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Our Native Birds

— of —

Song and Beauty,

Being

A Complete History of all the Songbirds, Flycatchers, Hummingbirds, Swifts, Goatsuckers, Woodpeckers, Kingfishers, Trogons, Cuckoos, and Parrots, of North America.

By

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With Thirty-Six Colored Plates after Water-Color Paintings


VOLUME II.

Milwaukee:

George Brumder.

1896.
ONE OF the handsomest and most characteristic families of American birds are the Tanagers. "This beautiful group of birds is represented in the United States by only five species, one of them being somewhat doubtful as a member of our fauna; but in tropical America, Tanagers form one of the principal elements of a bird-fauna, which for variety has no parallel in any other part of the world. It may interest the reader to know that the five families of Neotropical birds which are represented by the greatest number of species, are absolutely peculiar to America, these families being the Tanagers (Tanagridae), Tyrant Flycatchers (Tyrannidae), Wood-hewers (Dendrocolaptidae), Ant Thrushes (Formicariidae), and Hummingbirds (Trochilidae).

None of these families have even true representatives in any part of the Old World, the Sun-birds (Nectaridiidae), which some have considered as representing the Hummingbirds, belonging to even a different order (Passeres). There are besides those named above, many families of birds, remarkable for brilliant coloring or other characteristics, which are absolutely peculiar to the Neotropical region; prominent examples being the Honey creepers (Certhidae), Manakins (Pipridae), Cotingas (Cotingidae), Puff-birds (Bucconidae), Jacamars (Galbulidae), and Toucans (Ramphastidae). In number of species the Hummingbirds take the first rank, with nearly 450 known species, while the Tanagers follow soon after, with about 380 species, or nearly as many kinds as are included in the entire land-bird fauna of North America! With such a multitudinous host ranged under two families alone, the statement seems less remarkable that the grand total of tropical American birds is something like 4,000 species, or about one third of all that are known!"

"In comparison with such boundless wealth of bird-life, the meagre Ornis of our northern continent must seem a well-tilled, if not worn-out, field; but notwithstanding its comparative sterility, and long cultivation, by numerous devotees, there are more
things yet to be learned than can be discovered in the life-time of any man.—The single genus of Tanagridæ, which properly finds a place in this work, is one of the most typical of the whole family, and includes two of our most brilliant songsters."


The family is represented in our country by the following genera:

Genus Piranga Vieillot. Four species.
"Euphonia Demarest. One species.

SCARLET TANAGER.

Piranga erythromelas Vieillot.

PLATE XXV. FIG. 1.

O June! the month of merry song,
Of shadow brief, of sunshine long;
All things on earth love you the best,—
The bird who carols near his nest;
The wind that wakes and, singing blows
The spicy perfume of the rose
And bee, who sounds his muffled horn
To celebrate the dewy morn;
And even all the stars above
At night are happier for love,
As if the mellow notes of mirth
Were wafted to them from the earth.
O June! such music haunts your name;
With you the summer’s chorus came.

F. D. Shерman.

JUNE, the month of merry song, of fresh verdure, of a proud assemblage of wild flowers in woodland and meadow, of balmy air and a serene sky, has come at last. June is the real spring month in the northern parts of our country. The mornings and evenings now have acquired a delightful temperature, that invites us to rise early in the morning, and to enjoy the balmy breezes of the evening out of doors. The dew hangs heavily on grass and herbage, glittering like innumerable silver jewels. The early flowers, like the hepatica, the pasque-flower, the claytonia or spring beauty, the blood-root, the early dwarf wake-robin¹ are now half hidden beneath the dense foliage of the flowers of the summer. The violets and other delicate plants can hardly look up to us from underneath the stately fern leaves and the almost tropical foliage of the heracleum. The anemones, the flowers of the ground-nut², and many other heralds of spring are fast fading below the dense shrubbery. In the mixed woods of evergreens and deciduous trees the trailing arbutus and the wintergreen, the creeping snow-berry³ and the partridge-berry⁴ are beautiful in their new dress of tender foliage among the old dry leaves and pine needles which cover the forest ground. The voice of the true harbinger of spring, of the Song Sparrow and the Bluebird, whose tender warblings were

¹ Trillium nivale. ² Aralia trifolia. ³ Chiogenes hispida. ⁴ Mitchellia repens.
heard when snow still covered the ground, are now but faintly audible amidst the chorus of louder musicians. All our hopes realized, and we no longer look to the future for our enjoyments, but we now revel in all the pleasures that were so eagerly desired during the dreary winter and in the variable days of early spring.

A total change has taken place in the aspect of the landscape since the middle of May. The grass in the meadows and the rye and wheat in the fields wave like the billows of the sea, and the glossy corn-leaves, as they tremble in the soft wind, glitter like millions of mirrors in the bright light of the sun. Among the flowers which are now conspicuous in rich woods is the stemless lady’s slipper with its beautiful rosy-purple blossoms, and not far from it we may find the pretty white-veined and reticulated leaf-rosettes of Goodyera repens. The two species of yellow lady’s slippers are in their full glory now, the elegant flowers burst upon the sight of the rambler as if they had risen up by enchantment. In similar haunts the trientalis, unrivalled in the peculiar delicacy of its flowers, never fails to attract the attention of the lover of nature. This fine plant has an ebony-colored stem and bears a single whorl of pointed leaves, and above this a pretty white flower. The rosy-white flowers of the wild crab-apple have faded away, but different species of dogwood, wild snowball, and white thorns are in full flower on the woodland’s edge. While we are resting on a carpet of club moss, we may listen to the enchanting song of the beautiful Rose-breasted Grosbeak, the unrivalled melodies of the Veery, the metallic che-wink of the Ground Robin (Towhee), and the more modest songs of innumerable other birds. In some parts of the country the wild pastures and low grounds abound in rhodoras and azaleas in full flower. The first named plant is a low shrub, its brilliant rose-purple flowers appear late in May or early in June at the extremities of the branches. But the most beautiful of all the flowering shrubs of this month is undoubtedly the kalmia, distributed widely over the Eastern States, with its evergreen leaves. Its fine rose-colored flowers, unique in form and incomparable in beauty, are almost a revelation to the friend of nature. This plant, known in some parts of the country as calico-bush, mountain laurel, American laurel, and spoon-wood, is rendered singularly attractive by the contrast between its dark green leaves, its rose-purple blossoms of peculiar resplendency, and the whiteness of the flowers of surrounding plants. This shrub by its flowering marks the commencement of summer, and may be considered an apt symbol of the brilliant month of June.

“June is also the month of the arethusa,—those charming flowers of the peatmeadows,—belonging to a tribe that is mostly too delicate for cultivation. Like the beautiful birds of the forest, they were created for nature’s own temples.” Quite a number of interesting orchids, now in flower, are hidden in the deep mossy dells in the woods, where they seldom feel the direct rays of the sun. All alike they are “consecrated to solitude and to nature, as if they were designed to cheer the hearts of their humble votaries with the sight of a thing of beauty that has not been appropriated for the exclusive adornment of the garden and the palace.”*

* Cypripedium acaule. 2 Cypripedium pubescens and C. parviflorum. 3 Viburnum. 4 Crataegus. 5 Lycopodium dendroides.

In the gardens many exquisite varieties of the German iris, the showy orange-lily\(^1\), the glowing oriental poppies, the day-lilies\(^2\), the mock-orange, weigelas, snowballs, woodbines, upright honey-suckles, deutzias, several clematis, etc., are now in full bloom.

June is also the month of bird song and bird nesting. Without the birds, these cheerful and charming summer guests, woodland and meadow, field and forest would be without poetry and life. Even the most delicate songsters have arrived at the beginning of the month. Their songs resound from every nook and dell. Their nests are concealed in every grove and orchard, among the branches of the trees and bushes, or on the ground beneath a tuft of ferns, a bunch of grass, or a small shrub.

Many of these cheerful summer sojourners are birds of great beauty, but the most beautiful of all is the **Scarlet Tanager**. Indeed, it is the most elegant and distinguished of all our northern birds, dressed in rich fiery scarlet, which is relieved on wings and tail by a deep jetty black. Wherever we may chance to see it, especially in the deep green foliage of the woods, or on the ground, it is such a conspicuous object that even the most indifferent observer is struck with its beauty. Noble and retiring in its manners, confiding and trustful toward the true friend of nature, sweet in its song, brilliant in its attire, and useful in its destruction of harmful insects, the Scarlet Tanager is one of our most valuable birds, well meriting a cordial welcome.

Of all the species of the family the Scarlet Tanager is distributed farthest to the North, being found in Maine and even in the region of Lake Winnipeg. How far it is found southward during the breeding season, I am not prepared to say. I did not find it in summer in the Ozark region of south-western Missouri. In other southern States I have never met with it except during migration. Col. N. S. Goss reports it as common in the eastern part of Kansas. “In the southern half of Illinois,” says Prof. Robert Ridgway, “the Scarlet Tanager, while not an uncommon summer resident in some localities, is decidedly a less abundant bird than his plainer but more musical relative, the Summer Redbird. He is also much more retired in his habits, preferring the high timber of the bottom lands to the upland woods, and therefore brought not so much in contact with the abodes of man.” It is found as far west as the Great Plains. I have nowhere observed this Tanager more numerously than in Wisconsin and northern Illinois during the days of my youth. Every beech wood, every maple grove, the mixed woods of white pine, hemlock, and foliage trees, and even the large apple orchards harbored one or more pairs of these exquisite birds. It belongs to my first acquaintances among our birds, and once seen its picture never fades away from the memory. This reminds me of a beautiful passage in Dr. Elliott Coues’ “Birds of the Colorado Valley”:

“One of the best known members of the family is the Scarlet Tanager, whose encrimsoned body, contrasting with wings and tail as black as night, makes him only too conspicuous an object, the never-failing bait to the greed of the mere collector and dealer in bird-skins. I hold this bird in particular, almost superstitious, recollection, as the very first of all the feathered tribe to stir within me those emotions that have never ceased to stimulate and gratify my love for birds. More years have passed than I care to remember since a little child was strolling through an orchard one bright morning in June, filled with mute wonder at beauties felt, but neither questioned nor understood.

\(^1\) *Lilium croceum*.  \(^2\) *Hemerocallis*. 
A shout from an older companion—"There goes a Scarlet Tanager!"—and the child was
straining eager, wistful eyes after something that had flashed upon his senses for a
moment as if from another world, it seemed so bright, so beautiful, so strange. 'What
is a Scarlet Tanager?' mused the child, whose consciousness had flown with the won-
derful apparition on wings of ecstasy; but the bees hummed on, the scent of flowers
floated by, the sunbeam passed across the greensward, and there was no reply—nothing
but the echo of a mute appeal to nature, stirring the very depths with an inward
thrill. That night the vision came again in dreamland, where the strangest things are
truest and known the best; the child was startled by a ball of fire, and fanned to rest
again by a sable wing. The wax was soft then, and the impress grew indelible. Nor
would I blur it, if I could—not though the flight of years has borne sad answers to
reiterated questionings—not though the wings of hope are tipped with lead and brush
the very earth, instead of soaring in scented sunlight..."

In northern Illinois the Scarlet Tanagers do not arrive before the last days of
May, and in Wisconsin I never observed them before the beech trees had unfolded
their tender green leaves. The quiet, plain-colored, unobtrusive females arrive fully a
week later. In south-western Missouri I saw the first males about May 15, and in
southern Louisiana, in Florida, and south-eastern Texas I met with the migrants late
in April, when the most beautiful tree of our country, the great flowering magnolia
(Magnolia grandiflora), was in full bloom, perfuming the air with the sweetest fra-
grance. In spite of its apparently strong constitution the Scarlet Tanager is exceedingly
sensitive to cold weather. At its arrival, spring must be in its full glory. Though the
air is usually mild, and the woodland in its full summer dress when the Tanager arrives,
it often happens in the Northern States that cold, cloudy, and rainy days predominate
during the forepart of June. At such times most of the insects are hidden in the crevices
of the bark or in other protected places. Warblers, Vireos, and other denizens of the
woods seem not to feel the inclemency of the weather. Cheerily they sing among the
tree-tops, searching for insects in the crevices of the bark, underneath the leaves and
in the flower trusses. At such times our beautiful Tanagers are found sad and silent,
with blustering plumage, in a secluded locality in the woods, evidently severely
suffering from cold and hunger. It is not uncommon that, during such a cold spell, we
find many of the brilliant birds dead on the ground.

In northern Illinois the Scarlet Tanager's favorable haunts are the upland prairie
woods consisting mostly of a dense growth of oaks. It is also found in localities
where prickly ash, white-thorns, viburnums, crab-trees, dogwood, and other shrubs and
small trees form the outer edge of the woods, especially near rivers and creeks. In
places where the Wood Thrush pours forth its sweetest e-o-lie, where the Veery sings
in deepest seclusion its enchanting notes, where the Towhee is heard not far away,
where the Rose-breasted Grosbeak sings its indescribably beautiful notes, where Blue
Jays, these gaudy robbers, roam about in the woods, where Wood Pewees, Vireos, and
Warblers occur, we may also look for the Scarlet Tanager. As several small Hawks,
like the Sparrow Hawk, make the borders of the woods their favorable abode, the
male of this species prefers the interior of the woods. The female, which is of a
greenish-yellow color, is so perfectly in harmony with her surroundings that she is
rarely seen. In places where the Scarlet Tanager feels safe, it is sometimes found in large shade trees, and in northern Illinois I found two pairs in close proximity to a house. One pair was breeding in the large orchard and the other in a beautiful piece of adjoining woodland. The males were often seen together, flying around in the orchard or in the woods, or searching for food or nesting material on the ground. They did not hop about, but sat quietly in one place, flying to another after a short time. It was a beautiful sight to observe two of these exquisite birds on the ground underneath the green trees. They were not shy, allowing a very near approach. Evidently they knew that they were protected, for the owner of the grounds allowed nobody to shoot, to scare the birds, or to rob their nests. Whenever they heard a strange sound, or the cry of a Hawk, they were almost struck with terror and hurried to the next tree or the densest part of the woods. In the central and northern part of Wisconsin they usually inhabit mixed woods, consisting of beeches, maples, white-pines, hemlocks, and other trees. Although of a gorgeous scarlet, they are not out of place among the sombre evergreens. On this point I find the following passage in Mr. John Burroughs’ "Wake Robin":

"That bit of light scarlet on yonder dead hemlock, glowing like a live coal against the dark background, seeming almost too brilliant for the severe northern climate, is the Scarlet Tanager. I occasionally meet him in deep hemlocks, and know no stronger contrast in nature. I almost fear he will kindle the dry limb on which he alights. He is quite a solitary bird, and in this section* seems to prefer the high, remote woods, even going quite to the mountain's top. Indeed, the event of my last visit to the mountain was meeting one of these brilliant creatures near the summit in full song. The breeze carried these notes far and wide. He seemed to enjoy the elevation, and I imagined his song had more scope and freedom than usual. When he had flown far down the mountain-sides, the breeze still brought me his finest notes. In plumage he is the most brilliant bird we have. The Bluebird is not entirely blue; nor will the Indigo-bird bear a close inspection, nor the Goldfinch, nor the Summer Redbird. But the Tanager loses nothing by a near view; the deep scarlet of his body and the black of his wings and tail are quite perfect. This is his holiday suit; in the fall he becomes a dull yellowish-green,—the color of the female the whole season."

The common call-note of both male and female sounds like chip-a-raree, chip-a-raree. A soft pensive call-note is frequently heard during nesting time and after the young have left the nest, sounding like weed-weed-weed. The song of this bird is very loud, clear, and flute-like, resembling "somewhat that of the Robin in its modulation, but is shriller in tone, more hurried, and enunciated with a peculiar waverning style." These words of Mr. Ridgway I can fully corroborate. I have always found much resemblance in the songs of the birds named. Like the Robin the Scarlet Tanager selects a high perch, usually the top of a tall tree, when singing. At certain times a few notes reminded me of the song of the Baltimore Oriole. The bird sings only when the weather is warm and bright, and for a few weeks only. This may account for the fact that so many ornithologists have so little or nothing to say of the Tanager's song, which is really very fine and impressive if heard in the bright and merry days of June.

* Eastern New York. N.
The nest I have often found in the borders of woods and several times in orchards. It is always built on a horizontal branch of a forest tree and is not easily seen from below, being hidden among a dense growth of leaves, and quite often screened from view by grape-vines and other climbers. Oaks, beeches, maples, lindens, and, further east, chestnuts are the favorable nesting trees. In orchards they usually select old apple trees for nesting purposes, and, in one case, a nest was found in a belt of Norway spruces planted around a large orchard. The nest is very carelessly built, the material consisting of fine bark-strips, grasses, plant-stems, rootlets, and is lined with delicate bark-strips. The color of the material is light brownish. It is such a loosely built open structure that one can plainly see the eggs from the ground through the bottom of the nest. The eggs, four to five in number, are very delicate and break easily. Their ground-color is light greenish-blue, speckled, blotched and spotted, more or less densely, with rufous-brown. Some authors say that in the East the Scarlet Tanager is particularly fond of swampy places, and that the nest is generally found in low, thick woods, or in the skirthing of tangled thickets. This is, according to my observations, not the case in the Northwest. In the localities where I found this Tanager breeding, the nest is usually found with a full set of fresh eggs by the middle of the second week in June. Incubation lasts about thirteen days. Near the nest the brilliant colored male is rarely seen, and I have never observed that the sitting female was fed by him. More in the interior of the woods he is comparatively safe from his enemies. If it becomes necessary to take part in feeding the young, which is often the case in rainy weather, he approaches the nest with caution and stealth, to avoid the betrayal of the location of his family home by his presence. The female, whose greenish coloration assimilates with the surrounding foliage, incubates alone and is only partially assisted by the male in carrying food to the young. If the nest, however, is invaded or hostilely approached, both male and female take part in defending it. It is a beautiful sight to observe at such an intrusion the gorgeously colored male hop and skip around the observer in company with the entirely different looking female. The young are clad in the same greenish-yellow dress as the female, and the male in July changes his bright colors also and leaves his summer home in the plain dress of the female and young.

The food consists almost entirely of insects, which are collected from the leaves and flowers of the trees and sometimes taken on the wing. The birds rarely come down to the ground for the purpose of searching for food. June-berries (*Amelanchier canadensis*), huckle and rasp-berries, and other wild soft fruits of the woods are also eaten, forming no small part of their diet in summer. When food is very scarce, which sometimes happens just after arrival, even some kinds of seeds are not refused.

Though the Scarlet Tanagers arrive very late at their summer quarters, they are among the first to depart. Late in August they leave Wisconsin, and I have seen them pass through south-western Missouri September 15. Their winter home is at the West Indies, in southern Mexico, Central America, and South America to Ecuador.

No bird is so much killed for its beauty than our Tanager. In this connection I quote the following from Dr. Elliott Coues' "Birds of the Colorado Valley":

"These birds are famed for the beauty and variety of their coloration, being among those most frequently exhibited in the show-cases of bird-stuffers and milliners, as well
as on the head-wear of fashionable ladies, who have degenerated into walking advertisements of wretched taxidermy in their rage for barbaric ornamentation of their persons. The style used to be to wear plumes selected either for their beauty of coloration or their gracefulness of shape; but the itch of savagery has broken out with aggravated symptoms, to be appeased with nothing short of an ornithological museum. I once counted the feathers of no fewer than fifteen different kinds of birds on the dress of an Indian squaw; but then her alleged husband had one necklace of grizzly-bear claws and another of human finger-tips; and circumstances alter cases, you know. It seemed to me less singular than the case of another woman whom I examined with some care shortly afterward, on whose bosom rested a gilt-tipped tiger's-claw, from whose ears depended two claws of the same animal, in whose hair nested the greater part of the external anatomy of the bird known as the Shite-poke, and to whose loins a live poodle-dog was tied by a long blue string. Such a toilet, I think, would be still more effective with the rouge and lily-white in streaks instead of layers, and a fish-bone through the nose..."

NAMES: Scarlet Tanager, Scarlet Sparrow (Edw.), Canada Tanager (Penn.), Red Tanager (Lath.), Scarlet Black-winged Tanager (Sw.), Black-winged Redbird.—Scharlachtangara, Tangara (German).—Tangara écarlate (Le Moine), Cardinal de Canada, Tanagra du Canada (French).


DESCRIPTION: Adult male: Glowing scarlet, with black wings and tail. Female: Above, clear olive-green; below, greenish-yellow; wings and tail, dusky, edged with olive-green. Young males like the female. They do not seem to obtain their full wedding dress before the third year, for we see many males interminably variegated with colors of both sexes.

Length, 7.25 inches; wing, 4.00; tail, 3.00 inches.

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LOUISIANA TANAGER.

Pyranga ludoviciana Richardson.

PLATE XX. FIG. 3.

Of this beautiful bird Dr. Elliott Coues gives the following exceedingly interesting description in his excellent work, "Birds of the Colorado Valley":

"Long before Nuttall and Townsend's journey to the Columbia had contributed so many species of birds to the respective publications of these authors and of Audubon, the still more venturesome and memorable travels of Lewis and Clarke had resulted in enriching Wilson's Ornithology with three remarkable novelties—Clarke's Crow, Lewis' Woodpecker, and the Louisiana Tanager. These birds, Wilson says, 'were discovered in the remote regions of Louisiana'; that is, 'the extensive plains or prairies of the Missouri, between the Osage and the Mandan nations,' and were given a 'distin-
guished place' in his work, 'both as being, until now, altogether unknown to naturalists, and as natives of what is, or at least will be, and that at no distant period, part of the western territory of the United States.' Wilson seems to have handled three specimens of the Tanager, one of which has gone on record as 'Peale's Museum, No. 6236.' With the mutations of politics, and the shifting of political boundaries, the name of the Louisiana Tanager, like that of some other animals called ludoviciana, has become inappropriate; but in maps of the period, the letters 'L o u i s a n a' stretched clear across the present northern boundary of the United States into British America.

"Wilson had no information to the point, respecting the habits of this Tanager, nor does the locality in which Lewis and Clarke discovered it appear to be known with precision. It was probably farther west than Wilson indicated; for the bird is not known to extend eastward beyond the extreme foot-hills of the Rocky Mountains, being a woodland inhabitant to which the prairie stretches offer a barrier not likely to be surpassed. While connected with Lieutenant (now General) G. K. Warren's Exploration, Dr. F. V. Hayden took the bird in the Black Hills of Dakota and at Laramie Peak; these points representing its easternmost extension, for all that we know to the contrary. Westward it stretches to the Pacific, at least in all suitable localities; but its attachment to mountainous tracts is witnessed in its apparent absence from large areas within the general limits of its distribution. It has not been ascertained to penetrate much, if any, beyond the northern borders of the United States; but in the other direction it extends through Mexico, in suitable tracts of country, and into Central America, where Mr. Salvin has found it at elevations of some five thousand feet.

"It is migratory, like all the other Tanagers of this country, and withdraws altogether from our territory in the autumn, probably during the latter part of September and early in the following month, to re-enter the United States in the month of April. Its summer home or breeding range is coextensive with the whole of our country, as far as latitude alone is concerned, and its winter resorts include a considerable portion of Mexico, as well as of regions farther south. I do not know whether or not any of the birds nestle in Mexico, but presume that some may do so, in higher or northerly portions at least. The general tide of the spring migration, however, brings the species over our border, and distributes the individuals composing it from the mountainous portions of New Mexico and Arizona to latitude 49° north at least, if not a little farther in slightly elevated districts near the Pacific coast.

"We had no news of this Tanager for a long while after Wilson figured and described it from the 'frail remains' that Lewis and Clarke furnished him. In editing Wilson's work, Sir William Jardine found it 'impossible to decide the generic station of this bird'; and thought it probable that British collections possessed no example of the rare species. In fact, the first additional specimens known to naturalists appear to have been those brought in by Nuttall and Townsend; while the accounts which these naturalists gave are nearly the whole basis of Audubon's article upon the subject. In later times, Drs. Cooper and Suckley came to be our principal authorities on the habits and distribution of the species; their observations were published in full in the twelfth volume of the Pacific Railroad Reports, or the 'Natural History of Washington Terri-
tory,' and the first-named of these authors also gave a supplementary notice in the 'Ornithology of California.'"

"Dr. George Suckley writes as follows:

"The beautiful Louisiana Tanager is quite abundant in certain seasons in the vicinity of Fort Steilacoom. In 1854 but a limited number made their appearance, while, on the contrary, in the summer of 1856, I have seen about a hundred specimens. I have had frequent opportunities of studying their habits, and have never yet seen them descend to the low bushes or the ground, as stated by Nuttall, the reverse being the rule (at least at Puget Sound).... The favorite habitat of the species, in those localities where I have observed it, is among the tall, red fir-trees belonging to that magnificent species, the *Abies Douglasii*. They seemingly prefer the edges of the forest, rarely retiring to its depths unless for concealment when alarmed. In early summer, at Fort Steilacoom, they are generally seen during the middle of the day sunning themselves in the firs, occasionally darting from one of these trees to another, or to some of the neighboring white-oaks (*Quercus Garryana*) on the prairies. Later in the season they may be seen actively flying about in quest of insect food for their young. On July 10, 1856, I saw one of these birds carrying a worm or insect in its mouth, from which I inferred that the young were then hatched out. Both sexes, during the breeding season, are much less shy; the males during the day-time, frequently sitting on some low limb, rendering the scene joyous with their delightful melody."

"The records just mentioned, to which that left by the late Mr. J. K. Lord, from observations in the extreme North-west, may be added, represent nearly all the written history of the beautiful bird—one conspicuous even among this brilliant family for the striking color contrasts which the rich yellow, intense crimson, and jet-black afford—down to a most recent period. Within the past few years, Mr. Allen, Mr. Ridgway, Mr. Henshaw, and Mr. Trippe are among those who have contributed to the full exposition of the economy of the species. The memoranda of both the first and last-named of these gentlemen already enrich the pages of the 'Birds of the North-west,' through the personal attentions of these valued correspondents of mine.

"In southern Colorado, Mr. Henshaw found the Louisiana Tanager in small numbers among cotton-woods along the streams, at an elevation of about 7,500 feet, and much more abundantly among the pines, up to 9,000 and even 10,000 feet above sea-level. He afterward observed that it was common in southern Arizona, and found it lingering along the Gila River even so late as the middle of October, at which time nearly all these birds had migrated southward. As others had done, he noted the close similarity that obtains between this and the Scarlet Tanager:—'It is busy the whole time gleaning from among the pines and spruces the larger beetles and insects which infest them, and generally keeps well up among the higher branches, whence it makes its presence known by occasional bursts of melody.'"

In the fourth volume of the "United States Geological Exploration of the Fortieth Parallel. Clarence King, Geologist in Charge," I find the following excellent account on this bird by Prof. Robert Ridgway:

"This beautiful Tanager, one of the most brilliant of western birds, was found to be very generally distributed through the wooded portions of the route traversed, except.
ing in the valley portions of California, none having been seen from Sacramento eastward until well into the pine forest of the Sierra Nevada. It was first observed in the western portion of that range, at an altitude of about 5,000 feet, its song first attracting attention, from its extreme similarity to that of the Scarlet Tanager, of the East. From this point eastward it was met with in every wooded locality, being much more frequently seen on the mountains than along the rivers of the lower valleys. In May, soon after their arrival from the South, these Tanagers were very numerous in the rich valley of the Truckee, near Pyramid Lake, where they were observed to feed chiefly on the buds of the grease-wood bushes (Obione confertifolia), in company with the Black-headed Grosbeak and Bullock's Oriole. Very few were seen later in the season, however, nearly all having departed for the mountain woods. During July and August it was a common species on the eastern slope of the Ruby Mountains, where it inhabited the groves of cedar, nut-pine, and mountain mahogany; while from June to August it was an abundant bird in the pine forests of the Wabsatch and Uintah ranges. In September they were noticed to feed extensively on the fruit of the Cratagus rivularis, in company with the Red-shafted Flicker, Gairdner's Woodpecker, the Cedarbird, and the Cross-bills.

"In its habits this species is almost a perfect counterpart of the eastern P. erythromelas, while its song is scarcely distinguishable, being merely a slightly finer, or more silvery, tone; but the ordinary note, sounding like plit'-it, is very different from the chip'-a-ra, ree of the eastern species. The note of the young is quite peculiar, being a low whistle, something like the complaining call of the Eastern Bluebird, but louder."

According to Dr. Elliott Coues, the same ornithologist found a nest and eggs of the Louisiana Tanager in Parley's Park, Utah, on the 9th of June, 1869. This nest, says Dr. Brewer, 'was on the extreme end of a horizontal branch of a pine, in a grove, flat, and with only a slight depression having a diameter of four and a half inches, with a height of only an inch. It was composed externally of only a few twigs and dry wiry stems, and lined almost entirely with fine vegetable rootlets.' Such description of the nidification shows that the nesting is quite the same as that of the Scarlet Tanager. A set of eggs collected by Mr. Ridgway, and examined by me in the National Museum, differs noticeably from those of other Tanagers of this genus, the ground-color being much clearer green, and more sparingly marked by mere dots of very dark purplish-brown. A few points appear over the whole surface, but the tendency of the markings is to aggregate at the larger end, where the spots nevertheless remain perfectly distinct, though so numerous. In size and shape, these eggs are not very different from those of the Scarlet Tanager, though appearing rather more rounded if not actually larger. Dr. Brewer's measurements give a length of 0.95, with a greatest breadth of 0.66; eggs of P. erythromelas, he states, range from 0.90 to 1.00 in length, with an average diameter of 0.65. The number of eggs laid by the Louisiana Tanager is said by the same author to be usually three; but as the number of instances from which this average is deduced is not stated, we are free to infer that the clutch may ordinarily consist of four or five eggs, as is the case with the Scarlet Tanager.

"Thus it seems to be established that the habits and manners of the Louisiana Tanager differ in no wise from those of the Scarlet Tanager, and that its singing and nesting are much the same, though there may be some peculiarity of its call-note, and
though the eggs, to judge from the few that have fallen under the notice of naturalists, are recognizably different. It is scarcely necessary, therefore, to add my own experiences with this bird: these would only confirm the conclusions drawn from what has gone before. But in closing another chapter of the 'Birds of the Colorado Basin'—a work that has haunted and besought me for a decade of years, since the destruction of my old Arizona manuscripts, as a spirit that would not be laid, and is now become embodied—I am happy to recall, with something of its early freshness, the picture of this brilliant bird, set in the sad-hued foliage of the pine trees, just as a sunny spot breaks here and there amongst the closely-crowded memories of a sombre past. (Coues.)

NAMES: Louisiana Tanager, Crimson-headed Tanager.—Louisiana Tangara (German).—Pyranga à face rouge (Vieill.).


DESCRIPTION: "Male: Yellow; the middle of the back, the wings, and the tail black. Head and neck all round strongly tinged with red; least so on the sides. A band of yellow across the middle coverts, and of yellowish-white across the greater ones; the tertials more or less edged with whitish. Female: Olive-green above, yellowish beneath; the feathers of the interscapular region dusky, margined with olive. The wings and tail rather dark brown, the former with the same marks as the male.

"Length, 7.25 inches; wing, 3.60; tail, 2.85 inches." (Ridgway.)

SUMMER REDBIRD.

Pirangra rubra Vieillot.

PLATE XIX.

NO AMERICAN city known to me is so rich in fine shade-trees and subtropical plants than Jacksonville, Florida. Although the grayish-white sandy soil looks very unproductive, the avenues of shade-trees, consisting mostly of water-oaks and some magnolias, are hardly surpassed anywhere in the South. Large and broad, densely set with foliage and spreading branches, these magnificent oaks lend a great charm to the city. It was a fine day early in April when I for the first time strolled through the most beautiful part of the city. Only a few days ago I had admired the luxuriant camellias and Indian azaleas at Pensacola and the wealth of roses at Tallahassee; I had roamed about in the woods of the Chattahoochee and Suwanee rivers, where many strange and beautiful plants were first seen and admired. But here at Jacksonville many of the most exquisite shrubs and trees of the southern temperate zone and the tropics were seen in the gardens and pleasure grounds. Dense pittosporums¹, gardenias,

¹ Pittosporum tobira.
or Cape jasmines covered with their glossy green leaves and double waxy-white, deliciously scented flowers, banana shrubs\textsuperscript{1}, unrivalled in the sweet perfume of their blossoms, sweet olives\textsuperscript{2} with their insignificant but exceedingly fragrant blooms, golden dew-drops\textsuperscript{3}, camphor trees, magnolias, orange trees in fruit and blossom, climbing allamandas, star jasmines\textsuperscript{4}, and many other evergreen shrubs, trees, and vines were found growing in the sandy soil in luxuriant profusion. Sago palms\textsuperscript{5}, bamboos, the indigenous cabbage and saw palmettos, Cocos \textit{australis} and several species of date palms impart to these grounds a decidedly tropical appearance. This morning’s walk in the bright sunshine and salubrious air made a deep and lasting impression upon my mind. Near one of the most tastefully arranged gardens, replete with \textit{Magnolia fuscata} and other choice shrubs, I stopped to admire the beds of beautiful amaryllis (\textit{Hippeastrum equestre} and its larger and more dazzling variety \textit{H. equestre} “Hedwig,” \textit{H. Johnsonii}, \textit{H. Graveana}, \textit{H. crocea}, and other hybrids), the masses of spider lilies\textsuperscript{6}, the immense clumps of crinums\textsuperscript{7}, and especially the gigantic stem-like bulbs of the St. John’s lily\textsuperscript{8}, and of two other species\textsuperscript{8}, the lily-like flowers of which are deliciously fragrant. While I was still enjoying the pleasure of gazing at these floral treasures, I heard a well-known Thrush-like song coming from the top of a large magnolia standing in the same grounds. When I looked up, my eyes beheld the beautiful \textit{Summer Redbird}, or \textit{Summer Tanager}, a bird which I knew well, having frequently observed it in Texas, Louisiana, and other southern States, but which I had never seen in the immediate neighborhood of the crowded streets of a city.

During the next few days I saw this bright colored bird quite often among the large oaks and magnolias of the city, but nowhere had I such a good opportunity to observe it than near the home of a friend of mine at St. Nicholas, just opposite Jacksonville. Before we reached his residence we had to pass through a park-like piece of woodland, at the entrance of which groups of yuccas or Spanish daggers\textsuperscript{9} were planted. The magnificent \textit{Magnolia grandiflora}, lobbolly bays, live and water-oaks, sweet gums\textsuperscript{10}, red bays\textsuperscript{11}, and other trees shaded the ground. The underwood was mostly cleared away, but here and there were found thickets of sparkle-berry\textsuperscript{12}, swamp honeysuckle\textsuperscript{13}, clethras, hollies, snow-drop trees\textsuperscript{14}, sweet-leaf bushes\textsuperscript{15}, and many others; these thickets were frequently overgrown with Carolina jasmine and cross vine\textsuperscript{16}. In these grounds the birds are always protected and find a congenial home. When I entered this piece of woodland I still met large numbers of Juncos, White-throated and White-crowned Sparrows, several Towhees, Catbirds, and many Warblers. Mockingbirds were heard from all sides, singing their sweetest as well as their most peculiar strains, while the loud and ringing notes of the Cardinal Redbird, sounding like what cheer! what cheer! what cheer! came from all the dense thickets of holly overgrown with smilax and Carolina jasmine. Blue-gray Gnatcatchers were carrying lichens to their nests. The elegant Painted Bunting was to be found in every thicket. In these woods I heard the songs and call-notes of many Summer Tanagers. Perhaps most of them were on

\textsuperscript{1} \textit{Magnolia fuscata}. \textsuperscript{2} \textit{Olea fragrans}. \textsuperscript{3} \textit{Duranta Plumieri}. \textsuperscript{4} \textit{Rhynchospermum jasminoides}. \textsuperscript{5} \textit{Cycas revoluta}. \textsuperscript{6} \textit{Hymenocallis caribaea}. \textsuperscript{7} \textit{Crinum asiaticum}, \textit{H. erubescens}, \textit{C. scorbum}, \textit{C. capense}, \textit{C. sylaticum}. \textsuperscript{8} \textit{Crinum pedunculatum}. \textsuperscript{9} \textit{C. angustum}, \textit{C. amabile}. \textsuperscript{10} \textit{Yucca aloifolia}, \textit{Y. gloriosa}, \textit{Y. filamentosa}. \textsuperscript{11} \textit{Liquidambar styraciflua}. \textsuperscript{12} \textit{Persea carolinensis}. \textsuperscript{13} \textit{Vaccinium arboreer}. \textsuperscript{14} \textit{Azalea viscosa}. \textsuperscript{15} \textit{Halesia tetrapera}. \textsuperscript{16} \textit{Symplocos tinctoria}. \textsuperscript{17} \textit{Bignonia capreolata}. 
their way to more northern latitudes, the breeding range of these birds extending northward to about 40°. Central Illinois, Ohio, and New Jersey seem to be the northern boundary line of their summer home. The real home of the Summer Tanager, however, are the Southern States, especially those bordering the Gulf of Mexico. In south-eastern Texas they abound especially in localities where groups of sweet gum alternate with long-leaved pines and other trees. I found them still more common on the edges of the post-oak woods in Lee County of the same State. As soon as the young are able to leave the nest, they are led into the interior of the forest, where I always met them in the large and lofty trees of the bottom woods. In the south-west corner of Missouri they are often met, and according to the late Col. S. N. Goss they are common summer residents in eastern Kansas. West they are found to the Great Plains. According to Dr. C. H. Merriam they occur north regularly to the Connecticut valley. The majority winter in Cuba, eastern Mexico, and Central America, many migrating even into the tropics of northern Southern America. In the south-western part of the country the Summer Redbird is represented by a variety known as Cooper’s Tanager (*Piranga rubra cooperi* Ridg.).

Although very beautiful, the Summer Redbird cannot vie with the Scarlet Tanager in intensity and splendor of colors. The ground-color is a very fine rosy vermillion, darkest and mixed with dusky on wings and back. It is a beautiful sight to watch the male when he sings in the top of a flowering magnolia or a loblolly bay, or among the branches of the southern pines. The female is quite different, being greenish-olive on the back and dull buffy-yellow below. Our plate (XIX), made after a beautiful water-color painting by Prof. Robert Ridgway, renders a more detailed description needless. In this connection I cannot refrain from saying that this is one of the most beautiful pictures of the genial artist and ornithologist, whose paintings rank among the very best, being always natural and at the same time ideal and full of poetry. The back-ground of the picture represents a part of the woods on the lower Wabash in Illinois.

During a five year’s residence in Texas and other parts of the South I had the best opportunity of studying the habits of this Tanager. According to my observations the birds always choose their haunts in rather dry than in wet and swampy localities. Near Houston, Texas, they were found usually in the beautiful laurel oaks, magnolias, elms, button wood, sweet gum, and other large growing trees. I also observed the bird frequently in the monotonous post-oak woods between the Colorado and Brazos Rivers. In the groups of live-oaks in the prairie regions of Texas I have never seen this Tanager. Its haunts are always in the upper “stories of the woods,” where Vireos are its constant neighbors. Below, in the bushes and thickets, Cardinal Redbirds, Blue Grosbeaks, and other songsters have their home.

Like the Scarlet Tanager, the Summer Redbird is one of the latest arrivals in its breeding range. In south-eastern Texas and in Lee County of the same State the males arrive usually from April 1 to April 10, and in south-western Missouri from April 30 to May 17. If the weather be cold, they arrive late, if pleasant, they may be expected from ten to fifteen days earlier.

According to Prof. Robert Ridgway the male requires several years to attain the full plumage, immature individuals showing a mixture of red and yellow, in relative
proportions according to the age. Some females show more or less of red, one observed
May 21, 1881, at Wheatland, Indiana; having the plumage more than one half red, the
red color being of greater extent, in fact, than on the male, which was also procured
at the same time. The tint of the red is very peculiar, however, being of dull Chinese
orange, instead of pure rosy vermillion, as in the male.

In at least the southern half of Illinois the Summer Redbird is an abundant
species in dry upland woods. It is moreover a very familiar species, nesting habitually
in trees along the road-sides and even in the midst of towns. For this reason it is
much more frequently seen than the Scarlet Tanager, of which it is supposed by many
people to be a variety or special plumage. Besides being a more abundant and familiar
species, its notes are much louder. The ordinary one sounds like pa-chip-it-tut-tut-tut,
or, as Wilson expresses it, chicky-chuck-chuck. The song resembles in its general
character that of the Scarlet Tanager, but is far louder, better sustained, and more
musical. It equals in strength that of the Robin, but is uttered more hurriedly, is more
‘wiry,’ and much more continued.” (Ridgway.) I have almost daily heard this Tanager's
song in the latter days of April, in May, and often in June, and I can fully con-
firm what Mr. Ridgway says of it. To my ear it is a very exquisite, finely modulated,
and musical strain.

Mr. Wm. Brewster expresses his opinion of the song in the following words: “In
the thicker groves I often heard the voice of the Summer Tanager. His song is rich,
flowing, and not unlike that of the Rose-breasted Grosbeak, although some of his notes
recall those of the Robin. The call-note used by both sexes is a peculiar chuckF-
chuckTut. The bright colors of the male make him a conspicuous object amongst the
branches of the southern pine which, at least in Georgia, is his favorite tree.”

In Texas I found the nest usually in the lower limbs of post and laurel oaks,
about 8 to 25 feet from the ground. It is usually built in the smaller branches, near
the extremity of the limb, and so far from the trunk, as to be very difficult of access.
It is a very carelessly built structure, composed of bark-strips, a few grass-stems, and
pieces of leaves, the walls being so thin, that the eggs can be seen from below. Most
all the nests were found in the middle of May.

“In southern Illinois,” says Prof. Ridgway, “the nest is usually placed near the
extremity of a horizontal branch of an oak tree (preferably a white or post oak),
alongside the edge of a wood, trees standing by a road-side being frequently selected.
The height at which it is placed varies, usually from twelve to twenty feet above
the ground, although the writer found one which was nearly thirty feet up. Its average
elevation is such that a man standing upon the seat of a wagon could easily reach,
either with his hand or whip, the majority of them. The nest is a thin and shallow
but very firm structure, composed of loosely interwoven wiry grass-stems, often with
the seed panicles attached, and is so thin that the eggs can almost always be seen by
one standing underneath the nest. The eggs are usually three in number, and are
similar in color and markings to those of the Scarlet Tanager, but somewhat
larger.”

In most of the nests which I examined in Texas and Missouri, four eggs formed
a complete set. The ground-color of the eggs is a light emerald-green, spotted
and blotched with brown, lilac, and brownish-purple. They are not with any certainty distinguishable from the eggs of the Scarlet Tanager.

The food of this Tanager consists mainly of insects. Later in the season, when the different wild berries ripen, these constitute a large part of their diet. In Texas they are exceedingly fond of ripe sweet figs. At one time I counted about twelve of these birds in one large fig tree. Two of them were caught, and I kept them a considerable time in the cage, caring for them in the same way as I did for my Bluebirds and Mockingbirds. They became very tame, taking worms, flies, and berries out of my hand.

When taking my regular woodland walks in July, August, and September in the beautiful bottom woods traversed by the West Yegua, I often heard the peculiar sounds or call-notes of these Tanagers, sounding like *chicky-chucky-chuck*, and coming from the tops of the tallest trees.

By the middle of September the Summer Redbirds leave the Southern States for their winter home, all in the inconspicuous dress of the old female.

The Summer Redbird has many enemies. The Cowbird frequently deposits one or two eggs in its nest. The Tanager's own brood is lost thereby, while the parasite leaves the nest of its foster parents in the very best condition. Blue Jays, squirrels, opossums, raccoons, and more especially snakes only too frequently destroy the eggs and devour the young. But the worst enemy of our beautiful bird is man. Its glowing garb makes it the target for the common skin collector. The imp of fashion and the morbid desire of many people to have a collection which does not benefit them, because they are neither friends nor students of birds and their ways, cause this beautiful bird to become scarcer from year to year, particularly in the northern part of its summer home. In the glass-cases of milliners and in the show-windows of taxidermists and their customers the Summer Redbird is regularly seen in company with its congener, the Scarlet Tanager, the Baltimore Oriole, and other beautiful native birds. These bright colored birds, so lovely and attractive in our landscapes, are no longer safe there; death and destruction lurk everywhere. Even during the breeding time, when the young brood is in the nest, these birds are being ruthlessly shot. Feeling for, and true enjoyment of the beauties of nature, real enthusiasm for our native ornis, are beyond the conception of the average bird-collector. I know quite a number of such destroyers of nature's beauties who annually murder hundreds and even thousands of our small birds, at the same time carrying off their nests and eggs, persons who are unable to tell the correct names of fifty and barely the correct scientific name of a single species. Works of our great ornithologists, like Wilson, Audubon, Nuttall, Baird, Coues, Ridgway, Merriam, and the publications of the American Ornithologists' Union are hardly known to them by name, but they diligently read papers printed for skin and egg collectors, or journals of that ilk. If a collection has been gathered, it is sold, and in the following year a new collection is made. It is for good reasons that the American Ornithologists' Union does not permit into their ranks the average collectors and dealers in bird-skins, and that this society appointed a committee for the protection of birds. To the ornithologists we are indebted for the good laws for the protection of birds in different States. The true ornithologist is also the true friend of the birds, and he does everything in his power to have his feathered friends protected.
Cooper's Tanager, *Piranga rubra cooperi* Ridg., inhabits the south-western portion of the United States and western Mexico. Dr. Coues observed it at Los Pinos, N. M. and Dr. Cooper at Fort Mojave. It has also been found by more recent collectors, especially in Arizona. In its ways and habits it is the true counterpart of the Summer Tanager. It is brighter in its colors than the species.

**NAMES:** Summer Redbird, Summer Tanager, Flaxbird, Red Beebird (Ridg.), Redbird, Mississippi Tanager (Lath.), Variegated Tanager (Lath.).—Sommer-Tangara (Nehrling), Sommer-Rotvogel (German).—Mississippi-Merle (Brehm), Pyranga rouge (Vieill.), Tangara vermilion (Le M.).


**DESCRIPTION:** "Bill, nearly as long as the head, without any median tooth. Tail, nearly even, or slightly rounded. **Adult male:** Rich vermilion-red, the upper parts duller and darker. Bill, varying from light pinkish, more salmon-colored on mandible and darker on culmen, to wax-yellow, the maxilla more olive, with darker culmen; feet, lilac-gray. **Adult female:** Yellowish-olive above, light ochre-yellow beneath. Bill, etc., as in male."

Total length, 7.45 to 7.95 inches; extent, 11.50 to 12.25; wing, 3.70 to 3.95; tail, 2.90 to 3.15 inches." (Ridgway.)

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**HEPATIC TANAGER.**

*Piranga hepatica* Swainson.

On this Tanager of the southern Rocky Mountain region, I find the following account in Dr. Elliott Coues' celebrated work "Birds of the Colorado Valley":

"During Capt. L. Sitgreaves' expedition down the Zuñi and Colorado Rivers—an excursion well known to ornithologists through the important articles on birds which forms part of the published report—Dr. S. W. Woodhouse observed this beautiful Tanager in the San Francisco Mountains, and secured a full-plumaged male, adding to the then recognized fauna of the United States a species long before described by Mr. Swainson as a bird of Mexico. In 1858, Baird recorded a second specimen from Fort Thorn, New Mexico; and, in 1866, I wrote of the bird as a summer resident in the vicinity of Fort Whipple, Arizona, where it arrives during the latter part of April. In 1874, Dr. Brewer spoke of Woodhouse's original as the only specimen known at that time to have been found within the limits of the United States, adding, by a still more curious lapse, that the species 'probably' extended into the mountainous portions of the United States.

"Meanwhile, however, in 1873, Mr. Henshaw had been busy with birds in Arizona, and had taken a female specimen at Camp Apache, Arizona, as noted by Mr. Ridgway in the appendix of the work last mentioned. There this Tanager was not rare; perhaps half a dozen individuals were seen in the course of one afternoon, in a grove of oaks.
HEPATIC TANAGER.

that skirted some pine woods. The birds were very shy, and seemed to be gleaning insects amidst the foliage of the oaks. The following year, when Mr. Henshaw was again upon the spot, he made the Tanager out to be an abundant inhabitant of the pineries, and his observations represent nearly all that we know of its habits. At the date of his enquiries into its mode of life, July 12, it was doubtless nesting; but he was not successful, after a long search, in discovering the nest, though he carefully watched the birds as they moved about the tops of the pines in their search for insects, occasionally sallying out to capture them on the wing. He heard no song, nor indeed any notes whatever, excepting the call-note of both sexes, resembling a repetition of the syllables chuck, chuck…. Some old nests which Mr. Henshaw found at Rock Cañon closely resembled those of the Scarlet Tanager in their situation and structure, being composed mainly of coarse rootlets and dried plant-stems, with lining of similar but finer materials; and the rather slight unsubstantial fabrics were placed at the end of low horizontal branches of oaks. During the latter part of August, the birds seemed to leave the pine woods and to become more generally dispersed, some among the deciduous trees along the streams, but the majority amidst groves of oaks. They all appeared to have left for the South by the end of September.

"The known range of the Hepatic Tanager in the United States is thus limited to a small portion of our western territory, in the Colorado Basin, and near the Mexican boundary line. In the opposite direction, the record I have compiled shows that the bird has been found as far south as Guatemala, and in various Mexican localities, as Orizaba, Xalapa, Oaxaca, and elsewhere."

NAMES: Hepatic Tanager, Liver-colored Tanager.—Rotbranne Tangara (Nehrling), [German].


DESCRIPTION: "Adult male: Above, dull red, strongly tinged with grayish on back, etc.; lower parts, light vermillion, strongly shaded on sides and flanks with brownish-gray; ear-coverts, dull grayish-red, or reddish-gray, narrowly streaked with white. Adult female: Above, olive-green, the back more grayish; beneath, olive-yellow, strongly shaded with olive on sides and flanks. . . .

"Length, 7.30 to 8.20 inches; wing, 3.70 to 4.20; tail, 3.20 to 3.60 inches." (Ridgway.)

BLUE-HEADED EUPHONIA, Euphonia elegantissima Gray. This beautiful bird has been ascribed to our territory, but on insufficient evidence of its actual occurrence within our borders; it was originally described by Prince Bonaparte as a bird of Mexico, and shortly afterward Mr. J. P. Giraud figured it as one of his sixteen new species of birds of Texas. As far as I know it has never been observed by Dr. J. C. Merrill or Mr. Sennett in the region of the lower Rio Grande of Texas.

DESCRIPTION: "Adult male. Top of head and hind-neck, uniform light blue; forehead, dark rusty or chestnut, margined behind by black; rest of head and neck, with upper parts generally, uniform glossy blue-black, inclining to purplish steel-blue; lower parts (except chin and throat), plain orang Rufous. Female. Top of head colored as in the male; upper parts, olive-green; lower parts, including chin and throat, paler and more yellowish olive-green.

"Length about 4.70 inches; wing, 2.75; tail, 1.80 inches." (Ridgway.)
FINCHES, SPARROWS, ETC.

Fringillidae.

FINCHES, SPARROWS, and like birds are distributed over all the world. We find them, although in limited numbers, in the polar regions, in greater abundance in the temperate zone and in the tropics. They inhabit the shore of the ocean, the grassy, flower adorned prairies, the borders of woodland, field and forest, thickets and shrubbery; towns and cities, deserts where only yuccas, cacti, and agaves flourish, and the high mountain ranges. During their breeding time they usually live in pairs, but in the fall they unite into flocks of larger and smaller numbers. When migration begins most of them move southward in very large scattered companies. Most of our Finches find the winter climate of our Southern States congenial, while others pursue their journey more southward. Some of the species are permanent residents, that is, they live in one locality all the year round, like the Cardinal Redbird, the Pine-wood Sparrow, etc.

Late in the fall and in winter their food consists mostly of seeds of all kinds, especially of those of noxious weeds, while in spring and summer insects, their eggs and larvae, form the main part of their diet. With the exception of that imported foreigner, the European Sparrow, none of our Finches and Sparrows are injurious to vegetation. On the contrary, most all of them are of great value to the husbandman. Many of our Finches and Sparrows, and Buntings and Grosbeaks, and Purple Finches, etc., are excellent songsters. The lay of the Song Sparrow, the sweet voice of the Rose-breasted Grosbeak, the sprightly warble of the Painted Bunting and Indigo Bird, the loud resounding song of the Cardinal, the metallic note of the Towhee, the sweet love-song of the Goldfinch, are familiar to every country child. The dress of most of the members of the
family is of a soft rich color, like that of the Juncos, the Fox-colored Sparrow, the White-throated and White-crowned Sparrows, etc., while many are birds of great beauty (Cardinal Redbird, Rose-breasted and Blue Grosbeaks, Nonpareil, Indigo Bird, Goldfinch, Leucostictes, etc.). Their lively ways, their confidence in man, their beauty and song combine to make them important factors of the landscape, which they idealize and impart with happiness and poetry.

No other birds are so easily kept in the cage as the members of this family. Not only such little elfs, as the Magpie Finches, Silver-bills, Orange-cheeked Wax-bills, Cordon Bleus, Fire Finches, etc., of tropical Africa; Zebra Finches, Diamond Sparrows, Australian Grassfinches, etc., of Australia; the Java Sparrow, Nutmeg Bird, Amanda-vade Finch of India, and the Canary Bird, but also many of our native species, such as the Cardinal Redbird, Rose-breasted Grosbeak, Blue Grosbeak, Indigo Bird, Nonpareil, and many others stand exceedingly high in the favor of German bird lovers and bird fanciers. Dr. Carl Russ, of Berlin, has written several volumes on this subject.

The Finch family is represented in our country by about ninety-five species, which are divided into the following thirty-four genera:

4. *Carpodacus* Kaup. Four "
5. *Loxia* Linné. Two "
6. *Leucosticte* Swainson. Four "
7. *Acanthis* Bechstein. Two "
8. *Spinus* Koch. Five "
9. *Carduelis* Brisson. One "
10. *Passer* Brisson. Two "
11. *Plectrophenax* Stejneger. "
12. *Calcarius* Bechstein. Three "
13. *Rynchophanes* Baird. One "
15. *Ammodramus* Swainson. Eleven "
16. *Chondestes* Swainson. One "
17. *Zonotrichia* Swainson. Six "
18. *Spizella* Bonaparte. Seven "
20. *Amphispiza* Coues. Two "
22. *Melospiza* Baird. Four "
23. *Passerella* Swainson. One "

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1 *Spermestes* cucullata Sw. 2 *Ailornopyza* cantans Sharpe. 3 *Psittacus* melanops Sharpe. 4 *Hespera* phoebus Sw. 5 *Lagonosticta* minuta Can. 6 *Stagonopleura* castanotis Can. 7 *S. guttata* Can. 8 *Ailornopyza* modesta Reichen. 9 *Amadina* oryzivora. 10 *Muna* undulata. 11 *Estrela* amandava.

9 Dr. Carl Russ. "Die fremdländischen Stubenvögel." Bd. 1. 12 Colored Pl., and "Handbuch für Vogelzüchter" etc. Vol. 1
1. SIALIA MEXICANA Swains.
2. SIALIA ARCTICA Nutt.
3. PIRANGA LUDOVICIANA Rich.
4. MYADESTES TOWNSENDII Cabr.
5. HABIA MELANOCEPHALA Stejn.
6. CARPODACUS MEXICANUS FRONTALIS Ridg.
7. PIPILO CHLORURUS Baird.

- CALIFORNIKER HÜTTENSÄNGER - California Bluebird.
- GEBIRGSHÜTTENSÄNGER - Mountain Bluebird.
- COLDTANGARA - Louisiana Tanager.
- KLARINO - Townsend's Solitaire.
- SCHWARZKÖPFGER KERNBEISSER - Black-headed Grosbeak.
- HAUSFINK - House Finch.
- GRÜNSCHWÄNZIGE ERDFINK - Green-tailed Towhee.
EVENING GROSBEAK.

EVENING GROSBEAK.

Coccothraustes vespertina Gambel.

Plate XXI. Fig. 1.

The autumn landscape of last fall was exceptionally beautiful. The leaves of many trees and shrubs and even herbs were glowing in purple, red, violet, yellow, and brown tints. The first light frost had changed the color of the leaves of the stag-horn sumach, the sugar maple, and the Virginia creeper into the most beautiful red and purple, and these gorgeous colors were glowing in the woods like flames of fire and could be seen from a far distance. This beautiful autumn was followed by a very cold winter. Although the winters of Wisconsin are cold and changeable, they are not entirely without pleasure. The trees and shrubs of our garden have lost their beauty and the ground is covered with snow, but our mountain ash trees are still covered with bunches of red berries, which are sought in the early morning by our feathered winter visitants from more northern regions, who occupy the places of our summer sojourners that migrated southward. As soon as the sun rises, our trees are alive with peculiar and lovely birds. By the beginning of January Bohemian Waxwings appeared in great numbers, and Cedarbirds were also present. After being through with their meal they disappeared, returning, however, once or twice in the course of the day. On a very bright, cold morning I observed near my window, among a flock of Waxwings, scarcely ten feet away, two beautiful birds with thick bills, clad in a robe of gold, olive, brown, yellow, and white. These birds, as irregular in their appearance in winter as the Bohemian Waxwings, were Evening Grosbeaks. These visitors from the primeval evergreen forests of British America are rarely seen in Wisconsin. They suddenly appear in one winter and may not occur again in five or ten years. They did not show anything of the restlessness and voracity of their companions, being very quiet and slow in their movements. While the Waxwings were quick and restless at their meals, the Evening Grosbeaks took their time, eating the berries with leisure. They only seemed

25, Pipilo Vieillot. Six species.
26, Cardinalis Bonaparte. One "
27, Pyrrhuloxia Bonaparte. " "
28, Habia Reichenbach. Two "
29, Guiraca Swainson. One "
30, Passerina Vieillot. Four "
31, Sporophila Cabans. One "
32, Eutheia Reichenbach. " "
33, Spiza Bonaparte. " "
34, Calamospiza Bonaparte. " "

EVENING GROSBEAK.

Coccothraustes vespertina Gambel.
to eat the seeds of the berries. They appeared and disappeared with their companions. Whenever I had an opportunity to watch these beautiful Grosbeaks, they did not appear smooth, but the plumage looked rather puffed up, which was probably due to the intense cold. I saw them only three days, and then the Waxwings came again alone until March, when all the berries were consumed. They descended even to the ground to pick up those berries which had fallen down."

These words form a part of a letter which my friend, Miss Hedwig Schlichting, a resident of Milwaukee, Wis., wrote to me in April, 1887, when I still resided in the south-western part of Missouri. She further stated that these beautiful birds had been frequently seen in that locality, and that a flock of fourteen were observed by her near the city. At the same time the birds were observed in large numbers in Lincoln Park, of Chicago.

This sketch of the life history of the Evening Grosbeak would be incomplete, should I neglect to quote freely from an article written by our great naturalist, Dr. Elliott Coues (Bulletin of the Nutt. Ornithological Club. Vol. IV, 1879, p. 65—75):

"A bird of the most distinguished appearance, indeed, is the Evening Grosbeak, whose very name of the 'Vesper-voiced' suggests at once the far-away land of the dipping sun, and the tuneful romance which the wild bird throws around the fading light of day. Clothed in the most striking color-contrasts of black, white, and gold, he seems to represent the allegory of diurnal transmutations; for his sable pinions close around the brightness of his vesture, just as the night encompasses the golden hues of the sunset; while the clear white space enfolded in these tints foretells the dawn of the morrows.

"Once seen, the Evening Grosbeak will not likely be forgotten, even though we only glance at what was once a brilliant denizen of the maple groves, and is now but a bunch of feathers stuffed with tow; for there is no bird of our country that in the least resembles this striking likeness of a sunset. They say he has a near relative in the land of Montezuma, but he is otherwise quite an isolated magnificence, his closest kinship being with the Hawfinch of Europe (Coccothraustes vulgaris), whom he resembles in his stature and proportions, though not at all in coloration. Nor has he the curious construction of the wing-feathers that the typical Hawfinch displays, these quills being as simple in form as they are in any other member of the extensive family of the Finches. No very distant relatives among our Fringillidae are such species as the Blue, the Cardinal, the Rose-breasted, and other Grosbeaks, as well as those, like the Pine, with which we have grown accustomed to see him associated in our books and catalogues.

"He is rather a late aspirant to the questionable honors of our literature, having remained unknown to fame all through the Wilsonian period, and until brought to our notice by Mr. William Cooper, whose letter of introduction, originally published in the 'Annals of the New York Lyceum of Natural History,' was soon extensively copied by the editors of other periodicals. The bird thus speedily became known to ornithologists of all parts of the world. The actual discovery of so welcome an addition to our recognized Fauna was made by Mr. Schoolcraft, who secured the original example of the species in April of the year 1823, at or near the Saulte Sainte Marie, Michigan. This individual, upon its presentation to the Lyceum just named, became the basis of Mr.
Cooper's communication, and was supposed for a little while to be the only representative of the species known to naturalists; but other specimens soon became available for the purposes of science. Thus Bonaparte, who first figured the interesting acquisition, in 1828, states that at this date he had examined two other specimens, besides Mr. Schoolcraft's, which had been obtained early in the spring on Lake Athabasca, and were preserved in the Leadbeater collection in London; one of them serving him for the elaborate description which he gives in his "American Ornithology." Soon after this, we find Sir John Richardson's allusion to specimens sent to the authors of the "Fauna Boreali-America" by Mr. Prudens, Chief Trader at Carlton House; and this author remarks that the bird is a common inhabitant of the maple groves of the Saskatchewan region,—a circumstance from which its Cree Indian name Seebasquit-pethaysish, or Sugar-bird, is derived. A very characteristic likeness of the male bird of natural size, drawn and colored in William Swainson's well-known style, accompanies the notice to which I refer; the remainder of the account in the work just named consisting of the junior author's fanciful speculations on the quinary affinities of this remarkable Grosbeak. His ingenuity brings him to the sage conclusion that the bird is related to certain tenuirostral types, notwithstanding that it has one of the largest, stoutest, stockiest bills to be found in the whole Fringilline assemblage.

"Let us turn another page of written history respecting the subject of the present notice. The statements of fact I have made are all staple accounts, copied by each successive compiler with no less scrupulous exactitude than I have myself exhibited. Quite a fresh and interesting chapter was added by J. K. Townsend, who contributed his observations to Audubon's work, under date of 'Columbia River, May 27, 1836.' He corrected two grave errors which had already cropped out, namely, respecting the sexual similarity in plumage, and concerning the wrong notion that the bird sings only at evening, as implied in the term vespertina. His notice is worth transcribing, even at this late day, so little further information have we acquired respecting the habits of the Evening Grosbeak.

"The Evening Grosbeak," says Townsend, 'is very numerous in the pine-woods at this time. You can scarcely enter a grove of pines at any hour in the day without seeing numbers of them. They are very unsuspicious and tame.... The accounts that have been published respecting them by the only two authors to whom I have access, Mr. Nuttall and Prince Bonaparte, are, I think, in many respects, incorrect. In the first place, it is stated that they are retiring and silent during the day, and sing only on the approach of evening. Here they are remarkably noisy during the whole of the day, from sunrise to sunset. They then retire quietly to their roosts in the summits of the tall pines, and are not aroused until daylight streaks the east, when they come forth to feed as before. Thus I have observed them here, but will not say but that at other seasons and in other situations their habits may be different. They are now, however, very near the season of breeding.... They appear fond of going in large bodies, and it is rare to see one alone in a tree. They feed upon the seeds of the pine and other trees, alighting upon large limbs, and proceeding by a succession of hops to the very extremities of the branches. They eat, as well as seeds, a considerable quantity of the larvae of the large black ant, and it is probable that it is to procure this food that
they are not uncommonly seen in the tops of the low oaks which here skirt the forests. Their ordinary voice, when they are engaged in procuring food, consists of a single rather screaming note, which from its tone I at first supposed to be one of alarm, but soon discovered my error. At other times, particularly about midday, the male sometimes selects a lofty pine branch, and there attempts a song; but it is a miserable failure; and he seems conscious of it, for he frequently pauses and looks discontented, then remains silent sometimes for some minutes, and tries it again, but with no better success. The note is a single warbling call, exceedingly like the early part of the Robin's song, but not so sweet, and checked as though the performer were out of breath. The song, if it may be so called, is to me a most wearisome one: I am constantly listening to hear the stave continued, and am as constantly disappointed. Another error of the books is this—they both state that the female is similar to the male in plumage. Now, this is entirely a mistake: she is so very different in color and markings that were it not for the size and color of the bill, and its peculiar physiognomy, one might be induced to suppose it another species.

"The annual movements of the Evening Grosbeak within the area of its usual dispersion have not been well determined. It is a migratory bird in one sense, but does not appear to be subjected to the impulse of migration with periodical regularity, as a strict and proper migrant should be. It is certainly able to endure a very rigorous climate, for its presence during the most inclement weather of winter along our northern border, and even in British America, is sufficiently attested. Thus it appears, from Captain Blakiston's article in the 'Ibis,' that the Evening Grosbeak occurs in the inhospitable region of the Saskatchewan between the months of November and April, when birds of this kind were seen feeding on the ash-leaved maples in company with the very boreal Pine Grosbeaks. On the other hand, we have witnesses to their occurrence and probable residence on the table-lands of Mexico, not far from the capital city of that country, where Sumichrast observed them in the pine woods of Monte Celto, in May, 1857. Mr. Henshaw considers the species to be 'doubtless a rare resident' in Arizona, in which Territory he secured a specimen in September, near Camp Apache. As I have intimated, our rather meagre records do not furnish the data for the full solution of the question; and they are in some respects so conflicting apparently, as well as fragmentary, that we feel our doubts rather increased than removed when we compare them. It would appear in present light, however, that the bird is scarcely a true migrant, but rather a wanderer according to exigencies of food supply, to some extent resembling the Bohemian Waxwing, the Pine Grosbeak, Red-poll Linnet, Crossbill, and species of Plectophenax. Its general habits, and some traits of its character, especially its sociability, familiarity with man, and ways of feeding, are those of Crossbills, Redpolls, and certain other northerly Fringillidae, rather than of such species as the Rose-breasted, Black-headed, Cardinal, and Blue Grosbeaks, with which it seems to be nevertheless related in some technical characters.

"The erratic movements just intimated to be probably chargeable to this singular bird bring it at times to localities remote from its usual centres of abundance. I shall conclude with consideration of this point, in sketching the geographical distribution of the species. Our early accounts, as I have presented them, indicated a range along the
northern border of the United States from Michigan westward to the ocean, and Richardson ascribed to the bird a northward extension to latitude 56° N. But since those days it has been traced much farther south and east. Being a bird of woodland, it will not be found on the great plains; but, aside from any matters of local distribution resulting from surface conditions of the country, this Grosbeak may be said to inhabit the United States from the outliers of the Rocky Mountains to the Pacific. It is thus essentially a Western species; but in the region of the Great Lakes, and for some little distance thence southerly, it stretches far to the eastward, not in solitary and fortuitous instances, but regularly, or at any rate frequently. Its normal range cannot well be short of Canada, in different localities in which Dominion specimens have not seldom been secured. Thus Mr. McIlwraith states, in the paper above cited, that he had heard of its presence near Hamilton, Canada West, and that a few years previously several had been obtained by Mr. T. I. Cottle at Woodstock, where they were 'quite numerous for a day or two during the month of May.'"

The first nest was found by Mr. John Swinburne, of Springerville, Apache Co., Arizona, on June 5, 1884, at the head-waters of the Little Colorado River in the White Mountains. The nest was situated in a thick willow bush of a densely wooded cañon, and contained three eggs of a clear greenish ground-color, blotched with pale brown. It was placed about fifteen feet from the ground in the extreme top of the bush. The slight cañon, with a few willow bushes in its centre bordering a small stream, lies in the midst of very dense pine timber at an altitude of about 7,000 feet.

NAMES: Evening Grosbeak, Sugar-bird.—Abendkernbeisser (German).


DESCRIPTION: "Adult male: Crown, blackish, bordered anteriorly and laterally by a yellow patch covering forehead and superciliary region; rest of head, with neck and back, uniform deep olivaceous, changing gradually to yellow on scapulars and posterior portions of body, above and below; wings, tail, and upper tail-coverts, black; tertials, uniform dull white, the secondaries and inner webs of tail-feathers sometimes tipped with the same. Adult female: Whole top of head, dull brownish or brownish-gray; rest of head, with neck and most of the body, lighter grayish, tinged more or less with olive-yellow, the throat bordered along each side by a dusky streak; a whitish patch at base of inner primaries. Bill, yellowish-green.

"Length about 7.00 to 8.50 inches; wing, 4.20 to 4.50; tail, 2.75 to 3.20 inches." (Ridgway.)

**AMERICAN PINE GROSBEAK.**

*Pinicola enucleator canadensis* RIDGWAY.

PLATE XXI. Fig. 6.

It is a chilly and dreary winter day. Thick clouds, dense and heavy, darken the sky. The snow descends in large flakes, covering the earth as with a white shroud. The boughs of the evergreens bend under the weight of the snow. No winged being seems to enliven the garden; the erstwhile so cheery summer guests have fled
away to the South. With a feeling of melancholy we saw them depart, and yearningly we look for the return of the first harbingers of spring. But winter clings long to the northern parts of our great land, and many weeks will pass ere the first herald will bring to us in jubilant notes the glad tidings: "Yet spring, sweet spring is coming!" We stand at the window observing the whirling snow, but our thoughts wander afar to the distant land where many of our birds spend the winter, as we had also done in former years. There, near the Gulf of Mexico, where evergreen hollies, wax-myrtles, yupon bushes (Ilex myrtifolia), magnolias, loblolly bays, and heavily moss-draped deciduous trees make up the forest growth, in the orange groves of Louisiana and Florida, in the palmetto thickets and undergrowth of the woods, there are the thousands of our northern birds, there they find food plentiful, and a congenial clime. Even if an occasional blast from the North may penetrate into that latitude, it has become wayworn in the long journey and lost its vigor. While following these thoughts we failed to notice that a flock of birds had just come up and taken possession of one of the spruces in our garden. They are handsome grayish birds, some with a tinge of red, some even entirely red. How beautiful they appear, these winter visitors, as they move about among the branches and twigs covered with fresh fallen snow. These birds are Pine Grosbeaks who have just arrived from their distant northern home, to spend the winter with us. Among them are also frequently seen some Redpolls, Crossbills, Cedarbirds, and occasionally a few Evening Grosbeaks.

Only in very cold and snowy winters the Pine Grosbeaks visit the northern parts of our country. At such times we may find them south to northern Illinois and Ohio, and occasionally also in eastern Pennsylvania and Maryland, being sometimes very abundant in New England. The coniferous woods of the North, as far as the Arctic regions, are the true home of these birds. There, in peaceful quietness, far from the abodes of man, undisturbed by human nest robbers, the young leave the nest. In these aromatic pine and spruce woods they lead a retired life in the deepest recesses, and here resounds also the loud and melodious song. In their immediate neighborhood Crossbills, Kinglets, Bohemian Waxwings, many of our beautiful Warblers, and probably also Evening Grosbeaks, breed and sing. In the East the Pine Grosbeak is found, during the breeding time, as far south as Maine, the Magdalene Islands, and the Godbout River in Canada. In the Rocky Mountains this bird also prefers the coniferous woods at an altitude of 10,000 to 11,500 feet, and it is also found in the Sierra Nevada, where it appears to be a resident throughout the year. According to Dr. Elliott Coues, who observed this Grosbeak in Labrador, it is confined entirely to the thick woods and patches of scrubby juniper.

The reports on the life-history of the closely allied European Pine Grosbeak are very meagre, but those on our own species are still more so. Most of the travelers and collectors who had an opportunity to observe the birds in their haunts, have nothing to say about their nidification. In the "Report upon Natural History Collections made in Alaska" by H. W. Nelson I find the following interesting account:

"Along the entire west and north-west coast of America, from Vancouver Island north to within the Arctic circle, this bird occurs in greater or less abundance. The only breaks in this range are the treeless areas which occur along the coast of Behring
AMERICAN PINE GROSBEAK.

Sea. Throughout the interior of the above region it is an abundant species. On the Kadiak Peninsula, in the vicinity of Behring Straits it is found among the stunted spruces to longitude. 165° west, thence through the entire territory of Alaska, to the British boundary line it is abundant; at Sitka and Kadiak it was found numerous by Bischoff, during the Western Union Telegraph Expedition, and specimens were brought me from points along nearly the entire course of the Yukon. It is limited by the range of spruce, pine, and cotton-wood forests. Dall found the crops of these Grosbeaks filled with cotton-wood buds at Nulato, on the Yukon. During winter, while traveling along the frozen surfaces of the water-courses of the interior, it is common to note a party of these birds busy among the cotton-wood tops, uttering their cheerful lisping notes as they move from tree to tree. I have frequently passed a pleasant half hour on the wintry banks of the Yukon, while making a midday halt, and waiting for the natives to melt the snow for our tea, listening to the chirping and fluttering of these birds, as they came trooping along the edges of the snow-laden woods in small parties. They rarely paid any attention to us, but kept on their way, and were, ere long, lost to sight in the midst of the bending tree-tops, and silence again pervaded the dim vistas of the low woods. These birds withstand the severest cold in these forests, even within the Arctic circle, and appear to be about equally distributed throughout the wooded region. Unfortunately my opportunities for observing them were confined entirely to the short glimpses obtained in the manner cited, and I can add nothing to their history during the summer and breeding season. Beyond the faint, soft call-note uttered as the birds trooped along through the forests, I never heard them make any other sound. The American authors appear to have overlooked, or not noted, the song of this species, which is said to be—especially in the European bird—very pleasant and musical."

Mr. G. A. Boardman found a nest near Calais, Maine, supposed to belong to the Pine Grosbeak. It was placed in an alder bush in a wet meadow, about four feet from the ground. It was composed entirely of coarse green mosses. The eggs, two in number, were not distinguishable from those of the European species, being pale greenish-blue, spotted and blotched with dark brown surface markings and lilac shell spots. At the end of June Mr. H. A. Purdie observed old Pine Grosbeaks feeding their young in New Hampshire, and Prof. Wm. Brewster observed a young male at Upton, Me. Dr. C. H. Merriam, the celebrated naturalist of the Agriculture Department, Washington, D. C., observed it "on the Godbout River, which empties in the St. Lawrence from the North, about six miles from the Pointe des Monts, where the river widens into the Gulf." This was about the middle of July. According to Mr. Nap. A. Comeau, who accompanied Dr. Merriam, the bird is quite common there both summer and winter. These records show that this bird breeds in northern New England and Canada. Mr. Trippe and other ornithologists found the Pine Grosbeak in the high mountain ranges of the West during the breeding time.

I am in the happy situation to report of the Pine Grosbeak's breeding in northern Wisconsin. Mr. A. J. Schoenebeck found a nest of this bird May 5, 1890, near Boyd's Creek, six miles west of Chaguamegon Bay, Bayfield County, Wis. It was built in a hemlock about nine feet above the ground and seven feet from the trunk. The ground was dry and the forest consisted of deciduous and coniferous trees. The structure was
composed of hemlock and other twigs, and the interior of grasses and rootlets, lined with finer grasses and a little moss. The eggs, four in number, are now before me. They have a greenish-blue ground-color and are marked with many rather large and irregular lilac shell marks, mostly on the larger end, and a number of dark brown spots and blotches distributed rather unevenly over the entire shell. The eggs measure 1.00×.73, 1.04×.74, 1.03×.70, .97×.72.

These birds occasionally make southern Wisconsin and northern Illinois their winter-quarters. I have had frequent opportunities of observing them. They usually appear late in fall or early in winter in flocks of from five to thirty. They do not occur every winter. Years may pass before they visit the Northern States, and, on the other hand, it may so happen that they are present in several successive winters. They seem to leave their northern breeding range only when their supply of food, consisting mainly of coniferous seeds and berries, is short. Like all birds from those unsettled regions, they are exceedingly tame and unsuspicious when first making their appearance. When fired at or when one is caught in a trap cage, the others, instead of flying away, move toward their enemy, or alight on the cage, entirely unconscious of their own danger. I have seen whole flocks destroyed by bad boys. Later in the season, however, they are more shy and suspicious, having become acquainted, by experience, with the bad traits of man. Without fear they even visit the gardens and parks in large cities. According to the observations of Miss Hedwig Schlichting, they feed largely on the seeds of mountain-ash berries, and later in winter, when this food supply is exhausted, on other seeds and on buds of different trees. She has observed these birds during a period of twenty years in seven winters, usually in small flocks and sometimes associated with Crossbills, Redpolls, and other winter birds in Sheboygan County, Wis. She describes them as very beautiful objects on the snow-covered branches of pines and spruces. They always preferred to retire in cold and stormy weather and during night to the evergreens. She observed them always in exceptionally cold and snowy winters.

In the winter from 1877 to 1878 I observed them in large numbers in northern Illinois. In Oak Park, a beautiful suburb of Chicago, I had an opportunity of seeing them almost daily during the winter. A large garden adjoining my house was planted with a number of spruces, firs, pines, and white cedars, besides juniper bushes, apple and pear trees, and ornamental shrubs. In this garden they were at home, nobody being inclined to disturb them. Very early in the morning, after having spent the night in the evergreens, many chattered and sang most diligently, while others were engaged in bringing their plumage in order. The berries of the mountain-ash and seeds of evergreens and sun-flowers formed their main diet, while the buds of the fruit trees were eagerly searched for. But no serious damage was done by them, as the apple and pear trees were loaded with fruit in the year 1878. They were very common in the pine and spruce trees near dwellings, and in the belts of evergreens around orchards. In a flock of forty or fifty birds, scarcely more than two or three entirely red ones were seen. Many of the males were tinged with red, while the females showed no red at all. I have rarely seen them on the ground, and only in cases when they were picking up mountain-ash berries which had fallen down. They hop about on the ground in a rather awkward way. In the dense branches of spruces, firs, and pines they display a
great skill in moving about. Like the Crossbills and Redpolls they are born acrobats. Their flight is not very quick, rather high and undulating. During the winter months we only hear their soft and lisping call-notes, sounding like cheep, cheep, cheep. Towards the spring a few notes of their very melodious, liquid, and clear song may be heard. If such fine notes are uttered in their winter home, how beautiful must be the song in their summer haunts during the nuptial time!

In the cold winter from 1877 to 1878 a large number were captured near Chicago. As they were brought in the warm rooms, almost all died in a short time. I captured four in a trap cage, brought them in a cold room and they felt entirely at home. Even in the summer they did not suffer from the heat, as I kept them in a cool room on the north-side of the house. They were fed with Canary seed, millet, sun-flower seed, some hemp and all kinds of fruit. As I kept the birds in company with Crossbills, Rose-breasted Grosbeaks, Bobolinks, and other species, I rarely heard their exceedingly beautiful song. They were so tame that they took seeds, meal worms, and grasshoppers from the hand.


NAMES: American Pine Grosbeak, Pine Grosbeak, Pine Bullfinch.—Hakengimpel (German).


PINICOLA ENUCLEATOR CANADENSIS Ridg. (1887).

DESCRIPTION: "Adult male: Carmine red, paler or whitish on the belly, streaked with blackish on the back; wings and tail, dusky, with whitish edging, the former also with two white cross-bars. Bill and feet, blackish. Female: Ashy-gray, paler below, marked with brownish-yellow on the head and rump. There is a great difference in the shade of red of the male, and in the saffron markings of the female. It is one of the largest of the Fringillidae, with a remarkably short, stout bill, convex in all its outlines, and overhanging tip of upper mandible—almost parrot-like.

"Length, 8.00 to 9.00 inches; wing, 4.50; tail, 4.00 inches." (Stearns and Coues' "New England Bird Life." Vol. I, p. 214.)

Pinicola enucleator kadiaka Ridg. is smaller, with proportionally much larger bill and shorter tail.

Cassin's Bullfinch, Pyrrhula cassini Baird, is a rare inhabitant of Alaska.

PURPLE FINCH.

Carpodacus purpureus Baird.

It is a beautiful, sunny June morning. A cool easterly breeze comes from Lake Michigan. In the low meadows numerous merry Bobolinks are soaring in the air, pouring forth their sweet tinkling strains with great vivacity. The familiar Redwing, dressed in a robe of deep black, which is relieved by fiery scarlet on the shoulders, makes
the reedy marshes and swamps resound with its melodious con-cur-ee. The Catbirds in the thickets of the road-side, the Brown Thrushes in the white-thorn bushes, the Swamp Sparrows on the bushy edge of low meadows, the Robins in the maples, and the gorgeous Baltimore Orioles among the beautiful arching elms, all sing their jubilation hymns. Among the white pines and birches of a narrow ravine the enchanting song of the Rose-breasted Grosbeak and the Veery falls on our ear. Everywhere merry bird-life prevails. In the tamarack swamps huckle and cranberry bushes, the red osier, the kinnickinnik, and the black haw are in full flower, while the woodland's edge seems to be transformed into masses of rosy-white by the flowering wild crab-trees. White-thorns are also in bloom. In the rich forest soil the stemless and the yellow lady's slipper and many other delicate plants are in blossom. The flowering time of the first-named species is almost over when the yellow lady's slipper comes in bloom. The dense thickets of juniper and young white pines fill the air with a strong aromatic fragrance.

We are in that portion of Wisconsin where the coniferous woods begin to extend northward. At present only small remnants of the once so majestic forest primeval are left. Most of the land is under cultivation. This undulating and often hilly country is very rich in beautiful localities, in rivers, lakes, swamps, and springs. When we are reaching the summit of a slightly sloping hill a few miles west of Sheboygan, a beautiful panorama spreads before our eyes. Turning to the west we see hills and forests, and before our view extend the deep blue waters of Lake Michigan under a brilliant sky, the waves sparkling in the bright sunlight like millions of mirrors. Like an endless wall this beautiful sheet of water lies before us, dotted here and there with sailing vessels and steamboats.

In this region, fifteen or twenty years ago, the southern border line of the summer home of the Purple Finch was found. The pine region, especially where it alternates with fields, gardens, meadows, and pastures, is this bird's natural summer home. It does not breed in the dense woods. Formerly, when the original forest had not yet been touched by the devastating hand of man, the Purple Finches were not seen or heard among the gigantic white pines, beeches, oaks, and maples. Only later, when the woods gave place to fields and orchards, these birds began to settle in larger numbers. In my boyhood, about thirty years ago, only a few of these beautiful birds were seen in the newly settled places. They were, however, very common in fall when the hemp and sunflower ripened their seed. But since that time a great change has taken place. Orchards and shade trees have been planted, and beautiful specimens of spruces, firs, pines, and cedars are a great ornament around the houses. Horse chestnuts and even catalpas, never seen in the days of my youth, are now often met. I left my birth place and the State in 1869, but my friend, Miss Hedwig Schlichting, resided there until 1885. A great lover of nature, she carefully watched the change that took place since our school time. In her beautiful garden at Howard's Grove a large number of rare shrubs, trees, and flowers flourished, and even primulas and auriculas, so precarious in almost all parts of this country, grew luxuriantly and in great abundance. All our common garden birds were present. The Purple Finch also made its appearance in the fruit trees and evergreens of the garden and in the thickets of white pines near the

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woodland's edge. To-day these birds are common in all the larger orchards, especially
where evergreens were planted largely for ornament and shelter. At present we may
look for them as far south as Milwaukee, and even at Waukegan in northern Illinois
they have been seen during the breeding season.

This beautiful bird is easily observed when it sings. Perched in the top of a tall
tree, or on the roof of the house and barn, it sings almost incessantly in the early
morning. Its crimson color, most intense on the head, mixed with dusky streaks on
the back, its habit of erecting the feathers on the head while singing, and its loud,
melodious, and varied strain combine to make it a very conspicuous object wherever it
occurs.

The song is exceedingly beautiful, liquid, and sprightly, but the different individuals
differ considerably in scope and capacity of their notes. Usually the bird sits high in
the top of an evergreen or another tree while singing, but I often have observed it on
fences and posts, warbling with ecstacy and keeping its wings in rapid vibration. We
may hear the song at all hours of the day, even at noon, when most other birds are
silent.

Although breeding by preference in most thickly settled and well cultivated locali-
ties, it is exceedingly difficult to find the nest of the Purple Finch in the dense evergreens,
the bird taking great care not to betray its location. The nests found by me in Sheboygan
County, Wis., were usually built in dense horizontal branches of spruces and firs, not
far from the trunk and at a moderate distance from the ground. Several were also dis-
covered by me in apple trees. The materials employed in building the nest are pine
needles, grasses, weed-stems, rootlets, bark-strips, fibers of asclepias, hemp, wool, and
strings. The lining of the rather shallow structure consists of hairs, and sometimes of
pine needles and hemp-like fibers.

Dr. T. M. Brewer's excellent opportunities of studying the Purple Finch have been
fully utilized in his contribution to the biography of this species in "A History of North
American Birds." I extract his account in full:

"The Purple Finch, or, as it is generally known in New England, the Linnet, is
one of our sweetest, best, and most constant songsters, and is often trapped and sold
as caged birds. They soon become accustomed and partially reconciled to their con-
finement, but sing only during a small part of the year. When one of these birds,
confined in a cage, is hung outside the house in the country, he is sure to draw around
him quite a number of his species, and this furnishes the dealer a ready means of cap-
turing them.

"This Finch was once regarded as quite rare in the vicinity of Boston, so much
so that during a four years' residence in Cambridge, when collections of nests and eggs
had many votaries, not a single nest of this species was obtained by any one. Since
then, from some cause, probably the increase of gardens, rows of evergreens, and other
localities favorable for their preservation and reproduction, these graceful little Finches
have become quite abundant in places, propitious for their residence. No less than seven
pairs of these favorite songsters took up their abode in my grounds at Hingham in a
single summer, and two had nests in the same tree, one of which was at least sixty
feet from the ground, on the very top of a tall fir. These several pairs as a general
thing, lived together very harmoniously, save only when one would approach too near
the favorite station of another, when the latter would begin to bristle up his crest, and
give very evident hints that his near presence was not agreeable. The extreme southern
end of the ridge-pole of the house had been, for several summers, the favorite post for
the patriarch of the flock, from which at morning and at evening he made the neighbor-
hood vocal with his melody. If in his absence any other of these birds ventured to
occupy his position, there was always sure to be a disturbance on his return, if it was
not instantly vacated. These encounters were frequent, and always very amusing. Dis-
cretion usually took the place of valor on the part of the intruder.

"The song of the Purple Finch resembles that of the Canary, and though less
varied and powerful, is softer, sweeter and more touching and pleasing."* The notes
of this species may be heard from the last of May until late in September, and in the long
summer evenings are often continued until after it is quite dark. Their song has all the
beauty and pathos of the Warbling Vireo, and greatly resembles it, but is more powerful
and full in tone. It is a very interesting sight to watch one of these little performers
in the midst of his song. He appears perfectly absorbed in his work, his form dilates,
his crest is erected, his throat expands, and he seems to be utterly unconscious of
all around him. But let an intruder of his own race appear within a few feet of
the singer, and the song instantly ceases, in a violent fit of indignation he chases
him away.

"The flight of the Purple Finch is said by Mr. Audubon to resemble that of the
Green Finch of Europe. They fly in compact flocks with an undulating motion, alight-
ing all at once, and then instantly, as if suddenly alarmed, take again to flight, only
to return to the same tree. They then immediately make each his separate way to the
ends of the branches, and commence eating the buds. The food they take to their young
is juicy berries and the softer portion of the young cones of the fir and spruce.

"They nest generally in firs, spruces, or cedar trees, though occasionally on the
upper branches of a high apple tree. Their nests are usually placed upon a branch,
rather than interlaced between its forked twigs. I have known them not more than
five feet from the ground, and at other times on the highest point of a lofty fir tree.
The nests are, for the most part, somewhat flat and shallow structures, not more than
2.50 inches in height, and about 3.50 inches in breadth. The walls of the nest average
less than an inch, and the cavity corresponds to its general shape and form. The frame
work of the nest is usually made of small denuded vegetable fibers, stems of grasses,
strips of bark, and woody fragments. The upper rim of the nest is often a curious
interwining of dry herbaceous stems, the ends of which project above the nest itself in
the manner of a low pallisade. The inner nest is made up of minute vegetable fibers
closely interwoven. There is usually no other lining than this. At other times these
nests are largely made up of small dark colored rootlets of wooded plants, lined with
finer materials of the same, occasionally mingled with the down of birds and the fur of
small animals.

"The eggs of the Purple Finch vary greatly in size, and somewhat in shape, gener-
ally they are of an oblong oval, pointed considerably at one end. Their length varies

* The song of a good Harz Mountain Canary-bird has no resemblance to the song of the Purple Finch. H.N.
PURPLE FINCH.

from .92 to .81 of an inch, and their breadth from .70 to .60. Their color is a pale shade of emerald-green, spotted with dark brown, almost black, chiefly about the larger end. The ground-color is much brighter when the eggs are fresh, and soon fades upon exposure to light and even when kept in a close drawer."

In Manitoba and the upper Mississippi valley the Linnet is a common summer sojourner. Most of the birds pass the winter south of latitude 40, migrating as far south as the coast region of the Gulf of Mexico. They do not move northward nor southward with much precision. At Caddo, Indian Territory, in winter of 1883—'84, Prof. W. W. Cooke did not observe them until the real cold weather came; the first flock was seen January 10, and they were still present March 18. In the Ozark region of south-western Missouri I usually observed them from the middle of December to the first days of May.

That painstaking and careful observing ornithologist, Mr. Otto Widmann, of St. Louis, Mo., contributes the following to "Bird Migration in the Mississippi Valley":

"During the winter of 1883—'84, flocks were found at their old stand. There were not so many as in the winter of 1882—'83, and crimson and plain birds were almost equally numerous. In cold weather they keep mostly on the ground, feeding on seeds of the ash; in warm weather they ascend to the tree tops to feed on buds. February 23 there was a change in the flocks; they became larger, but there was a decrease in the number of crimson birds (that is, the old males), 75 per cent. being brown birds, the balance light crimson. March 17, flocks existed, mostly of brown birds, but singing. March 27, the bulk departed. April 19, the species still present in small flocks, mostly brown but singing much. April 28, last regular migrants. May 5, an accidental party of eight or ten, all brown; May 7, a single brown bird seen."

In northern Illinois they usually arrive in flocks about September 15, feeding mostly on the seeds of hemp and sunflowers. Much has been written about the injury done to the fruit crop by the Linnet's habit of eating the flower buds. While the Linnet do attack the fruit buds, I have never observed that any damage was done in this respect. In good fruit years the flower buds are so abundant that it is merely a thinning out of a worthless surplus, and in bad years fruit is scarce in even such localities, where the Purple Finch never makes its appearance.

The Purple Finch is one of our best cage birds. While residing at Oak Park, Ill., I caught one in a trap cage and kept it from the fall 1875 to early spring 1879, when I left for Texas. I presented the bird to a friend; he kept it until 1884, when it was killed by a cat. In confinement the Linnet is very fond of sunflower seed, hemp, Canary seed, and rice. Buds of trees, lettuce, meal worms, and grated hard boiled eggs are eaten with relish in spring and summer. In confinement the Purple Finch soon loses its beautiful red color. My caged bird changed on the back to brownish-yellow and on the under-side the red was soon replaced by a dull light yellow.

NAMES: Purple Finch, Linnet, Eastern Purple Finch, Purple Linnet, Rosy Linnet, Purple Grosbeak, Strawberry Bird (Connecticut), Hemp-bird and Sunflower-bird (in the West).—Purpurgimpel, Purpurfinck (German).

CASSIN’S PURPLE FINCH.

DESCRIPTION: "Male: Body, crimson; palest on the rump and breast, darkest across the middle of back and wing-coverts, where the feathers have dusky centers. The red extends below continuously to the lower part of the breast, and in spots to the tibiae. The belly and under tail-coverts, white, streaked faintly with brown, except in the very middle. Edges of wings and tail-feathers, brownish-red; lesser coverts like the back. Two reddish bands across the wings (over the ends of the middle and greater coverts). Lores, dull grayish. Female: Olivaceous-brown above; brighter on the rump. Beneath, white; all the feathers everywhere streaked with brown, except on the middle of the belly and under coverts. A superciliary light stripe.

"Length, 6.25 inches; wing, 3.34; tail, 2.50; bill above, .46 inches." (Ridgway.)

The California Purple Finch, *Carpodacus purpureus californicus* Baird, differs little from the eastern race. All its colors are darker. Its home extends from British Columbia to southern California, breeding in the mountains.

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CASSIN’S PURPLE FINCH.

*Carpodacus cassini* Baird.

N THIS species Prof. Rob. Ridgway gives the following account:

"Although this Finch was observed to be essentially pinicoline, it was occasionally found among deciduous trees when such occurred in the immediate vicinity of coniferous forests, this being notably the case during the breeding season. In the pine forests of the Sierra Nevada, near Carson City, these birds were first observed on the 21st of March, at which date large flocks were found among the trees. They continued to increase in abundance until about the middle of April, when they gradually dispersed through the forest, the greater number going higher up the mountains. At the time of their arrival they were in full song, and continued so during the season, and it was noticed that the young males, in the plumage of the females (possibly the latter also), sang almost if not quite as vigorously and sweetly as those in the adult livery. In certain localities of the eastern slope of the Ruby Mountains they were quite abundant on several occasions, the flocks consisting chiefly of young-of-the-year, which, with their parents, had apparently come from the higher coniferous woods near the summits of the range, since no nests were found among the cedar and piñon groves of the lower slopes. In the pine belt of the Washatch and the Uintah Mountains they were abundant from May to August, during the whole of which time they were nesting. Most of the nests found were among the aspens and narrow-leaved cotton-woods\(^1\) of the higher portions of the ravines, where these trees replaced the conifers.

"The song of this species is clear and sweet and is even superior to that of the Eastern Purple Finch, which, however, it greatly resembles. Many passages are loud and clear, and so much like the notes of certain Vireos, that we were several times led by them in search of a new Greenlet. Other portions of its song, which was greatly varied, were sweet soft warblings, and tender, whistling calls."

\(^1\) *Populus tremuloides* and *P. angustifolia.*
HOUSE FINCH.

Carpoaacus mexicanus frontalis RIDGWAY.

PLATE XX. FIG. 6.

EVERY highminded man is a friend, a true friend of the birds, and ever has been. There is a tie between him and these beautiful feathered beings, who enliven our gardens, woods, meadows, and fields, a tie which grows stronger with time and closer acquaintance. This affection which he feels for them, is to some extent an inheritance coming down from earlier, long past days; for before the scientist looked into the ways of these winged favorites, the poet and the simple minded peasant had long observed and loved these companions of their country solitude. The one as well as the other looked at the birds with the eyes of a child, admired the grace and the beauty of plumage, in mind even accompanied them over hill and dale, over land and sea, the one devoted to them verse and song, the other showed them hospitality, gladly received them in and about his dwelling place, and could not withstand the temptation to bring them even into captivity in order to enjoy their presence. Such are the ties that continue in undiminished form even to the present day.

The special favorites of man among the birds are those who take up their abode habitually in the garden and in or near his buildings. None are more loved, none find a heartier welcome when they return home from their winter-quarters, than the familiar Barn Swallows, the merry Purple Martins, the lively Wrens, the amiable Bluebirds, the bright colored Baltimore Orioles, the loud-voiced Robins, the melodious Cathbirds, the plain-colored, sweet-voiced Song Sparrows, the Canary-like Goldfinch, and other familiar birds. The earliest arrivals, the true harbingers of spring, inspire even indifferent people with joy and happiness. In the South no other bird is such a universal favorite as the many-tongued, unrivaled Mockingbird. In the West the House Finch, House Linnet, also called California House Finch, and by the Mexicans, Burion, is one of the loveliest and most confiding birds. Occurring from the 40° south into Mexico, and from New Mexico west to the Pacific, the House Finches are common birds in New Mexico, in Arizona, California, and Nevada. Wherever they occur, these beautiful
birds have won the friendship of man. They are exceedingly tame, building like the European Sparrow in nesting boxes put up for them, in outbuildings, in bushes, and in every nook and corner. As soon as the morning begins to dawn, they commence to sing their sweet and melodious strain. Their excellent song, beauty, and familiarity combine to make them great favorites of Californian rural life.

Prof. Robert Ridgway, who has had the opportunity of observing this bird in California as well as in Nevada and Utah, gives the following account of its life-history:

"The 'Red-head Linnet' was the most familiar and one of the most abundant of the birds found at Sacramento, where it frequented the shade trees of the streets or the door yards and gardens in the city in preference to groves in the suburbs or country. In its abundance and semi-domestic habits it thus reminds one somewhat of the European House Sparrow, but, unlike that bird, endeared itself to its protectors by the possession of a sweet song and brilliant plumage. It is greatly prized as a cage bird, and justly, too, for while its plumage is equally pretty, its notes excel those of the Canary in sweetness, while at the same time they are fully equal in vivacity and power. All the notes are decidedly Canary-like, the usual utterance being a soft musical tweet. The song itself differs from that of the Canary chiefly in being more tender, less piercing, and interspersed with more varied warblings. The males were observed to be shyer than the females, the wariness being perhaps explained by the fact that several were noticed which had their tails clipped, showing that they had once been in captivity. When their nests were disturbed, however, the males exhibited as much concern as the females, and kept up a lively chinking from an adjoining tree.

"Few birds are more variable as to the choice of a location for their nests than the present species, since it adapts itself readily to any sort of a place where safety is assured. At Sacramento they usually build among the small oak trees, generally near the extremity of a horizontal branch, but one nest was placed inside the pendulous, basket-like structure of a Hanging-bird (Icterus bullocki); in the narrow gorge of the Truckee River, where that stream breaks through the Virginia Mountains, one was found inside the abandoned nest of a Cliff Swallow; along the eastern shore of Pyramid Lake numerous nests were found among the rocks, placed on shelves in the interior of caves, along with those of the Barn Swallow and Say's Pewee, or in the crevices on the outside of the tufa-domes, while in the neighboring valley of the Truckee, where there was an abundance of cotton-wood timber, their nests were nearly all built in the low grease-wood bushes. On Antelope Island, in the great Salt Lake, they preferred the sage brush, like the Black-throated and Brewer's Sparrows; in City Creek Cañon, near Salt Lake City, one was found in a mountain mahogany tree, while in Parley's Park another was in a cotton-wood tree along a stream. At all the towns and larger settlements, however, a large proportion of the individuals of this species have abandoned such nesting places, as those described above, and resorted to the buildings, where 'odd nooks and crannies' afforded superior attractions.

"Although chiefly a bird of the lower valleys, this species was sometimes found in the lower cañons of the mountains, it being common in Buena Vista Cañon, in the West Humboldt Range, in September, having apparently nested in the ruined adobe houses of the deserted town. In City Creek Cañon, near Salt Lake City, several nests were found
at an altitude of about 1800 feet above the level of the mesa, or at the lower limit to
the breeding range of Cassin's Purple Finch, a single nest of which was found on a tree
adjoining one in which was a nest of the present bird. In Parley's Park it was likewise
found; but in small numbers, and only on the floor of the park, the Cassin's Purple
Finch inhabiting the upper portion of the streams."

In order to give my readers a full account of this valuable and familiar bird of the
West, I cite the following from Colonel McCall's biographical sketch of the House
Linnet:

"I found this charming little Finch abundant at Santa Fé, N. M., where it
commenced nesting in March, although the weather was still wintry and so continued,
with frequent snow-storms, for more than a month. Notwithstanding this, the song of
the male failed not to cheer his mate, during incubation, with the liveliest melody. The
notes often reminded me of the soft trill of the House Wren, and often of the clear
warble of the Canary. The males of the last year, though mated and apparently
equally happy and quite as assiduous as their seniors, were not yet in full plumage,
having little or nothing of the red colors that mark the adult birds.

"The nests which were stuck into every cranny about the eaves and porticos of
the houses throughout the town, were variously composed of dry grass, fine roots,
horse-hair, long pieces of cotton-twine, or strips of old calico; in fine, of countless odds
and ends, that were picked up about the yards;—these were curiously and firmly inter-
woven, so as to make a warm and comfortable abode for the new-comers.

"His disposition toward other birds appeared to be mild and peaceful, and I had
many opportunities to observe. I will mention one instance. In the piazza of the house
I occupied, quite a colony of these birds had their nests; here the work of building and
incubation had gone on prosperously for several weeks, although the weather at times
was stormy and cold, and ere the genial warmth of spring was fairly felt, the colony
might have been said to be fully established. As the season advanced and birds of a
less hardy nature began to arrive from the South, a pair of Barn Swallows made their
appearance, and forthwith entered the territory of the Finches. And here they at once,
very unceremoniously, began to erect their domicil. This act of aggression would have
been fiercely resented by most birds, and violent measures would have been resorted to,
to eject the intruders. The conduct of the little Finches was quite different; at first
they stood aloof, and seemed to regard the strangers with suspicion and distrust, rather
than enmity. In the meantime the Swallows went quietly to work, without showing
any inclination to intermeddle; and in a day or two (their mud-walls all the time
rapidly advancing) they gained the confidence of their neighbors, and finally completed
their work unmolested. Indeed, a perfect harmony was established between the parties,
which I never saw interrupted by a single quarrel during the time they remained my
tenants."

Mrs. Sophia Zimmermann, then at San Miguel, San Luis Obispo County, Cal.,
kindly sent me the following account:

"The House Finch is one of the commonest songbirds of this locality. The winter-
storms, accompanied by heavy rains, are still in full force. The oaks (Quercus corbata),
cotton-wood trees, and the sycamores are still leafless. In the fields and on the hill-
sides, however, a velvety green gladdens our eyes. Several species of flowers are blooming already. Near San Miguel I have found on January 15 quite a number of different flowers. At this time the House Finches usually make their appearance in large flocks. One morning, early in February, a loud song arrested my attention, and I noticed with great pleasure numerous House Finches around the water pots and nesting boxes which I had put up on trees for the convenience of these birds. After their arrival the males are fighting with great vehemence for the females, and later there is much quarreling going on for the best nesting sites. The foundation of the nest consists of plant-stems, especially of the woolly stems of *Microps californica*, and the interior is lined with softer material. I am in the habit of supplying these birds and the Orioles with nesting material, and I have invariably found that the birds prefer to go quite a distance to get it instead of taking that which is nearest the nest. They always select white or neutral colored strings and pieces of cloth. Colored material they never employ. Blue, black, red, and yellow strings were never used. Bullock's Orioles also showed a great dislike for colored material.—The House Finch has a great predilection for nesting boxes, but where these are not supplied, every nook and corner near or in a house is occupied by a pair. Beneath the roof, even over the door in a house, I have seen the nest. The birds are exceedingly tame, especially where they are protected. Last spring (1890) two and even three pairs came regularly through the window into my room. On the trees around our house numerous nesting boxes decorated with lace lichen (*Ramalina retiformis*) and moss are to be found. They were occupied as soon as they were fastened to the trees. These very natural looking moss-houses are especially adapted for these birds. ... Two years ago an old overcoat was left hanging on a tree during night. When I came to the spot the next morning I was very much surprised in finding in one pocket a nest of these birds just commenced. I left the coat in the same position and arranged the other pocket so that it also could be occupied. During the next hour an other pair had settled in it. Several broods of young birds were raised successfully in each pocket. I have also seen the birds using old Oriole nests for nesting purposes."

The House Finch has all the requisites for a valuable cage bird. An excellent singer, of fine plumage, very tame, easy to keep, it is especially adapted for the cage and aviary. Sunflower seed, millet, Canary seed, rice, and now and then a little fruit and a few meal-worms are sufficient to keep the bird in good health. After a short time the beautiful red color gives place to a rather dingy yellowish-brown. The California Linnet is rarely found in the bird-stores of the East and in Europe.

This bird is merely a variety of the *Crimson-fronted House Finch*, *Carpodacus mexicanus* Ridg., of eastern and southern Mexico.

**Names:** House Finch, California House Finch, California Linnet, Red Linnet, Burion.—Hausfink (German).

**Scientific Names:** *Carpodacus rhodocolpus* Cabanis (1851). *Carpodacus frontalis rhodocolpus* Ridg. (1873). *CARPODACUS MEXICANUS FRONTALIS* Ridg. (1887).

**Description:** "Adult male: Above, brownish-gray; below, whitish, more or less extensively streaked with dark grayish-brown; wings and tail, dusky grayish-brown, the feathers edged with a paler shade of the same. The red spreading at least over breast (sometimes over whole lower parts, except
AMERICAN CROSSBILL.

Loxia curvirostra minor RIDGWAY.

When the flowers long have withered,
   And the wind blows chill north-west,
In the hemlock bough a bird is
   Building then a little nest.

There this bird of blood-red plumage,
   'Spite grim winter's darkest mood,
Faithful to her instinct, hatches
   Fervently her little brood.

Wonderbird, oh faithful Crossbill:
   When the world looks drear to me,
With but duties ties to hold me,
   Then, oh then I think of thee!

From the German of JULIUS Mosen,
   by FRANK SILLER.

THE POET calls the CROSSBILL a "Wonderbird," and not without good reason.

This bird of the evergreen woods has some startling peculiarities which really justify this term. It occupies quite a place in poetry and fairy-tale, being the Gypsy among the birds, the Parrot of the evergreen forests, whose courtship and song even bid defiance to winter, when ice and snow cover the earth and weigh down the dense branches of the pine, spruce, and hemlock. The real home of the Crossbill is found in the vast and lonely northern forests of coniferous trees, not often trodden by human feet. There they live in great numbers. They are not confined to any particular region, but are great wanderers, and sometimes suddenly appear in localities where they were never seen before, and then disappear as mysteriously as they came. Their migrations depend on the abundance or scarcity of the seeds of the evergreens, their favorite food. If that be plentiful, they remain, if not, they wander on, even into thickly settled localities. They often breed there and then disappear as suddenly as they came. Sometimes they arrive in large numbers in forests where they were not seen for years. Apparently they make the locality their home, they breed, raise their young, and are off again to renew the same process in other parts of the country during another year. In America their migrations have extended as far south as Mexico. Doubtless the quality and quantity of the coniferous seeds in the different parts of the country have much to do with their coming, remaining, and departing. These irregular movements can only be explained by supposing that larger or smaller flocks of them are moving throughout the entire year,
roving through the forests and settling where the prospect for the seed of evergreens is encouraging. But where this appears less promising they pass on after a hurried reconnoitering. Thus they are more abundant in the large northern and mountain woods than in the more scanty forests of the lowlands, where good seed harvests seldom occur, and where the birds are more likely to be disturbed. Thus they become scarcer from year to year where the extermination of the pine forests is progressing at a deplorable rate in the Northern and New England States. In Europe this Crossbill, of which our American bird is only a variety, moves very far to the South, being found sometimes in Spain and Greece. They even cross the Mediterranean Sea, visiting the Atlas and the mountains of Asia Minor. Our Crossbill is not known to traverse such a vast extent of country, though it is breeding, sporadically, south to Maryland and Virginia near the coast, and to Kentucky, Tennessee, and Georgia in the mountains. In the south-western parts of the country, from western Kansas, Colorado, and Arizona south through the Highlands of Mexico, it is replaced by another variety, the Mexican Crossbill, _Loxia curvirostra stricklandi_ Ridg. It was also observed in the Coast Range and in the Sierra Nevada of California. In Colorado, according to Mr. Tripe, this bird, like the Pine Grosbeak, is irregularly distributed, flocks of hundreds being occasionally seen in Clear Creek County, while, as a rule, it is not commonly to be met with in that part of the mountains. It ranges much lower than the bird just named, "breeding from 7,000 feet, if not lower, all the way up to timber-line; nesting, as near as can be judged from the appearance of the young birds, in April and May, according to the elevation, or about the breaking up of the winter. In June flocks composed of young and old may be seen roving through the woods occasionally, and alighting on dead limbs and tree tops, where their bright colors and noisy chatter are sure to attract the attention of passers-by. They are not at all shy, and sometimes alight on trees in the midst of larger towns. Their food is the same as the Pine Grosbeak's—the seeds of pines, birches, etc.; and as they sometimes alight in the thickets of rose-bushes, rasp-berries, and other shrubbery, they probably add hawks and berries to their bill of fare. In June I have heard it sing very agreeably; its notes are much like those of the Pine Grosbeak."

The eastern variety I have frequently observed in Wisconsin, usually in very snowy and cold winters. They generally appeared early in January, in large flocks, and were rarely seen again during the next five or six successive winters. The Crossbills, just after their arrival, are so tame that they come without fear in the vicinity of houses, entering even the parks and gardens of our large northern cities. Evergreens are always preferred, as they afford them excellent resting places during the night, sheltering them at the same time from cold winds and snow. At this season they feed on the seeds of the mountain-ash, alder, birch, and all kinds of evergreens. In the cold winter of 1875 to 1876 the parks of Chicago and the suburbs around the city swarmed with Crossbills and other northern birds. They came into my garden and to the windows of my house at Oak Park, Ills., picking up crumbs, pieces of fat and tallow, hemp, millet, Canary-seed, cuttle-fish bone, and even salt. Quite a number were caught and kept in a cage, together with Pine Grosbeaks and Red-polls, which all lived in perfect harmony and peace. During the hot summer months they suffered very much and most of them died, while others for years remained perfectly healthy. After being caught they never
2. Parus atricapillus Linn. - Schwarzkopfmeise - Chickadee.
should be brought into a warm room. Such a sudden change will kill almost every bird. A very cool, unheated room is the right place for keeping them, and they should always be kept in small companies. A single bird soon pines away. With the exception of our beautiful Baltimore Orioles I have never observed birds that are so much attached to one another than these Crossbills. When I had caught one in the trap cage, the other of the pair did not leave its mate, but hopped around in great distress, uttering exceedingly mournful notes.

The Crossbill is a very diligent singer, even as a cage-bird. The song consists of a number of loud and flute-like notes, which are frequently intermingled with several harsh chattering tones. There are good and poor singers among the Crossbills, as it is the case also with most other birds. The song of the females is in every respect quite equal to that of the males. The usual note is a loud chatter, which is generally heard when they fly. While feeding among the dense evergreens, a soft, persuasive weed, weed is frequently heard.

I have never found a nest, although these birds, in the days of my boyhood, were sometimes exceedingly abundant throughout the year in the white pines around our small lake in Sheboygan County, Wisconsin. In Oconto County of this State Mr. B. F. Goss and Mr. A. J. Schoenebeck found a nest of this bird on June 9, 1892, in a hemlock. July 4 it contained four young. Near this old nest Mr. Schoenebeck found on April 29, 1893, another one, evidently of the same pair, with four fresh eggs; this was also built on a hemlock.

In Maine, Vermont, and even in New York this Crossbill has also been found breeding. The best account on the nesting habits of this bird has been given by Mr. Eugene P. Bicknell.

"Among those of our abundant birds," says Mr. Bicknell*, "whose nidification remains very unsatisfactorily known, the Red Crossbill occupies no inconspicuous position. True, the nesting of the very intimately allied European form is pretty thoroughly understood, but, so far as I can now recall, there is but a single authentic descriptive record of the nest and eggs of the American Crossbill having been discovered. In view of these facts it is with much pleasure that I find myself able to describe the nest and eggs of this species taken in the Lower Hudson Valley; theoretically one of the most unlikely places to be chosen as a breeding station in the State, and well illustrating the uncertain and erratic disposition of the species in question.

"The winter of 1874—75 will be remembered as one of extreme severity, during which most of our boreal birds appeared in greater numbers, and extended their range further to the southward than for many winters before. At Riverdale, New York City, Red Crossbills were first observed in 1874 on November 3 (a small flock). They remained apparently but a few days, but reappeared in larger numbers about a month later, and thereafter during the ensuing winter were constantly present in small roving flocks. At one locality, in particular, they were almost always to be found. This was about several private residences overlooking the river, whose grounds, abounding with various species of ornamental evergreens and conifers, especially larches and the Norway spruce (Abies excelsa) seemed to offer them especial attractions. Here as the winter

waned the birds became none the less common, and in the mild mornings of early spring time this species, as well as the Pine Grosbeak, would often be found in full song, frequently on the same tree. As I now recall them, the song of the Grosbeak was a subdued rambling warble, interrupted with whistling notes; that of the Crossbill bolder and more pronounced as a song. During the third week in April a male was daily heard singing about the same spot, and on the 22nd, in following up his notes, I came upon the female busily at work upon a nest. Several times I watched it arrange a burden of building materials, gathered from the ground but a few yards distant, in the almost completed structure, which on another visit a few days later appeared to be finished, but was empty. On shaking the tree the female fluttered from the nest, and while I was ascending both birds flew about me with notes of distress and alarm, the female approaching within a foot when the nest was reached, though her mate exercised a greater degree of caution. Notwithstanding all this demonstration, however, the male bird (unquestionably of this pair) was observed near the nest a short time afterward in full song.

"The nest was placed in a tapering cedar of rather scanty foliage, about eighteen feet from the ground, and was without any single main support, being built in a mass of small tangled twigs, from which it was with difficulty detached. The situation could scarcely have been more conspicuous, being close to the intersection of several roads (all of them more or less bordered with ornamental evergreens), in plain sight of as many residences, and constantly exposed to the view of passers-by. The materials of its composition were of rather a miscellaneous character, becoming finer and more select from without inwards. An exterior of bristling spruce twigs loosely arranged surrounded a mass of matted shreds of cedar bark, which formed the principal body of the structure, a few strips of the same appearing around the upper border, the whole succeeded on the inside by a sort of felting of finer material, which received the scanty lining of black horse-hair, fine rootlets, grass stems, pieces of string, and two or three feathers. This shallow felting of the inner nest can apparently be removed intact from the body of the structure, which, besides the above mentioned materials, contained small pieces of moss, leaves, grass, string, cottony substances, and the green foliage of cedar. The nest measured internally two and one half inches in diameter by over one and a quarter in depth; being in diameter externally about four inches, and rather shallow in appearance.

"The fresh eggs are in ground-color of a decided greenish tint, almost immaculate on the smaller end, but on the opposite side with irregular spots and dotting of lavender-brown of slightly varying shade, interspersed with a few heavy surface spots of dark-purple-brown. There is no approach in the arrangement of these to a circle, but between the apex of the larger end, and the greatest diameter of the egg, is a fine hair-like surface line; in two examples it forms a complete though irregular circle, and encloses the principal spots. In the other egg, which is the largest, this line is not quite complete and the primary blotches are wanting, but the secondary markings are correspondingly larger and more numerous. In another egg there are two perfect figures of 3 formed on the sides by the secondary marks, one of them large and singularly symmetrical. The eggs measure respectively .74×.56, .75×.58, .78×.59."
NAMES: **American Crossbill**, Red Crossbill, Common Crossbill.

**Scientific Names:** *Crucirostra minor* Brehm (1853).  *Loxia curvirostra minor* Ridg. (1885).

**Description:** Adult male, dull red, brightest on the rump, wings and tail uniformly dusky. Adult female, plain olive, tinged with grayish or yellowish.

Length, 5.50 to 6.25 inches; wing, 3.20 to 3.60; tail, 1.85 to 2.40 inches.

The variety *Loxia curvirostra stricklandi* Ridg. (Mexican Crossbill), is a little larger and the colors are brighter.

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**White-winged Crossbill.**

*Loxia leucoptera* Gmelin.

**Plate XXI. Fig. 4.**

This handsome bird is as erratic in its movements as the common Crossbill. Occurring during one winter in large flocks and in company with the common Crossbills, Pine Grosbeaks, Red-polls, Evening Grosbeaks, and Waxwings, it may, perhaps, not be found again in the same locality for the next five or ten successive winters. Like its ally it is a very gregarious bird, being never seen alone, but always in flocks. In the breeding season these flocks separate and each pair is following its own way. In the days of my youth I have sometimes seen flocks of from twenty to hundred in the dense and beautiful woods of white-pines in Sheboygan County, Wis. In the winter of 1875 and 1876 I observed them in great numbers in Oak Park, Ill.

“The Crossbills of both species,” says Mr. Winfred A. Stearns, “are birds of the most strongly marked originality of character, and it is never safe to predict what they may and may not be found about. Their most remarkable habit is that of breeding in winter, or very early in the spring, when one would think it impossible that the callow young could endure the rigors of the season. They are most devoted parents, seeming entirely insensible in the defence of their homes; and at all times, indeed, betray a confidence in man that is too often misplaced, and that seems the height of folly to one who knows as much of human nature as most people find out, sooner or later, to their cost. The birds are much attached to pine woods, the seeds of the conifers furnishing them abundant food, of a kind that their curiously shaped bills enable them to secure with great ease and address. From their summer resorts in the depth of the evergreen woods the Crossbills come flocking in the fall to all other parts of New England and beyond, generally associated with the other species, or with Pine Grosbeaks and Red-polls, always gentle, unsuspicious, and apparently quite at their ease. They are not so common, however, as the Red Crossbills are, and both species take such freaks in deciding their course of action that their appearance can never be relied upon. It need surprise no one to come upon a pair of Crossbills breeding anywhere in New England, though the general tenor of the Crossbill’s way is as above
Intimated; for they seem to be quite independent of weather and season. Their diet is not so exclusive as many suppose; the birds may sometimes be seen helping themselves to decayed garden fruits. Mr. Maynard has seen them feeding on the seeds of beachgrass, and has also found the stomachs filled with canker-worms. The eggs are still considered a great prize, few having come to the knowledge of naturalists. They are described as pale blue, with the larger end rather thickly spattered with fine dots of black and ashy-lilac; the size being 0.80 × 0.56. They thus resemble those of the Purple Finch and are probably indistinguishable from those of the Red Crossbill. Both species of Crossbills have a chattering or rattling note, usually uttered as they fly; but the true song is seldom heard south of their nesting grounds."

A nest of this bird was found by Mr. A. J. Schoenebeck, on April 27, 1891, on a small branch of Port River, some ten miles west of Ascanaba, Delta Co., Mich. It was found in dense evergreen woods, and was placed in the top of a small pine about twenty-five feet from the ground. Mr. Schoenebeck saw one of the old birds moving around in the tree top in a somewhat uneasy way, and when his companion, an old trapper, knocked against the tree, he saw two birds flying off. He at once climbed the tree and found to his great delight a nest with two fresh eggs. Both are now before me. The exterior of the nest consists of fine twigs and within this the nest proper is placed. It is built of hemp-like fibers, bark-strips, some fine grasses, and the inside consists of the same material and a layer of black horse-hair mixed with fibers. The inside diameter is 2.75 inches and the depth 1.75 inches. The eggs measure .82 × .60 and .81 × .62. Their ground-color is bluish-white, almost white when blown, marked with very fine spots of reddish-brown and a few larger dots of dark brown, especially on the larger end.

The breeding range of this Crossbill is found from northern New England and the Northern States northward. In winter it is rarely found south of 40°. Dr. C. H. Merriam found this bird in the Adirondacs, and Prof. R. Ridgway in the East Humboldt Mountains. Near Calais, Maine, Mr. Boardman found a nest in winter. In the Rocky Mountains of Colorado, Wyoming, and Montana it is not an uncommon bird.

Among the branches of pines, spruces, and firs these birds are of great beauty. In all conceivable positions they climb around among the dense branches like Parrots. They are especially attractive in winter when the snow weighs down the branches of the evergreens. Several times I have seen them together in such a snow-covered tree with the Red Crossbills, Pine Grosbeaks, and Red-polls. The partially red plumage contrasts beautifully with the dark green of the pine foliage and the snow that covers it.

I kept several of the White-winged Crossbills in a cage, and they took food immediately after being captured. They were very tame, picking pieces of fruit, hemp, and Canary-seed from my hand. They were almost constantly climbing around in the cage like Parrots, moving up and down on the sides of the cage and hanging and walking with the same ease, head downward, on the upper side of the wire netting. They did not seem to suffer from the summer's heat, for I kept them about three and several four years in perfect health.

Names: White-winged Crossbill.

DESCRIPTION: Male, adult: Rosy-red; feathers of the back, dark-centred; wings and tail, blackish, the former with two conspicuous white cross-bars. Bill, horn-color; both mandibles falcate, with crossed points. The shade of red varies greatly, but is never bricky or cinnamon, as in the other species of Loxia.—Female and young: Olive-brown, the feathers dark-centred; rump, saffron or gamboge-yellow; wing-bars, present.
Length, 5.75 to 6.00 inches; wing, 3.40; tail, 2.25 inches, forked.

BLACK ROSY FINCH.

Leucosticte atrata Ridgway.
PLATE XXII.

PROF. R. Ridgway sends me the following account on this rare and beautiful bird:

"The first specimen of Aiken’s Rosy Finch brought to the notice of ornithologists was obtained September 20, 1870, by the collector of the United States Geological Survey, under Dr. F. V. Hayden, on the Uintah Mountains. This grand range trends exactly at right angles with the meridian of 110°, along the south-western border of Wyoming, and forms part of the boundary line which separates the above-named territory from Utah. On which slope, or in what part, of the range in question the specimen was procured, is not known. It was described, in ‘History of North American Birds’ (Vol. I, p. 505), as the young of L. tephrocotis, with the remark, however, that ‘were it not unmistakably a bird of the year it would be considered almost a distinct species, so different is it from adult specimens of the Gray-crowned Leucosticte.’

“At the comparatively recent date when this first mention of the present species, wrongly identified, was published, the birds of this interesting genus were, with the exception of L. griseonucha, little known, probably less than two dozen specimens representing the entire material contained in public museums or private collections. During the winter of 1874—’75, however, the writer, when preparing his monograph of the genus*, was able to examine at one time more than four hundred specimens, embracing large series of L. tephrocotis, L. tephrocotis littoralis, and L. australis, besides three examples of L. atrata—more than half of which were generously loaned for the purpose by Mr. Charles E. Aiken, of Fountain (now of Colorado Springs), Colorado. At the present time, the three forms above-named, and also L. griseonucha, are common in collections, but L. atrata is still rare, while nothing has yet been learned as to its range during the breeding season. Speculations as to its summer home would, considering the paucity of our present knowledge, be idle; but it seems not improbable that its breeding grounds may be located in the unknown Rocky Mountain region of British America, or perhaps even within our own territory.”

NAMES: BLACK ROSY FINCH, Black Leucosticte, Black Gray-crowned Leucosticte; Aiken’s Rosy Finch.


DESCRIPTION: "Male: General color, black, darker than the frontal patch, deepest anteriorly. Female: General color, dusky slate, lighter than the frontal patch, and with a faint brownish cast on the dorsal region.—In winter-plumaged specimens, there is almost as much pink on the abdomen as in L. australis, while the lesser wing-coverts, together with the middle and greater coverts, form a uniform patch of this color—a delicate, soft, peach blossom-pink. In younger individuals the greater coverts and tertials are broadly edged with pale clay-color, while the scapulars are widely bordered with the same; the feathers of the breast are widely bordered with dull whitish, and the feathers of the neck, all round, have narrower borders of the same. The gray of the head is not so sharply defined in winter as in the spring specimens, and the bill is dull yellow, with a dusky tip. In the adult female, in spring, there is a less sharp outline to the ash of the crown, and the demarkation between this and the dusky frontal patch is not distinct; the dusky shading gradually along the median line into the color of the occiput.

"Length, 6.50 to 7.25 inches; wing, 4.15; tail, 3.09 inches." (Ridgway.)

GRAY-CROWNED ROSY FINCH.

Leucosticte tephrocotis Swainson.

The Gray-crowned Leucosticte, or Gray-crowned Rosy Finch is a resident of the interior of British America, near or in the Rocky Mountains. In winter this handsome bird is common on the eastern slope of the Rocky Mountains, especially in Wyoming, Montana, Colorado, etc. None seem to breed in our territory. They appear in small flocks during the coldest part of the winter. Their food consists of small seeds and insects.

"During the winter," says Mr. M. Trippe, "I saw several flocks of this bird near Central City, where they were feeding in the dry gulches and about gardens, acting like Lapland Longspurs; but did not observe them elsewhere, though I looked carefully for them throughout a large extent of country. During summer and autumn the Gray-crowned Rosy Finch is common above timber line, where it breeds, ranging higher than the Titlark, and being usually found in the vicinity of snow fields and the frozen lakes near the summit of the range. It is rather shy in such localities, though exceedingly tame in winter; its flight is in undulating lines, like the Crossbill's, and the only note I have heard it utter is a kind of churr, like the call of the Scarlet Tanager. In the latter part of September small flocks, composed of one or two families, may be seen together; and still later in the season they gather into large flocks. They stay above timber line till the close of October or the middle of November, being much harder than the Titlark; and only descend when driven away by the furious winter storms. * * * * Since the above was penned, great flocks of the Gray-crowned Rosy Finch have appeared near Idaho Springs. In their habits and actions they are very similar to the Snow Bunting. They are perpetually roving from place to place; feed upon the seeds of weeds and grasses; and are never at rest for more than a moment at a time, constantly whirling about in close, dense masses, like so many Longspurs."

"These Finches," says Dr. J.C. Merrill, "were first noticed here (Fort Shaw, Montana)
shortly before Christmas, when a heavy snow storm and very cold weather (the mercury solidifying on several occasions) brought many birds about the Fort for food and shelter. Of these, Snow Buntings and Shore Larks (var. Leucolaema) were the most abundant, and mingled with them were Red-polls and the present species. During the most severe weather the Finches, when not feeding, sought shelter in Cliff Swallow’s nests under the eaves of the stables,—a habit I did not observe in the other species. From that time to the present, about two months, the birds have been quite common, but only during storms; they appear about the buildings within an hour or two of the first fall of snow, and remain until the storm is over. They are now to be found for a day or two among the weeds in the post garden, and then disappear until the next storm; nor has diligent search revealed their haunts at these intervals. Though very tame, and associating freely with the Buntings and Larks while in the Fort, at the garden the Finches are usually seen in small flocks by themselves, or with the Red-polls. Here they are restless rather than shy, continually rising without apparent cause, to settle immediately near the same spot. The only note I have heard is a rather musical chink. On dissection the œsophagus was always found distended with the seeds of a small weed. Both Finches mingle indiscriminately. At this season of the year they are alike in having the bill yellow with dusky tip, iris brown, the legs and feet brownish-black."

This life-sketch of the Gray-crowned Rosy Finch would be incomplete, should I fail to quote an article from the pen of Dr. R. W. Shufeldt in the “Bulletin of the Nuttall Ornithological Club.” He writes:

“While stationed at Fort Fetterman, Wyoming, in the spring of 1880, I captured eight Gray-crowned Finches, all apparently in perfect health and feather. After the capture I decided, as well as I could from the diagnostic points of size and plumage, that I had the sexes about equally represented. As these birds were very plenty about my quarters, and anticipating the care of my pets, I had already constructed a large double cage for them, consisting essentially of a lower or breeding cage, 3x2½ feet, with a large side door, and admitting the light from in front and upper half through a rather coarse net-work. This part of their home was intended to represent and take the place of their outdoor existence. The floor was covered with two or three inches of earth and sodded; the grass growing well. Various styles of perches were introduced, miniature clumps of dry grasses, and odds and ends of building materials. Above and easy of access there was another cage, 2x2x2½ feet, with its floor also spread with earth, well lighted, and containing a large bath tub and a shelf intended to represent the eaves of a house, a style of perch the Gray-crowned Finch is particularly fond of. The capture was effected on the 10th of March, and the little fellows were introduced to their home for the summer. I had two objects in view: first, to observe their style of plumage during the summer months, and, secondly, if possible, to induce them to breed and rear their young. Imagine my delight, when I found that in a few days they not only became accustomed to their narrow quarters, but apparently thoroughly satisfied and happy. Flocks of their companions passing over were certain to be called down, to alight on the fences, the ground, and in fact everything in the neighborhood of the cage, to even the cage itself. Their plumage at this time of the year seemed to be almost in a perfect state, all the colorings being very dark. My captives were fed upon
Canary seed, flax seed, finely cracked wheat, and, later in the year, lettuce, and other tender leaves. As the sods at the bottom of the cage were often entirely removed, they no doubt obtained also many insects. Every morning as I approached the cage, a general and impatient chattering commenced for their breakfast and bath, and they immediately availed themselves of both in my presence; and often I deluged the entire thing, birds and all, with a large watering pot, they enjoying this sprinkling immensely. Later in the spring this part of the programme was followed by their mounting to the upper cage, pluming themselves in the sun, chattering among themselves, and the males giving utterance to a low, subdued, and plaintive sort of a song, being different from the shrill whistle they gave to attract the attention of their passing fellows outside.

"By the middle of May, all the birds of this species had entirely left the country; the spring migration was thoroughly inaugurated, and the weather was becoming very warm. Swallows were breeding and many other birds were evidently thinking of doing likewise. I now made their home as attractive as possible, by every means that my imagination could invent. Nests of birds of about their own size that built on the ground were introduced into the secluded nooks of their breeding cage, but these they invariably pulled to pieces the very day I placed them there. In short, by the middle of June I had abandoned all hope of their breeding, and during their entire confinement there never seemed any evidence of their pairing, or having the least desire, like sensible birds, of resorting to the business of the season.

"By the first of July, they were as gentle as any cage birds I ever saw; they would pick seed out of one's hand, and alight on your finger, if you quietly introduced it between the bars; in fact, they were all that any one could desire in the way of cage pets. On the 10th of July, I opened the doors of their little prison and allowed them all to escape, as they had suffered intensely from the heat for several days; the sudden exercise was rather too much for one or two of them, and they were readily retaken but only to be kept until the cool of the evening. The brilliancy of their plumage seemed to be at its acme in the early part of May; at the time of their release it was in all of them many shades paler. On several occasions during the summer they were seen about the post, usually one at a time, so I am quite confident they never made the attempt to either breed that season or to follow their companions to the northward."

A variety, Hepburn's Leucostictie, or Hepburn's Rosy Finch, L. tephrocotis littoralis Coues, inhabits the Pacific coast ranges of north-western North America. In winter it is found from Kadiak southward and south-eastward to the Great Basin, western Nevada, and eastern Colorado.

NAMES: Gray-crowned Rosy Finch, Gray-crowned Finch, Gray-crowned Leucostictie.

SCIENTIFIC NAMES: Leucostictie tephrocotis Swainson (1831).

DESCRIPTION: Male in winter. General color, dark cinnamon-brown, lighter and more chestnut below; the feathers to a considerable degree with paler edges, those of back with darker centres. Nasal bristly feathers, and those along base of maxilla, and the hind head to nape ash-gray, this color forming a square patch on top of head, and not extending below level of eyes. A frontal blackish patch extending from base of bill, and reaching somewhat beyond the line of the eyes, with convex outline behind, and extending less distinctly on the loral region. Chin and throat, darker
ALEUTIAN LEUCOSTICTE.

Leucosticte griseonucha Bonaparte.

According to Mr. Dall this species abounds on the Prybilof and Aleutian Islands. In August he observed it on St. George's; at this time it was moulting. "This beautiful bird had no song at that season except a clear chirp, sounding like wéet—a-wéet—a-wee—wee. It was on the wing a great part of the time, avoiding alighting on the ground, but darting rapidly in a series of ascending and descending curves, now swinging on the broad top of an umbelliferous plant, and now alighting on some ledge of the perpendicular bluff, jumping from point to point, and seemingly delighting in testing its own agility. Their nest is a simple hollow on one of these ledges, provided with a few straws or bits of moss. They lay four white eggs in May (0.97 X0.67). In August the young were fully fledged." In "Contributions to the Natural History of Alaska,"* Mr. L. M. Turner has given a good description of the habits of the bird, and Prof. R. Ridgway has figured it (on Plate VIII) in his admirable style. According to Mr. Turner, this Rosy Finch is common on all the Aleutian Islands, including the Pribylof group, Sannakh, mainland of Belkovsky, Unga Island, and was also observed on Kadiak Island. At Unalashka the bird is often seen. At the villages of St. Paul's Island and that of St. George's Island the bird is abundant in the so-called streets. Mr. Turner counted as many as twenty individuals around one building at St. George's Island; and some of them within few feet of several persons. They seemed regardless of the presence of man; while at other places they were seldom seen and were then shy, taking long flights when approached. This bird prefers the bold, ragged cliffs along the seashore. They are constantly in motion, either on the wing, flying in sweeping, long curves, sometimes near the earth, to mount thirty or forty feet at a single effort, alighting on some projecting ledge of a bluff to search for food, and away again to alight for a moment on a weed stalk. Their nest is built in a small projected ledge of a bluff, or else in a small crevice.

A nest was found by Mr. Turner in a small cleft of a rock on the side of a high bluff. It was composed of small pieces of wild parsnip stalks, coarse grass stems, and finer blades of grass to form the lining. The nest is not elaborate, the material being somewhat carelessly arranged. Four, sometimes five white eggs are laid in the early part of June. The young are able to fly by the first of August.

DESCRIPTION: Adult: Forehead and forepart of crown, black; throat, dusky; rest of head, uniform ash-gray; general color of plumage, dark chocolate-brown, with a chestnut cast on the breast, the feathers of posterior region tipped with pink.—Length, 8.00 inches; wing, 4.49; tail, 3.49 inches.

RED-POLL LINNET.

*Acanthis linaria* BONAPARTE.

**PLATE XXI. FIG. 3.**

ALTHOUGH it is midwinter, the banks of some rapidly flowing creeks and bubbling springs are the chosen haunts of bird-life. Where the water boils and foams around a moss-covered boulder, where dense shrubbery and masses of evergreens skirt the banks and the near surroundings, we may be sure to meet quite a number of birds in spite of the extremely cold weather. On sunny, warm winter days the Tree Sparrow sings almost as fervently as in spring. The Blue Jays rove around in flocks, making the woodland ring with their loud, harsh *jay, jay.* Pine Grosbeaks and Cross-bills are always seen in flocks, and they feel quite at home among the sombre green of the young pines. We also find that brutal highway robber, the Great Northern Shrike, killing many an innocent Finch or Titmouse wherever small birds congregate. The birds being common summer sojourners among the pines, hemlocks, birches, and elms, are gone. The sprightly Yellow Warbler feels just as happy in the gardens of Georgetown, British Guiana, among the tropical trees covered with the gorgeous *Bignonia venusta, B. Cherere,* and the beautiful eta and royal palms, as in the maples and other trees of its summer home. The charming Rose-breasted Grosbeak and the Scarlet Tanager, who both are denizens of these woodlands in summer, do now enliven the trees and palms of Venezuela and Colombia. The trees of their winter quarters are quite different from those of their northern breeding ranges, providing congenial homes for ferns, mosses, orchids, philodendrons, anthuriums, and other epiphytal plants.

One of the most common birds in our northern winter landscapes, and even in the gardens and parks of populated cities, is the RED-POLL LINNET, usually called the RED-POLL, a bird whose breeding range is limited by the Hudsonian Fauna. Like the Evening and Pine Grosbeaks, the Crossbills, Bohemian Waxwings, and other boreal birds, which come to us from the high north, the Red-poll also occurs usually in very large flocks, or in company with the birds just mentioned. Flocks from twenty-five to a hundred and more individuals are frequently seen. Like the above named species it is irregular in its movements, and we never can rely on its appearance. It may occur that these birds remain with us for two successive winters, but this may not happen again for the next five or six years. Doubtless their wandering to southern regions is due to the abundant or scarce food supply of their native land. In case the birch and alder yield an abundance of seed, they do not appear in our country, but if the food supply is short they are forced to move southward. At such times these beautiful and lively little birds pass the boundary line of the Northern States in great numbers.

Sometimes they arrive in Wisconsin and northern Illinois in November, but usually they are not seen before Christmas or the first of January, and they remain generally until March 1. The flocks roam about in the gardens among the evergreens, in weedy fields, in the thickets of the lowlands and tamarack swamps, in the shrubbery along
creoks and streams and on the woodland border. Everywhere they are searching for food. At this time the seeds of all kinds of weeds furnish their main food supply. I have even observed them on hay stacks, where an abundance of timothy, millet, and clover seed was found.

In their habits they are much like our familiar Goldfinch or Thistle-bird. They are very tame and easily caught in all kinds of traps. While feeding among the weeds and in the low, dense shrubbery, they are easily startled. The alarmed flock does not fly far. All alight in a neighboring tree and remain perfectly quiet. After a little while a few soft notes are uttered as if to assure each other that no danger is to be feared. Then they all fly down again, one after the other, searching for food as before.

While residing at Oak Park, Ill., I had a splendid opportunity to observe these and many other birds during the migration and in winter. A large garden planted with fruit trees, ornamental shrubs, and evergreens, next to my house, was the favorite resort of many birds. Red-polls visited this garden in large flocks. In the winter of 1875 to 1876 they were especially numerous. The first few appeared by the middle of November, while the majority did not arrive before the cold days of January. Among the late arrivals I noticed many of a beautiful red hue. Without fear they came under the kitchen windows, picking up millet, Canary seed, and crumbs of bread. The weeds in the garden (a species of Ambrosia) and the hemp stalks were thoroughly searched for food. Like Titmice they climbed, head downward, along the branches of shrubs and weed stalks, always uttering a peculiar chett, or chett-cherrett. The exceedingly lively and beautiful birds in company with other winter sojourners are especially striking objects among the snow-laden branches of firs, spruces, and pines, and they imbue such a cold and dreary winter landscape with joy and happiness. Their confidence, their innocent and cheerful manners, their climbing about in all imaginable attitudes combine to make them favorite pets wherever they come in contact with the lover of nature. In their northern home, where they are seldom disturbed by human intruders, they have no opportunity to make the acquaintance of man. For this reason they are charmingly innocent and confiding when they make their appearance from the North.

Fearlessly they enter large cities and all the smaller towns. The street urchin who does not take any notice of the common House Sparrow, at once takes up the chase of our small native birds with stones, sling-shot, and air-gun, and numberless Warblers, Finches, Creepers, and Nuthatches are killed annually in this way in our towns and cities. The schools have too much to do with biology, morphology, and physiology, and so their pupils are left in ignorance of the charms of nature, revealed to them in thousands of beautiful birds, plants, and flowers. The children are not taught to carefully preserve the beautiful in nature, to protect nature's poets, the birds.—The Red-polls who confidingly enter the cities in great numbers, are mercilessly killed with stones and sling-shots, with air-guns and sticks. But they soon learn to avoid danger, becoming just as wild and suspicious as they formerly were fearless and confiding.

Their flight is not very high, and the scattered flocks move along in undulating lines. They are excellent turners among the branches of bushes and trees, but on the ground they hop about in a rather awkward way. Nevertheless they frequently alight on the snow, picking up the seeds that have fallen down.
They are excellent cage pets, becoming very tame when well treated. As they are just as happy in the cage as among the trees and bushes, and take food at once after having been captured, they do not seem to feel the loss of their freedom. In the cage they should be fed with millet, Canary and rape seed, and in summer with cratered carrot, mixed with Mockingbird-food, lettuce and fruit should be added. They suffer, however, much from the heat of the summer.

On the Red-poll’s habits in its summer home Mr. E. W. Nelson* gives the following account:

“This and the closely-allied species (Acanthis hornemannii exilipes) commenced to nest in the vicinity of Saint Michaels, even as early as May 22, and in 1878, before the ground was free from snow, and while the sea and small streams were still covered with ice, we found a nest of this bird cunningly placed in a cavity in a stout branch projecting from a log of drift-wood, which a high tide, many years before had stranded on the bare tundra several miles from the sea. In the bottom of the shallow cavity, to which the bird gained access by a small knot-hole, was placed a compact structure of fine straw and grass, lined with Ptarmagin feathers and containing three eggs. The log was from twenty to twenty-five feet in length, and while a native sat at the farther end the female entered the nest, the male keeping close by and continually uttering his cheerful notes, as if to assure his partner of his presence.

“A pair of these birds built their nest early the same season within the shelter afforded by my inverted kyak, as it lay upon the staging close by the house, and nests were found all about in bushes, or tufts of grass, indifferently, according to the locality. The material used by them is as varied as the sites chosen, and appears to consist of such material as comes first to hand. One, for instance, is composed entirely of an irregular mass of fine dry twigs with a very few Ptarmigan feathers for lining; another, is a fine, compact, cup-shaped structure of dry, coarse grass, warmly lined with a finer material of the same, united with feathers and the cotton obtained from willows and other plants.

“It has been recorded from the Aleutian Islands, at Unalashka in Ellis’ voyage, and this is the only record from those islands. To the north I found it and the Hoary Red-poll on both shores of Behring Sea to the Arctic. On the Alaskan coast the two were common about Kotzebue Sound, the Hoary Red-poll, however, being the predominating species. In the vicinity of East Cape and adjoining portions of the Sibiran coast the two forms occur, the Hoary being in the majority there, as it is on our shore.

“The first nests are built early in spring, as noted, and from the middle of May until the last of June and first of July they are seen but rarely in the vicinity of the houses. After about the first of July, however, they come trooping about, young and old, in large parties, with great confidence and a peculiar pertness, taking possession of the premises and using the roofs and fences for convenient perches, making excursions thence to whatever point appears likely to yield food, or chasing each other playfully about. In spring they are beautiful objects, with their bright rosy hues and fluffy plumage. On warm sunshiny days during April they come familiarly up to the very windows and

doors, and peer about with an odd mixture of confidence and curiosity, examining everything, and scarcely deigning to move aside as the people pass back and forth. By the 8th of June their young are frequently hatched, and by the 1st of July are fully fledged. All through July and August they are extremely abundant, but in September the number commences to diminish, until toward the end of September the majority are gone, and but comparatively few are seen in the vicinity of the coast until spring approaches. Flocks of considerable size, however, unite at this season and remain about the country, frequenting the bushy tracts on the hill-sides, until into November, when all but a few of the hardiest leave. The migrants mainly flock to the interior where they brave the severest weather. The last of March and early in April they reappear on the sea-coast and make their first visits to the houses. Their movements at this season are rather erratic. They sometimes appear in considerable numbers and remain permanently, or they remain for a few days or hours, and then disappear for several weeks."

The Red-poll inhabits the whole northern hemisphere. In northern Europe it is very common. Tschudi has found it breeding in the Alps of Switzerland, Hanf in Steiermark.

NAMES: Red-poll Linnet, Red-poll, Common Red-poll.—Birkenzisig, Leinfink (German).


DESCRIPTION: Male adult: Uppers parts, streaked with dusky and light colors; crown with a rosy-crimson patch; rump, rosy-white, streaked with dusky. A dusky spot covering chin and upper part of throat. Below, white, heavily streaked with dusky except belly; breast, tinged beautifully with rosy-red or deep madder-pink. Female, similar, showing the red crown patch, but lacking the red on the chest and sides. Bill in winter, yellow, black in summer.

Length, 5.00 inches; wings, 2.91, much pointed; tail, 2.33, rather short and forked.

HOLBELL’S RED-POLL, Acanthis linaria holbælli BREHM, is a bird of the northern coasts of Europe and Asia (Norway to Japan), and has also been found on the coast of Alaska. In winter it has been also observed near Quebec. It is a little larger than the type.

GREATER RED-POLL, A. linaria rostrata COUES. This variety inhabits southern Greenland in summer and migrates in winter as far south as Wisconsin, northern Illinois, New England, lower Hudson valley; west to Manitoba. It is considerably larger than the common Red-poll, while the colors are darker.

BREWSTER’S LINNET, A. brewsteri RIDGW., lacks the red on the top of the head and the dusky spot on the chin. Only one specimen is known which was found at Waltham, Mass.

GREENLAND RED-POLL, A. hornemanni HOLB., and its variety, the HOARY RED-POLL, A. hornemanni exilipes COURS, can scarcely find a place in this book. The type inhabits eastern Arctic America south to Labrador and the variety is common in Alaska and has been repeatedly found in northern New England in winter. It inhabits circumpolar continental regions.
Our sprightly little Goldfinch is pre-eminently a summer bird. It does not take part in the jubilee of spring when the true harbingers of the early season, the Robins, Bluebirds, and Song Sparrows make the air resound with their sweet music. Even later, when the wild plum trees, the viburnum bushes, the June-berry trees, and other shrubs blossom on the woodland border, when the rosy flower buds of the apple trees open, we scarcely notice one of these birds. At this time the flowering orchard trees swarm with bright-colored Warblers, and in the tender foliage of the maples and elms the Baltimore Oriole sparkles like a flame. The Scarlet Tanager, the most beautiful and refined bird of our country, and the far-famed Rose-breasted Grosbeak are heard on all sides. The songs of both are exceedingly melodious and beautiful. In the woods we find now a host of handsome flowers, among them the blue polemonium and the white trillium. A little later, in June, we now and then discover a beautiful yellow lady’s slipper growing vigorously in the spongy soils of shady woods. Most of the birds are breeding now, and nests are found everywhere. The Goldfinch lingers till the gorgeous summer flowers open. “Not until the advent of summer do the brilliant large flowers appear; the spring flora is smaller, more delicate, and generally more ephemeral. You must stoop down for the spring flowers; the summer flowers reach up to you. The procession formed in May and augmented in June moves steadily through July, when wild lilies blaze and tall habenarias lift their purple spires; it moves onward during August over stubbles gay with vervains and willow-herb, and meadows fragrant with trumpet weed; it files more slowly in September along streams flaming with cardinal flowers and lanes lighted by golden-rod; until it halts and breaks ranks in late October, crowned with aster and everlasting, and strewed with painted maple leaves. Do we half appreciate these summer days? We long for them in winter, and wish the months were weeks, to bring them nearer to us. Let us enjoy them when they come; let us get nearer to this joyous life of nature, and join in the procession of flowers.

“You would know by the scent of the lilacs that summer was here. How fragrant the censer of June! how profuse with the scent of blossoming vegetation!—odors not alone from myriads of plants, but breathing from orchards, hedges, and thickets, rising from woods and hill-sides, blown from far meadows and pastures. What an exhalation of millions of open petals, mingled with the scent of green growing things! It seems as if nature could not do enough when her appointed time arrives; as if there were no end to her prodigality of bloom and song and color and sunshine: birds singing amid
GOLDFINCH.

the orchard blossoms, bees plunging into the flower-cups, meadows smothered with butter-cups, swamps golden with marsh marigolds, woods aflame with honey-suckles, fields crimson with clover—bird song, insect hum, and flower blossoms on every side!"*  

In the merry month of June we hear from early dawn till the evening falls a chorus of beautiful singing birds. The Oriole in the elm, the Song Sparrow in the rose bushes, the Catbird in the honey-suckles, the Summer Warbler in the mock orange, the Rose-breasted Grosbeak in the trees of the woodland border, the Veery in the mossy swamp, the Bobolink in the flower-adorned meadow, the Red-wing in the reeds, the Martin in the air—all sing in jubilant notes their hymns of joy and happiness. Not earlier than the latter part of that month our lovely little Goldfinch begins to join the chorus, and by July first all the males are in full song. Their brilliant melodious and liquid strains are now heard from all sides. Almost all other birds are now busily engaged in feeding their young, finding rarely time for singing, except in the dusk of the evening.

The Goldfinch which is also known by the names of Wild Canary, Thistle-Bird, Yellow-Bird, and Lettuce-Bird, is one of our most familiar species, being especially abundant in settled localities. Its colors are gay, its song sweet and varied, its ways and manners agreeable, innocent, and enjoying, and its nesting habits and its family life highly interesting. It is, therefore, quite worthy of the love and favor with which it is regarded by all who love nature. Like the Bluebird, the Robin, Catbird, Baltimore Oriole, and Martin, the Goldfinch is one of our most lovely, poetical, and valuable garden birds, and like all the others it has a character entirely of its own, harmlessness being its main feature.

This bird is distributed over a vast territory, being found from the Atlantic to the Pacific, and from the Gulf of Mexico to the fur countries. In these northern regions it was observed by Sir John Richardson. He says that it is one of the tardiest of summer visitors, departing in September. In its range of distribution the Goldfinch is found almost everywhere, at least at certain times of the year. It may be found in the lowlands as well as in the mountain regions. Prof. R. Ridgway found it breeding in the Uintah Mountains in July. He also observed it near Sacramento City, associated with the House Finch and often nesting in the same tree. Nests were found in this locality much earlier than in the East, from 6th to 28th of June. In the interior of California the Goldfinch is rarely seen. Dr. Newberry found it quite common throughout his route to the Columbia. This sweet songster, he says, has been a constant source of pleasure in the interior both of California and Oregon, far from the haunts of man, where everything else was new and strange. In California it breeds as far south as San Diego, but seems to avoid the hot interior valleys as well as the mountains. In south-eastern Texas, in Louisiana and Florida it is common in winter from November to April, but I have never found it there in the breeding season. In northern Arkansas and southern Missouri it is a rather common summer resident, but is not so abundant as in Wisconsin and northern Illinois. Although giving the impression of a delicate bird, it is quite a hardy little creature, capable of taking a Wisconsin winter as it comes. Probably these winter sojourners are northern birds, while the

summer residents have left for a more congenial clime in the Southern States. I have seen single individuals in Wisconsin about Christmas and New Year, and they uttered their common call-note *per-chick'-o-pee* as happily as in summer. Even the few that remain during the winter, are very erratic, moving from place to place until spring arrives.

In Wisconsin and northern Illinois the majority leave for the South early in November, when their favorite food supply is getting scarce. A few stragglers, however, linger until the middle of December, if the weather be fair. In the Gulf region large scattered flocks arrive in the last days of November or the beginning of December. Their favorite food in the Southern States is the seed of the button-wood tree or sycamore. Sometimes one of these gigantic trees is covered with these now very quiet, plainly dressed birds. With the agility of Titmice they hang on the balls which contain the seeds, and the air is full of the cottony substance in which the seeds are embedded. The seeds of this tree form their main diet during the first half of the winter in the Southern States. In spring they come down to the ground, where they search for seeds, small plants, and insects. While walking through one of the most beautiful streets in Houston, Texas, on March 29, 1880, I heard continually low sweet notes which were at once familiar to my ear. I looked around in the broad live oaks and in the magnificent large-flowering magnolias in the street and garden, but was unable to detect the birds. At last, when looking over the fence into the large, beautiful semi-tropical garden, I saw on the grass among rose bushes and gardenias a large number of Goldfinches busily engaged in searching for food. Their bills were entirely covered with black soil, and most of them were uttering their low call-note *ce-re-eye* at frequent intervals.

In Wisconsin I have rarely met with the first arrivals from the South before May 15, and sometimes I have not seen them before May 25. They usually make their appearance in large scattered flocks, which remain together till the breeding season arrives, when they separate into pairs. This is about the middle of June. Each pair now moves into its old quarters, or, in case of young birds, selects its breeding place in a locality not yet occupied by another pair. Where the birds are common, the nesting range of each pair is very small, and I have repeatedly found from five to six pairs breeding in one large garden or orchard.

"The Goldfinch," says Dr. T. M. Brewer, "is to a large extent gregarious and nomadic in its habits, and only for a short portion of the year do these birds separate into pairs for the purpose of reproduction. During at least three-fourths of the year they associate in small flocks, and wander about in an irregular and uncertain manner in quest of their food. They are resident throughout the year in New England, and also throughout the greater portion of the country, their presence or absence being regulated to a large extent by the abundance, scarcity, or absence of their favorite kinds of food. In winter, the seeds of the taller weeds are their principal means of subsistence. In the summer the seeds of the thistle and other plants and weeds are sought out by these interesting and busy gleaners. They are abundant in gardens, and as a general thing do very little harm, and a vast amount of benefit in the destruction of the seeds and troublesome weeds. As, however, they do not always discriminate between seeds that are troublesome and those that are desirable, the Goldfinches are unwel-
come visitors to the farmers who seek to raise their own seeds of the lettuce, turnip, and other similar vegetables. They are also very fond of the seeds of the sunflower.

"Owing possibly to the scarcity of proper food for their young in the early summer, the Goldfinches are quite late before they mate and raise their single brood. It is usually past the 10th of July, before their nests are constructed, and often September before their broods are ready to fly."

When the Goldfinches arrive in their summer home, the males have assumed their beautiful lemon-yellow and black color again, which they had lost in the fall. On this change of coloring Prof. R. Ridgway writes as follows:

"In the fall the male loses his beautiful lemon-yellow plumage and assumes a sombre garb like that of the female, which he wears until the succeeding spring, when the rich colors of summer are resumed very gradually, the change commencing in April and continuing until the summer is at hand, before all traces of the winter dress are lost."

In the love season the call-notes sound indescribably sweet and liquid. They consist of a soft tweet and a very low, persuasive ce-ree, ce-ree. These notes are also uttered in their winter-quarters, when the flock has scattered over a number of trees or over the ground, but then they sound quite different. Shortly before and during the nesting time, especially in July and August, they are often seen circling round and round "with the peculiar undulating flight and calling per-chick'-o-pee, per-chick'-o-pee, at each opening and shutting of the wings, or later leading their plaintive brood among the thistle heads by the road-side." (Burroughs.) At this time the male flies frequently in the air singing and circling around in ecstasy of song and happiness.

The Goldfinch belongs to our best songsters, its strain being remarkably sweet, melodious, loud, liquid, and varied. I love the song of this bird more than I do that of a common Canary-bird. According to Audubon, the song resembles that of the European Goldfinch, a bird that has been introduced to Boston, New York, Cincinnati, St. Louis, and Portland, Oregon, and which promises to become abundant in time. I have frequently heard the song of caged European Goldfinches, and must admit that the lay has a great resemblance to that of our native Goldfinch, but the latter is a far superior songster, its strain being louder, sweeter, more varied and brilliant. The song which has to me a singular fascination, commences and is often interrupted by uttering the common call-note ce-ree, or che-see, and by the characteristic per-chick'-o-pee.

"The song of the Goldfinch," says Dr. T. M. Brewer,—"very different from their usual plaintive cry or call-note, uttered as they are flying or when they are feeding—is very sweet, brilliant, and pleasing; most so, indeed, when given as a solo, with no other of its kindred within hearing. I know of none of our common singers that excel it in either respect. Its notes are higher, more flute-like, and its song is more prolonged than that of the Purple Finch." In July and August, even in the hot hours of noon, the bird sings diligently, and often two and more males are heard at the same time, vying with each other in their musical performances.

With the exception of the Cedarbird the Goldfinch is our latest breeder, and I have never found the nest in Wisconsin and northern Illinois before the 15th of July, and the majority were always found in August. In Wisconsin there goes the saying: "You may look for the nest of the Goldfinch, when the field peas are ripe," and I have
found this to be true. I have even discovered nests with sets of fresh eggs in the
beginning of September. The statement made by some authors that the Goldfinches
commence nestbuilding early in June in the Northern States is erroneous. Of the
hundreds of nests which I have examined during the last thirty years, none was found
before the second week of July. Of course the farther south the earlier the birds begin
to breed. I have seen nests in south-western Missouri in the last days of June and
early in July, the difference between the two localities being about two weeks. They
always prefer to select their nesting sites near dwellings, especially in apple, pear, and
plum trees of the orchard and in dense sugar maples, elms, and box-elders planted for
shade around the house, or, sometimes, in high mock-orange and upright honey-suckle
bushes. It is also found in Lombardy poplars in gardens and on the road-side, in trees
and shrubs in pastures and meadows, but never in the forest and on dry hills far from
water. During the warm summer weather the Yellow-birds are very fond of bathing,
and they are frequently seen on stones and rocks in shallow brooks for this purpose.
The nest is rarely placed higher than from seven to ten feet, although I have seen some
fifteen to thirty feet from the ground. They usually select an upright crotch, in which
they build their beautiful and warm structure very ingeniously. During the days of my
youth, when orchards were rare in Wisconsin, I discovered many nests in slender ash
saplings in the meadows about five or six feet from the ground. Of late I found in
several cases as many as five to six nests in one large apple orchard. The birds lived
harmoniously together, and the males were often seen flying around in company among
the thistles, sunflowers, and hemp stalks, singing diligently in the bright summer
weather.

The very artistic and warm structure is composed exteriorly of fine hemp and
asclepias fibers, tender grasses, shreds of cedar and grape-vine bark, and is lined with
a very thick layer of soft thistle down. Aug. 3, 1889, I found a very characteristic
nest in the orchard of my parents in Sheboygan Co., Wis. It was built in an upright
crotch of an apple tree, and contained six white eggs with a faint bluish tint. The
outside was mainly composed of sheep’s wool and several short flower spikes of a
species of vervain. The lining consisted of a few horse hairs and thistle wool. A
second nest was found Aug. 14 near the first one, and a third one the same day only
about forty steps from the second. All these nests were built in the same style and of
the same material. It usually takes six days before such a nest is finished, and twelve
days more before the eggs are hatched. The young leave the nest when about ten or
twelve days old. The nest is easily found, but where the birds do not feel safe they
cunningly hide their domicile among dense branches and leaves. Nests in south-western
Missouri cannot be compared in beauty and artistic skill to those in Wisconsin.
They are usually built of fine grasses and bark-strips, and the interior is lined with the same
material, lacking the compactness and beauty of northern nests entirely. The eggs,
four to six in number, are bluish-white; in very rare cases they are marked slightly
with fine brown spots.

In late August and in September waste places, abounding in thistles, are alive with
Goldfinches. They usually perch on the seed heads of these weeds until the stalks bend
almost to the ground. In all imaginable attitudes they pick out the seeds, and at such
times the air is full of thistle down. Whilst thus assembled they are always extremely harmonious and their happiness is expressed by their delightful twittering. The flight consists of a series of marked undulations, and, as I have noted already, occasionally of great circles in the air. Late in August and during September we hear on all sides the peculiar clamoring cries of the young birds, and even in October we may see them follow their parents crying for food.

The Goldfinches are excellent parents and do not like intrusion or a near approach to their domicile. They cry in pityful notes like he-de-de-de, he-de-de-de, and the kind-hearted observer soon leaves the premises after he has inspected the nest. Among the German settlers in Wisconsin, the Goldfinch is regarded an excellent cage bird. As soon as the young are able to leave the nest, they are placed in a cage and the old birds feed them until they are able to provide for themselves. Then they are taken into the house and are fed like Canaries—with a mixture of rape and Canary seed and now and then a few hemp seeds. I knew a Goldfinch that lived in captivity for thirteen and another for fifteen years.

Many of the old males are also caught in trap-cages when they arrive from the South. If caught later when they are paired, they die after a few days. These old birds rarely live longer than a year in the cage, and most of them die in the course of the first summer or in fall. In the cage our beautiful Goldfinch proves to be a rather delicate bird, and it takes careful nursing in order to succeed with it. It shows a very varied taste in regard to its favorite kinds of seed. The best food consists of a selection of the following seeds: Canary, flax, rape, oat-grits, hemp and lettuce seed, generally diminishing in favor as in the order named. Should the bird show a decided preference for hemp, it is not advisable to let it have too much, as this seed is very fattening. A few seeds each day or every two days are sufficient. Many bird fanciers do not give hemp seed at all. One very important item in the treatment of the Goldfinch consists in providing plenty of gravel or coarse sand, the former being preferable. This gravel or sand assists digestion, and is a great source of pleasure to the bird, besides being conducive to health.

"The Goldfinch, particularly when in the aviary, very often suffers from diarrhea and a wasting away of its flesh. When thus attacked, at once separate from the other birds, place in a small cage with plenty of gravel, over which strew some lettuce seed. Feed as recommended, adding plenty of lettuce seed, also giving some chalk in its water, first having deprived the bird until thirsty—say about an hour—not omitting to stir the mixture recently so as to ensure the bird getting its dose of chalk. If it has been previously fed on any green food, it had better be deprived of that luxury, or vica versa."*

The Goldfinches become very tame in an aviary. One time I kept about a dozen together with Juncos, Field Sparrows, Tree Sparrows, Chipping-birds, etc. When I entered the cage-door with my hand they at once alighted and picked hemp seeds from the fingers.

ARKANSAS GOLDFINCH.

Spinus psaltria Stejneger.

This is not a common bird, and our knowledge regarding its life history is limited, but we may venture to say that it is the counterpart of our eastern Goldfinch. The bird was discovered in Long's Expedition to the Rocky Mountains and described by Thomas Say in 1823. It is distributed over various parts of California and New Mexico, and is also found in Oregon, Utah, and Colorado, and—in winter at least—in Lower California, Arizona, Sonora, etc.

Dr. Heermann states that the birds are quite abundant in the northern mining regions of California, frequenting the same localities as Lawrence's Goldfinch, and often associated with the Pine Siskin.

Prof. Robert Ridgway found the Arkansas Goldfinch among the Wahsatch Mountains, his attention being at once drawn to it by its curious notes. He met with it first in the City Creek Cañon, near Salt Lake City, where he found it mixed with flocks of Pine Siskins. The note of this bird is remarkable for the powerful and at times very sad tone. The ordinary note is a plaintive, mellow, whistling call, impossible to describe, and so inflected as to produce a very mournful effect. When the bird takes to flight, it is changed to a simple cheer, similar to the anxious notes of the male Red-winged Blackbird, uttered when its nest is disturbed. This species was rare, not being so common as either the Common Goldfinch or the Pine Siskin. Its nest was found in Parley's Park, Wahsatch Mountains, June 27, in the top of a willow bush near a stream.

A nest found by Mr. Xantus, containing four eggs, was built in an Obione, about ten feet from the ground. This was at Fort Tejon, May 1. It is reported by Dr. T. M. Brewer in "History of North American Birds," that Dr. Canfield found their nests in considerable numbers, near Monterey. They were all built in the forks of trees, in the same manner as those of the Common Goldfinch, and were structures of remarkable beauty, evincing the great skill of the architects. Eggs, four to five, uniform greenish-white, unspotted.
The Arizona Goldfinch, Spinus psaltria arizone Stejn., a local variety of the foregoing, was found in considerable numbers by Dr. Elliott Coues in New Mexico, near Fort Wingate, and at Fort Whipple, Arizona. It is said to occur also in western Texas and in northern Mexico.

The Mexican Goldfinch, Spinus psaltria mexicana Stejn., is reported to occur in southern Texas, from where it is distributed through Mexico south to Costa Rica.

DESCRIPTION:  
Male: Upper parts and sides of head and neck of Arkansas Goldfinch olive-green. Upper tail-coverts, wings, tail, and hood, but not sides of head below the eyes, black. Underneath, bright yellow; white band on wings.  
Female: Upper parts and sides, olive-green; wings and tail, brown; white band and wings.—Length, 4.25 inches; wing, 2.40; tail, 1.85 inches.

LAURENCE'S GOLDFINCH.  
Spinus lawrencei Bonaparte.

This Goldfinch is common throughout a large part of California. In its habits it is much like the American Goldfinch, but its notes are weaker and the song is higher in its pitch. They are exceedingly gregarious in winter and move about in very large flocks. They eat the seeds of grasses and the buds of shrubs and trees with great avidity. Dr. Cooper says that they sometimes feed on the ground on grass-seeds. They are regarded by him as more of a sylvan species than the Common Goldfinch, and not so fond of willows and other trees growing along streams and in wet places. In the Colorado valley, it is said, they feed on the seeds of the Artemisia. They were found breeding at San Diego. Their nests were placed in forks of bushes or stunted oaks and were composed of fine grasses, lined with hair and feathers. Nests found by Dr. Canfield at Monterey, Cal., were all "more or less felted, and beautifully wrought, fully equal in artistic skill to the nests of the Goldfinch. They were about 1.50 inches in height and 3.00 in diameter, and the cavity 1.00 inch in depth and 1.75 in diameter. The walls of these nests were soft, warm, and thick, composed of wool, both vegetable and animal, fine stems of grasses, down, feathers, and other materials, all closely matted together, and lined with the long hair of larger animals. One of these nests was made up entirely of the finer grasses, strongly matted together." (Brewer.) The eggs are of a uniform greenish-white, very similar to those of the species described.

Correspondents inform me that at present this little Goldfinch nests preferably in pear, peach, almond, and apricot orchards, in orange and olive groves, and also abundantly in the California live oaks.

NAMES:  
Lawrence's Goldfinch, California Goldfinch.

Scientific Names:  

DESCRIPTION: "Male: Hood, sides of head anterior to the middle of the eye, chin, and upper part of throat, black. Sides of head, neck, and body, upper part of neck and the back, and upper tail-coverts, ash-color. Rump and lesser wing-coverts, yellowish-green. Throat below the black, breast, and outer edges of all the quills (except the first primary, and passing into white behind), bright greenish-yellow. Wings, black. Tail-feathers, black, with a white square patch on the inner web, near the end; outer edges, grayish; quills, black.  
Female: Similar, with the black of the head replaced by ash.  
Young: Like the female, but wing-bands pale fulvous, instead of yellow.  
"Length, about 4.70 inches; wing, 2.75; tail, 2.30 inches." (B. B. & R.)
PINE SISKIN.

*Spinus pinus Stejneger.*

NORTHERN Wisconsin forms the southern part of the Canadian Fauna. In the extensive and beautiful evergreen woods of this region many species of Wood Warblers breed, and the sweet soliloquy of the Blue-headed Vireo is often heard. The numerous cool springs, murmuring brooks and deep lakes, and the invigorating climate in summer make this hilly forest region especially attractive to the tourist and friend of nature. This is the true home of the Veery, the White-crowned Sparrow, the Slate-colored Junco and the Crossbills, and it is also the summer home of the always vivacious little Pine Siskin, or Pine Finch.

The Pine Siskin is an inhabitant of the extensive evergreen forests of the north, from the Northern States northward and from the Atlantic to the Pacific, but it does not seem to occur as far north as Alaska. In our own country it is found from Maine to New York, in Michigan, Wisconsin, and Minnesota, in the coniferous forests of the Alleghany Mountains as far south probably as South Carolina and Georgia, in the Sierra Nevada and in the Rocky Mountains, being also a common resident in the plateau of Mexico and in the Alpine regions of Vera Cruz, rarely or never descending below 3,000 feet. Its common name there is *Dominiguito montero.*

In winter the Siskins are very abundant in the Middle and Gulf States, where they often congregate with Goldfinches. They frequently come into the gardens in search of food, usually in small troops of ten or a dozen, conducting themselves much like Goldfinches under similar circumstances. In northern Illinois they generally appear by November 10, and by the end of that month they reach southern Missouri. They make their appearance in large flocks of from fifty to a hundred and more individuals, scouring the locality in the same erratic manner as their allies, the Red-polls. They are often mistaken for Goldfinches, as they resemble them very much, not only in regard to their general appearance, but also in their smoothly undulating flight, their climbing around on the weed stems, their lisping querulous call-note, and in the manner of procuring their food. In their winter-quarters they are often seen moving around together. During the breeding season, however, both species show so many differences, and the song of both is so unlike that only the beginner in the beautiful science of ornithology is liable to confound them. — In the pine woods of the Southern States they are very common in winter, feeding on the seeds of grasses and weeds which grow abundantly in these forests, as well as of the seeds of the sycamore and the river or red birch (*Betula nigra*).

In Wisconsin and other Northern States they appear in the early part of May or late in April, fully two weeks earlier than the Goldfinches. According to my friend, the late Capt. B. F. Goss, they breed rather abundantly in the northern part of Wisconsin, and his observations fully corroborate what Dr. C. H. Merriam has written about the nest. It is a rather bulky structure, the exterior being loosely built of hemlock and spruce twigs and moss, while the interior is compactly woven of plant down,
feathers, and hairs. A nest found May 27, 1891, in Town 29, Oconto Co., Wis., by Mr. A. J. Schoenebeck, was built in the dense branches of a small pine about twenty-five feet from the ground. It was constructed of grasses and pine needles, and the lining was a felted mass of plant down and feathers of the Ruffed Grouse and Blue Jay. The eggs, four in number, were too far advanced in incubation to be preserved. They were pale bluish-white, spotted rather sparingly with lilac and brown. A set of four eggs, taken June 25, 1887, in northern New York, and now in the “Goss Collection of North American Birds' Eggs,” in the Public Museum of Milwaukee, shows a great variation in regard to coloring. One egg is speckled all over with many reddish-brown and a few dark brown splashes and spots; the second has a dense wreath of dark and light brown markings and a number of spots all over the shell; the third is only spotted with dark and light brown marks on the point of the larger end, being almost without a trace of markings on the rest of the shell, and the fourth is almost immaculate.

Dr. A. K. Fisher found a nest of this bird at Sing Sing, N. Y., and Dr. J. A. Allen discovered another one near Cornwall-on-Hudson, Orange Co., N. Y. The house where Dr. Allen stopped from April 20 to May 12, 1887, was in the midst of a lawn of several acres in extent, well set with fruit and shade trees, overlooking the Hudson.

This great ornithologist writes: “On the day of my arrival a small flock of Pine Finches, busily hunting food in the pines and spruces, attracted my attention, but as the season was late and the weather still cold it was not, of course, a noteworthy occurrence. They continued to haunt the vicinity for several days, when all disappeared except a single pair. On the morning of May 3, I was surprised to see one of the birds gathering material for a nest. She was easily traced to the lower branch of a Norway pine, scarcely thirty feet from the piazza, and almost within reach of a little summer house overrun with a wisteria vine. The site chosen for the nest was the extremity of the branch, about eight or ten feet from the ground, and well concealed. Several times the little builder carried material to the nest while I was sitting in the arbor, almost within reach of it. Although I afterward carefully kept away, the birds seemed not fully satisfied with the exposed situation, and after the second day I noticed that nothing seemed to be added to the structure, and my fears that they had abandoned it proved true. Still the birds were about, and the female was often observed with bits of nest-material in her bill. A little patient watching disclosed the fact that a new nesting-site had been chosen,—this time the extremity of an upper branch of a neighboring Norway pine, about thirty-five feet from the ground, and about the same distance from the much frequented piazza of the house. As it was on the side of the tree toward the house, and nearly on a level with the windows of my room, I had a fine opportunity of watching the industrious little architects, although the nest itself was completely hidden from view by the dense pine needles in which it was placed.

“One of the birds, presumably the female, did all the work, but was escorted to and from the nest by the male, who further manifested his interest and joy by a profusion of Canary-like twee-e-ts and other peculiarly sweet and pleasing notes. Later the birds were more silent and much less frequently seen;—it was evident that incubation had begun. Here was certainly a prize, which, in view of all the circumstances, it seemed hardly right to ignore; for the nests and eggs of the Pine Finch are by no
PINE SISKIN.

means easy to discover, are still rare in collections, and the breeding of the species so far south of its usual summer home a noteworthy event; yet it required no slight struggle with tender feelings to decide to break up the happy home, even in behalf of science, and of the museum whose ornithological interests I may be supposed to have deeply at heart.

"On May 12 I enlisted the services of my young nephew, R. T. Swezey, who kindly ascended to the nest on a tour of observation, finding, as was anticipated, a full clutch and the female sitting. She remained on the nest till his hand touched the branch on which the nest rested, when she flew off with a great outcry and dashed frantically about for some seconds, passing and repassing within a few yards of the nest, uttering such plaintive notes of distress as to make the task of securing the prize indeed a sad one. The nest was placed at the base of a bunch of cones within a few inches of the extremity of the branch, and being thoroughly shielded on all sides by the strongly resisting, long, sharp needles, it was no easy matter to reach out to the nest and, inserting the hand, safely remove the coveted treasures."

The nest contained four eggs of a pale bluish-white ground-color, speckled and dotted with dark reddish-brown. "The nest was well-built, neat, and compact, and quite large for the size of the bird. It measured 2.25 inches in inside diameter, 3.50 inches in outside diameter, 1.50 inches in depth (inside measurement). The base of the nest is formed of string, thread, a long piece of tape, and rootlets woven into the pine needles on which it rests, some of the strings and the tape being looped about and bound to the clusters of the needles. On this rests a cup-shaped structure of coarse and fine rootlets and soft vegetable fiber, lined with black horse-hair." The nest and its contents are now in the American Museum of Natural History at New York.

The Siskin is quite a hardy bird, wintering often in small numbers in southern Wisconsin and northern Illinois. Like the Goldfinches they have a strong instinct for sociability which they show even in the breeding season, and it is stated that they usually breed in communities, "large numbers occupying for that purpose the same tract of evergreen wood or swamp, sometimes shared by equal numbers of Crossbills."

In the cage the Pine Siskin becomes very tame and much attached to its master. It sings from early May to the end of July diligently. The notes are sweet, varied, clear, and mellow, but they are perfectly distinct from those of the Goldfinch. In the cage it requires the same care as the Canary-bird.

NAMES: Pine Siskin, Pine Finch, Pine Lianet.—Tannenzisig (German).


DESCRIPTION: Male and female: Above, grayish or brownish-olive, below, whitish, plumage conspicuously streaked with dusky. Concealed bases of quills and tail-feathers sulphur-yellow. Two brownish-white bands on wings. Tail, deeply forked.

Length, 4.50 to 5.25 inches; wing, 2.75 to 2.90; tail, 1.85 to 1.95 inches.
EUROPEAN GOLDFINCH.

Carduelis carduelis Boie.

The beautiful European Goldfinch, having been introduced and successfully naturalized a number of years ago, bids fair to become quite plentiful in and near New York, Hoboken, Boston, Cambridge and Worcester, Mass., in parts of New Jersey, Portland and other localities in Oregon, and probably also in St. Louis and Cincinnati. The bird was introduced in all these places in small numbers, but nowhere it seems to thrive so admirably than near Portland and in other parts of Oregon. The secretary of the Oregon Society of Acclimatisation at Portland, Mr. Pfueger, informs me that almost all the birds, especially Sky-larks, Chaffinches, Greenfinches, Blackbirds (Merula merula Boie), Song Thrushes, Starlings, Cardinals, and even Mockingbirds and other useful European and American songbirds, which were set free some years ago, thrive admirably and that the Goldfinch in particular finds the climate and the landscape very congenial, singing most delightfully and multiplying readily. In the extensive orchards they find most favorable haunts, breeding preferably in apple, pear, plum, and coniferous trees where the nest is well hidden among the dense foliage of the exterior branches. Food is always plentiful and the winters are extremely mild. In this region most of the birds have become residents, remaining throughout the year where they sing and breed.

A nest of this favorite bird, which is the true counterpart of our beautiful and familiar American Goldfinch, has been found repeatedly in Massachusetts and New York. On July 11, 1890, Mr. F. S. Wilder found a nest in Northville, a suburb of Worcester, Mass., in an apple tree within seven feet from the ground, similar to the nest described in Ridgway's "Manual of North American Birds," except that it contains no moss. In Central Park, New York, Mr. E. T. Adney discovered two nests April 20, 1886. They were built in pine trees and were placed among the tufts of pine needles, near the end of slender horizontal limbs, about twelve feet from the ground. The nest, compact, and cup-shaped structure is generally composed of fine grasses, mosses, fine bark-strips, etc., lined with a thick layer of plant-down. The eggs, four to six in number, are bluish or greenish-white, marked with reddish-brown round the larger end.

In Europe the Goldfinch occurs from central Sweden south to Greece and Spain, being also found on the Canary Islands and Madeira, in north-west Africa, Asia minor, and a large part of Siberia. In Italy this and other songbirds are exceedingly rare, owing to the "bird-murdering" habit of the Italians.

Within its range the Goldfinch appears everywhere, especially in such localities where fruit culture is common, orchards and ornamental trees near dwellings being its favorite nesting places. But the bird does not occur everywhere in equal abundance. In Germany and England where it is cherished by all and carefully protected, it is much more abundant than in any other European country. In the fall the Goldfinches assemble into flocks of several hundreds, wandering about in the region, but not migrating far to the south. Cold does not affect the birds, as they are able during the winter
to find their main food, the seeds of noxious weeds, everywhere. Only when deep snow
covers the ground they are forced to wander to more favorable localities.

The Goldfinch or Thistlefinch is a beautiful bird, and, like our own Goldfinch, it is
very restless, quick in its movements, and always happy, cunning, and suspicious. When
alighting in the top of a tree, singing in rapturous joy its sweet strain, the bird makes
the impression as if it were aware of its fine appearance. Being a denizen of the trees,
it rarely comes down to the ground, where all its movements are very awkward. While
resting, the tops of medium-sized trees are chosen. It is always suspicious of man,
and even shy, but only after the experience of the bird has found him its enemy. Where
it is cared for and protected, it becomes very familiar and tame, breeding and singing
frequently in close proximity to frequented walks in the garden or near the house. The
flight and the song also remind the observer of our Goldfinch, though its notes are
louder and not quite as mellow and sweet as those of our native species.

Its food consists in winter mostly of the seeds of weeds, and in fall those of the
alder and birch are searched for. In spring insects are added to its bill of fare, and in
early summer the seeds of the dandelion and lettuce are greatly relished. But its main
food consists of the seeds of the burdock and especially the thistle. It is a beautiful
picture to see the American and European species in a patch of thistles climbing around
and swinging themselves on the thistle heads. As a cage bird this Goldfinch is a great
favorite with bird fanciers, and in this respect it is much more valuable than our more
tender native species, being able to withstand the hardships of cage life exceedingly well.
It needs the same treatment in captivity as the Canary-bird.

NAMES: European Goldfinch, Thistlefinch.—Distelfink, Stieglitz (German).


DESCRIPTION: "Sexes alike. Forepart of head, all round, crimson; lores, hinder part of crown, occiput,
and bar from latter half-way across side of neck, black, rest of head, white, more or less tinged with
buff; hack and scapulars, plain brown; rump and upper tail-coverts, white; wings and tail, chiefly
black; greater portion of greater coverts, basal portion of lower secondaries, and basal half or more
of exposed portion of outer webs of primaries, pure gamboge-yellow; secondaries, primaries, and
middle tail-feathers, tipped with white, the inner webs of outer tail-feathers partly white; sides of
breast, sides, and flanks, plain cinnamon-brown; rest of lower parts, dull white.

"Length, 4.87 inches; wing, 3.02; tail, 2.05 inches." (Ridgway.)

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ENGLISH SPARROW.

Passer domesticus Schaeffer.

The English Sparrow, also called the European or House Sparrow, is at present
one of our most numerous and wellknown birds, being common in all the larger
cities and towns, and in many country places from the Atlantic to the Pacific and from
Canada to the Gulf of Mexico. The first experiment to naturalize this bird was made
by Hon. Nicolas Pike in Brooklyn, N. Y., in 1850, where eight pairs were imported
from England and liberated in spring of 1851. As these did not thrive, he imported other fifty in 1852 and set them free in Greenwood Cemetery in spring 1853. They did well and multiplied rapidly. In 1854 they were introduced in Portland, Me., in 1867 in New Haven, Conn., and in the same year a colony was established at Galveston, Tex. The year 1869 witnessed the importation, in one lot, of a thousand Sparrows by the city government of Philadelphia, which is probably the largest importation of Sparrows ever made to this country. The same year they were brought to Cleveland and Cincinnati, and about the same time they were liberated in great numbers in Chicago, Milwaukee, St. Louis, San Francisco, etc. In many cases it is positively known that the birds were brought to this country mainly from England and Germany. “But no sooner had they become fairly numerous at any of these points than people began to take them thence to other places, sometimes in large numbers, but more often only a few pairs at a time. In most cases these few birds were carefully watched, protected, and fed, and so multiplied rapidly, forming new colonies from which these birds spread steadily without assistance, and more rapidly by successive transportations by man. This important factor in the rapid increase and wide distribution of the Sparrow in America has been too generally ignored, and it is only within the past year that we have come to realize something of the magnitude of the ‘craze’ which led so many people to foster and distribute the serious pest.”

“The marvelous rapidity of the Sparrow’s multiplication, the surpassing swiftness of its extension, and the prodigious size of the area it has overspread are without parallel in the history of any bird. Like a noxious weed transplanted to a fertile soil, it has taken root and become disseminated over half a continent before the significance of its presence has come to be understood. The explanation of this phenomenal invasion must be found in part in the direct assistance given by man in carrying it from place to place intentionally; in part in the peculiar impetus usually given prolific species when carried to a new country where the conditions for existence are in every way favorable; and in part in its exceptional adaptability to a diversity of physical and climatic conditions. This adaptability has enabled it not only to endure alike the tropical heat of Australia and the frigid winter of Canada, but to thrive and become a burdensome pest in both of these widely separated lands.

“At first sight it seems difficult to understand why man should have taken so much interest in this bird, and aided in its rapid increase and spread; but the consideration of a few points bearing upon the matter will render the case more intelligible.

“A considerable part of our population, and especially that of the newer parts of the country, consisted of Europeans who naturally remembered with pleasure many of the surroundings of their former homes and doubtless often longed for the familiar chirp of the Sparrow. They had no strong associations connected with our American birds, and our treeless cities and uncultivated prairies contrasted strongly with the thickly settled country—half garden, half city—which so many of them had left. So, as opportunity offered, small lots of Sparrows and other European birds were brought to this country; or after the Sparrows became abundant in our Eastern cities they were

carried inland to a large number of different places. There is little doubt that if we could obtain the data relating to the introduction of Sparrows at all points where they are now found in the Mississippi Valley, we should find that by far the larger part of these introductions had been accomplished by English, German, and French citizens, inspired by the recollections of the birds of their fatherland.

"In addition, the prevailing ignorance of the average American citizen with regard to our native birds, joined to the totally erroneous, or at least grossly exaggerated, reports of the benefits conferred by the Sparrows in New York, Philadelphia, and other Eastern cities, tended to increase the interest which naturally attached to an imported bird, until many persons went to the expense of purchasing and shipping Sparrows to considerable distances in the belief that they were insectivorous birds and must prove beneficial wherever they could be naturalized. In this way a veritable Sparrow 'boom' was started, and the price of Sparrows in New York went up to such a point that many people desirous of obtaining the birds found it cheaper to club together and import them direct from Europe; while in many cases this was doubtless done from the desire to obtain birds from the neighborhood of the importer's native place, or through distrust of the kind of Sparrow already imported, which, unfortunately, was widely known from the first as the English Sparrow. We can never know how many separate importations were thus made, nor how many thousands of individuals were introduced, but it is certain that the number of places thus supplied with birds is much greater than has been supposed, and considering this fact and the rapid rate at which the Sparrow breeds, we ought not to wonder that it has so completely overrun the country."

It is due to the great care and fostering, and the protection that the Sparrows increased to such an extent that they have become a public nuisance. Had the people only turned their love and care to our beautiful native birds, to the lovely Bluebird, the brave Martin, the Robin and Wren, and to our excellent native Sparrows! How would these beautiful choristers have appreciated such love and protection by their exquisite song and familiarity! But all these useful insectivorous birds were treated with indifference and in many cases they were intentionally driven away and pursued with stones and shot guns. Their breeding places and the nesting boxes, placed on posts and in trees, and the tree holes were occupied by the Sparrows, and at present in the costly and fine parks of our larger cities we hear during the merry month of June no longer the fervent strains of the Wrens, the flute-like melodies of numerous Robins, the sweet warble of the Bluebirds; only the harsh and unpleasant chirping of the Sparrow falls on our ear. The anarchist, tramp, and loafer among birds has taken undisputed possession of the parks and gardens of our large cities and towns, and wherever this "ruffian in feathers" makes its appearance in the country and is allowed to multiply, most of the native birds are forced to leave their haunts.

When the intention to introduce the Sparrow into North America became known to European ornithologists, they did not hesitate to express their opinion on the subject. This opinion was expressed by the late Pastor W. Thienemann, of Zangenberg, Germany, in the following words: "All ornithological authorities agree that the Sparrow is a very injurious bird, quarrelsome, wily, and of a very low character. It does much
ENGLISH SPARROW.

injury to the fruit crop and especially to the grain, but most pernicious it becomes by
driving away almost all the other useful birds and by robbing them of their nesting
places. Its destruction is a necessity, its extermination an impossibility. To naturalize
it in other countries is more than unwise."

That the Sparrow eats the flower buds of fruit trees to a great extent is a well-
known fact, but this does not need much consideration. Enough will remain to insure
a good crop. Only when the Sparrows visit the orchards in swarms, as they often do,
the damage done to the fruit crop becomes very serious. To strawberries, peas, and
grapes they do more harm than any of our native birds. The flower lovers see with
great distress their first spring flowers, the crocuses, tulips, and pansies, robbed of their
blossoms by the Sparrows.

Where these feathered anarchists become abundant it is scarcely possible to enjoy
the presence of other birds in the garden. The nesting boxes devised for Bluebirds,
Martins, Wrens, Titmice, Great-crested Flycatchers, and other hole breeders are soon
taken possession of, the Sparrows having usually occupied them before the rightful
owners arrive from their winter-quarters. Should one or the other pair of these birds
be successful in occupying one of them, the Sparrows also know how to act in such
cases. They seem to have learned by experience the truth of the saying: "Union is
strength." If one pair does not succeed in dislodging the rightful owners, they violently
call in their harsh, noisy way for help. In a very short time quite a number of
Sparrows appear, attacking the denizens of the box, and after a hard fight they are
victorious. With great noise and much ado they take possession of the home of the
native songsters. This I have frequently observed, and the Bluebirds and Martins are
suffering especially from these foreign intruders.

In many cases protection has been afforded the pugnacious but interesting House
Wren and several of our Titmice by supplying them with boxes the entrances to which
are too small to admit the Sparrow; but this does not suffice in all cases.

Concerning the Purple Martin's contests with the Sparrow, I refer the reader to
p. 340, 341 of Vol. 1 of this work.

They also injure other birds by throwing their eggs and young out of the nests and
using the nesting material for themselves. Where they are common, they destroy many
nests of the Robins, Baltimore and Orchard Orioles, Vireos, Goldfinches, Painted Finches,
and Cardinals. Mr. Otto Widmann, of St. Louis, observed that they entered the nesting
boxes of the Martins in the absence of the owners, eating their eggs, and I have made
a similar observation in Milwaukee, where they destroyed the eggs of the lovely little
Chipping Sparrow. Every unprejudiced observer may see all this with his own eyes.
The same observations have been made in Germany and in England, and the friends of
the songbirds in those countries do not tolerate this tramp among the birds of their
gardens. Those of our birds not directly driven away by the Sparrows are so much
annoyed by them that they also leave the parks and gardens.

"There seems to be no possible escape from the conclusion," writes Mr. Walter
Barrows, "that the Sparrow exercises an important and most harmful influence on our
native birds. It is not claimed that in all cases where native birds have become less
abundant, or have entirely disappeared from town or farm, the Sparrow is the cause.
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On the contrary, we know positively that there have been marked changes in the numbers and kinds of birds visiting certain districts, under such circumstances that it is impossible to attribute these changes to the influence of the Sparrow. The settlement of a country frequently causes great changes in its bird life. The rapid growth of towns and cities, without a corresponding increase in parks and gardens, has done much to diminish the number of birds. Cats, small boys, feather hunters, and similar agencies have aided in the war of extermination. The Bobolink breeds much less abundantly in New England now than it did twenty-five years ago, but this is well known to be due partly to the introduction of mowing machines and the cutting of hay much earlier in the season than formerly, and partly to the wholesale destruction of the species during its migrations. But the fact that all disappearances of native birds from town or country can not be charged to the Sparrow in no way lessens its responsibility for such changes as it unquestionably has caused.

"On the other hand, many of the most stalwart champions of our native birds are not altogether free from blame for their partial disappearance. In how many cities of the Union were native birds carefully protected and encouraged to build their nests before the introduction of the Sparrow? It is certain that in many cities hundreds or even thousands of boxes were provided for the introduced Sparrows, where scarcely a dozen had been given to native birds.

"In many cases this superabundance of nesting places so suddenly provided will account for the actual increase of native birds in spite of the presence of the Sparrows; and such cases have naturally misled many candid observers, who recognized the facts without considering all the conditions. As bearing on this point we cite a part of Dr. J. A. Allen's remarks before the Nuttall Ornithological Club, at a meeting held in Cambridge, Mass., early in 1878. All of Dr. Allen's remarks were of great interest and value, and should be read with care by every one interested in the Sparrow question. We quote here from the report printed in the Boston Evening Transcript of March 19, 1878, but select only the parts referring to the Sparrow's relations to native birds:

"... The destruction of a few caterpillars Mr. Allen regarded as almost the sole good that can be adduced in their favor. Their presence in small numbers, and especially in winter, is indeed cheery and pleasant; but, when in force, their harsh chatter becomes a positive nuisance, and even in summer renders the notes of other birds singing in neighboring trees almost indistinguishable. In regard to the unfavorable side of the score, the list of charges is a long one, and the greater part are too well attested to admit of reasonable doubt.

"First in the list is their unfavorable influence upon our native birds. Ordinarily, so far as his observations extend, he believed that they were not violently aggressive, but readily became so whenever there was a conflict of interest and occasionally without provocation. The little Chipping Sparrows commonly associate with them on terms of intimacy and harmony, and rarely had he seen them pursue or attack other birds when meeting with them at a distance from their own domiciles. But that they do, by their abundance and petulance, tend to crowd out and supplant our native birds seems nearly unquestionable, since the latter disappear wherever the House Sparrows become abundant. Upon such species as have a preference for nesting sites similar to their own, they do exert, however, a most positive influence. These are Bluebirds, White-bellied Swallows, Purple Martins, and Wrens—birds of attractive ways, agreeable notes, and highly insectivorous in their diet. When the Sparrows were first introduced into Cambridge, probably at least a dozen bird-houses were put up to each pair of Sparrows. The result was that the native species just mentioned found abundant nesting places, and at once became more numerous than formerly. As the Sparrows rapidly increased, they very naturally possessed themselves of the bird-boxes and forced their former occupants elsewhere. He cited the following instances as having fallen under his observation: Three years ago no less than three pairs of Wrens and as many pairs each of Bluebirds and White-bellied Swallows raised their
ENGLISH SPARROW.

young in boxes in sight of his windows. The following year about one-half disappeared, and last year not one of these nine pairs of native birds had a representative left within this small area. Not that all the boxes were occupied by the Sparrows, but they claimed possession of all, and by force of numbers retained it. In most cases the former occupants, finding their homes already in the possession of their enemies, appeared to make no struggle to regain them, a reconnaissance of the field apparently satisfying them of the hopelessness of any such attempt; in other cases they were not given up without long and hard-fought battles. On inquiry he found that similar incidents have been observed in neighboring parts of Cambridge. Besides this, instances of uncalled-for aggression had come to his notice, one of which he himself had observed. Last year a colony of Sparrows, not content with three times as many boxes as they had use for—to gain possession of which they had dispossessed Wrens and Swallows—attacked a pair of Robins that very unwisely, as it proved, had chosen a nesting site in an elm close to this pugnacious colony, by which they were so persistently harassed that they had to abandon their completed nest and its, to them, precious contents.'

"One error into which many observers who are not ornithologists have fallen lies in the failure to discriminate between the abundance of birds in towns and cities in time of migration and in the breeding season. Thus such a visitor to the national capital during the first week in April, 1887, would have been struck at once with the number of Robins in all the parks, and might have come to the hasty conclusion that, therefore, the English Sparrow had no serious influence on them.

"There were undoubtedly many thousands of Robins in the city of Washington at that time. On the grass ground in front of the Smithsonian Institution, on the lawns of the Capitol, and in many of the other parks, hundreds were in sight at once, and they seldom appeared to be molested by the Sparrows. But no sooner had these migrating flocks passed northward and the intending settlers arrived in smaller numbers from the South than the Sparrows began to show their natural disposition, and, as a result, the Robins which remained and nested in the beautiful parks, numbering hundreds of acres, probably did not average one pair to every ten acres of suitable ground.

"One other egregious blunder, for which there is still less excuse, is the claim so often put forward that in other countries, notably in England and Germany, the Sparrows live in peace with all birds, whereas if they were the terrible foes represented they would have expelled all these birds long ago. In general, such statements may be set down at once as totally untrue as regards the facts. The Sparrow in Europe is very much the same bird as in the United States, certainly no better. And wherever there is any marked difference in habits, such a difference is usually attributable to the fact that the conditions of existence are entirely unlike.'

In many parts of Europe bounties have been paid on the Sparrow from time to time for centuries, and to-day in many sections of England the farmers are fighting this pest as bitterly as in any section of the New World. If any one doubts that the Sparrow attacks other birds in Europe, let him turn to the evidence given before the select committee of the British Parliament in 1873, and read the statements which support the testimony of Col. Champion Russell with regard to the relations of the Sparrow and the Martin. His conclusion is, 'If people will neither protect the Martins from the Sparrows nor let them build near their doors and windows for protection, we shall lose these beautiful and most useful birds; indeed, we are losing them fast. Unlike most other birds, they will not make their nests far from our dwellings; if not allowed to build there, they disappear.'

If we want to enjoy the presence of our beautiful native songbirds in the larger
parks and in all the gardens of the country, we have to wage constant war against
the Sparrow, and to assist our native birds in every way to take up their abode near
our home. In order to accomplish this all the Sparrow nests should be destroyed
wherever found. This is the best and safest way to keep the dangerous pest in check.
To exterminate these proletarians is out of question, but we are able to control their
multiplication by destroying all the nests we find, especially when they contain half or
full grown young. If every friend of our beautiful native birds would do this, we would
not hear so many complaints about the Sparrow's invasion and the decrease of our
American birds.

It is doubtless a very dangerous measure to give everybody the right to shoot
and kill the Sparrows. Many people, especially boys, are in many cases not able to
discriminate among our native Sparrows and the introduced bird. It is astonishing
how little most people know about our birds and how few are able to distinguish the
most common species. It is a great deficiency of many of our modern schools, that the
children are not made acquainted with the beauties of the surrounding nature, the
flowers, mammals, and birds, and their habits and habitat, in a pleasant and interest-
ing way. If everybody were allowed to shoot Sparrows, many would make use of this
opportunity to follow their love of sport and kill almost any bird they see. I have
more than once seen that Song Sparrows, Swamp Sparrows, Lark Sparrows, White-
throated, White-crowned, and Fox Sparrows were mistaken for the European species
and killed. In States where a bounty is paid for each Sparrow head, even most of the
officials are not always able to distinguish the foreign from the native birds, and cases
are known that a bounty was paid for the heads of Bobolinks, and even Thrushes and
other insectivorous birds. Instead of allowing everybody to shoot Sparrows it is
advisable that the community appoint some reliable person for that purpose.

It has been recommended to poison the Sparrows, and various methods have been
employed, but this is not only detrimental to the Sparrows but our native seed-eating
birds would share the same fate. This has been experienced in Australia where the
settlers not only killed many Sparrows by poisoned millet, but also numberless of their
exquisite small Finches. The Sparrows are there still a public nuisance, but the indi-
genous birds are almost entirely exterminated.

The Sparrow builds its nest in every nook and corner, in houses, barns, stables,
in tree holes, on trees and bushes, and, preferably, in nesting boxes. It is a bulky
structure of dried grasses, rags, strings, pieces of paper, etc., and is lined with feathers.
The eggs are dull whitish, thickly speckled and dashed with dark brown and purplish-gray.

NAMES: English Sparrow, European Sparrow, House Sparrow, Common Sparrow.—Hausserling, Sper-
ling, Spatz (German).

Scientific Names: Fringilla domestica Linn. Pyrgita domestica Cuv. PASSER DOMESTICUS SCHEEFF.

Description: Above, brownish, the back streaked with black; wing with two white bands; lower parts,
dull grayish-white or pale grayish. Adult male with black of throat continued over chest, where
forming a broad patch; ear-coverts, entirely dull grayish; top of head, grayish, with a large patch
of chestnut on each side, from eye back to sides of nape.

Length about 5.50 to 6.25 inches; wing about 2.85 to 3.00; tail, 2.35 to 2.60 inches.
EUROPEAN TREE SPARROW.

Passer montanus Koch.

On this bird Mr. Otto Widmann writes as follows:

"Early in 1870 a St. Louis bird dealer imported, among other birds, twenty Tree Sparrows direct from Germany. Mr. Kleinschmidt, hearing of it, persuaded Mr. Carl Daenzer, Editor-in-Chief of the Anzeiger des Westens, who was at that time experimenting with the introduction of European songbirds, to contribute to the purchase of these birds. Accordingly they were bought and taken to Lafayette Park, in the then south-western part of the city, and liberated April 25, 1870. All left the park immediately, and none were seen again until April 24 of the following year, when a single bird was seen one mile east of the park. This discovery was considered worthy of mention in the public press, since at that time the introduction of the European Sparrow at St. Louis was thought to be a failure. That this was an error became apparent during the ensuing summer, when these discoveries were reported so often, and from parts of the city so widely separated, that success could not longer be doubted.

"During the next few years bird dealers had pairs of House Sparrows sent from New York, and well-meaning citizens bought them for liberation, but the exact number can not be learned, since the principal parties have died. Both species increased amazingly, and as early as 1875 Passer had spread over the entire sixty-four square miles which make up the city of St. Louis. In the southern part the Tree Sparrows predominated, and as late as 1877 no House Sparrow was seen on my premises, one mile south of the arsenal, which latter point they had then occupied in large numbers. Also during the winter of 1877—'78 all of my twelve boxes set up for Sparrows were in undisputed possession of the Tree Sparrows.

"On March 28, 1878, the first House Sparrow appeared on the scene, and trouble began. One pair of Tree Sparrows was dislodged and a pair of House Sparrows began nest-building. That summer no increase in House Sparrows took place in my colony, and the Tree Sparrows reared their broods in peace, but when the first cold October nights forced the Sparrows to change their roost from the now nearly leafless trees to some warm shelter, a whole flock of House Sparrows took possession of the boxes and the Tree Sparrows had to leave. Thereafter the weaker Tree Sparrow had little chance to gain a suitable nesting site around its old home. Only one pair continued breeding for a few years longer, in a box which, besides hanging lower than the rest, had an entrance which the bigger House Sparrows found uncomfortably small. It appeared to me that the Tree Sparrow would be much more of a house sparrow if his stronger cousin did not force him to be a tree sparrow by robbing him of every suitable nesting and roosting place about human'habitations.

"With the increase of the House Sparrow the Tree Sparrow had to yield the city almost entirely to him and betake himself to the country, spreading in all directions..."
and resorting to tree holes and out-of-the-way places, while the other took the cities and towns.

"This Tree Sparrow is a much more acceptable acquisition than the House Sparrow. Although sharing many of its habits, it lacks the fighting qualities for which the other is so much hated. Of course, like every bird, it defends its home against intruders, but it is not aggressive. It never attacks other birds for mere sport, like its cousin; on the contrary, it enjoys the company of our native birds, and it is daily seen associating with our wintering Junco and Canada Tree Sparrow. With this latter bird it has some notes in common, and it seems that this resemblance of the voice led the early European settlers to apply the name of Tree Sparrow to this otherwise entirely different bird, a misnomer which in turn gave rise to the equally inappropriate scientific names montana and monticola.

"The voice of the European Tree Sparrow, although it can not be called a song, is really melodious, especially when a number of them, as is generally the case, join in common concert, much like our Bobolinks and Blackbirds. Not more than two broods are raised annually, while the House Sparrow often raises three, but not four to six, as some claim." The nest is similar to that of the common Sparrow, and the eggs are also much like Sparrow's eggs but averaging smaller and usually darker and redder.

DESCRIPTION: The black of the throat in the adult male is not continued over the chest; ear-coverts with a large black spot; top of head entirely liver-brown, or purplish-chestnut.

Length about 5.50 inches; wing, 2.80; tail, 2.40 inches.

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**SNOWFLAKE.**

*Plectrophenax nivalis* Stejneger.

The sky is gray as gray may be,
There is no bird on wing or bough,
There is no leaf on vine or tree.
Slow creep the hours, slow creep the days,
The black ink crusts upon the pen—
Just wait till Bluebirds, Wrens, and Jays
And Golden Orioles come again.

T. B. Aldrich.

Though the winter in the Northern States of our great country is exceedingly cold and changeable, it is not entirely without beauty. True, the trees are leafless, the woods quiet, and the beautiful summer flowers rest under a thick cover of snow. The winged choristers of woodland and garden, field and meadow have deserted their natal haunts, sojourning in the tropics or in the mild regions of the Gulf coast. Even the Slate-colored Snowbirds, the White-throated, White-crowned, and Fox Sparrows have left, long before the winter commenced, for the milder regions of the Southern States, where the dense shrubbery of the bottom lands and the woods, fringed with bushes and tangled thickets covered with cross-vine (*Bignonia capreolata*), Carolina
jasmine, smilax, grape-vines, and other creepers afford them food, safety, and shelter. The weather before Christmas is usually not so very cold, but after the holidays icy north and west winds and snow storms sweep over prairies and stubble fields with increasing vigor, placing lakes and ponds, rivers and streams in icy fetters and covering all nature with a white winter robe. Only the pines, spruces, firs, cedars, and junipers, though clothed in a sombre green, are as beautiful at this time of the year as they are in spring and summer, their branches being loaded with snow, the white color of which contrasts beautifully with the dark, deep green of their foliage. During winter these trees are frequently visited by flocks of Pine Grosbeaks, Crossbills, and Redpolls, many of which show more or less red color. At this time of the year I especially admire the mixed woods consisting partly of deciduous trees, partly of evergreens.

The fields and prairies seem desolate, rarely a living creature being visible. But this will not remain so. With the first heavy snow, especially when drifted by high winds, numberless birds appear, usually in large swarms and in rapid and wavy flight, alighting on the stubble fields of Wisconsin and the prairies of Illinois. The prevailing color of these most picturesque of our winter birds is white, and as they come and go with the white crystallizations of winter, they were appropriately named by the people when they called them Snowflakes. Like thousands of snowflakes they whirl into the northern part of our country, “on wings as wayward as those of the storm that urges them on; but, though thus irregular in their appearance, according to stress of weather, no winter passes without its Snow Buntings, and it is not until April that the last of the birds is seen” in the northern part of the Union.

The flight of the Snowflake, or Snow Bunting, is extremely beautiful. Great numbers are usually swirling over the ground. “They keep pretty closely in flocks numbering from a dozen or so to several hundreds, and, though they spread over the ground a good deal in running about after seeds, they fly compactly, and wheel altogether. In their evolutions they present a pretty sight, and have a not displeasing stridulent sound, from mingling of the weak chirrups from so many throats.” (Coues.) The birds are constantly in motion, and when the hindmost alight in front of those that first settled, these again rise and alight again in the front. Thus the whole swarm soon disappears. They do not seem to suffer with cold, although the thermometer often goes down to 30° below zero F. They subsist during the winter entirely on the seeds of weeds which they pick up from the snow, and thus they become very beneficial to the farmer. I have never seen them on trees and rarely on fences, but they frequently alight on stones and boulders. When forced to alight on branches of trees or bushes their movements are awkward, seemingly as if afraid they would fall. Their feet evidently do not grasp small twigs with security. On the ground they are perfectly at home, running around with great agility. By the end of March or the beginning of April all the Snowflakes have departed again for their breeding quarters. They come with the snow, and they disappear with the snow.

The Snowflakes winter mostly in the Northern States, rarely moving as far south as Pennsylvania or Kentucky. I have never seen them in the Ozark region of southwestern Missouri, and Mr. Otto Widman never observed them near St. Louis. They commonly invade all our country north of latitude 39°, and less often south to latitude
35°, where they are replaced by the Lapland Longspur. Most of them have left Wisconsin for the North by the first of April.

The breeding range of the Snowflake is found in the circumpolar regions, except the islands in Behring Sea. It has been observed by various Arctic expeditions. Mr. E. W. Nelson, who had a good opportunity of observing the bird in Alaska, writes as follows:

"But few remain during the season in Alaska, and these mainly on the Aleutian chain and the south-east shore of the Territory, where the climate is comparatively mild. To the North of this the intense cold and violent storms permit the presence of only a small number of the most hardy. Before the winter is fairly broken—by the 6th of April—they commence to return to the North, and are found on this date at Fort Reliance, on the Upper Yukon, and thence they advance slowly with the returning sun until during this month they have regained nearly all their summer haunts within the Territory. Along the north coast of Asia Nordenskjöld mentions finding it at nearly every stopping place of the Vega during his famous voyage, and notes its arrival at Tapkan, on the Sibirian Arctic shore, north-west of Behring Straits, on April 23. During the summer of 1881, while with the Corwin, I found it common on the Arctic coast of Alaska to Point Barrow, along the entire north-east Sibirian coast, and again on Harald and Wrangel Islands.

"Elliott found it resident on the Seal Islands in Behring Sea, and informs us that this bird builds an elegant and elaborate nest of soft, dry mosses and grass, and lines it warmly again with a thick bed of feathers. It is placed on the ground beneath some heavy lava shelf or at the foot of an enormous boulder. Five eggs are usually laid, about the first of June. They are an inch long by two-thirds broad of a grayish or greenish-white, spotted sometimes all over, sometimes at or around the larger end only, with various shades of rich dark brown, purple-brown, and paler neutral tints. Sometimes the whole surface is quite closely clouded with diffuse reddish-brown markings. Upon the female the entire labor of the three weeks' incubation required for the hatching of her brood devolves. During this period the male is assiduous in bringing food; and at frequent intervals sings his simple but sweet song, rising, as he begins it, high up in the air, as the Sky Lark does, and at the end of the strain drops suddenly to the ground again. . . . The food of this species consists of the various seeds and insects peculiar to the rough, higher ground it frequents, being especially fond of the small coleopterous beetles found on the island. . . . It can not be called at any season of the year gregarious like its immediate relative, the Lapland Longspur, with which it is associated on these sea-girt islands."

A variety, the Prybiolof Snowflake, *P. nivalis townsendii* Ridg., inhabits the Prybilof Islands of Alaska, and Kamschatka.

McKay's Snowflake, *P. hyperboreus* Ridg., breeds on Hall Island and probably also on St. Matthew's Island, Behring Sea, and in winter visiting the west coast of Alaska.

NAMES: Snowflake, Snow Bunting.—Schneeammer (German).


Description: "In summer: Pure white, the middle of the back, the wings, and the tail, mostly black; bill and feet, black. Seldom if ever seen in this perfect dress in the United States. As found with us,
the white is variously clouded with rich warm brown, which colors most of the upper parts, washes along the sides of the body, forms a collar on the breast and a patch on the ears, and deepens to blackish on the crown; the black dorsal area is mixed with brown and white; the feet are black as in summer, but the bill is mostly or entirely yellowish.

"Length, about 7.00 inches; wing, 4.50; tail, 2.75 inches." (Stearns & Coues, "New England Bird-Life." 1. p. 230.)

LA PLAND LONGSPUR.

Calcarius lapponicus Stejneger.

ALTHOUGH this Longspur appears in countless thousands on the fields and prairies of the northern part of the United States in October and early in November, it is not a familiar bird owing to its plain and inconspicuous coloring. For this reason it does not give an impression to the landscape like its striking congener, the Snowflake. Most people, who are well acquainted with the characteristic birds of their surroundings, do not know the Lapland Longspur, though it may be very common everywhere in their immediate neighborhood in fall and spring. While the Snowflakes make the northern parts of the Union their winter home, the Lapland Longspurs move farther southward. The Mississippi valley below the range of the Snow Bunting is occupied by these birds, and in the East they occur sometimes as far southward as South Carolina. In south-western Missouri it is exceedingly common in old, weedy cornfields and on grassy prairies. It also visits Kansas, penetrating even to Texas, where it has been observed at Gainesville. At Caddo, Indian Territory, it was observed by Prof. W. W. Cooke. None were seen until a sudden cold snap in February covered everything with frozen rain. Horned Larks, Smith's Longspurs, and Chestnut-collared Buntings became abundant, and February 13 three Lapland Longspurs were seen. Starting out the next day, Prof. Cooke found himself suddenly surrounded by hundreds and hundreds of them. They fairly swarmed for a week; but on the night of February 19, taking advantage of a clear sky and a south wind, they disappeared, in company with all their long-clawed brethren, as suddenly as they had come. In Kansas they were very numerous at the same time, and a month later Nebraska became the scene of action for the evolutions of their mighty armies. In the Ozark region of south-western Missouri these birds are usually first observed by December 1, provided the weather be cold at that time, but they rarely make their appearance before January 1. They leave early in March. In Wisconsin they appear in the first days of April, remaining in favorable localities about ten to fifteen days. I have observed these birds almost every winter from 1869 to 1879 on the prairies of northern Illinois. When cold weather commenced they moved southward, but returned late in March. They were exceedingly abundant in old fields, especially in weedy tracts, and heedlessly alighted even on hay-stacks and in farm yards. They are more quiet and do not fly so beautifully nor in such compact masses as the Snowflakes. They never retire to bushy tracts or to the woodland border, but always keep in the unprotected open fields and prairies.
This Lapland Longspur is also an inhabitant of Europe, being common all over the northern part of that continent and especially in Lapland. In northern Asia it is just as abundant as in the Arctic regions of North America. Its food in the breeding range consists mostly of insects and their larvae, while in winter it subsists entirely on the seeds of weeds. Like all these small winter birds it is eminently beneficial to the farmer. Mr. E. W. Nelson, who observed the Lapland Longspur in Alaska, gives the following interesting account:

"During my residence at Saint Michaels over thirty nests were found, and the number might readily have been doubled. Their nests were so abundant everywhere on the grassy flats that one could scarcely walk over the tundra for half an hour during the proper season without finding from one to a half a dozen of them. By the middle of May the males are numerous and in full song along the coast of Norton Sound, having arrived about this time or a little earlier in flocks, and spread rapidly over their breeding ground. . . . When they arrive early in May the ground is still largely covered with snow, with the exception of grassy spots along the southern exposures and the more favorably situated portions of the tundra, and here may be found these birds in all the beauty of their elegant summer dress. The males, as if conscious of their handsome plumage, choose the tops of the only breaks in the monotonous level, which are small rounded knolls and tussocks. The male utters its song as it flies upward from one of these knolls, and when it reaches the height of ten or fifteen yards it extends the points of its wings upwards, forming a large V-shaped figure, and floats gently to the ground, uttering, as it slowly sinks, its liquid tones, which fall in tinkling succession upon the ear, and are perhaps the sweetest notes that one hears during the entire spring time of these regions. It is an exquisite jingling melody, having much less power than that of the Bobolink, but with the same general character, and, though shorter, it has even more melody than the song of that well-known bird. There is such joyous exultation in the song that the songster assumes a new place in one's regard.

". . . The nests are generally placed on the drier portions of the flats; a hummock or tuft of grass is chosen, or perhaps a projecting bunch of dwarf willow stems, and as one comes directly upon it, the female usually flutters off under one's feet; the male keeps in the immediate vicinity, and joins with his mate in a cheeping protest at the intrusion. If the eggs are nearly ready to hatch the females show the greatest solicitude, as they do also in case the nest contains young. In one instance a parent was driven from her eggs just as they were about to hatch, and she ran along the ground for a few yards, uttering a plaintive note, like cheē cheē cheē, in a fine, vibrating, metallic tone, at the same time dragging her outspread wings and tail upon the ground, and fluttering as though in mortal agony."

The eggs, four to six in number, are much pointed at the smaller end, and are very dark colored, much like those of the Titlark. The color is a "heavy clouding or thick mottling" of chocolate-brown; the ground-color is greenish-gray and their size .80 x .62.

The summer home of the Lapland Longspur in North America extends from the Great Slave Lake and the Mackenzie River northward.
SMITH'S LONGSPUR.

NAMES: LAPLAND LONGSPUR.—Sporenammer (German).


DESCRIPTION: "Male. Head all round, and neck, black, extending on the jugulum in a crescentic patch; a broad line from above and behind the eye, sides of neck, a patch in the black of hind head, and whole under-parts, white; the sides of body streaked broadly with black. A broad half-collar of chestnut on back of neck, separated from the hood narrowly, and from the auriculæ and throat broadly, by the white stripe from the eye. Above, brownish-black, the feathers sharply edged with brownish-yellow. Outer tail-feathers, white, except the basal portion of inner web, and a shaft streak at end; next feather with a white streak in end, rest, black. Legs, black, bill, yellow, tipped with black. In winter plumage the black and other markings overlaid by rusty and fulvous; beneath by whitish. Female with the black feathers of head edged with yellowish-rusty; the throat white, bordered on the sides and behind by blackish; feathers edged with grayish-white, the rufous of nape obscure, and streaked with blackish.

"Length of male, 6.25 inches; wing, 3.90; tail, 2.80 inches." (B. B. & R., I p. 515.)

SMITH'S LONGSPUR; PAINTED BUNTING.

Calcarius pictus Stejneger.

This Longspur is also a bird of the Arctic regions of North America, breeding abundantly on the lower Anderson River, where numerous nests were found by Mr. McFarlane. They were all on the ground, and usually in open spaces, but also in the vicinity of trees. The nests, for the most part, were constructed of fine dry grasses, carefully arranged, and lined with down, feathers, or finer materials similar to those of the outer portions. In a few nests there were no feathers; in others, feathers in different proportions; and in a few the down and feathers composed the chief portion of the nest, with only a few leaves as a base. They were sometimes sunk in excavations made by the birds, or placed in a tussock of grass, and, placed in the midst of a bed of Labrador tea (Ledum palustris), a beautiful evergreen ericaceous plant. When the nest is approached the female quietly slips off, while the male may be seen hopping or flying around among the weeds or bushes, and like all these ground-building Sparrows, will make all possible efforts to induce intruders to withdraw from the neighborhood. Nests have also been found at Fort Yukon, at the mouth of Porcupine River, and in the Mackenzie district the bird seems to be especially common. The eggs are similar to those of the Lapland Longspur, but lighter in color.

The Painted Bunting comes and goes with the Lapland Longspur, but it is not as common as this species. It migrates as far south as Caddo, Indian Territory, and even to Gainesville, Texas. In the prairie districts of south-western Missouri it is not uncommon in winter. It is only a winter visitor of the United States, especially west of the Mississippi and east of the Rocky Mountains. According to Prof. Ridgway they sometimes also occur on the prairies of Illinois, and it is probable that they also visit the western parts of Wisconsin during their migrations.

DESCRIPTION: "Adult male in summer: Top and sides of head, deep black, relieved by a broad white stripe behind the eye, a narrow white stripe along middle portion of ear-coverts, and a white malar-stripe, much widest posteriorly; hind-neck and entire lower parts deep ochraceous-buff, the first streaked with dusky; anterior lesser wing-coverts deep black, posterior ones pure white, forming a conspicuous bar, widest above. Adult male in winter: Black of head entirely replaced by streaked
brownish, the throat and chest also more or less streaked with dusky; otherwise much as in summer, but middle and greater wing-coverts distinctly tipped with white. Adult female in summer: Much like winter male, but smaller, paler, and grayer, without deep black or pure white on lesser wing-coverts; in winter, similar, but more Buffy.

"Length, 6.45 inches; wing, 3.65; tail, 2.75 inches. Female smaller." (Ridgway.)

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**CHESTNUT-COLLARED LONGSPUR.**

*Calcarius ornatus* Stejneger.

This beautiful Longspur, which is also known to the ornithologist as the Chestnut-collared Bunting and Black-bellied Longspur, is an abundant and characteristic species of the Missouri region. Originally discovered by Townsend on the upper Missouri, it has since been traced far north in the interior of British America, and southward, in elevated regions, to Vera Cruz and Orizaba. I have only met with the birds in the prairies of Lafayette, Lee, and Bastrop Counties, Texas, in winter, when they were observed in company with Horned Larks. Their favorite resorts are along old trails and abandoned wagon roads where the grass is short. "In their search for food they fly near the ground, in an easy, wavy, circling manner, constantly chirruping as they go, dropping down here and there and running swiftly about. Busy bodies, that have to labor hard and long, in order to pick up enough of the tiny seeds upon which they feed to satisfy their wants." (Goss)

Dr. J. A. Allen found these Longspurs breeding in the vicinity of Fort Hays, Kansas. He writes: "Common out on the plains almost everywhere, it being one of the most interesting and characteristic species of the plains. It has a short, shrill, but very sweet song, which is often uttered while on the wing. It is very wary for so small a bird, and has the habit of circling round the observer when disturbed for several minutes together, approaching tantalizingly near, with feints of nearer approach, but generally keeping well out of range. The nest is a very neat, though slight structure, placed of course upon the ground, and is composed of dry, fine grass and rootlets. The eggs are generally five, blotched and streaked with rusty on a white ground. Full sets of freshly laid eggs were first found about June 3. I met with it in winter from Fort Hays westward, nearly to the Colorado line, indicating that it is resident here the whole year."

Undoubtedly the Chestnut-collared Longspur also breeds in Nebraska and South Dakota, and Dr. Elliott Coues observed the bird during the breeding season in the greatest abundance in North Dakota. "On the bare plains," he says, "away from a single landmark, it is perhaps the most abundant bird of all, though Baird's Bunting and the Missouri Skylark are not far behind in this respect. All three associate intimately together, and there is a great general similarity in their habits. The nest of the present species is placed on the ground, effectually concealed beneath some little tuft of grass; it is a slight affair, merely a few fine grasses and slender weed-stems, for the most part circularly disposed, and considerably hollowed. Like the nests of most other Sparrows that breed on the ground, it is sunken in a depression so as to be flush with the general surface. It measures about three and one-half inches across outside, and
more than half as much in depth; the bottom is very thin in comparison with the brim, which is well defined. The eggs are usually four in number, measuring about four-fifths of an inch long by three-fifths broad, and are not peculiar in shape. They are grayish-white, more or less clouded, and mottled obscurely with pale purplish-gray, which confers the prevailing tone; this is overlaid with numerous surface markings of points, scratches, and small spots of dark brown, wholly indeterminate in distribution and number, but always conspicuous, being sharply displayed upon the subdued ground-color. I think that two or three broods are reared each season, for I have found fresh eggs and newly hatched birds the same day, July 18, when a week before I had seen young birds already on the wing; and again, I have found fresh eggs so late as the first week in August. When the nest is approached, the female generally walks quietly off, after a little flutter, threading her way through the grass till she is at a safe distance, and then taking wing. Should the young be hatched, however, both parents will hover together close overhead, in evident distress, with beseeching cries." In the fall they associate with the Lapland and Smith’s Longspur, and in October they wend their way south. "Like other small birds of the prairies, it haunts the roads where, as the grass is worn away from the wheel-tracks, it feeds and runs with the greatest ease. I never saw one alight except on the ground. In flight, it may always be recognized by the amount of white on the tail."

NAMES: Chestnut-collared Longspur, Chestnut-collared Bunting, Black-bellied Longspur.


DESCRIPTION: "Bill, dark plumbeous. Male: Crown, a narrow crescent on the side of the head, with a line running into it from behind the eye, entire breast and upper part of belly all round, black; throat and sides of the head, lower part of belly and under tail-coverts with bases of the tail-feathers, white. The white on the tail-feathers runs forward as an acute point. A chestnut band on the back of the neck extending round on the sides. Rest of upper parts, grayish-brown, streaked with darker. Middle coverts with a white patch. Lower wing-coverts like the back. Legs, dusky, bill, blue. Female lacking the black and chestnut colors.

"Length about 6.00 inches; wing, 3.35; tail, 2.30 inches." (B. B. & R. I. p. 520.)

MC COWN’S LONGSPUR.

Rhynchophanes mecowii Baird.

During a two years’ residence near the West Yegua Creek, in Lee County, Texas, I had an excellent opportunity of observing a number of birds which I never had seen alive before. Among these, to me, new birds McCown’s Longspur was one of the most interesting. When walking through the weedy and grassy corn and cotton fields in December, January, and February, I was almost sure to find large assemblages of Henslow’s, Leconte’s, Savanna, and Grasshopper Sparrows, Baird’s Buntings, Vesper Sparrows, and Horned Larks. Among these flocks I met McCown’s Longspurs for the first time in December 1881. They usually kept together in flocks from ten to fifty, but were often associated with the above named species. When startled they fly in an easy, wavy, circling manner over the ground, always uttering soft chirruping notes while flying. Like all Longspurs they swiftly run over the ground without uttering a
single note. They live on weed and grass seeds, especially on the spiny seeds of the sand-spur or bur-grass (*Cenchrus*), a vile weed.

This Longspur inhabits the great western plains and probably breeds from northern Kansas northward to the Saskatchewan, wintering from Kansas and eastern Colorado southward through western Texas, New Mexico, and Arizona to Mexico.

Dr. J. A. Allen observed McCown's Longspur in the vicinity of Cheyenne, and also near Laramie City. A nest, found by him on Heart River, Dakota, July 7, 1873, was built on the ground, and constructed of decomposing woody fiber and coarse grasses with a lining of finer grasses. It contained four eggs, of a dull white ground-color; the markings are obscure and rather sparse mottling, with some heavier, sharp, scratchy ones, both brown, of different intensity. They measure about 0.80×0.60.

**NAMES:** McCown's Longspur, McCown's Bunting.

**SCIENTIFIC NAMES:** *Plectrophanes mccownii* Lzar. (1851). *Rhyynchophanes McCownii* Ridg.

**DESCRIPTION:** *SP. CHAR.* "Tail-feathers (except middle pair) white, broadly tipped with black (outer feathers almost entirely white). Adult male in summer: Middle, and posterior lesser, wing-coverts rufous; crown, rictal stripe, and crescentic patch on chest, black; sides of head, grayish; back, etc., gray or brownish, streaked with dusky; lower parts (except chest) white, tinged laterally with grayish. Adult male in winter: Crown and other upper parts, dull brownish-buff, streaked with dusky; black rictal streak obsolete, and black patch on chest hidden by light dull buffy tips to feathers. Adult female: Similar to winter male, but without concealed black on chest or rufous on wing-coverts.

"Length about 0.00 inches; wing, 3.60; tail, 2.40 inches." (Ridgway.)

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**BAIRD'S SPARROW.**

*Ammolramus bairdii* Giebel.

This Finch inhabits the Great Plains, from Dakota and Montana to the Saskatchewan in summer. In winter it is found as far south as Arizona and New Mexico, and I have noticed large numbers from November to March in the weedy cotton and corn-fields of Lee and Fayette Co., Texas. In its maimers it closely resembles the Savanna Sparrow.

According to the observations of Dr. Elliott Coues, Baird's Bunting is extremely abundant in Dakota, in some places outnumbering all other birds together. He did not see it immediately along the banks of the Red River, but at once encountered it beyond the low Pembina range of mountains, thirty or forty miles west of the river, as soon as he came upon the high prairie. This was the second week in July, when he saw young birds just fledged, though the great majority were then breeding. The males attracted attention as they sat singing on the low bushes of the prairie, the females lying concealed in the grass, incubating or attending to the young. The song is peculiar, consisting of two or three distinct syllables, in a mellow, tinkling tone, running into an indefinite trill; it may be suggested by *zip-zip-zip-zr-t-r-r.* In their general appearance and habits, the birds are so nearly the same as the Savanna Sparrows, that it was
two or three days before Dr. Coues learned to distinguish them at a certain distance. They do not go in flocks, yet there is a sort of colonization among them, for we may ride a mile or two over the prairie, without seeing any, and then come upon numerous pairs breeding together. Dr. Coues deems it probable that a second brood is usually reared each season. After performing incubation, the plumage is renewed, it having become greatly worn and faded. When the young are all on the wing, they associate together with their parents, in loose straggling troops, mixing freely with the Chestnut-collared Buntings, and the Missouri Sky-larks. Their numbers sensibly diminish in September, and they apparently move south during the month, as he saw none after the first of October. In September, in this latitude, there is a good deal of cold weather, and not unfrequently a heavy snow-fall, sending the more delicate birds away early. The birds feed upon various seeds, as well as upon insects, even sizable grasshoppers, which in this region seem to be eaten by almost every bird and animal.

Although our learned naturalist made many a search whilst the birds were evidently breeding, he never succeeded in stumbling upon a nest. Fortunately, however, I am enabled to complete the history of the species with the description of the nest and eggs, taken July 1, 1873, on Big Muddy Creek, North Dakota, by Dr. J. A. Allen, then Naturalist of the Yellowstone Expedition. The nest was built, as was expected, on the ground, and is very similar to that of the Chestnut-collared Bunting—a slight structure of grasses and weed bark, circularly disposed, about four inches across outside. It contained five fresh eggs, most nearly resembling those of the Bay-winged Bunting, but smaller and decidedly more rounded. They measure 0.80 by 0.65. The ground is dull white, speckled all over, but very irregularly, with light reddish-brown (pale sienna), and having a few larger blotches of the same and a darker shade, owing to heavier laying on of the pigment. In a number of instances the coloration would probably not be distinguishable with certainty from those of the Vesper Sparrow.

NAMES: Baird's Sparrow, Baird's Bunting.


DESCRIPTION: "Somewhat similar in general appearance to Ammodramus sandwichensis savanna. Back, grayish, streaked with dusky. Crown, nearly covered by black streaks, but divided by a broad median band of brownish-yellow. Eyelids and a faint superciliary stripe, yellowish-white. Beneath, white, with a maxillary blackish stripe and some narrow streaks on the upper part of the breast, and sides of throat and body. Outer edges and tips of tail-feathers, white; the two outer feathers absolutely white. Bend of wing, white." (B. B. & R.) Length, 5.10 to 5.85 inches; wing, 2.65 to 3.05; tail, 2.20 inches.

SAVANNA SPARROW.

Ammodramus sandwichensis savanna Ridgway.

Plate XXIII. Fig. 7.

The Savanna Sparrow is one of those inconspicuous little birds which hide in the grass or run stealthily along the fences or furrows, having nothing special in their appearance or habits to attract particular attention." These words from the pen of Prof. R. Ridgway well characterize this plainly colored bird of the grassy low
SAVANNA SPARROW.

meadows, prairies, and salt marshes of the Eastern and Northern States. It breeds from the Northern States northward to Labrador and the Hudson Bay territory. How far it is found south during the breeding season, I am unable to say, but Prof. Ridgway has found a nest near Mount Carmel, in southern Illinois. In New England it is especially abundant, its favorite haunts being the salt marshes bordering the sea-shore, but it may be found in large numbers in any open ground throughout the interior. In northern Illinois, in Wisconsin, and Minnesota it is in some localities common, breeding in large colonies, but in other entirely similar places it is not found at all.

The Savanna Sparrow is thoroughly terrestrial, confining itself almost entirely to the ground, and rarely perching on anything even so high as a shrub or a fence. On the ground it runs "swiftly with pretty steps, threading its way like a mouse through the grass. Always solicitous of concealment, it takes but short wayward flights when forced to rise on wing, soon dropping again into the favoring shelter of the herbage." It is one of those Finches that best deserves the name of "Ground Sparrow," or "Grass Finch," so indiscriminately applied to several distinct species in the vernacular of our rural people.

The song of the Savanna Sparrow consists of a number of rather weak chirping notes of no great value, but with other bird-notes they combine to make the flower-adorned prairies and meadows more delightful. We rarely see the singing birds, as they utter their lay on the ground or on some low growing herb. Where these Sparrows occur we may hear late in May and early in June peculiar music from dozens of performers on all sides. At other times only a slight chirping call-note is heard. The nest is placed on the ground, or, more correctly—in the ground, as it is sunken to the brim. It is so well hidden among the grass and the weeds that it is only accidentally found, while we are roaming around on the prairies and meadows. The incubating bird does not leave the nest before we almost step on it. Then it flutters and tumbles along, feigning severe lameness, in the endeavor to attract attention from the nest to herself, "and thus decoy the intruder away from her treasures." In this manner most ground birds act, when their nest is approached. If we look closely from where the bird started, we may always find the nest. This is a very slight affair, being constructed of grasses only, the brim being flush with the surface. It is in no way different from other ground nests. The eggs, usually five in number, are greenish or grayish-white, spotted, blotched, and speckled with brown and lavender, especially round the larger end. The markings are often so numerous that they almost conceal the ground-color.

In winter these birds are found in very large flocks, in company with Leconte's, Henslow's, and Baird's Buntings, Horned Larks, Vesper Sparrows, Grasshopper Sparrows, and other similar birds in the cotton and corn-fields of Texas, Louisiana, and other localities bordering the Gulf of Mexico. In the Carolinas, especially on the sea shore, they are exceedingly abundant during winter. I have seen them frequently in winter on the low prairies of south-eastern Texas, between Houston and Galveston. In fall they usually arrived early in November and remained, at least in small numbers, until the end of April. In the prairies west of Houston, near Hockley, I found them when most of the other birds were breeding, and this led me to suppose that they were summer residents in that part of the State. Later investigation, however, has proved that they
Bellding's Marsh Sparrow.

Ammodramus beldingi Ridgway.

This is a common bird near the coast of southern California, especially in the marshes between San Diego and National City. A nest found April 4, by Mr. L. Belding, was near the beach just above high tide, in a dense growth of Salicornia, Atriplex, and

BELDING'S MARSH SPARROW.

Ammodramus sandwichensis Ridg., inhabits the northwest coast from Unalashka eastward and southward, probably to northern California in winter. This is the true species, while the Savanna Sparrow is only a variety.

Another variety is the Western Savanna Sparrow, Ammodramus sandwichensis alaudinus Ridg., inhabiting western North America, and breeding from the Rocky Mountain plateau north to the Yukon district of Alaska. It winters south to Mexico, but does not occur on the Pacific coast. There it is replaced by the following species:

BRYANT'S MARSH SPARROW, Ammodramus sandwichensis bryanti Ridg. According to Mr. Walter E. Bryant, the discoverer of this variety, it is a common resident in the salt marshes about San Francisco Bay. Near Oakland it is especially common in winter in fields and along road-sides. The bird apparently prefers dry ground near salt marshes for nesting sites, although it also breeds in the marsh grass in places not subject to overflow during excessively high tides. The fields where it takes up its haunts are usually those more or less overgrown with grass and weeds, or pasture lands where herds of cattle are grazing. The nests are placed on the ground, usually in a depression.

NAMES: Savanna Sparrow, "Ground Sparrow."


DESCRIPTION: "Feathers of the upper part generally with a central streak of blackish-brown; the streaks of the back with a slight rufous suffusion laterally; the feathers edged with gray, which is lightest on the scapulars, and forms there two gray stripes. Crown with a broad median stripe of yellowish-gray. A superciliary streak from the bill to the back of the head, eyelids, and edge of the elbow, yellow, paler behind. A yellowish-white mandibular stripe curving behind the ear-coverts, and margined above and below by brown. The lower margin is a series of thickly crowded spots on the sides of the throat, which are also found on the back of the neck, across the upper part of the breast, and on the sides of body, a dusky line back of the eye, making three on the side of head (including the two mandibular). A few faint spots on the throat and chin. Rest of under-parts, white. Outer tail-feathers and primaries edged with white." (B. B. & R.) Length, 5.17 inches; wing, 2.73; tail, 2.07.

BELDING'S MARSH SPARROW.

Ammodramus sandwichensis Ridg.

Do not breed in Texas. In northern Illinois and Wisconsin they usually arrive about May 9. Full sets of eggs are found in the first week of June. As I have found fresh nests by the middle of July, I am inclined to think that they make two broods each season.

Like all our small birds these Sparrows are exceedingly beneficial, their food consisting, during the breeding time, mostly of insects, and in fall and winter they eat large quantities of the seeds of noxious weeds. Unfortunately these and other songbirds are killed by the thousand in the South by the negroes for the kitchen, and on the French Market in New Orleans large masses of these birds are offered for sale during the whole winter. This shameless slaughter of our native songbirds should be stopped by stringently enforced laws for their protection.

The SANDWICH SPARROW, Ammodramus sandwichensis Ridg., inhabits the northwest coast from Unalashka eastward and southward, probably to northern California in winter. This is the true species, while the Savanna Sparrow is only a variety.

Another variety is the Western Savanna Sparrow, Ammodramus sandwichensis alaudinus Ridg., inhabiting western North America, and breeding from the Rocky Mountain plateau north to the Yukon district of Alaska. It winters south to Mexico, but does not occur on the Pacific coast. There it is replaced by the following species:
Frankenia. It was composed of surf-worn eel-grass mostly, lined with a few feathers. My friend, Mr. B. T. Gault, found this Finch in large numbers in the salt marshes near National City, in the spring of 1883. A nest containing three fresh eggs was found May 24; it was situated in a patch of marsh weed, apparently raised a little above the ground—several feet above tide-water mark, and was completely saturated with water; notwithstanding the dampness of the nest the eggs were warm to the touch, as the female just had left the nest. The structure was composed almost exclusively of weed stalks, with a little grass and a few feathers, arranged in a careless manner. The ground-color of the eggs is dirty white, of a brownish tinge, caused by minute specks of brown and lavender, and the blotches of amber-brown, congregating especially on the larger end, with an occasional streak of a darker brown shade. Size about .77 × .58.

DESCRIPTION: In color this bird is similar to Bryant's Sparrow, but the upper parts are more heavily streaked with black on a much more uniform and more olivaceous brown ground.

The Ipswich Sparrow, Ammodramus princeps Ridg., was discovered December 4, 1868, by Mr. J. C. Maynard, among the Ipswich Sand-hills, Mass. This is a rare bird, breeding on Sable Island, Nova Scotia, and wintering south to Virginia and the coast of Texas. The eggs are similar to those of the Savanna Sparrow, and the nest is also placed on the ground.

The Long-billed Sparrow, A. rostratus Cass., inhabits the coast of southern and Lower California, and Sonora. It winters south to Cape St. Lucas and Guaymas.

St. Lucas Sparrow, A. rostratus guttatus Ridg. This variety occurs in the vicinity of Cape St. Lucas.

GRASSHOPPER SPARROW.

Ammodramus savannarum passerinus Ridgway.

Plate XXIII. Fig. 6.

The Grasshopper Sparrow, or Yellow-winged Bunting, is a common summer-bird from the Atlantic Ocean to the eastern foot-hills of the Rocky Mountains, and from Massachusetts and central Wisconsin to South Carolina and Arkansas, and probably to Florida and Texas. Although abundant where it occurs, it is one of our least known birds, being frequently confounded with other similar species of like habits. It is also a bird of very irregular and unequal distribution, being found in certain localities in great abundance, and not at all in the intervening districts. I have met with this Sparrow in many places in Wisconsin, Illinois, and Missouri during the breeding season, especially in cultivated districts. In Wisconsin it takes up its haunts in rather sandy and weedy places and in grassy pastures. From its living among the grass it is usually known as the "Grass-bird," "Grass Sparrow," or "Ground Sparrow." and, according to Prof. R. Ridgway, it is known in southern Illinois and in other rural districts as the "Grasshopper-bird," or "Grasshopper Sparrow," this appellation being derived from its
GRASSHOPPER SPARROW.

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grasshopper-like song, which is uttered from the top of a fence-stake, or a tall weed-stem, or mullein-stalk. It is a very weak performance, and, although frequently uttered, is not recognized by many as a bird song.

The Grasshopper Sparrow is a very sly and secretive bird, keeping most sedulously concealed in rank grass, rarely rising higher than the top of the tall weed-stems. If in late May or during June we stroll through weedy fields, especially in sandy, sterile soil, we shall often have an opportunity to startled the little plain colored bird from its hiding places among the dense weeds and grass. It darts a few yards in wayward flight, disappearing as suddenly from view as it came to light. In northern Illinois it is a common bird in the grassy prairies, especially on higher ground and in old neglected fields and pastures.

I have often found the nest accidentally when rambling through weedy localities, pastures, and prairies. It is sunken in the ground, and is usually placed in or on the side of a tuft of grass or in a cluster of plants, and is thus well concealed. It is built of dry grasses, and lined with the same, and with a layer of horse hair.

The number of eggs is usually four, but sometimes five complete a set. They have no resemblance to those of the Savanna Sparrow, Vesper Sparrow, Song Sparrow, and other ground builders of this family, having a clear white ground-color, somewhat polished, and are spotted more or less thickly with reddish-brown, especially at the larger end. The spots and marblings vary in size and form, occasionally forming a corona about the larger end. They measure about .75 by .63 of an inch. “Early in June, when the female is incubating, the males seem more ambitious than at other times, and often mount a weed, shrub, or fence-post to make their queer music—one of the sounds that an ornithologist learns to recognize without difficulty, though the casual ear might not separate it from the nameless voices that show how the field teems with life at this season.” (Stearns.)

Like all our small terrestrial Sparrows it subsists on larvae, insects, and seeds of grasses and weeds.

The Yellow-winged Bunting is a rather late arrival, making its appearance in Wisconsin usually not before May, and leaving again in September. It is not gregarious, and although often seen among the flocks of other similar Sparrows in the cotton and corn-fields of Texas, during winter, it avoids intercourse with its own species on a large scale. I have rarely met four or five together. Dr. Heermann, Mr. Dresser, the celebrated English ornithologist, the well-known naturalist Dr. Lincecum, and other ornithologists of later date as well as myself have observed this bird during the summer in Texas. As I have seen it also near the Gulf coast, I infer that it breeds in that State.

The Grasshopper Sparrow is mainly a bird of the Alleghanian and Carolinian Fauna. I have no record of its breeding in northern Wisconsin, and it is even rare in northern Massachusetts.

The variety, Western Grasshopper Sparrow, *Ammodramus savannarum perpallidus* Ridgw., is found from the Great Plains to the Pacific, south over the table lands of Mexico. It is paler in color, and has usually a longer tail and longer wings.

NAMES: Grasshopper Sparrow, Grasshopper-bird, Yellow-winged Bunting; “Grass Sparrow,” “Ground Sparrow,” “Grass-bird.”

DESCRIPTION: "Feathers of the upper parts, brownish-rufous or chestnut-brown, margined narrowly and abruptly with ash-color; reddest on the lower part of the back and rump; the feathers all abruptly black in central portion; this color visible on the interscapular region, where the rufous is more restricted. Crown, blackish, with a central and superciliary stripe of yellowish tinged with brown, brightest in front of the eye. Bend of wing, bright yellow; lesser coverts, tinged with greenish-yellow. Quills and tail-feathers, edged with whitish; tertiaries, much variegated. Lower parts, brownish-yellow or buff, nearly white on the middle of the belly, darkest on the jugulum. The feathers of the upper breast and sides of the body with obscurely darker centers, these sometimes wanting. Sides of breast against bend of wing with a few black streaks, usually concealed." (B. B. & R.)

Length, 4.85 to 5.20 inches; wing, 2.43; tail, 1.87 inches.

HENSLOW’S SPARROW.

Ammodramus henslowi Gray.

This interesting little Sparrow is quite common in restricted localities from southern New England west to the edge of the Great Plains and north to Ontario. During my ten years’ residence in northern Illinois I found this species the most abundant of the genus in Cook Co. and Du Page Co., Ill., where it frequented the low flower-ornamented grassy prairies everywhere. In its habits it agrees almost entirely with the Grasshopper Sparrow, but its song is quite different, being somewhat louder and more prolonged. It consists of a number of notes sounding like sit-sit-sit-sit-ser-it. The common call-note is a soft se-wick. While singing the bird is always perched on a tall weed stalk, uttering incessantly its plain and feeble but emphatic strain, “the head being thrown back and the tail inclining forward underneath the bird,” in the manner of the Grasshopper Sparrow.

Prof. Robert Ridgway found this Sparrow a common or even abundant bird on Fox Prairie, Richland Co., Ill., in June 1871. “Twelve years later it was exceedingly numerous on the small remaining patch of open prairie (160 acres in extent) in the same locality, and also in a similar bit of prairie of equal extent which marked the last vestige of the once extensive but since populous and well-cultivated Sugar Creek Prairie, several miles to the south-west. These birds lie very close, allowing themselves to be almost trodden on before flying; and notwithstanding a very large number of females had evidently been startled from their nests only one nest could be found. They had probably run some distance through the grass before flying, thus rendering search fruitless.”

In northern Illinois HENSLOW’S SPARROW is a rather late arrival, none having been observed by me before the second week of May. When they leave in fall I am unable to say, but I have seen the first migrants in southern Missouri late in September, which seems to indicate that they leave southern Wisconsin and northern Illinois by the middle of September.

It is very difficult to find the nest. Although having searched every spring, during my residence in Illinois, for the nests of these birds, I only discovered five, and these were
only found accidentally. In the first week of June, 1870, I discovered two nests in the low, grassy prairie near Addison, Illinois, and a few years later I found several in similar situations near Oak Park, Ill. All these nests were alike in structure, being built of grasses and lined with finer grasses. No other material entered into the composition. All were built on, not sunken in the ground, like the nests of the Grass-hopper or Savanna Sparrow, and they were always placed on the side or in the center of a weed or a perrenial prairie flower, which overshadowed and concealed the structure in an excellent way. They were always found on the low prairie, where the grass and prairie flowers were growing most luxuriantly. The four, rarely five eggs have a greenish-white ground-color and are blotched and speckled all over with a mixture of madder-brown and sepia, the color becoming more confluent on the larger end; there are also a few dashes and dots of very dark sepia, almost black, scattered among the spots. They measure about .75 X .58.

In 1879 Prof. R. Ridgway found these birds common in Fairfax Co., Va., about five miles from Washington. Walking along the road at dusk, a few stars having already made their appearance, he was surprised to hear the peculiar note which he had last heard on Fox Prairie, Ill., eight years previously. Soon numbers were heard on every hand, the locality being a rather narrow valley between low hills, the lower ground being chiefly damp meadow land. A nest was discovered in this locality the following summer by Mr. P. L. Jouy.

In winter Henslow’s Sparrow is a common bird among the weeds in the cotton, corn, and sugar-cane fields of southern Louisiana and south-eastern Texas as far west as Lee County.

NAMES: Henslow’s Sparrow, Henslow’s Bunting.


DESCRIPTION: “Upper parts, yellowish-brown, the hood, neck, and upper parts of back, tinged greenish-yellow. Intercapular feathers, dark brown, suffused externally with bright brownish-red; each feather with grayish borders. Tertiaries, rump, and tail-feathers, abruptly dark chestnut-brown, darkest centrally, paler externally, and narrowly margined with gray. Crown, with a broad, black spotted stripe on each side; these spots continue down to the back. Two narrow black mandibular stripes and one post-ocular on each side of the head, and an obscure black crescent or spot behind the auriculas. Under-parts, light brownish-yellow, paler on the throat and abdomen. The jugulum, upper part of the breast, and the sides of the body, conspicuously streaked with black. Edge of wing, yellow. A strong tinge of pale chestnut on the wings and tail. The median tail-feathers and upper coverts, chestnut or Rufous-brown, with sharply defined shaft-streaks of black.” (B. B. & R.)

Length, 5.00 inches; wing, 2.15; tail, 1.97 inches.

LECONTE’S SPARROW.

Ammodramus lecontei Gray.

During the winters of 1880 and 1881 I found this interesting and pretty little Sparrow quite common in the low cotton and corn-fields in Lee Co., Texas. On the evening of October 25, 1881, several, attracted by the light, came through the open windows into my room, and I kept them almost a year in the cage, when I liberated
them again. During the first few weeks of their cage life they were exceedingly wild, but at last became quite reconciled and tame. They arrived in large numbers by the middle of November, after a very cold and rainy "norther." I also observed the bird several times in northern Illinois, especially on a low, moist prairie near Calumet Lake, on the same spot where Pullman is now situated. Mr. Charles K. Worthen found the bird near Warsaw, Ill., on the low, swampy prairies in the Mississippi bottom lands and also on dry bluffs. Several observers have met with the bird in South Carolina, Alabama, and even in Florida. It is probably common in winter in Louisiana, southeastern Texas, and many other localities, but on account of its mouse-like habits in the dense grass it is rarely observed.

Dr. Elliott Coues found Leconte's Sparrow on the border of North Dakota, while he was surgeon and naturalist of the Northern Boundary Survey in 1873. This was Aug. 9, near Turtle Mountain, and a year later he met with the bird on the head-waters of Mouse River about the margins of reedy pools, in situations exactly corresponding to those the Ammodrami inhabit along the coast. They had chosen their haunts in the deep green sea of waving grass that rolled over an extensive moist depression of the prairie. "In their mode of flight, the birds resembled Wrens; a simile which suggested itself to me, at the time, was that of a bee returning home laden with pollen; they flew straight and steady enough, but rather feebly, as if heavily freighted for their short wings. The only note I heard, was a chirping, like the noise of a grasshopper. Although I found no nest, the circumstances of observation leave no doubt that the birds bred there. They were in company with a number of Short-billed Marsh Wrens; their neighbors of the drier prairie around were Chestnut-collared Buntings, Baird's Buntings, and Sprague's Larks, all very numerous."

Leconte's Sparrow breeds from North Dakota northward, and seems to be especially abundant in Manitoba, where it was found breeding by Mr. Ernest E. Thompson. This naturalist gives the following account:

"As little seems to be known of this bird I may describe some of its habits. It frequents the damp meadows which are a mixture of red willows and sedgy grass. It is commonly found in the willows at all seasons, uttering its peculiar ventriloquial tweete, tweete, whence I knew it as the 'Willow-tweete,' long before I ever heard of Leconte or of any name for this bird. But in spring the male may be seen perched on some low twig in the meadow, pouring out his little soul in a tiny, husky double note, like reese, reese. This is so thin and weak as to be inaudible at thirty yards, yet in uttering it he seems to labor hard, his beak being wide open and pointed straight to the zenith. On the 26th of June, 1882, I found the nest and eggs which I believe were previously unknown. The nest was by a willow bush in the damp meadow; it was apparently on the ground, but really raised six inches, being on the tangle of grass etc. The eggs, three in number, were of a delicate pink, with a few spots of brownish and of black towards the larger end. One measured .75×.50."

Names: Leconte's Sparrow, Leconte's Grasshopper Sparrow, "Willow-tweete."

DESCRIPTION: Sexes, alike. "Upper parts, light yellowish-red, streaked with brownish-black; the margins of the feathers and scapulars, pale yellowish-white. Tail-feathers, dusky, margined with light yellowish. Lower parts, with the cheeks and a broad band over the eyes, fine buff. Medial line, yellowish anteriorly, nearly white behind. The buff extending to the femorals and along the sides, streaked with brownish-black. Throat, neck, and upper parts of the breast, without any streaks, and plain buff." (B. B. & R.)
Length, 4.85 inches; wing, 1.96; tail, 2.01 inches.

SHARP-TAILED SPARROW.

Ammodramus caudacutus Swainson.

The salt marshes which border the coast of Massachusetts are usually comparatively solid or at least firm enough to bear the weight of a man, but some spots are very peculiar, being composed of soft mud overlaid with sod. Thus these sloughs, as they are termed, are very deceptive, as the surface which looks solid to the eye, proves very yielding to the feet, and the unwary pedestrian finds himself submerged to the armpits in soft, slimy ooze, the odor of which is only exceeded by its pertinacity in adhering to the clothing. These singular places are doubtless the remains of lagoons or small bays, that have been surrounded by the slowly forming marshes which have gradually encroached upon the space occupied by the water. Indeed, this transformation of water into earth may be plainly seen in progress, for some portions are not even covered with vegetation, others merely support the sod; while small peninsulas have made out which are firm enough to walk upon. These are covered with a species of short, wiry grass that grows very thickly, and, as it is never cut, the dead growth of previous seasons accumulates, forming a mat. The insecurity of the footing prevents cattle or other mammals from wandering on such places, thus the localities are comparatively lonely and just suited for the home of some retiring species of bird. The Sharp-tailed Finches are aware of this fact, for here they find excellent breeding grounds, as they are almost entirely free from invasion. The thick matting of dead grass is admirably adapted to nest building, and their neat domiciles are almost always placed in it, while the overhanging grass serves to hide them. I know of but few birds which take so much pains to conceal their eggs as the Sharp-tailed Finches. They will frequently form a path for nearly a yard under the grass, by which they enter the nest that is placed in a thicket at the end. The female, when sitting, is extremely difficult to start, and then I have nearly placed my foot on her before she would fly. As will readily be perceived by the foregoing description, the nests are not easy to discover, and it is only by carefully examining every foot of the ground that I ever found one. They breed in communities in the localities which I have described, and I have found as many as eight nests in a space not larger than a half acre." (Maynard.)

The Sharp-tailed Sparrow is practically confined to the salt and brackish marshes of the coast from Prince Edward's Island and Nova Scotia south to North Carolina,
wintering from South Carolina southward to Florida and probably to Texas. Although exceedingly abundant where it occurs, it is of all the common eastern birds one of the least known to the general public, not only because its distribution is very local, but especially because its habits screen the bird from casual observation. These birds take but short and feeble flights when flushed. Usually they keep in the shelter of the reeds and the rank salt herbage. Neither this nor the nearly allied Sea-side Sparrow is so rare in New England as some suppose; “and as each one, like the Marsh Wren, colonizes certain spots without settling others to all appearance equally eligible, the actual numbers of the birds can scarcely be surmised.” (Stearns.)

This bird arrives in New England about the beginning of April and remains until some time in October. Early in June the first set of eggs is laid, and a second brood, perhaps, is reared in July. The nest is placed in a tuft of marsh grass, “just out of the way of the water—some instinct teaching the birds enough about tides to answer their purpose.” The nest is built of soft slender grasses, arranged in a circular form. It is large for the bird, spacious and deep, and is softly lined with finer grasses. The eggs measure about 0.75 x 0.55, and are grayish-white, thickly and pretty evenly speckled with brown. They cannot with certainty be distinguished from some eggs of the Savanna Sparrow, nor readily from those of the nearly allied Sea-side Finch.

The food consists mainly of seeds, and in spring and summer also of insects of various kinds.

In the interior of the country, especially in the fresh-water marshes of the Mississippi valley, we find Nelson’s Sparrow or Nelson’s Sharp-tailed Sparrow, Ammodramus caudacutus nelsoni Allen, rather common. In northern Illinois, and near Lake Koshkonong and in the Horicon Marshes in Wisconsin, this is an abundant summer resident. This was the bird I met on the coast of Texas, in winter 1879 and 1880, and which was mentioned as A. caudacutus in the Bulletin of the Nuttall Ornithological Club (Vol. VIII, 1882, p. 12) in my article on the “Birds of South-eastern Texas.”

NAMES: Sharp-tailed Sparrow, Sharp-tailed Finch, Sharp-tailed Bunting, Shore Finch.—Ueferfink (German).


DESCRIPTION: “Upper parts, brownish-olivaceous. Head, brownish, streaked with black on the sides, and a broad central stripe of ashy. Back, blotched with darker; edges of interscapular feathers and inner secondaries, whitis, just exterior to a blackish sufrusion. A broad superciliary and maxillary stripe, meeting behind the ashy ear-coverts, and a band across the upper breast, buff-yellow. The sides of the throat with a brown stripe; the upper part of the breast and the sides of the body, streaked with black; rest of under-parts, whitish. Female, similar.” (B. B. & R.)

Length, 4.33 inches; wing, 2.27; tail, 2.08 inches.

Colors of upper parts in A. caudacutus nelsoni “usually very sharply contrasted, especially the chalky-white streaks of back, as compared with the rich umber-brown ground-color.”
SEA-SIDE SPARROW.

*Ammodramus maritimus* Swainson.

This Sparrow inhabits similar localities as the preceding species, but its distribution is more southward, breeding, as it does, from Massachusetts south to Texas on the Atlantic and Gulf coasts. It seems to be particularly common on the coast of South Carolina and Georgia, which consists of various islands. These are, according to Maynard, separated by deep sounds which form the mouths of the numerous rivers that flow through this section of the country. The islands are not much elevated, but are above high water mark, while the land back of them is very low, being, in fact, overflowed by the tide. These salt marshes are quite wide, extending for some hundreds of miles along the shore, and are intersected by numerous creeks, some of which are very deep. Here the Sea-side Sparrows, or, as they are sometimes termed, the Gray Shore Finches, find a home in the tall grass which grows very densely, forming a complete protection to them. Thus they are perfectly safe, having few if any enemies; therefore they have increased to a surprising degree; in short, they fairly swarm in countless numbers. Mr. Maynard says, "that every square acre held its thousands, and every mile its hundreds of thousands of these little gray birds." At first he was not aware that there were so many, for he entered the marshes during a low course of tides, but when the water rose so high as to cover all but isolated patches of tall grass, forcing the birds to congregate in them in large flocks, he saw how numerous they really were. Usually they live concealed, but at such times they retreat before the advancing flood, until they are obliged to perch on the tops of the swaying grass, where they crouch patiently awaiting the subsiding of the waters, when they seek their fastnesses and run about on the mud in search of small shells and aquatic insects which form, in addition to various seeds, their food. Maynard found the bird also breeding at Cedar Keys, Fla., as early as February:

"The males would give their performance morning and evening, and throughout the day if the weather were stormy. The song consisted of four notes, the first two were given abruptly with a distinct articulation, while the last were more connected; the former being low and quick, the latter prolonged and accented, and both together much resembled the carol of the Red-winged Blackbird; in fact I thought the sound was produced by this bird, as the Finches were almost always concealed at the time. While giving this singular song the bird becomes greatly excited, ruffling his feathers, spreading his tail, and drooping his wings, while the head is bowed forward when the last syllable is uttered, as if it cost him a very great effort. This somewhat rude lay is evidently quite attractive to the female, for she is always near the spot, and the male often pauses in order to pursue her through the grass. Besides the notes I have described, the Gray Shore Finch utters a low twittering song while hovering in the air a few feet above the grass. It is a singular fact that these birds were about to lay so early in the season at Cedar Keys, for they do not nest in the Carolinas until the first of June which is but a little earlier than the breeding time in Connecticut. The nest is
VESPER SPARROW.

Poecetes gramineus Baird.

Plate XXIII, Fig. 5.

Yet these sweet sounds of the early season
And these fair lights of its early days,
Are only sweet when we fondly listen,
And only fair when we fondly gaze.

There is no glory in star or blossom,
Till looked upon by a loving eye;
There is no fragrance in April breezes,
Till breathed with joy as they wander by.

William Cullen Bryant.

Though the first harbingers of spring, the Bluebirds, Robins, and Song Sparrows, have made their appearance in the gardens of the northern parts of our country, April is still a cold and unpleasant month, a month of hopes and surprises, and, in many cases, of disappointments. Stormy, rainy and cold days change with bright,
1. JUNCO HYEMALIS Selat. WINTERFINK Junco.
2. SPIZELLA SOCIALIS Bonap. HAARFINK Chipping Sparrow.
3. SPIZELLA PUSILLA Bonap. WALDFINK Field Sparrow.
4. AMPHISPiza BILINEATA Cones. SCHWARZKEHLIGER AMMERFINK Black-throated Sparrow.
5. POOCÆTES GRAMINEUS Baird. ABENDFINK Vesper Sparrow.
6. AMMÖDRAMUS SAVANNARUM PASSERINUS Ridg. GRASHÜPFERFINK Grasshopper Sparrow.
7. AMMÖDRAMUS SANDWICHIENSIS SAVANNA Ridg. SAVANNENFINK Savanna Sparrow.
sunny, and warm ones. During fair weather the lovely Bluebirds are peering into the nesting boxes provided for them, warbling cheerfully their familiar strain. The next day, however, it may happen, that the air is cold and snow covers the ground, while they soar around in wayward flight, uttering rather sad and sorrowful notes. The Robins do not feel the inclemency of the weather so much. Their jubilant songs are heard from the tall elms and maples. The Song Sparrow pours forth its sweet notes in every hedge and thicket. The exhilarating sensation of the first warm April day fills the soul of the friend of nature with joy and hope. Not long after the advent of the feathered messengers of spring the first woodland flowers open their delicate petals. Among, and sometimes under the old leaves and pine needles the modest and yet so beautiful and fragrant trailing arbutus bursts into bloom, and in certain localities the snowy trillium\(^1\) is the first flower we find. In some places, especially on dry hills and prairies, the showy pasque-flower\(^2\) grows in great profusion. But it is not until late in April, that we may look for variety and wealth of the spring flora. While rambling through the woods in Sheboygan Co., Wisconsin, on April 24, 1894, I found in the sunny woodland border some places yellow with the bright lily-like blossoms of the dog's-tooth violet\(^3\), while near by, in a somewhat moister place, the ground was covered with the spring beauty\(^4\), its white or rosy flowers pencilled with red, being very conspicuous. Everywhere the hepatica\(^5\) was present, and its dainty blue blossoms were more suggestive of spring than any other flower. The blood-root\(^6\) grew in great profusion in the rich soil, unfolding its large rolled-up leaves and its snowy white blooms. All these low flowers on a background of beautiful leaves are the gems of the woodland in a marvelous setting. Here and there I found bunches of twin-leaf\(^7\), a peculiar as well as beautiful plant, though the white flower, like that of the blood-root, is very ephemeral. The large white trillium or wake-robin\(^8\) was fast pushing up its three leaves with the flower bud in the center. When walking home in the dusk of evening I passed large moist meadows yellow with marsh-marigolds\(^9\), and in peaty and springy places the gigantic leaves of the skunk-cabbage\(^10\) were growing vigorously. Once started, the wild spring flowers succeed one another in astounding rapidity, and many of them are worthy of a conspicuous place in the garden. Few realize the poetry, charm, and richness of our native flora. Comparatively few are familiar with its infinite grace and beauty in its chosen haunts, and the same holds true of our beautiful native birds.

While walking through the lane I frequently saw a gray bird dusting itself and running ahead, occasionally stopping, as if to rest, and then alighting on a fence post or a board. While flying, the tail was spread, and several white tail-feathers became visible. The whole or partial whiteness of the outer tail-feathers, always noticeable as the bird flies, renders this exceedingly common bird easily recognizable. Although one of our most abundant songsters, it is frequently confounded with other Sparrows, notably the Song Sparrow, but, if this characteristic is kept in mind, it can always readily be distinguished. At this time of the day, soon before night-fall, the exquisite song is heard on all sides until darkness. The country people call this harbinger of spring the

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\(^1\) Trillium nivale. \(^2\) Anemone patens var. Nuttalliana. \(^3\) Erythronium americanum. \(^4\) Claytonia virginica. \(^5\) Hepatica triloba. \(^6\) Sanguinaria canadensis. \(^7\) Jeffersonia diphylla. \(^8\) Trillium grandiflorum. \(^9\) Caltha palustris. \(^10\) Symplocarpus foetidus.
GRASS-BIRD, or GRASS SPARROW, and to others it is known as the Vesper-bird or Vesper Sparrow, Bay-winged Bunting and Evening Sparrow.

The Vesper Sparrow is one of our most valuable and important birds, breeding from the Atlantic to the edge of the Great Plains, and from Virginia, Kentucky, and Missouri northward to Manitoba and Nova Scotia. In late fall or early winter it is found in large numbers in the sugar plantations, and in the weedy corn and cotton fields of the Southern States, where it subsists on the seeds of weeds and insects. From the Great Plains to the Pacific a paler form, the Western Vesper Sparrow, *P. gramineus confinis Baird*, represents the typical species. In Wisconsin the Grass Finch is one of the most plentiful birds, surpassing in this respect even the Song and Chipping Sparrow, and the same seems to hold true in New England and all the Eastern States. In the northern part of the country it arrives between April 1 to April 15, usually when the weather is a horrid mixture of sunshine, rain, snow, and warm breezes.

The favorite haunts of the Vesper Sparrow are upland fields, pastures, timothy and clover fields. In northern Illinois it frequents the high rolling prairies, though in that State it is not so conspicuous a bird as in Wisconsin, where it imparts to the landscape, especially in the late afternoon, by its abundance and its exquisite song an indescribable charm. The nest is invariably placed on the ground, generally in a pasture, or in a timothy or clover field. It is always sunk into the ground to the level of the surface, and is so artfully concealed among the grass that it is only found by accident. The breeding female does not desert the nest until almost trodden upon, when she will flutter off feigning lameness, so much so, that, when a boy, I supposed that I had really stepped upon and severely injured her. By such adroitness she endeavors to attract the attention from her home to herself, to save her brood...

"The female," writes Mr. John Burroughs, "builds a plain nest in the open field, without so much as a bush or thistle or tuft of grass to protect it or to mark its site; you may step upon it or the cattle may tread it into the ground. But the danger from this source, I presume, the bird considers less than that from another. Skunks and foxes have a very impertinent curiosity, as Finchie well knows,—and a bank or hedge, or a rank growth of thistles, that might promise protection and cover to mouse or bird, these cunning rogues would be apt to explore more thoroughly." The structure is built of coarse grasses and lined with the same, only finer, material. The eggs, usually four, sometimes five in number, are pale greenish-white, more or less clouded and blotched with chocolate-brown and with dots and scratchings of various shades of reddish and rusty-brown. The average size is .80 x .60. They are very similar to the eggs of the Savanna Sparrow. Full sets may be found in Wisconsin and other northern parts of the country by the middle and sometimes even early in May and early in June, and a second brood is raised in July or later, and a third may even be reared in August.

This plain-colored bird is not only one of our most exquisite choristers, but it is also a very diligent songster, singing as it does from early morning to the fall of twilight in the evening, but we may enjoy its liquid lay even during the months of July and August, when most other birds are silent. It sings, however, most fervently in the evening and in cloudy weather, and we have often an opportunity to hear more than a dozen birds sing at the same time around us. Most sweetly sounds this strain during
the brilliant sunsets of the summer evenings. Can you imagine, dear reader, the song of this bird at such a time? If you pass over the upland fields and pastures at the close of day, when the sun suddenly breaks through the cloud-banks on the horizon, filling the whole landscape around you with a brilliant hue of crimson and golden light, you will notice every Vesper Sparrow in the field mounting a post, a fence rail, or a dry plant stalk, singing his sweetest notes. From dozens of birds on all sides the enchanting lay is heard, and this "music in the air" heightens the poetry of rural life more than any other bird song in these localities at this time.

No other observer has described the song of the Vesper Sparrow so correctly, and at the same time so poetically and in such classic language as Mr. John Burroughs, one of our most enthusiastic and charming writers upon birds—in his excellent little volume, entitled "Wake-Robin":

"Have you heard the song of the Field Sparrow?" he asks. "If you have lived in a pastoral country with broad upland pastures, you could hardly have missed him. Wilson, I believe, calls him the Grass-finch, and was evidently unacquainted with his powers of song. The two white lateral quills in his tail, and his habit of running and skulking a few yards in advance of you as you walk through the fields, are sufficient to identify him. Not in meadows or orchards, but in high, breezy pasture grounds, will you look for him. His song is most noticeable after sun-down, when other birds are silent, for which reason he has been aptly called the Vesper Sparrow. The farmer following his team from the field at dusk catches his sweetest strain. His song is not so brisk and varied as that of the Song Sparrow, being softer and wilder, sweeter and more plaintive. Add the best parts of the lay of the latter to the sweet vibrating chant of the Wood Sparrow, and you have the evening hymn of the Vesper-bird,—the poet of the plain, unadorned pastures. Go to those broad, smooth uplying fields where the cattle and sheep are grazing, and sit down in the twilight on one of those warm, clean stones, and listen to this song. On every side, near and remote, from out the short grass which the herds are cropping, the strain rises. Two or three long, silver notes of peace and rest, ending in some subdued trills and quavers, constitute each separate song. Often you will catch only one or two of the bars, the breeze has blown the minor part away. Such unambitious, quiet, unconscious melody! It is one of the most characteristic sounds in Nature. The grass, the stones, the stubble, the furrow, the quiet herds, and the warm twilight among the hills, are all subtilely expressed in this song; this is what they are at last capable of."

The Vesper Sparrow is not a gregarious bird, though many pairs may live in close proximity of each other. Where we find one pair, others are sure of being found near by. But they never associate during the breeding season, and even in fall and winter they are not seen in such large flocks, as, for instance, the Juncos, the Field Sparrows, and the White-throated Sparrows. I observed them early in November (1891) in large scattered flocks among the weeds of Poidra's sugar plantation, about twelve miles south of New Orleans, but in south-eastern Texas I met with them during fall and spring on rare occasions only, which leads me to believe that they do not make this region their winter quarters. Further west, in Lee, Bastrop, and Fayette Counties, Texas, they were exceedingly common in the cotton and corn fields during November
and December, the paler form outnumbering the typical species by far. They were mostly found in company with Yellow-winged, Savanna, Henslow's, and Leconte's Sparrows. They usually arrived early in November, when the first cold "norther" swept over the State. As in their summer home they never visit thickets and bushes, the dense grasses and weeds of the open fields affording them food and shelter. They rarely alight on bushes, although they frequently mount posts, telegraph wires, fences, and sometimes the lower naked limbs of large trees. They do not remain in Texas during the whole winter, the majority moving farther to the south, probably into Mexico, from whence they arrived again in Lee Co., Texas, about March 1, remaining about two weeks. At Freistatt, Mo., the first appeared about March 15; all had left in the course of about ten days. None remaining there to breed as far as I know. In fall they usually returned in early November and tarried often until December,

The food of this bird consists of insects and small seeds of grasses and weeds. It is very fond of searching on freshly ploughed fields, keeping almost always on the ground. Though an unsuspicious and fearless bird, it neither seeks nor avoids the companionship of man. It is the most common bird in the country roads of the North, where it searches for food and dusts itself. In the South I have rarely seen it on roads or in the vicinity of houses.

NAMES: Vesper Sparrow, Grass Finch, Grass Sparrow, Bay-winged Bunting.—Abendfink, Grasfink (German).


DESCRIPTION: Sexes alike. "Tail-feathers, rather acute. Above, light-yellowish-brown; the feathers everywhere streaked abruptly with dark brown, even on the sides of the neck, which are paler. Beneath, yellowish (sometimes reddish) -white; on the jugulum and sides of neck and body streaked with brown. A faint light superciliary and maxillary stripe; the latter margined above and below with dark brown: the upper stripe continued around the ear-coverts, which are darker than the brown color elsewhere. Wings with the shoulder light chestnut-brown, and with two dull whitish bands along the ends of the coverts; the outer edge of the secondaries also is white. Exposed portion of outer tail-feather, and edge and tip of the second, white.

"Length, about 6.25 inches; wing, 3.00; tail, 2.50 inches." (B. B. & R. I. p. 545.)

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**LARK SPARROW.**

*Chondestes grammacus* Bonaparte.

Plate XXIV. Fig. 1.

- Beautiful is the land, with its prairies and forests, and fruit trees: Under the feet a garden of flowers, and the bluest of heavens Boxing above, and resting its dome on the walls of the forest.

- Longfellow.

If our opportunities to ramble around in the post-oak woods of Texas are confined to the hot and dry summer time, when the ground is deeply cracked and the flowers withered, we are unable to comprehend the nature and extent of the great beauty and charm of these woodlands in spring, when the feathered minstrels sing their jubilee notes,
and the ground of forest and prairie is aglow with bright-colored wild flowers. Although impressing the mind at first as quiet and unattractive, these post-oak woods are, during a great part of the year, full of life, and abound in an astonishing wealth of flowers. This I found especially true of the region between Brenham and Austin. These woods consist almost entirely of post-oaks, though hickories and black jack oaks are frequently interspersed. In the bottom lands of the creeks and “branches” water oaks, pecan trees, mulberry and hackberry trees, and elms, mostly draped with long pendent festoons of Spanish moss, take the place of the post-oaks. Small live-oak and mesquit prairies, alternating with the woodlands, are another feature of the landscape. The farms are scattered promiscuously in the woods and on the prairies where the soil proves especially fertile.

The first spring blossoms appear in February. In March the ground is covered with gorgeous masses of lovely flowers. The sweet-scented Carolina anemone¹, varying in color from white to purplish-red, is the first spring flower we meet, although in sunny and protected places the striped allium² begins to flower sometimes in January. One of the most dazzling and familiar plants of the post-oak woods is the dwarf coral plant or Cherokee bean³. Its red pea-like flowers are scattered along the leafless stems in great profusion. Later on the ground glows with masses of phlox⁴ in different shades of color, from rosy-white to a deep scarlet, the fiery red prevailing. The fragrant nemastylis⁵, the interesting blue-eyed grass⁶, the star-grass⁷ are common everywhere in early spring. The pretty sky-blue larkspur⁸ is a very common plant, while patches of the standing cypress⁹, stately in growth and with large spikes of dazzling orange-scarlet flowers, are seen from a great distance. Coreopsis or tickseed¹⁰, gaillardias¹¹, the deep blue lupine¹², and many others add color and variety to the white carpet of woolly gnaphalium, which covers the ground everywhere in the openings. The soft stems of this plant are most extensively used by many birds in nest building. In sandy places the eye beholds large patches of tuberous rooted commelina¹³, the blue flowers of which exhale the fragrance of the heliotrope. After a heavy shower the star-like blossoms of the yellow zephyr flower¹⁴ and the snowy-white blossoms of the cooperias¹⁵ appear like magic out of the ground. Characteristic among the flora of these localities are the beautiful pentstemons, especially the thimble-flower¹⁶ with its large bell-shaped pale blue, purplish striped blossoms, and the imposing Pentstemon Murrayanus, attaining a height of from four to six feet with magnificent spikes of large scarlet blooms. On dry gravelly soil in the woods we frequently find patches of the exceedingly beautiful comb cactus¹⁷, the rosy-purple flowers of which are very striking. The bread cactus¹⁸ is met most abundantly in openings, while the devil’s pin-cushion¹⁹ prefers the dry heavy soil in the open woods.

The prairies, here and there dotted with patches of live-oak and mesquit trees, abound in a flora of their own. Among the spring flowers the evening primroses²⁰, the sensitive plants²¹, and a host of other flowers²² convert these localities into veritable

flower gardens. Near the creeks the beautiful blue foam flowers\(^1\) and gorgeous cardinal flowers\(^2\) grow in great luxuriance. Dense bushes of malvaviscus\(^3\) are showing their scarlet flowers and still darker red berries at the same time. Many of these flowers have been transferred to the garden and are highly prized in cultivation. Those mentioned are only a small portion of the rich and interesting flora of the post-oak woods of Texas.

During April these woods resound by a thousand-voiced bird concert. Not only the resident species and the summer sojourners, but also the migrants in their bright wedding dresses sing from trees and bushes their notes of joy and happiness. In this part of Texas many of the farm-houses are built of logs or rough boards, having a primitive and uninviting appearance. With the exception of a number of peach trees only a few mulberry and China trees are planted for shade. Being familiar with the beautiful trees, shrubs, and climbers found in the neighboring woodlands, we are disagreeably affected by the dreariness and the desolation around the farm-houses. In this blessed climate, where one of the most beautiful trees in existence, the grand evergreen magnolia, grows to perfection; where gardenias (Cape jasmines), pittosporums, pomegranates, myrtles, tea and Noisette roses, amaryllis (of the genera Amaryllis, Lycoris, Nerine, Hippeastrum, Habranthus, Cooperia, Zephyranthes, and Narcissus), majestic clumps of crinums and many other semi-tropical bulbs and plants appear in unparalleled magnificence, man has the material on hand to create exquisite surroundings, if he only had the taste and love for the beautiful. The famous Mockingbird, in spite of the scarcity of trees and shrubs, sings its indescribably beautiful and melodious song day and night, and Bewick's Wren is also present everywhere near and in the habitations of man. Where a variety of deciduous and evergreen shrubs, trees, and vines are found, we may be sure to observe the brilliant Painted Bunting, the Blue Grosbeak, the bright-colored, proud Cardinal, the Bluebird, Martin, Kingbird, Orchard Oriole, and Scissor-tailed Flycatcher.

In early spring of 1881 I made the post-oak woods near the West Yegua Creek, Lee Co., Texas, my home for several years. My little cabin was surrounded by many old and crooked oaks. There was little undergrowth, except on the edges of the woods and on the creeks and "branches"; the eye could penetrate far in every direction. In the trees the noisy Tufted Titmouse, pursuing insects from branch to branch, called incessantly with loud and echoing voice peto-peto-peto, and frequently the whistling note of the Great-crested Flycatcher and the sweet, melancholy call of the Wood Pewee fell on my ear. The shrill cry of the ever present Blue Jay echoed sharply among the trees. There were other sounds. The rolling tapping of the many Pileated Woodpeckers, and of the numerous Red-headed and Carolina Woodpeckers. From the clearings and the prairie outside, pleasantly softened by distance, the songs of the Mockingbirds and Cardinals were heard. But we notice another beautiful and strange song, one of the most characteristic of the woodland choir, its silvery notes being easily recognized among the intermingling of the other voices.

This sprightly songster proves to be the Lark Sparrow, a bird being most numerousely distributed over this region. In the gardens the familiar northern Catbird is replaced by the Mockingbird, and the saucy little House Wren by the nobler Carolina

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\(^1\) Ageratum. \(^2\) Lobelia splendens. \(^3\) Malvaviscus Drummondii.
and Bewick's Wrens, while the Lark Sparrow occupies the place of the Song Sparrow. In the gardens of the post-oak region it is exceedingly abundant, and is also found in large numbers on the edges of the woods, on the prairies, and in corn and cotton fields. It is a much livelier bird than the Song Sparrow, and is also quicker in its motions and finer in its plumage. Loud and melodious, energetic and merry sounds the song of this familiar bird from the fence posts, the bushes, and trees. In the next moment, after finishing his song, he raises the feathers of the crown, and wildly and in evident excitement chases the female in circular flights over the ground, spreading at the same time his tail in a fan-like manner, the outer feathers of which are broadly tipped and bordered with white, characterizing him at once even to the novice.

I found the Lark Sparrow exceedingly numerous in all parts of Texas, and from Houston to New Braunfels. On Spring Creek Prairie (Rose Hill), in Harris Co., Texas, a favorite field of observation of mine, I had the first opportunity of observing it closely. There the isolated trees as well as those of the margins of the woods, especially the beautiful laurel oaks, were densely draped with festoons of Spanish moss. Mockingbirds, Cardinals, Blue Grosbeaks, Painted Buntings, Orchard Orioles, Scissor-tailed Flycatchers, Blue Jays, Shrikes, Sycamore and Parula Warblers, Acadian Flycatchers and Lark Sparrows were very numerous on the borders of these woods, all preferring to hide their nests on horizontal branches densely draped with Spanish moss. Thus situated it was almost an impossibility to find a nest, and I never succeeded here in discovering one of the Lark Sparrow. These pretty and mirthful birds could be observed in great abundance on the borders of the woods and on the adjoining prairie, and their gushing and sprightly music fell on my ear wherever I chanced to go. In this locality as well as all around Houston the Lark Sparrows were very wild and suspicious, avoiding the society of man almost entirely. At Freistatt, Lawrence Co., Mo., where I resided from 1882 to 1887, this bird was also a very common summer sojourner, but here also it was very shy, always shunning the immediate neighborhood of man.

In south-eastern Texas and westward the Lark Sparrow makes its appearance early in April; in the Ozark region of Missouri it rarely arrives before the third week of the same month, while in northern Illinois it seldom appears before May 5. Although occurring occasionally as far north as Minnesota, Dakota, and even Manitoba, it is a rare bird in southern Wisconsin, being generally unknown to the most ardent friend of Nature. In northern Illinois it is nowhere conspicuous among the avi-fauna. It leaves south-western Missouri early in September, and by the middle of October almost all have departed from south-eastern Texas for their winter-quarters. The bird is mainly distributed over the Mississippi valley, east to Ohio, west to the Great Plains, south to Louisiana and eastern Texas. In western Texas and west of the Great Plains to the Pacific the species is replaced by a variety, the Western Lark Sparrow, Chondestes grammacus strigatus Ridg., a form which is particularly common in California.

After the birds have arrived from the South in Texas, they attract our attention wherever we meet them. At this time the males are full of that rivalry which the love season inspires. They are now in small companies, and as soon as the females make their appearance a few days later, many a fierce battle is fought among the extremely pugnacious males. In jealous contest they chase each other through
the bushes and over the ground. At such times they vie in song. On all sides their peculiar music is heard, especially when several males are in pursuit of a female, "who with affected coyness leads them a rapid chase through the tangled maze of bush and foliage, and as they ardently follow her each gives voice to a gushing strain of melody which blends into a whole, marking their track as it were by a continuous stream of music."

To my ear the song is very beautiful. I am unable to compare it with any other bird melody with which I am acquainted. It consists of a succession of loud, clear, mellow, and extremely sweet notes, interspersed with tinkling trills and a few twittering sounds. The whole is flowing forth like a clear rushing stream, ever new and ever charming, being as beautiful as it is indescribable. Prof. Robert Ridgway, who has a very fine ear for bird music, describes the song in the following words:

"It has been a matter of surprise to us that writers who have described the habits of the western birds, have not mentioned more particularly the vocal capabilities of this bird, which in sprightliness and continuity of song has few, if any, rivals among the North American Fringillidae. Words entirely fail to describe its song, which, among the oak groves of California, as well as on the prairies of Illinois, is pre-eminent for the qualities above mentioned. As the bird perches upon the summit of a small tree, a fence post, or a telegraph wire, his notes may be heard throughout the day—in the morning before those of any other, and late in the evening when all else but this unwearied songster are silent; indeed, often have we been awakened at midnight by a sudden outburst of silvery warblings from one of this species. This song is composed from a series of chants, each syllable rich, loud, and clear, interspersed with emotional trills. At the beginning the song reminds one of that of the Indigobird, but the notes are louder and more metallic, and their delivery more vigorous. Though seemingly hurried, it is one continued gush of sprightly music; now gay, now melodious, and then tender beyond description,—the very expression of emotion. At intervals the singer falters, as if exhausted by exertion, and his voice becomes scarcely audible; but suddenly reviving in his joy, it is resumed in all its vigor, until he appears to be really overcome by the effort."

In the post-oak region nest-building begins early in May. The nests are built in very different situations. As a rule horizontal limbs of trees are chosen. The first nest which I found May 5, was placed in a dense young mulberry tree, about six feet from the ground. It was scarcely ten feet from a much frequented veranda and near the main walk. The structure was artfully hidden among the branches and shaded from the fierce rays of the sun by a dense canopy of leaves. The main material used in the construction were the soft white stems of Gnaphalium, arranged in a circular manner. A few grass-blades, bark-strips, rootlets, strings, and fine hair of cattle also entered into the composition. The lining consisted of horse hair. Scarcely ten yards from this nest I found another one in the corner of a rail fence which enclosed a cow pen. This was constructed exactly in the same style as the one above described. A third one was discovered near by in an old Woodpecker's hole, and in such cavities quite a number of nests were discovered later. In the following spring several pairs even occupied nesting boxes which I had put up near my house to accommodate the Bluebirds and Tufted Titmice. Nests in cavities are not built in the substantial manner just mentioned.
LARK SPARROW.

They consist only of a foundation of bark-strips and grasses, and are lined with horse hair. I have also made the observation that the Lark Sparrow repairs old nests of the Cardinal, Mockingbird, Kingbird, Scissor-tailed Flycatcher, and Orchard Oriole. As the Lark Sparrow generally avoids the society of man, it seems peculiar that in many places of Texas it is as familiar, and more so, as the northern Song Sparrow. Although I have frequently discovered nests on the ground in cotton and corn-fields in Texas, most of them were built near dwelling-houses in orchard and ornamental trees. In eastern Texas the nest is almost invariably placed in thick bunches of Spanish moss on a horizontal limb. At Vermillionville and New Iberia in southern Louisiana they were found in gardens, but more usually in the dense Cherokee rose hedges which surround the fields. In south-western Missouri all the nests examined by me were placed on the ground, usually sunken in a cavity and concealed by tufts of corn, clover, or weeds. These ground nests are exceedingly difficult to find. Several nests found between the years 1869–1879 in Du Page and Cook Co., Ill., were all built on the ground.* In the gardens of Texas the nests are easily discovered. Although the parent birds do not make much ado when the nest contains eggs, they become quite excited when the young are hatched. The eggs, usually four to five in number, are pure glossy white, speckled, blotched, and marked with zigzag and wavy lines and spots of very dark brown, almost black; this color is easily rubbed off by a moist piece of cloth, and a dark shade of rusty-brown remains. The markings prevail on the larger end, and the eggs somewhat resemble those of the Baltimore Oriole, though smaller, and much more rounded and polished. They measure .77 to .88 of an inch in length, and from .60 to .67 of an inch in breadth.

In Texas the Lark Sparrow rears two and sometimes three broods annually, while in south-western Missouri and in all parts of its northern habitat only one brood is raised. In July and August I always heard in Texas the young males of the first brood, scarcely two months old, practice their song in all directions. In delivering their performance they were usually perched on the top of some bush or fence-rail, twittering with all their power their short and rather harsh juvenile song.

This Sparrow, like all its congeners, subsists in winter largely on the seeds of weeds and grasses, taking also insects and their eggs when opportunity offers. In August and September the birds are met most numerously in the cotton fields, where they are chasing the cotton moths and are searching for cotton and boll worms. By the beginning of October they move southward, but stragglers are found until the middle and end of that month. None winter in Texas. Southern Mexico (Vera Cruz, Oaxaca, etc.) and probably also Central America is their real winter home.

Though not bright-colored, the Lark Sparrow can justly be termed a very pretty bird, its gray, white, and brown color being very tastefully arranged. It is without doubt one of the finest of the group of American Sparrows, known as the sub-family of Spizellinae, termed by Dr. A. E. Brehm "Ammerfinken" (Bunting Sparrows), a very

* According to the observations of Mr. H. C. Coole, Mr. E. T. Genli, and Dr. J. L. Hancock, the Lark Sparrow is rather rare in northern Illinois, which fully agrees with my own observations. "In north-eastern Illinois," says Dr. Hancock, "I found the Lark Finch (scarce) in Englewood, June and July last year, 1883. It was observed by me in middle of July 1887 in Hyde Park, and recorded as a 'summer resident' in my notes. At Riverside I met with it 'on the borders of fields in woods,' for the last three years 1891–1893, but it is rather scarce. It breeds here, for I saw some that were feeding their young. They are not wary, are easy to approach, which makes their identification unquestionable."
correct appellation. The liveliness of this Sparrow, its excellent song, its dexterous flight, its abundance, and, in many localities, its confidence in man, combine to make it one of the most valuable of our southern birds. As it easily accustoms itself to cage life, bird fanciers in this country and Europe are very fond of it. Like most members of the *Spizella*, it becomes very tame, is easily kept, sings finely, and its plumage always looks smooth and trim. For the aviary it is not adapted, as it soon becomes the tyrant of all the other inmates, chasing even such large birds as Cardinals, almost incessantly around in the cage. All the other members of this sub-family are exceedingly peaceful and harmless. Kept singly, it sings from March to September almost without interruption. Prof. Ridgway says, that at Sacramento, Cal., young birds readily sell for four dollars a pair.

I have kept quite a number of Lark Sparrows in the cage, and observed that, like all members of the sub-family *Spizella*, their wants are easily supplied. A mixture of millet, Canary seed, natural rice, lettuce, wild portulaca, etc., forms the main diet, while they also get accustomed to a mixture of Mockingbird food and crated carrots. Mealworms are highly relished, and so are grasshoppers and other insects. Some of my cage pets were so intent upon these and other insects, that they took them from my hand without hesitation.

The Lark Sparrow in different sections of the country is known by different names. From its running in the grass, with lowered head like a Quail, it received the name “Quail-head,” and from the habit of running along the road it is called in some places the “Road-bird.” According to Prof. Ridgway, the Utah boys call it the “Snake-bird,” from the supposed resemblance of its striped head to that of a snake. In Texas it is sometimes called the “American House Sparrow,” “Prairie Sparrow,” “Cotton-bird,” and “Texas Song Sparrow.”

The Western Lark Sparrow, *Chondestes grammacus strigatus* Ridgw., inhabits the Western United States, east to the Great Plains and middle Texas, south over table-lands of Mexico.

**NAMES:** Lark Sparrow, Lark Finch, Quail-head, Road-bird, American House Sparrow (Texas), Cottonbird, Prairie Sparrow, Texas Song Sparrow, Snake-bird (Utah).


**DESCRIPTION:** Sexes, alike. Above, brownish or grayish-brown, each feather streaked with blackish; lower parts, chiefly white, with a small black spot on the chest; tail-feathers, blackish, broadly tipped with white, except the middle pair; “crown and ear-coverts, chestnut, the former divided medially by a pale brownish-gray or grayish-buff stripe (whitish anteriorly), the chestnut passing anteriorly into blackish; a black streak across lores, and one along each side of throat.”

Length, 6.25 inches; wing, 3.49; tail, 2.82 inches.

*Chondestes grammacus strigatus* Ridgw. is paler, browner, and larger.

Length about 7.00 inches; wings, 3.58; tail, 2.93 inches.
WHILE residing in the post-oak woods near the West Vegua creek in Lee Co., Texas, I had an excellent opportunity of observing the resident and winter birds of that region. Every day early in the morning I rambled about in the bottom woods, which were bounded by cotton and corn-fields. A dense border of tangled thickets and trees overgrown with mustang grape-vines, Virginia creeper, smilax, and trumpet-vine surrounded these woodlands. Pin-oaks, elms, pecan, mulberry and hackberry trees, sycamores and hickories were the prevailing species of trees, while the underwood consisted of Mexican mulberry, yupon bushes and white-thorns. During fall, winter, and spring this locality swarmed with birds of many species, but the different Sparrows and the Wood Warblers were most numerous and interesting. In no other place did I ever find so many winter birds as here. It is a well-known fact that in certain localities the woods and the undergrowth swarms with birds, while in other places, evidently equally suitable, none or very few are found.

In fall the birds usually arrive just before a cold rainy storm or contemporaneously with it. These cold snaps, which are known everywhere in Texas as the "norther," begin late in October and last till March or early April. The duration of such a cold blast is usually three days, but it often lasts six and even nine days. After such a norther has ceased, the weather is clear and spring-like again, the air salubrious and invigorating. While walking through the border of the woods on Nov. 14, 1881, when we had experienced a very wet and cold "norther," I noticed among the mesquit bushes and prickly pear thickets a number of strange birds which I had never seen alive before. Still more numerous they were in the bushy border near a corn-field, and in the dense interior of the woods. I recognized these birds at once as Harris' Sparrows. During the whole winter, until late in March, I had an excellent opportunity of observing them. Thousands of Juncos, White-throated and White-crowned Sparrows, Towhees and Field Sparrows were generally in their company. In the dense, partially evergreen thickets, and in the equally dense undergrowth of the bottom woods all these birds were excellently protected from cold weather, and from the many birds of prey that were to be found in open places and in the extensive fields. Great swarms of Passenger Pigeons, which found an abundant supply of food in the post-oak woods, made the dense bottom woods their resting place during the night. Here also the majority of winter birds were found, and I could scarcely imagine a better field for my observations than among these thickets. The Hermit Thrush was hunting among the dry old leaves for insects. Thrashers and Chats hopped shyly through the tangled masses of creepers. The restless, noisy, and inquisitive Bewick's and Carolina Wrens were creeping adroitly through brush heaps and formidable prickly pear thickets. Flickers were seen on all sides, hammering with all their power into the over abundant ants' nests.
HARRIS' SPARROW.

Everywhere in the adjacent fields and in the bushes bird life reigned supreme. Many rare birds from the Saskatchewan and the region of the Red River of the North mingled here with those of the central and southern part of the country. Large flocks of Field Sparrows were seen in company with Pallid Sparrows.

On the above mentioned day immense numbers of northern birds arrived, and the woods swarmed with migrants from the North. White-throated and White-crowned Sparrows were hopping about in the same thickets with Cardinals and Mockingbirds. But of all the birds which I here saw, none attracted my attention in a higher degree than Harris' Sparrows. I was struck with their size and beauty. I never had seen these birds in south-eastern Texas or in any other part of the State. They found an abundant supply of food in the adjoining corn and cotton-fields, where especially the spiny seeds of a species of cock-spur grass (Cenchrus) abounded. They were very shy and did not venture to stray too far from the edges of the thickets to which they retired instantly when danger threatened. In the outskirts of the woods I could observe them almost for hours, but whenever I changed my position they flew without a moment's delay into the thickets of the interior of the woods where evergreen bushes predominated. In their ways and habits they reminded me of the White-crowned and Fox-colored Sparrows, and to a certain extent also of the Towhee. They do not seem to be as gregarious as many of their kin. I have rarely observed more than six to twelve in a flock. In the early morning they visit with Juncos and other allied Sparrows and even Cardinals the neighboring fields, and they also went in their company to the water. Among the bushes and weeds of the fence corners I have frequently seen them. As soon as the day dawns they are awake, uttering their call-notes from all sides. At day break they fly into the fields for food. In the evening they soon go to rest, seeking the most protected and dense places in the thickets. On the ground they scratch much in the way of chickens, but they throw the old leaves and the soil backward with both feet at the same time.

The Towhee, Fox-colored Sparrow, White-crowned and White-throated Sparrow scratch in exactly the same manner.

In October 1882 I found these birds in small numbers at Freistatt, Lawrence Co., Mo. They were loitering in small troops in the basket vines (Symphoricarpus glomeratus) and the undergrowth of the woods and the thickets and hedge-rows, along with Juncos, White-throated Sparrows and Towhees, all enjoying at their ease the genial climate and the beautiful autumn days of the lingering season. They were observed during five successive years. Arriving usually by the middle of October, they remained frequently until Christmas if the weather was fair. In spring the first migrants appeared again by the middle of March, and the last stragglers did not leave for the North until the middle of April.

In Texas I caught quite a number and kept them in the cage. Although very wild in the beginning, they soon became reconciled to their loss of freedom. With kind treatment they became very tame, and took grasshoppers and moths from my fingers. With other inhabitants of the cage they lived in perfect peace. They always kept their plumage smooth and in good order. Millet seed, caffir corn, and Canary seed were their main diet. In order to give them an equivalent for their insect diet in spring and summer, I added fine pieces of crated beef, grasshoppers, beetles, and other insects to their usual
food. The song of my cage pets was very loud, clear, melodious, prolonged, and liquid. They sang most diligently in sultry weather, and the lay reminded me of the song of the White-crowned Sparrow as well as of that of the Fox-colored Sparrow.

The breeding range of this fine Sparrow is found from northern North Dakota and Montana northward. Our celebrated ornithologist and oologist, Captain Charles E. Bendire, gives the following description of the supposed nest and eggs of Harris' Sparrow:

"During the summer of 1885, while I was stationed at Fort Custer, Montana, one of my men, who was well posted about the birds of that region, and helped me to collect a good many, while out hunting one day found a nest and four eggs of some Sparrow, without, unfortunately, securing the parent, and brought them in for me. I saw at a glance that these eggs were new to me, and visited the place where the nest was found next day, in the hope of possibly still finding the owners about the locality, but failed in this. The eggs in question differ materially in coloration from those of the other species of Zonotrichia, as well as from those of the genera Passerella, Melospiza, and Pipilo, all of which are represented by good series in the National Museum collection.

"The nest was found June 24, 1885, in a dense willow thicket close to the banks of Little Horn River, about one and a half miles above the post. It was placed between several young willow twigs, about eight or ten inches from the ground, compactly built of strips of decayed willow bark, coarse grasses, etc., and lined with finer materials of the same kind. Outwardly the nest was about four and a half inches wide by three deep; the inner cavity was two and a half inches wide by two in depth. In its general make-up it resembled the average nest of a Passerella. The eggs contained small embryos. They resemble certain types of Cardinal's eggs more than anything else, but are considerably smaller. There is no trace of green whatever noticeable in their ground color. This green tint is always found to a greater or less extent in all the eggs of the genera Zonotrichia and Passerella, and with rare exceptions in Melospiza as well, while here, it is a creamy or buffy-white, and the shell is also more lustrous. The eggs are thickly spotted and blotched with dark brown and burnt umber, and more or less mixed with pale heliotrope-purple and purplish-gray. They are ovate in shape, and measure .89×.70, .88×.69, .86×.69 and .85×.65 inch.

"I am certain that these eggs are not those of the Cardinal, which is not found as far north as Fort Custer and would surely have been noticed by me, if it occurred there, and unless they should be abnormally colored eggs of the Arctic Towhee, which is barely possible, although also rather small for this species, they will certainly prove to be those of Harris' Sparrow. While I do not believe that it is a constant and common summer resident in the vicinity of Fort Custer, it probably breeds there as a straggler; I failed to meet with this species during the summer, but found it not at all uncommon during its fall migration. Specimens collected by me in the early part of October are now in the National Museum. I found them associated with White-crowned Sparrows and Arctic Towhees principally, scattered in small flocks through the undergrowth along the Big and Little Horn River bottoms, and it seems to confine itself to the shrubbery found along the streams." *

In their breeding range in fall "they go in little troops; loitering in the patches of briers that lead out from the continuous undergrowth into the ravines making down to the streams; and their habit, when disturbed, of mounting the topmost twigs of the bushes to gain a better view, together with their size, renders them very conspicuous." (Coues.)

NAMES: Harris' Sparrow, Black-hood Sparrow.—Trauerfink (German).


DESCRIPTION: "Hood and nape, sides of head anterior to and including the eyes, chin, throat, and a few spots in the middle of the upper part of the breast and on its sides, black. Sides of head and neck, ash-gray, with the trace of a narrow crescent back of the ear-coverts. Interscapular region of back, with the feathers reddish-brown, streaked with dark brown. Breast and belly, clear white. Sides of body, light brownish, streaked. Two narrow white bands across the greater and middle coverts.

"Length about 7.00 inches; wing, 3.40; tail, 3.65 inches." (Ridgway.)

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**WHITE-CROWNED SPARROW.**

*Zonotrichia leucophrys* Swainson.

**PLATE XXIV. FIG. 4.**

Down from the North they are marching,
The scouts of the winter king:
Where bright spring flowers were blooming,
Withered and dead leaves they fling.
Their blazon fires they've kindled,
Sumacs and maples aglow;
Oaks on the hill-side are waving
Signals to birches below.
O'er field and meadow are drifting
The smoke and dust of the fray;
In woodlands dead leaves are falling,
This Indian summer day.

From "Forest and Stream."

This time our way leads us to the thickets of the woods and the woodland border.

It is a beautiful day in October, as October itself is one of the most beautiful months of the year in almost all parts of our great country. The thickets and hedges swarm with birds migrating southward. The days are yet quite sunny, though the nights are not free from hoar frosts. A veil-like haze, so vapory as to be perceptible only on distant objects which it seems to cover, denotes the Indian summer. The wonderfully picturesque effects of the various contrasting colors which the foliage of many trees, shrubs, and even herbs has assumed, produce a deep impression upon the lover of the beautiful in Nature. The deep blue prairie gentian1 is flowering abundantly on the prairies of the Ozark region never disturbed by plough or harrow. About the same time the beautiful fringed gentian2 appears, mirroring the blue October skies. The closed gentian3 with its deep purple-blue corolla is less beautiful as the two foregoing.

1 *Gentiana puberula*.  
2 *G. crinita*.  
3 *G. Andrewsii*.
species. All are exquisite and worthy of special culture in the garden, and all are difficult to transplant. The leaves of the sumach and the Virginia creeper, the latter covering thickets and creeping high up on the trunks of trees, are glowing in the brightest red and purple tints imaginable. In fact, the Indian summer to a great extent rewards for the absence of a fine and congenial spring time, and often continues into December, till a sudden winter storm puts a hasty end to all this autumnal glory.

This season is peculiarly attractive to the lover of plant and bird life. Though our country is famous for the fading tints of its autumn foliage, the rich yellow flowers of the golden-rod mixing with the falling leaves, do much towards the reputation for unsurpassed beauty which American scenery enjoys. There are almost fifty different species of golden-rods, most of them yellow, but they vary much in "habit and in arrangement of flowers, so that though the golden-rods are everywhere in our fields and forests, there seems to be an unending variation in the effect they produce, and the impression to the novice in their study is that there are even a greater number of species among them than is actually the case." Although exceedingly common everywhere, they are among the most distinguished of our wild flowers. Everybody who knows anything of our wild scenery knows the golden-rod, and no picture or description of an American autumn landscape is complete, unless the golden-rod forms an essential part thereof. The autumn sneezewort or "Indian snuff" (*Helenium autumnale*) which usually grows near the water, is also a common plant of the season, as are the numerous asters which, mixed with the golden-rods, form a conspicuous part of the autumn landscape. Though many of the shrubs and trees begin to shed their leaves, yet there is cheery life in all the thickets, woodlands, fields, gardens, fence corners, and hedge-rows. Thousands of Wrens, Thrashers, Palm and Myrtle Warblers, Juncos, Towhees, White-throated and Fox-colored Sparrows, and many other species, having arrived from the North silently and unperceived, rest here for a while, enlivening by their presence the enchantingly beautiful days of the Indian summer, and adding in a high degree to its charms. As soon as the days get cold and damp, the birds wend their way southward.

One of the most striking and attractive of these migrants during the salubrious days of the Indian summer is the **White-crowned Sparrow**, a bird of very prominent and elegant appearance, and easily distinguished by its white crown which is separated by two black stripes on either side, rather narrower than itself. The black line behind the eye is continued anterior to it into the black at the base of the bill.

The White-crowned Sparrows appear in central Wisconsin and in western Massachusetts from the first to the fifteenth of October from the North. The first flocks reach south-western Missouri by the middle of the month and south-eastern Texas by the first of November. They are usually in company with Juncos and White-throated Sparrows, but rarely more than a dozen are found together in one locality. Each one goes its own way without caring much for the rest. The White-throats are much more gregarious than the present species. It is a peculiar fact that the birds are not observed each year in equal numbers; they may be exceedingly common in spring, while only a few are seen in fall and vice versa.

During the fall these birds frequent brier patches, thickets in fields, bushy borders of the woods, fence corners where bushes, golden-rods, and asters grow luxuriantly,
hedge-rows and the bushy margin of swamps. At this time they rarely visit the gardens and parks of larger cities. They are always searching for seeds of grasses and weeds on the ground, and for this purpose even visit the interior of open woods where many species of sunflowers grow abundantly, the seeds of which they greatly relish. Noiselessly they skip about. Now and then we only hear their call-note, a subdued cheep or chee. In case of danger they all rush into the thickets and into the bushy interior of the woods, not appearing again before they feel perfectly safe. Their flight leads them often over large tracts, though they prefer to move from thicket to thicket. Like all the small birds they migrate during the night, resting and searching for food during the day. On the ground they are perfectly at home, running around adroitly. Although they sometimes take insects from the leaves of the bushes, they pick most of their food from the ground. Among the old leaves and grasses and in the loose leaf-mould of the woods they scratch like a hen; yet unlike a hen in so far as they scratch with both feet at once, which is, as Mr. Burroughs says, "by no means the best way to scratch." If we have the opportunity to ramble about in the brier patches and copses and on the bushy woodland border on any warm and clear October day, we shall rarely miss this bird, provided we take an interest in bird-life and have accustomed ourselves to its contemplation. By the end of October they have all disappeared from the Northern and New England States.

While residing in Texas I had many welcome opportunities to observe these and other Sparrows in their winter-quarters. They were exceedingly numerous in the low dense thickets overshadowed by magnolias, live-oaks, laurel-oaks, red bays, plane or sycamore trees, sweet gum, hackberry and other trees on Buffalo and White Oak Bayous near and in Houston, Tex. The underwood and the thickets which margined the woods, consisted mostly of Dahoon, Yupon, holly, dogwood, different species of viburnum, button-bush, lantanas, laurel-cherry, and many other shrubs and small trees which were overgrown with tangled masses of smilax, Carolina jasmine, clematis, and grape-vines. The twisted and in every way grotesque forms of the supple Jack were growing to an immense size in the rich, moist soil. Thousands of our northern birds find a safe retreat during the inclemency of the wintry "norther"s in these protected localities. The migrants in fall usually arrive immediately before or contemporary with one of the rainy and cold "norther," which frequently visit Texas from early November to the latter days of March. These cold winds are the cause why we cannot expect a more tropical vegetation in this State, though the heat of summer is really tropical. The first White-crowned Sparrows appear early in November, but the majority does not arrive before the last days of that month or early in December. At this time the thickets swarm with birds. In the dense broom grass they find excellent hiding places, for Sparrow Hawks and several other birds of prey are always present where many of the small birds congregate. Seed-bearing grasses and weeds supply an abundance of food, and there is no lack of insects on the ground and under the old leaves. During the entire winter these localities are alive with thousands upon thousands of birds.

1 Persea Carolinensis. 2 Plantanus occidentalis. 3 Liquidambar styraciflua. 4 Ilex Cassine. 5 I. vomitoria. 6 I. opaca. 7 Cephalanthus occidentalis. 8 Prunus Caroliniana. 9 Clematis viorna. 10 Berchemia volubilis. 11 Andropogon macrourus.
WHITE-CROWNED SPARROW.

Not only winter visitors find here a congenial home, but also many resident species. During the latter part of March and early in April the White-crowns usually prepare for their journey to the North, but I have seen them as late as April 30 near Houston and in the thickets near the West Yegua creek. In Oak Park, Ill., I observed them every spring from the last days of April until the middle of May. They were so tame that they came under the kitchen windows to pick up crumbs and seeds.

At Milwaukee this Sparrow usually arrives about May 1, though in mild seasons the van may appear a few days earlier. They remain about two weeks, and some stragglers tarry even till the last days of the month. In the fine gardens, rich in evergreens and ornamental shrubs, the exceedingly characteristic and fine strain of the White-crowned Sparrow is heard from all sides on the sunny and warm days of May. It sounds like pē-de-de-de-de-de. The first two notes are long drawn and rising, the rest hurried and lowering, the whole sounding like a mellow whistle, being easily imitated. The song bears a close resemblance to that of the White-throat, but is readily distinguished, being louder and less monotonous and plaintive. While uttering its lay the bird is always mounted in the top of a tall shrub or a small tree, singing incessantly for almost half an hour. If approached while thus engaged, the performer becomes silent and dives hastily into the nearest cover, soon, however, appearing again in another direction and singing as diligently as before. In the garden of Miss Hedwig Schlichting, where large old apple trees, ornamental shrubs, and shade trees are found, and where Scotch pines and Norway spruces grow in an adjoining garden, these birds are perfectly at home during the migrations, especially in spring. My friend made the observation that they are not equally abundant every year, and that they are much less numerous as the White-throats, with whom she often found them associated. They leave earlier for their northern home as their congeners, and they are so tame and unsuspicous that they pick up the seeds which she supplies. In an apple tree near her window one male was singing every morning during the fine days of May.

Although the White-crowned Sparrow breeds abundantly in Labrador, it is much less common in New England during the migrations than more in the interior of the country. Its summer home in the West are the high mountain ranges of the Sierra Nevada and the Rocky Mountains, and north of the Great Lakes it breeds to the Hudson's Bay Territory and Labrador.

In northern Wisconsin and especially in northern Michigan—in the Lake Superior region—this Sparrow is a rather common summer bird. A nest found by Mr. A. J. Schoenebeck on June 9, 1891, in Oconto Co., Wis., was built on the ground and was well concealed under a tuft of grass. It was constructed of grasses and lined with finer grasses. The exterior diameter of the nest was 5.00 inches, the interior diameter 2.75 inches, and the cavity was 1.50 inch deep. The eggs, four in number, have a pale greenish-blue ground-color, and are thickly speckled, sprinkled, and spotted with cinnamon and rusty-brown. Mr. Schoenebeck states that some sets of the eggs of this species look as if the ground-color were a pale cinnamon-brown. They average in size .89 × .64.

"Like other naturalists," says Dr. Elliott Coues, "who have visited the forbidding shores of Labrador, I found the White-crowned Sparrow one of the most abundant of the summer birds of that country. Labrador and Newfoundland, indeed, appear to be
the principal breeding resorts of the species along the Eastern coast. The nest appears to be always placed on the ground; the situations generally selected are thick patches of low heath, and the still more dense growths of scrubbly conifers. It is composed chiefly of mosses, but lined with a quantity of very fine dried grasses or rootlets, set evenly round and round. The eggs are four or five in number, about seven-eighths of an inch long, and pale greenish, speckled and blotched, particularly toward the larger end, with brown and neutral tint. The descriptions of some of the earlier authors are certainly erroneous, probably relating to the egg of the Tit-lark, which breeds abundantly with the White-crowned Sparrow, and, like it, builds a mossy nest on the ground. I found nestlings but a few days old the last week in July; these were perhaps of a second brood, as many birds of the year were flying about the same time. The southward migration begins, according to Audubon, as early as the middle of August; this statement is confirmed by the presence of the birds in New England, and even in the Middle States, in September. The migration is very extensive, the birds scattering all over the United States, and wintering as far north, at least, as Maryland. Audubon says that they pass beyond Texas; but he does not appear to have made any personal observation to that effect, and I cannot lay my hand on a Mexican quotation. I can hardly understand the scarcity,—much less the irregularity,—of the occurrence of the birds along the Atlantic States, considering the numbers that breed to the northward, unless the migration is performed obliquely and in the interior. At Washington, for example, I found that they were not to be depended upon at all. Dr. Prentiss and I used to look for them in October, and especially in April, and some years we found a good many, while at others there appeared to be none at all. They seemed, on the whole, more frequent in spring than in the fall, and all those we secured were in breeding dress. They remained sometimes until the second week in May; frequented the same situations as the White-throats, often associating with them, and showing very similar traits.”

Mr. M. Trippe gives the following interesting account on the White-crowned's breeding in the Rocky Mountains:

“This Sparrow appears in the lower valleys of Clear Creek County, Colorado, in the first or second week of May, and soon becomes very abundant, frequenting the shrubby banks of the streams, and occasionally venturing some distance upon the hillsides, but, as a rule, keeping close to the brooks and creeks. As the snow disappears it ascends higher and higher, reaching timber-line by the middle of June, and going up to the extreme limit of the willows and Junipers, being nowhere more abundant than in those dense thickets that shut the upper edge of the timber. By far the greater number pass the breeding season there, but a few nest lower down, as far as 8,500 feet, below which it does not occur during summer. In habits, during the breeding season, it resembles the Song Sparrow, seeking its food in the grass and among the dry leaves in the thickets. It sings constantly during June and July, and occasionally in August, mounting to the top of some high bush, the dead limb of a pine, or any convenient perch well elevated above the surrounding shrubbery, and chanting its ditty at short intervals for half an hour or more at a time—a lively, agreeable song, fine and clear, and frequently heard from a score or more of birds at once, with a most pleasing effect. While his mate is setting, the male sings almost constantly throughout the day, and
sometimes even late into the evening, long after dark—I have heard it at midnight, and even as late as one or two o'clock. It is very tame; a pair had their nest within a few feet of our camp at Chicago Lake, and all the bustle and noise did not drive the female from her nest, while her mate would pick up crumbs which we threw to him, almost at our feet. It commences building in July, and the young are hatched about the 20th; the nest is placed on the ground in a clump of bushes, composed of coarse grass and weeds, and lined with fine grass. The eggs are usually four, of a pale bluish-green, very thickly speckled and dotted with reddish-brown, the latter color almost wholly obscuring the former at the larger end. In September it begins to descend; by October it is abundant at Idaho, and by November has disappeared. It is by no means as numerous in the lower valleys during fall as in spring, passing through much more quickly, a peculiarity shared by many species whose migrations are similar, as Sylvania pusilla, Dendroica auduboni, and others."

NAMES: White-crowned Sparrow, White-crown, White-crowned Bunting.—Kronfink (Nehr.), Weisskronfink (Nehr.) [German].


DESCRIPTION: Sexes, alike. Distinct white stripe on top of head, bordered on each side by a black stripe; this again is bordered by a stripe of pure white passing over each eye to the hind neck; below this another narrow stripe of black through and behind the eye to the occiput. Sides of the head, forepart of breast, and lower neck all round, pale ash, lightest beneath, shading to white on the belly and chin; sides of belly and under tail-coverts tinged with yellowish-brown. Above, gray, streaked with black and brown. Two white bands on wing.

Length, 7.00 inches; wing, 3.19; tail, 3.00 inches.

GAMBEL'S SPARROW, Zonotrichia gambeli Gambel. The habitat of this Sparrow is found in the coast ranges of California, north to British Columbia. This bird, which is also known as the Western White-crowned Sparrow, was met with by Prof. Robert Ridgway at the Summit Meadows, near the summit of Donner Lake Pass of the Sierra Nevada, at an altitude of about 7,000 feet. It was there an abundant and characteristic bird. The males were in full song in all parts of the meadow, and the birds were nesting in such numbers that on the evening of July 9, on halting for the night, in a hurried search no less than twenty-seven eggs were found within about fifteen minutes. In every instance the nests were embedded under a species of dwarf willow, with which the ground was covered. The birds were extremely unsuspicious, the male often sitting on a bush within a few feet of the naturalist, chattering merrily. In other localities the nests of Gambel's White-crowned Sparrow were found in trees, bushes, and in thick clumps of weeds. The ground-color of the eggs is pale greenish-blue, spotted and splashed with liver-brown.

DESCRIPTION: The only appreciable and constant difference between this species and the White-crown is found in the character of the black stripe on the side of the crown. In Z. leucophrys the black passes down over the upper half of the lores, and in front of the eye, to a line continuous with the cutting edge of the bill, and sends back a short branch to the eye, which cuts off the white superciliary stripe. In Z. gambeli the superciliary stripe passes continuously forward to the ashy lores, cutting off the black from the eye. The lower edge of the black anteriorly is much higher than in Z. leucophrys, and nearly on a line with the nostrils.
INTERMEDIATE SPARROW.

Intermediate Sparrow, Zonotrichia intermedia Ridg. "Everywhere in Alaska," writes Mr. E. W. Nelson, "the presence of bushes and timber is an almost certain indication of this bird's presence in summer. It is the only White-crowned Sparrow reaching these high latitudes, and it ranges to the shores of the Arctic Ocean and Behring Sea. In the northern half of British America, extending entirely across that country along the Arctic shore and thence west throughout Alaska, it is a very abundant and familiar bird. It arrives on the upper Yukon at the Arctic Circle by the 15th or 20th of May and begins nesting about the 20th of this month. . . ." It is the most abundant Sparrow on the Mackenzie River, and it was found breeding in great numbers on the upper Yukon and thence east to the Anderson River, where McFarlane, Lockhart, and Ross found it breeding. The nests found were mostly placed upon the ground or in low bushes, and were well lined with deer-hair and feathers. The eggs have a clayey-white ground-color, thickly covered with small reddish spots, which are only a trifle more numerous at the larger end. In Alaska these Sparrows approach the houses in considerable numbers by the 25th of July, joining with the various other Sparrows and small birds. As the cold storms of August commence they gradually pass to the South until, as this month draws to a close, they have all disappeared.

Near the West Yegua, Lee Co., Texas, I observed these Sparrows in abundance in company with others of their genus. They arrived late in November and remained until about April 1. In their ways and manners they do not differ from their near relatives. They winter south into Mexico. Dr. Hoy obtained a specimen near Racine, Wis., in 1871.

DESCRIPTION: Similar to the White-crowned Sparrow, but differs in having the lores entirely light ash or buffy, continuous with the superciliary stripe of same color.

Golden-crowned Sparrow, Zonotrichia coronata Baird. According to Mr. E. W. Nelson this bird is a common summer resident from Puget Sound to the peninsula of Alaska. On the lower Yukon and Norton Sound it is also common, penetrating even beyond to the Arctic Circle, in the Kotzebue Sound region, where, however, it is less common. Mr. Nelson found it at Saint Michaels, Alaska, usually from May 25 to the 15th of August, about which latter time it passes south with its young. At this time it comes fearlessly about the houses for food, with troops of other Sparrows, and is not so shy as in spring. Its breeding ground is in the alder patches along the hill-sides, where the various bush-loving species make their homes in the matted thickets, well protected from birds of prey and most other foes by an almost impenetrable wall of gnarled and twisted branches.

A straggler of this species was also obtained by Dr. P. R. Hoy near Racine, Wis.

DESCRIPTION: Similar to the White-crown, but the crownstripe is yellow anteriorly, ashy behind.
WHITE-THROATED SPARROW.

*Zonotrichia albicollis* Bonaparte.

**Plate XXIV.** Fig. 3.

Spring's little lyrist, the White-throated Sparrow,

Trilled to me dainty violets this morn,

Songs that might make despondence less forlorn;

So forth I fared, from chamber dark and narrow,

To a warm, sunny hill that plough and harrow

With their remorseless iron 'er had torn,

For signs that Spring again was newly born—

Spring whom I love as lover his "winsome morn."

The feathered minstrel had foretold me true,

Nor hope had waked with a deceitful voice,

Nor sung through merely vanity of art;

For there were liverworts both white and blue,

That, smiling, did at the new birth rejoice,

And cheered with wordless eloquence my heart.


SPRING in the northern parts of our country is quite different from that season in the central and southern portions, though the autumn time is almost everywhere pretty much the same. October is beautiful in its bright colors in Wisconsin and New England, in Missouri and North Carolina, in Texas and Florida. In the North spring lingers long, and it takes at least two months before the time of hopes and disappointments is over. Our ideas of May being derived in part from the descriptions of European poets and naturalists, abound in many pleasant fallacies. May, at least in our Northern States, is exceedingly changeable. It is a pleasant and weary prolongation of hopes, frequently interrupted by days and often weeks of wintry gloom. Though Nature is not yet clothed in the fulness of her beauty, she is in many respects lovelier and more enchanting in May than she will ever be in the course of the year.

In this light we have to view the month of May in the northern parts of our country, no matter how beautiful and promising it begins. In the present year (1894) the first two weeks were exceedingly beautiful, while rainy, stormy, and cold weather prevailed during the last two weeks. Several sharp night frosts occurred, and the delicate summer birds, like the Scarlet Tanager and others, suffered severely. On May 9 in the gardens of Milwaukee, the apple trees were almost in full bloom, with flower trusses of every shade of color from almost carmine to pure white. The Siberian crab, the pear, plum, and cherry trees were also in full flower. Beautiful Wood Warblers, on their way to more northern regions, were busily engaged in searching for insects among the flowers of the fruit trees. Their sprightly songs were heard on all sides, while they were running, hopping, creeping, darting, and flying around among the masses of flowers. In the Hospital grounds across the street the large apple trees swarmed with birds. From the windows of my study I saw three beautiful males of the Scarlet Tanager, and the loud, melodious, and flute-like song was heard especially in the quiet and sunny morning hours. The sweet notes of the Baltimore Oriole, of the Rose-breasted Grosbeak, and the Indigo Bunting were also heard on this bright and mild day. Usually these
birds arrive somewhat later, especially the Scarlet Tanager, and the fruit trees are generally also flowering later,—all coming forth, one after another, to welcome the birthday of June.

Among the ornamental shrubs the Japan quince, the beautiful Tartarian honeysuckle, and the Japan plum\(^1\) were in full bloom. The lowlands were bright with the fragrant meadow pink\(^2\), and on the edges of the woods the handsome blue polemonium or Jacob's ladder\(^3\), the rue anemone\(^4\), the fragrant waxy-white flowers of the May-apple or mandrake\(^5\), and many others were found. Blue and yellow violets were common everywhere. The next day, May 10, the weather became still warmer, and in the late afternoon and evening the air was rather sultry. Low clouds of a dark gray, color obscured the blue of the sky. After the night had fallen the air was alive with thousands of birds migrating northward. The call-notes of many species could be heard from all sides. Innumerable Bobolinks passed on to the North; they could easily be distinguished by their mettalic notes. Warblers and Goldfinches could also be plainly distinguished by their voices. They all pursued their way northward rather low, and sometimes their forms could be plainly seen. Thousands upon thousands of birds were moving on. Even at three o'clock in the morning I heard their voices. Early in the morning of May 11 all the larger gardens in the city swarmed with migrants, the majority of them being Warblers, especially Chestnut, Blackburnian, Magnolia, Black-throated Green, Black-throated Blue, Black-and-white, Canada Warblers, and others.

The most conspicuous of all the migrants, however, was the **White-throated Sparrow**. Its peculiar song echoed from every garden containing ornamental trees and shrubs. Although the van had arrived late in April and early in May, the majority appeared in the second week of that month. In the garden of Miss Hedwig Schlichting they were observed from the day of their arrival till their departure late in May. In the large old apple trees near her house, in the adjoining grounds, and in the evergreens and the ornamental shrubs they felt perfectly at home. My friend fed them under her window twice each day with Canary and millet seed. Sometimes more than twenty-five were picking up the food she supplied, often in company with White-crowns and House Sparrows. She observed that only a few of the last species mingled with the White-throats, and that no quarreling ever occurred.

"The White-throated Sparrows," Miss Hedwig Schlichting says, "are elegant and noble birds, highly interesting in all their ways and manners, and showing nothing of the vulgar and low traits of the European species. When not molested they are confident and even tame. I observe them often for an hour from the open window, enjoying highly their presence. In the broad old apple tree, under which I scatter the food, the sprightly Wood Warblers in great numbers and of many species, the Baltimore Oriole, the Catbird and Vireos are busily engaged in searching for insects and in singing their sweet notes. Now and then one of these Sparrows mounts the top of this or a neighboring tree, warbling with all his power his peculiar and exquisite notes. I even have heard them utter their song on the ground, when they were picking up the seeds which I had scattered around. Often I heard two or three in different directions vieing with each other in pouring forth their melody. This song is quite different from any

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\(^1\) *Prunus triflora*. \(^2\) *Phlox pilosa*. \(^3\) *Polemonium caeruleum*. \(^4\) *Thalictrum anemonoides*. \(^5\) *Podophyllum peltatum*. 
other bird music I am acquainted with except that of the White-crowned Sparrow, to which it bears close resemblance, though instantly distinguishable by a musical ear. The White-crown’s song is louder, shorter, and, to my taste, finer, consisting only of six notes, while the more prolonged and varied strain of this bird is made up of about ten to twelve notes. It is sometimes marred by several harsh sounds. Yet it is a peculiar whistling strain of great beauty and charm, well adapted to brighten the beauty of such a time as we experience to-day (May 9, 1894). The melody commences with a long syllable, clear and high, loud and reverberating, the second rising still higher; then the others follow in a quicker tempo and with a falling cadence. There are excellent and poor singers among the White-throats as among other birds. The song can be easily imitated. Probably it can be best described by the following syllables pee-a’dee-dee, a’dee-de, a’dee-dee, or, as Mr. Ridgway gives it, pe-pe’body, pe’body, pe’body. Though a pleasant strain and a sweet accompaniment to the beautiful days of May, I am inclined to suppose that it is not the full love song which is heard in its summer haunts, the beautiful evergreen woods of northern Wisconsin and northward. During warm weather we may listen to this exquisite song throughout the month. In the resident part of the city it is heard from all directions. These Sparrows are not molested so much by the bad boy and the street urchin as the brighter colored birds like the Baltimore Oriole, the Rose-breasted Grosbeak, the Indigo Bunting, the Goldfinch, the Woodpecker and, especially that ‘flame in feathers,’ the Scarlet Tanager. They are mistaken for the common House Sparrow and are left alone. The first arrivals are old males, very probably such that pass on to the most northern regions of their habitat. The females and young males of those breeding in the northern part of our own State linger until the last days of May, when they are off for their breeding grounds, leaving not a single straggler. They disappear as suddenly as they arrived, and none are observed again until the bright and balmy days of the Indian summer. They visit our gardens at the fall migration in smaller numbers, and they are also perfectly quiet; at this time I never have heard their notes. They do not linger so long as in spring. Evidently they procure almost all their food from the ground, where they scratch in the same way as the White-crowned and Fox-colored Sparrow and the Towhee.”

I can fully confirm these observations of my contributor, as I have seen them in large numbers in her garden, which seems to be the gathering place for many birds during migrations, especially in spring.

They arrive about the same time as the White-crowns and the Juncos, being not as numerous as the last, but much more abundant than the first. Moreover this species is more common in the East than in the West. In southern Wisconsin and northern Illinois they usually arrive in fall during the first days of October, remaining generally until the 20th or 25th. In south-western Missouri they make their appearance about October 10, remaining well into November. In all parts of Texas and Louisiana they winter abundantly. In southern Louisiana a shameless slaughter of our small song-birds is going on throughout every winter. In the French Market of New Orleans we notice dead Juncos, Towhees, White-throated and White-crowned Sparrows, Thrashers, Thrushes, Robins, Warblers, etc., by the thousand. We learn from Audubon that even
in his time these birds were slaughtered in immense numbers in Louisiana. In Texas they are not much molested except by Negroes.

Wherever the White-throated Sparrows occur in fall and winter and in spring, they are always found in or near thickets, hedge-rows, in the underwood of forest lands, in gardens well planted with ornamental shrubs, etc. In Houston, Tex., they find protection during cold weather in magnolias, loquat trees, pittosporums, gardenias, red cedars, and even in the tangled masses of evergreen Japanese honey-suckles and roses on piazzas and verandas. "They frequent, on the whole," says Dr. Elliott Coues, "different places in the spring and fall. At the former season, they enter the woods in large numbers, less closely associating than during the fall, and ramble over the ground, doubtless in search of insects, the last year's supply of seeds being in a great measure exhausted. In autumn, they are found principally trooping together in shrubbery, along hedge-rows, the brier-patches of old fields, and similar resorts, where the seeds they like are plenty. Audubon's account of their manners at this season is too faithful and vivid to ever grow out of date:

"'How it comes and how it departs are quite unknown to me. I can only say that, all of a sudden, the edges of the fields bordering on creeks or swampy places, and overgrown with different species of vines, sumac bushes, briers, and the taller kinds of grasses, appear covered with these birds. They form groups, sometimes containing from thirty to fifty individuals, and live together in harmony. They are constantly moving up and down among these recesses, with frequent jerkings of the tail, and uttering a note common to the tribe. From the hedges and thickets they issue one by one, in quick succession, and ramble to the distance of eight or ten yards, hopping and scratching, in quest of small seeds, and preserving the utmost silence. When the least noise is heard, or alarm given, and frequently as I thought, without any alarm at all, they all fly back to their covert, pushing directly into the thickest part of it. A moment elapses, when they become reassured, and, ascending to the highest branches and twigs, open a little concert, which, although of short duration, is extremely sweet. There is much plaintive softness in their note, which I wish, kind reader, I could describe to you; but this is impossible, although it is yet ringing in my ear, as if I were in those very fields where I have so often listened to it with delight. No sooner is their music over than they return to the field, and thus continue alternately sallying forth and retreating during the greater part of the day. At the approach of night they utter a sharper and shriller note, consisting of a single twit, repeated in smart succession by the whole group, and continuing until the first hooting of some owl frightens them into silence. Yet, often during fine nights, I have heard the little creatures emit, here and there a twit, as if to assure each other that all's well.'

"The musical abilities of this pretty Sparrow, to which Audubon so feelingly alludes, are of a high order, though the song is rather notable for its limpid sweetness than for power of brilliancy. An attempt is made to express the sound in the name commonly given to the species, in some sections, 'Peabody-bird.' It seems to say, pee-a'-body, a'body, a'body, a'body, beginning clear, high, and loud, with prolonging of the first syllable; then rising still higher and shortly accenting the second note; then trilling the remainder with a falling inflexion and decreasing volume; this latter part
being repeated three or four times, the $\delta$ still accented, but with diminishing emphasis. I think it might be readily written in musical notes, but I am unable to do so."

"Notwithstanding the slighting manner," writes Dr. T. M. Brewer, "in which the song of this bird is spoken of by some writers, in certain parts of the country its clear, prolonged, and peculiar whistle has given to it quite a local fame and popularity. Among the White Mountains, where it breeds abundantly, it is known as the Peabody Bird, and its remarkably clear whistle resounds in all their glens and secluded recesses. Its song consists of twelve distinct notes, which are not unfrequently interpreted into various ludicrous travesties. As this song is repeated with no variations, and quite frequently from early morning until late in the evening, it soon becomes quite monotonous.

"Among the White Mountains I have repeatedly found its nest. They were always on the ground, usually sheltered by surrounding grass, and at the foot of bushes or a tree, or in the woods under a fallen log. In that region it retained all its wild, shy habits, rarely being found in the neighborhood of dwellings or in cultivated grounds. But at Halifax this was not so. There I found them breeding in gardens, on the edge of the city, and in close proximity to houses, apparently not more shy than the common Song Sparrow.

"The nest of the bird is usually, if not always, on the ground, but in various situations, as I have found them on a hill-side, in the midst of low underbrush, in a swampy thicket, at the foot of some large tree in a garden, as at Halifax, by the edge of a small pond, or in a hollow and decaying stump. Their nest is large, deep, and capacious, with a base of moss or coarse grasses, woven with finer stems above and lined with hair, a few feathers, fine rootlets of plants or soft grasses. The eggs vary from four to seven in number. Their ground-color is of a pale green or a greenish-white, marked over the entire egg with a fox-colored or rusty-brown. Occasionally these markings are sparsely scattered, permitting the ground to be plainly visible, but generally they are so very abundant as to cover the entire egg so closely as to conceal all other shade, and give to the whole a deep uniform rufous-brown hue, through which the under color of light green is hardly distinguishable. They measure $.90 \times .68$ of an inch."

The White-throated Sparrow is an abundant summer sojourner in northern Wisconsin. According to Mr. A. J. Schoenebeck it is a common summer resident in Oconto Co., where he frequently found the nest. While making a trip through the woods with the late Mr. B. F. Goss, on June 8, 1892, he found two nests in a swamp on the ground. They were situated in bunches of moss, and one was entirely covered with moss except on one side. These nests were mainly built of moss and lined with fine grasses. Each contained four eggs, averaging $\.88 \times .64$.

The White-throated Sparrow is an excellent bird for the cage. I kept several for years, in Chicago as well as Texas. Near the West Yegua Creek I caught them in a "figure of four trap" in the woods, where they were occupied during the whole winter in silently gleaning for food among the dead leaves. They lived perfectly in peace with other Sparrows, and their appetite was easily satisfied. Seeds of all kinds, and in summer a mixture of Mockingbird-food and crated carrots and half ripe millet and
caffir corn was all they desired. The males do not sing if kept in company with each other, but placed separately in a cage they sing almost incessantly through the months of May and June.


—Buschfink and Weisschläger Ammerfink (German).


DESCRIPTION: "Two black stripes on crown, separated by a median one of white. A broad superciliary stripe from the base of the mandible to the occiput, yellow as far as the middle of the eye and white behind this. A broad black streak on the side of the head from behind the eye. Chin, white, abruptly defined against the dark ash of the sides of the head and upper part of the breast, fading into white on the belly, and margined by a narrow black maxillary line. Edge of wing and axillaries, yellow. Back and edges of secondaries rufous-brown, the former streaked with dark brown. Two narrow white bands across the wing-coverts.

"Length, 7.00 inches; wing, 3.10; tail, 3.20 inches." (B. B. R.)

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TREE SPARROW.

*Spizella monticola* Baird.

The windflower and the violet, they perished long ago,
And the brier-rose and the orchid died amid the summer glow;
But on the hill the golden-rod, and the aster in the wood,
And the yellow sun-flower by the brook in autumn bountiful stood,

Till fell the frost from the clear cold heaven, as falls the plague on men,
And the brightness of their smile was gone, from upland, glade and glen.

W. C. Bryant.

Among the limited number of northern birds spending the winter in Wisconsin and northern Illinois, the Tree Sparrow is one of the most conspicuous. Bushy woodland borders, thickets in fields and meadows, and especially hedge-rows are its favorite resorts during the cold winter weather. The van appears late in October. The majority, however, does not arrive before the end of November. Those remaining in the northern parts of the country probably come from the regions of the Yukon, the Mackenzie, the Great Slave Lake and Great Bear Lake, Labrador, and the Hudson's Bay territory. In the Ozark Mountains of south-western Missouri I found them more abundant during winter than anywhere else in the United States. In northern Illinois they take up their abode in the Osage orange hedges which stretch out for miles along the country roads, or serve as boundary lines between the different farms. In summer these hedge-rows are the favorite haunts of the Thrashers, the Catbirds, Kingbirds, and Shrikes, and the nests of these birds are almost always found in these thorny thickets. I never found the Thrasher so abundant as in these Osage orange hedges. In winter the Great Northern Shrike makes these hedge-rows its favorable hunting ground, and many an innocent Tree Sparrow falls a prey to this harmless looking butcher. During
very cold weather the Tree Sparrows often frequent the door-yards and gardens. At Freistatt, Lawrence Co., Mo., where my house was situated on the edge of the woods, I had prepared a feeding place for the hungry winter birds, consisting of a bare spot, surrounded by thorny brush piles and overlaid with brush and some evergreen branches. Here they were quite safe from their worst enemies, the prowling cats, and from birds of prey. Snowbirds or Juncos, White-throated, White-crowned, and Fox-colored Sparrows, Harris' Sparrows, and especially Tree Sparrows visited these feeding places regularly several times each day, picking up the millet, grass seeds and crumbs of bread which I had supplied for them. Such a feeding place is a source of great pleasure to the friend of Nature, and he will often have the opportunity to observe birds, which, perhaps, he has never seen before. In this locality I heard the song of these birds throughout the winter on mild and sunny days. It is a very musical, loud, and clear chant, starting, as Prof. Wm. Brewster says, with two high notes, then falling rapidly, and ending with a low, sweet warble. In the Northern States I have heard the song several times in November, and then again in March, just before they started for their northern breeding grounds. Early in March the majority leaves the Ozark region, and by the end of that month most have departed from Milwaukee, although I have seen stragglers there until April 20.

Even in North Dakota this Finch is a very abundant winter bird. "At Fort Randall," says Dr. Elliott Coues, "I found the birds as abundant as I have ever seen them anywhere, during pleasant weather in the month of October. All the undergrowth of the river-bottom was full of them, in troops sometimes numbering hundreds, singing as gaily, it seemed to me, as in spring time. With the colder weather of the following month, so many moved off that I thought none would remain to endure the rigor of winter, but such proved to be not the case. The remainder simply retreated to the deepest recesses of the shrubbery, where, protected from the biting winds, if not from the cold, they passed the winter, and to all appearances very comfortably. I account for their remaining at this inclement season, by the profusion of seeds of various kinds that are to be obtained during the whole winter; certainly, those that I examined were in good condition, and generally had the crop well filled. Their seclusion and quietness at this season is remarkable, and causes them to be in a great measure overlooked. On several occasions, when the thermometer was below zero, the river was frozen solid for two feet deep, and snow on the ground, I have unexpectedly come upon little groups of these birds, hiding away close to the ground among and under network of vines and rank herbage, close enough to collect and retain a mantle of snow. When startled at such times they have a low, pleasant chirp as they flutter into sight among the bushes, scattering a little, but only to collect again and seek their snug retreat as soon as left to themselves. Whether rendered careless by the cold, or through a natural heedlessness, they are very tame at such times; they sit unconcernedly on the twigs, it may be but a few feet distant, chirping cheerfully, with the plumage all loosened and puffy, making very pretty 'roly-poly' looking objects. There is a particular kind of plant here, the seeds of which endure all winter, furnishing a favorite repast. In a clump of these tall weeds dozens of the birds may be seen together, busily feeding. Some, more energetic, spring up and cling to the swaying panicles, picking away, while others gather about
the stem, getting a good dinner, without trouble, off the seeds that their neighbors above rattle down. At such times the whole company keeps up an animated conversation, expressing their satisfaction, no doubt, in their own language; it is more than chirping, and not quite singing—a low, soft continuous chanting, as pleasing as it is indescribable. The Tree Sparrow is, indeed, one of the sweet-voiced of our Sparrows, and one very fond of singing, not only in the spring, but at other seasons; times are hard with it, indeed, when it cannot, on occasion, tune its gentle pipe.”

The breeding range of this bird is extensive. On the Atlantic coast it breeds from northern Maine to Labrador. In the Hudson's Bay region it seems to be common also. In Alaska it is one of the most abundant birds. But this is a variety, the Western Tree Sparrow, *S. monticola ochracea* Brewster.

The nest is described as being placed in similar situations as that of the Hairbird, but it is said to be built often on the ground. Kennicott found the bird breeding on the Yukon, and Dall at Nulato. McFarlane met with it breeding in large numbers at Fort Anderson. The nests were constructed of dry bark and grasses, loosely put together and very warmly lined with feathers. On the ground they were usually concealed in a tuft of grass. The usual number of eggs in a nest is four or five. The eggs have no similarity to those of the Hairbird, being light green, flecked and flecked with minute markings of foxy-brown. These markings are distributed with great regularity over the surface, but so sparsely as to leave the ground distinctly visible. Size .80 × .60.

**NAMES:** Tree Sparrow, American Tree Sparrow, Canadian Sparrow, Winter Chippy.—Baumfink (German).


**Description:** Sexes, alike. "Mandible, yellow; maxilla, black. Pileum, rich rufous, also a distinct postocular stripe; sides of head, light ash-gray, including a broad superciliary stripe, the latter nearly white anteriorly. Nape mixed ashy and rufous. Back, rusty ochraceous, streaked with rufous and black. Wings, rusty, the feathers blackish centrally; both rows of wing-coverts broadly tipped with pure white, forming two distinct bands; tertials bordered with white toward ends. Rump, uniform grayish-olive. Tail, dark grayish-brown, feathers edged with paler. Lower parts, whitish, tinted with ashy anteriorly, sides and flanks tinged with ochraceous, sides of breast tinged with rufous, and middle of jugulum with a dusky spot." (Ridgway, "Birds of Illinois."

"Length about 6.25 inches; wing, 2.95; tail, 2.70 inches.

**The Western Tree Sparrow,** *S. monticola ochracea* Brewst., a local form, inhabits western North America, east to Dakota and western Kansas, south in winter to New Mexico and Arizona, in summer north to the Arctic regions. Breeds in Alaska.
CHIPPING SPARROW.

*Spizella socialis* Bonaparte.

Plate XXIII. Fig. 2.

Stranger, if thou hast learned a truth which needs
No school of long experience, that the world
Is full of guilt and misery, and hast seen
Enough of all its sorrows, crimes, and cares
To tire thee of it, enter this wild wood
And view the haunts of Nature. The calm shade
Shall bring a kindred calm, and the sweet breeze
That makes the green leaves dance, shall waft a balm
To thy sick heart. Thou wilt find nothing here
Of all that pains thee in the haunts of men
And made thee loathe of thy life.

W. C. Bryant.

Beautiful and idyllic country seats are scarce in this country, and comparatively scarce are the true lovers of Nature. Although there is happiness, peace, beauty and charm in country life, the young men only too often leave the associations of their early childhood and help to increase the population of our large and smoky cities. The friction of their kind, the stir of multitudes, the thrill of competition, the struggle for success, prove irresistible to the young, and once inured to it the mature man rarely desires to leave it for a more healthful, happy, and quiet existence. The woods, the brooks, the birds and plants take a subordinate place in the young man’s fancy. But in the evening of his days, after the stress of life’s work is over, there will inevitably return the longing to possess and transfigure some portion of the earth’s surface. This desire comes naturally to almost every man. The idea of rest in declining years seems to be inseparably connected with rural scenes. The paradise to be regained is never within the walls of the city. This is true even of the city-born and city-bred, and it is doubly true of those reared in the country, and when they take up with renewed interest the occupations of their childhood, they find, to their surprise, that in addition to the flowers or fruit which reward their care there is an ideal harvest of associations which may make their closing years rich with a beauty and pathos all their own. Every leaf and flower, every tree and shrub, every bird in the garden and woodland touches some mystic chord of memory and association, and the memory of that far-off time gilds their downward pathway with a tender radiance and revives the spirit of early youth.

Of all this I was reminded when for the first time I visited the beautiful country seat of Ex-Governor Francis A. Hoffmann of Illinois—who writes his books and articles on agriculture and horticulture under the nom de plume “Hans Buschbauer.” Born and bred in the country, he took for many years a high rank in business as well as in society and politics in the western metropolis, Chicago. But the noise and the enervating life of the great city created in him the desire to return to the country. In Jefferson County, Wis., a fine piece of land was selected. In cultivating the soil, in the planting of trees and shrubs, and in observing the coming and going and nesting of the birds he found health and recreation. From the broad veranda of the house, built in the convenient southern

style, he has a beautiful view of the landscape around him. Behind the house the Rock River flows through a piece of the forest primeval. This region was once the favorite habitation of a great people, as the ancient city Aztlán and the many mounds as well as the innumerable implements of stone and copper which were and are still found near the Rock River and throughout Jefferson County, show. Mr. Hoffmann is especially fond of the birds which abound on his grounds. The Orioles in the elm trees, the Vireos and Rose-breasted Grosbeaks in the adjoining woodland, the Catbird in the honeysuckles, the Thrasher in the hedge-row, the Swallows in the air, the Wrens, Martins, and Bluebirds around their nesting boxes, the Song Sparrows, Indigo-birds, and Summer Warblers in the ornamental shrubs, all these birds are tenderly loved and protected. There are few places in this State where so many small birds congregate.

Nowhere have I seen so many Chipping Sparrows, or Hairbirds, than here. In the dense red cedars and evergreens which surround the house, and in the ornamental shrubs they find excellent nesting places and a safe retreat in case of danger and during the night. As everywhere else the Chippy is a great favorite here, although the clever little gray fellow in its jaunty rusty-red cap is not an elegant bird like its neighbor, the Indigo Bunting, or like the exquisite Rose-breasted Grosbeak and the Scarlet Tanager in the adjoining woodland. Its simple notes which consist of a rapid succession of sharp sounds, may be heard from a bush or a small tree by the wayside or in the garden throughout the day until the evening falls. This song sounds as if “bits of flint were being chipped by striking against each other.” I do not know of any bird having a similar song, except the Worm-eating Warbler, a species common in the central regions of our country and frequenting the woods. “If you hear a Chippy sing in the woods near St. Louis and in southern Illinois,” says Mr. Widmann, “you may be sure to have made the acquaintance of the Worm-eating Warbler.” A very striking trait in the life-history of our Hairbird is its familiarity, combined with a good deal of “self-possession if not self-assertion.” Without fear the bird approaches the house, coming even in the vicinity of the kitchen door to pick up crumbs and seeds.

The Chipping Sparrow is everywhere a bird of the garden. Indeed, I have never seen one, during the breeding season, far from the habitations of man. Gardens planted with dense evergreens and ornamental shrubbery, even in our large cities, are its favorite haunts. In the farmer’s gardens, where often neither tree nor shrub has been planted for ornament, the Chippy makes its home in a dense currant or gooseberry bush. Although being found from Georgia and Arkansas to the Arctic regions, I nowhere observed it more frequently than in Wisconsin. Along the Atlantic coast it breeds as far north as Nova Scotia and New Brunswick, and it has been met with in considerable numbers at Fort Resolution, on Great Slave Lake, and at Fort Simpson and Fort Rae. In the United States it is distributed from the Atlantic to the Great Plains, wintering from about 40° southward. From the Rocky Mountains west to the Pacific it is represented by the Western Chipping Sparrow, *S. socialis arizonae* Coues, which occurs north to beyond 60°, wintering as far south as southern Mexico. This variety seems not to be quite as familiar as the true species. Prof. Ridgway found it in abundance in all the wooded portions of the Great Basin. He did not meet with it among the cotton-woods of the river valleys, its favorite haunts appearing to be the cedars and nut-pines of the
1. CHONDESTES GRAMMACUS Bonap. - LERCHENFINK. - Lark Sparrow.
2. ZONOTRICHIA QUERULA Gamb. - TRAUFINK. - Harris' Sparrow.
3. ZONOTRICHIA ALBICOLLIS Swains. - BUSCHFINK. - White-throated Sparrow.
4. ZONOTRICHIA LEUCOPHYRYS Swains. - KRONFINK. - White-crowned Sparrow.
5. PEUCAEA AESTIVALIS Cab. - PALMETTOFINK. - Pine-woods-Sparrow.
6. PASSERELLA ILLIACA Swains. - FÜCHSFINK. - Fox Sparrow.
mountains. In July and August he found it abundantly in such localities on the East Humboldt Mountains. At Sacramento, Cal., it was also very numerous among the groves of small oaks. He could not find the slightest difference in habits or notes between the two forms. Dr. Elliott Coues observed this form a very abundant summer resident in Arizona, and Mr. Dresser obtained specimens near San Antonio, Texas.

In the Northern States the Hairbird does not belong to the first arrivals from the South, although it makes its appearance while spring still hesitates with lingering doubts, cold winds and patches of snow on north-facing slopes and in shaded ravines. I have rarely observed it in southern Wisconsin before April 20, and the same holds true of all localities under the same latitude. At Freistatt, Lawrence Co., Mo., where these birds are exceedingly common during the migrations, they do not arrive before March 15. Though the climate of the last-named locality is very mild, none winter there. They arrive from the North early in October, and by November 30 almost all have left. Only few remain to breed. At Houston, Texas, I met with them throughout the winter in the larger gardens, where they found sufficient food and excellent abiding places in the dense evergreen shrubs, conifers, creepers, and rose bushes. The winter home of the Chippy is in the Southern States, but the majority winters in Mexico. Dr. Gerhardt found this bird breeding in northern Georgia, and Dr. Coues in South Carolina.

The haunts of the Chippy are always chosen near the habitations of man. We rarely meet with it in pastures and on the woodland border. In the days of my youth a pair built its nest several times each year in the dense wild grape-vine, which was planted as an ornament on the veranda of my parental home, while near by a second pair had its domicile in a wild clematis or common virgin's bower (Clematis Virginiana); a third pair had its nest in a dense wild gooseberry bush not more than twenty yards away. In close proximity to my house at Oak Park, Ills., a pair nested in a dense arbor-vitae, and others had their nests in spruces and firs. Where upright honey-suckles, mock-orange and snowberry bushes (Symphoricarpos glomeratus) are planted profusely, these are entirely to its fancy. Twining honey-suckles, clematis, and especially currant bushes are also favorite nesting sites. In the East, where rhododendrons, azaleas, andromedas, and kalmias (mountain laurels) flourish to perfection in peaty beds, they are the Chippy's paradise.

The Chipping Sparrow's nest is one of the most notable and characteristic domiciles among those of our garden birds, and one scarcely to be mistaken for that of any other bird. Fine grasses and rootlets form the substance of the walls and basement, and the deep cup is almost invariably lined with horse hairs, and sometimes it consists chiefly or entirely of such material. The location of the domicile is also very characteristic. In most cases it is built in the interior of a very dense bush, not more than two or three feet from the ground. If we carefully bend the twigs aside, we may see the beautiful nest with its still more beautiful contents before our eyes. Frequently these birds become so accustomed to the presence of man, that they built their nest within arm's reach of those who sit or walk upon the veranda.

In Wisconsin I often found the nest in almost impenetrable and stunted white-thorn bushes in pastures. These bushes were kept dwarf and dense by the teeth of browsing cattle; no cat or skunk or any other robber could penetrate such a thorny mass, and even the bird itself could often enter it only at one or two places.
The eggs, four or five in number, are bluish-green, and are sparingly spotted about the larger end with dark brown and purple markings. They measure .66 × .48.

The young are fed with small insects, and when they are about six days old the parents carry larger insects, especially green worms, to the nest. When their haunts are infested with the destructive canker worms, they will feed the young with this pest in incredible numbers. They are devoted parents and express great solicitude whenever their nests are approached and meddled with.

"The tameness and sociability of this bird," writes Dr. T. M. Brewer, "surpass that of any of the birds I have ever met with in New England, and are only equalled by similar traits manifested by the Snowbird (Junco hyemalis) in Picton. Those that live about our dwellings in rural situations, and have been treated kindly, visit our door-steps, and even enter the houses with the greatest familiarity and trust. They will learn to distinguish their friends, alight at their feet, call for their accustomed food, and pick it up when thrown to them, without the slightest signs of fear. One pair which, summer after summer, had built their nest in a fir tree near my door, became so accustomed to be fed that they would clamor for their food if they were any morning forgotten. One of these birds, the female, from coming down to be fed with crumbs, soon learned to take them on a flat branch of the fir near her nest, and at last to feed from my hand, and afterwards from that of other members of the family. Her mate, all the while, was comparatively shy and distrustful, and could not be induced to receive his food from us or to eat in our presence."

The flight of the Chippy is in no way peculiar; it is never long and not as quick and graceful as those of the Field Sparrow. The birds pick up their food mostly from the ground, though they capture cater-pillars, moths, and beetles often on the foliage and the flowers of trees and shrubs. They rarely perch at any great height from the ground, and I cannot recall an instance of having seen them in tall trees. Wherever they occur the low shrubbery is their abode. Often we may see them perching upon fences, wash-lines, posts, or farming implements. They are not uncommon in our large cities; in Milwaukee and Chicago I have found them common summer sojourners in the parks and even in the small gardens of the resident parts. Owing to the coal dust and soot the plumage of these city birds looks much darker than that of the Chippies living in a purer air. In populated parts of the country these birds are much more abundant than in the primitive tracts. "They are consequently among the several species who have to contend with the English Sparrows in the ceaseless struggle for existence that is the order of Nature for all creatures. During the pairing and nesting periods they are pretty equally dispersed in their usual haunts, showing no gregarious disposition; but in the fall, preceding or during the migration, flocks of considerable size make up by the roadside and in the pasture land. They have at times a song quite different from the sharp, monotonous trill so characteristic of the spring time, and of much more musical quality; and they are among the several birds of our country which occasionally wake up in the middle of the night, to twitter a tremulous expression of their happiness, and then sink quietly to sleep again." (Stearns.)

The ordinary note of the Hairbird is a sharp chip, like that of the Tree Sparrow, and its song consists of quite a series of chips, with scarcely any variation. These notes
are unique, reminding more of the sounds of an insect than a bird, and are easily recognized.

NAMES: Chipping Sparrow, Chipping-bird, Chippy, Chip-bird, Hair-bird, Chipper.—Haarfink, Haavogel (German).


DESCRIPTION: "Rump, back of neck, and sides of head and neck, ashy. Interscapular region with black streaks, margined with pale rufous. Crown continuous and uniform chestnut. Forehead, black, separated in the middle by white. A white streak over the eye to the nape, and a black one from the base of the bill through and behind the eye. Lores, dusky. Upper parts, unspotted whitish, tinged with ashy on the sides and across the upper breast. Tail-feathers and primaries, edged with paler, not white. Two narrow white bands across the wing-coverts. Bill, black.

"Length, 5.75 inches; wing nearly 3.00; tail, 2.50 (or less)." (Ridgway.)

The Western Chipping Sparrow, S. socialis arizonae Coues, a local variety of the foregoing, inhabits the Western United States, from the Rocky Mountains to the Pacific. Winters in middle and western Mexico.

FIELD SPARROW.

Spizella pusilla Bonaparte.

PLATE XXIII. FIG. 4.

There's something in the air
That's new and sweet and rare,—
A scent of summer things,
A whiff as if of wings.

There's something, too, that's new
In the color of the blue
That's in the morning sky
Before the sun is high.

Nora Perry.

The highlands of south-western Missouri and northern Arkansas are blessed with a most congenial climate throughout the year. Though changeable, the winters are short and not very cold, and the somewhat dry summers are not oppressively hot. A very invigorating mountain air, blowing always from the South, makes even the hottest days pleasant. The plateaus of this locality—the Ozark region—are mostly prairies surrounded by woods. Hill-sides and valleys, and the many ravines are clothed with a dense growth of forest trees and underwood. These woodlands are not so beautifully romantic as are those of the Northern States or New England, nor do they have the charm of the magnolia and live-oak woods near the Gulf coast, destitute as they are of a great variety of species. Swamps and large sheets of water are entirely absent. The ravines are usually covered with trees and thickets of hazel, white-thorn, sumach, snowberry, nine-bark, sweet viburnum, black haw, arrow-wood, persimmons, wahoo, and others. Wild grape-vines, poison sumach, trumpet creeper, and smilax convert many thickets into impenetrable masses of tangled green. In the Northern States May is generally a very cold, changeable, and unreliable month, but here the climate reaches at this time the climax of beauty. The air is exceedingly mild and invigorating, the ground is covered with masses of flowers, and the air is full of bird song. The

1 Symplocarpus glomeratus. 2 Spirea opulifolia. 3 Viburnum lantago. 4 Viburnum prunifolium. 5 Viburnum dentatum. 6 Euonymus atropurpureus. 7 Rhus toxicodendron. 8 Tecoma radicans.
large apple, pear, and peach orchards and the extensive vine-yards of this region yield a large revenue to their owners.

In speaking of this region, we must not forget to mention the many cool springs with which the whole district is supplied, each the centre of some wild nook, the very paradise of Cardinal Redbirds, Chats, Catbirds, Thrashers, Water Thrushes, Hooded Warblers, and others. Through the thickets one catches a glimpse or hears the voice of the rushing brook into which these springs empty.

It is not until the beginning of May that the wild flowers in all their beauty and wealth are to be found, although we may cull several species in bloom early in April. The Carolina and wood anemone\(^1\), the houstonia, the rue-anemone\(^2\), shooting-star, spring-beauty, and other vernal species are exceedingly abundant. Groups of mandrakes\(^3\) grow luxuriantly in rich shady spots. The bird's foot violet\(^4\) flourishes in every fence corner, in half-cleared pastures, and on the woodland border, calling forth rapturous admiration from the real friend of Nature who happens to see it for the first time. It is the most showy of all our violets, and its true home seems to be here. The common blue violet\(^5\) and the arrow-leaved species\(^6\) are also very plentiful. On the prairies and in pastures the shooting-star or American cowslip\(^7\) opens its white or purple fragrant blossoms early in May in such abundance, that large tracts of land are covered by it. The spring beauty\(^8\) is also a very characteristic flower of this region, growing in such a profusion on the borders of woods, that it is impossible to set down the foot without crushing the delicate blossoms. Along woods and in half-cleared pastures the houstonias or bluets\(^9\) overlap all bounds, and many localities are clouded by them. "They become visible by the highway across wide fields, and look like little puffs of smoke clinging to the ground." By this time the apple and pear trees are in full bloom, and woods\(^10\) and orchards literally swarm with Warblers. Near my house, situated on the edge of a fine piece of woodland and on the northside of a large orchard, these sprightly and beautifully colored birds explored every branch from the tallest hickory to the low dense snowberry, the bush honey-suckle\(^10\), the forsythia, mock-orange, and spice-bush\(^11\), so urgent is the demand for food during their long journeys. Usually they are seen early in the morning and all day long, searching every leaf and flower for small insects. At night they are up and away.

Bird-life is exceedingly abundant in this region. The Blue Jays roam around in large bands in the woods, and the harsh \textit{jay jay} of these beautiful robbers is heard throughout the day. They breed near the houses, being more sagacious and cunning than the House Sparrows. Robins, Thrashers, Catbirds, Bewick's Wrens, Tafted Tit-mice, Yellow Warblers, Red-starts, Chats, White-eyed, Red-eyed, and Bell's Vireos, Cardinal Red-birds, Great-crested Flycatchers, Bluebirds, Orchard Orioles, Kingbirds, Blue Grosbeaks, Indigobirds, Traill's and Acadian Flycatchers, all had their nests in my immediate vicinity, partly in the orchard, partly in the woods, partly in the many bird-houses I had fastened in the orchard and shade trees, and partly in the dense thickets of snowberry bushes in half-wild pastures and on the woodland border. This was the most favorable place for me to observe birds, to study their habits, and to make myself familiar with them.

\(^{1}\) \textit{Anemone Caroliniana} and \textit{A. nemorosa}.  \(^{2}\) \textit{Thalictrum aquilegoides}. \(^{3}\) \textit{Podophyllum peltatum}. \(^{4}\) \textit{Viola pedata}. \(^{5}\) \textit{Viola cucullata}. \(^{6}\) \textit{Viola sagittata}. \(^{7}\) \textit{Dodecatheon Meadia}. \(^{8}\) \textit{Claytonia Virginica}. \(^{9}\) \textit{Houstonia minima}. \(^{10}\) \textit{Lonicera Tatarica}. \(^{11}\) \textit{Calycanthus floridus}. 
The bird most abundantly met with in this locality is the lively little Field Sparrow or Wood Sparrow, one of the most charming songsters we possess. To become acquainted with this Sparrow we need not go far or search long. While sitting on the piazza covered with yellow honey-suckle (Lonicera flava) and clematis, we hear its peculiar loud and sweet song from all sides. During the breeding season it never enters the interior of woods, nor does it occur in open fields or bushless prairies. Its favorite haunts are the scattered bushes on the edge of woods, neglected fields, and pastures, where bushes and thickets have grown up luxuriantly, and especially in such places it occurs, where the forest has been cut down and where among isolated trees, old stumps, and rotten logs dense thickets of snowberry, hazel, nine-bark, wild gooseberry bushes, and vine-covered small trees have sprung up. We may also find the bird in the shrubbery of fence corners and even on road-sides. Sometimes the ornamental shrubs of large gardens bounding woodlands are also selected for a summer home.

During the breeding season this little Finch is distributed from Arkansas and Virginia, north to Wisconsin, southern Canada, and Maine, and from the Atlantic west to the Missouri. In the northern parts of its habitat it is a rare bird, having never been observed by me in Wisconsin or northern Illinois, though other naturalists have found it there occasionally. In central Illinois it occurs more frequently, and in the southern part of that State it is very abundant. Its true home extends from Missouri east to New Jersey etc. It is a common New England bird in field, pasture, and scrub land, but it is decidedly more southerly in its general range. "It is naturally limited northward by the Alleghanian Fauna, though extending also into the Canadian."

At Freistatt, Lawrence Co., Mo., the Field Sparrows make their appearance from March 25 to April 1. By the middle of April even the last stragglers and all the females have arrived. At St. Louis they make their appearance about the same time. Several days after their arrival the large flocks dissolve, and by the beginning of May we only observe the single pairs in their breeding ranges. One pair frequently lives in the immediate neighborhood of another. In southern Missouri, where the bird breeds in large numbers on the bushy borders of woods and half-wild localities, I have found during the space of a single hour six nests on an area not more than three acres in extent. In this locality full sets of eggs are found late in May, farther north in the first week of June.

This Sparrow is much livelier and quicker in its motions than the Chippy; its flight is also more extended and rapid, and the bird is altogether wilder. "Although equally common with the Chipping Sparrow," says Prof. Robert Ridgway, "and in many localities even more abundant, the little Field Sparrow is far less known on account of its more secluded habits. Instead of seeking the society of man it almost wholly avoids the towns, and seems inseparably attached to the rural districts. It is by no means timid or retiring, however, but prefers the country because only there can it find those localities which are essential to its presence."

Only occasionally I have found the nest on the ground at the foot of a dense bush or herb. Almost all the nests I examined were discovered in very dense bushes which were frequently overgrown with climbing plants. They were always artfully hidden in the interior of the bushes, and were situated from one to four feet from the ground.
Snowberry bushes are mostly used for this purpose. While roaming around in a half-cleared piece of woodland on May 26, 1886, searching for nests of the Yellow-breasted Chat, Hooded Warbler, Indigo Bunting, and Blue Grosbeak, I found quite a number of the domiciles of the Field Sparrow, which outnumbered those of all other birds combined. The nests were all built in snowberry bushes, which were represented in large and dense single specimens and in thickets. In single specimens the branches hang down to the ground. Indeed, I do not know a shrub that is more densely leaved or branched. No sunbeam can penetrate, and the prying eyes of all kinds of robbers are unable to detect the cozy little domicile hidden underneath and within a dense canopy of tangled green. When carefully parting the twigs from above, I usually had a good view of the nest and the breeding female before me. Looking at me with her innocent eyes for a moment, she slipped off silently by the other side. She then alarmed the male, and both uttered anxious notes of distress. Other birds breeding preferably in these bushes or the surrounding thickets also became alarmed, flying around as if terror-striken, and trying to lead the intruder away from the place where their treasures were hidden. Among these the Yellow-breasted Chat was most conspicuous, but Cardinals, Catbirds, Thrashers, Hooded Warblers, White-eyed and Bell's Vireos, Blue Grosbeaks and Indigo Buntings also appeared on the scene.

The nest of the Field Sparrow is not so easily found as that of the Chippy, being more carefully concealed in the compact shrubs. In construction it is similar, although more bulky and not so thickly lined with hair. The exterior consists of grasses, rootlets, and fine plant stems, and the cavity is lined with horse hair. Nests on the ground are not sunken into a depression; they are usually situated on the side of a shrub or herb underneath the overhanging branches. They are still more bulky than those in bushes.

I also found the nests often in brier patches on the road-sides, in wild gooseberry bushes, and in vine-covered thickets. In Missouri the birds confine themselves during the breeding season almost entirely to the bushy outskirts of upland woods. They were never observed, during this time, in swampy or wet places. Two and sometimes three broods are raised annually in the southern part of its summer home.

The eggs, sometimes three and five, but usually four in number, have a buffy or greenish-white ground-color, marked more or less thickly with blotches and specks of ferruginous-brown. The markings are sometimes so dense, especially at the larger end, as to almost wholly obscure the ground-color. The average size of the eggs is .68 X .52 of an inch.

This humble little Sparrow has a very characteristic and melodious song, entirely its own and widely different from all other bird songs I am acquainted with. It is an untiring songster, singing its sweet lay usually from the tops of bushes, fence-posts, stumps, telegraph wires from morning until the evening falls. Although singing at all hours of the day, even in the noonday heat of the summer, its song is mostly heard in the morning and evening, when the bushy fields and the woodland borders ring with the sounds of dozens of performers. Where the birds are common, this song is one of the most familiar to the ear. No other observer has given such a truthful and correct account of the Field Sparrow's song, as Mr. John Burroughs in his already often mentioned little volume "Wake Robin." Mr. Burroughs writes:
"Another favorite Sparrow, but little noticed, is the Wood or Bush Sparrow, usually called by the ornithologists Spizella pusilla. Its size and form is that of the Chippy, but is less distinctly marked, being of a duller, redder tinge. He prefers remote bushy, heathy fields, where his song is one of the sweetest to be heard. It is sometimes very noticeable, especially early in spring. I remember sitting one bright day in the still leafless April woods, when one of these birds struck up a few rods from me, repeating its lay at short intervals for nearly an hour. It was a perfect piece of wood music, and was of course all the more noticeable for being projected upon such a broad unoccupied page of silence. Its song is like the words, fee-o, fee-o, few, few, fee, fee, fee, uttered at first high and leisurely, but running very rapidly toward the close, which is low and soft."

This description gives a very clear and correct idea of the song, showing that Mr. Burroughs is not only a good observer of the habits of our birds, but that he has also a fine ear for bird-music. I have heard the same notes almost daily from November to late in March near the West Yegua Creek in Texas, where the birds winter in countless numbers, congregating with Juncos, White-throated and many other Sparrows. They kept together in large swarms, and on fine days each male mounted the top of a bush or the rail-fence and began to sing. The air was full of the sweetest music, and the song here was much more conspicuous than in its summer home. This Sparrow was, with the exception of the Cardinal, and now and then a White-crowned and White-throated Sparrow, the only bird which uttered its song. Near Houston, when coming from the tangled and almost impenetrable parts of the forest into some open bushy place, I was usually saluted by the Field Sparrow's song. In their winter-quarters—the South Atlantic and Gulf region—they frequent, with many other birds, the thickets and bushy edges of woods not far from water. Evergreen shrubs, such as hollies, yupon bushes, myrtle hollies, and other bushes overgrown with evergreen smilax and Carolina jasmine, are their favorite haunts. Here they sleep, and with thousands of other northern birds are comparatively safe from their many foes, especially Sparrow and Pigeon Hawks which always follow these swarms of small winter birds. This is their starting place, when they, shortly after day-break, fly into the neighboring cotton and corn-fields to pick up the seeds of weeds and grasses. When alarmed they fly directly back to the bushes, seeking and finding refuge in the masses of tangled branches. During cold weather they are found more in the interior of the woods, where the cold wind has lost much of its vigor. When in March the first flowers begin to bloom, coloring the ground with their tender hues, the unspeakably beautiful song of these birds is heard from all sides. A few days later they are on their way to the North, none remaining to breed in Texas. The departing of these lovely birds and of many others, known to me since my earliest childhood, did not leave me forsaken; but the contrast for a time suggested solitude. The merry notes of their many voices still rang in my ears and made me long for my northern home. It seemed as if I should follow them, when the loud what cheer, what cheer of the Cardinal Red-bird fell on my ear, driving from my mind all dreary thoughts. The beautiful magnolia under which I rested, the thickets of holly all around me, the trumpets of fragrant Carolina jasmine, the garlands of smilax and trumpet creeper scrambling over bush and tree, the songs of the
Cardinals and Mockingbirds, and Carolina Wrens and Bluebirds made me satisfied with my situation, and in my happiness I wished that it might be forever so.

The Field Sparrow secures its food mostly on the ground. In fall and winter it subsists mostly on the seeds of weeds and grasses, and in spring and summer on insects, their eggs, and larvae. Grasshoppers, but especially small cater-pillars, are greatly relished. The young are fed entirely with insects, as is the case with all the small birds. The flight is short, low, and undulating. In their motions they are much quicker, being more nervous than the Chipping Sparrow. For cage-life they are well adapted, as they are easy to keep and their wants readily satisfied. With other smaller birds of similar character they may be safely kept together. Millet and grass seed, "ant's eggs," Mockingbird-food, etc., form their diet in cage-life. They are also very diligent songsters in confinement.


DESCRIPTION: "Bill, brownish-red. Crown, continuous rufous, with a faint indication of an ashy central stripe, and ashy nuchal collar. Back, somewhat similar, with shaft-streaks of blackish. Sides of head and neck (including superciliary stripe), ashy. Ear-coverts, rufous. Beneath, white, tinged with yellowish anteriorly, the sides of the breast with a rufous patch. Tail-feathers and quills faintly edged with white. Two whitish bands across the ear-coverts. Autumnal specimens more rufous." (Ridgw.)

Length, 5.75 inches; wing, 2.50; tail, 2.60 inches.

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CLAY-COLORED SPARROW.

Spizella pallida Bonaparte.

This handsome little species is found quite abundant throughout the country bordering on the upper Missouri. It inhabits with particular partiality the small valleys found here and there among the numerous ravines running from the interior, and between such hills I have already mentioned. Its usual demeanor resembles much that of the Chipping Bunting, and, like it, it spends much of its time in singing its monotonous ditties, while its mate is engaged in the pleasing task of incubation. When approached, it will dive and conceal itself either amid the low bushes around, or will seek a large cluster of wild roses, so abundant in that section of country, and the fragrance of which will reach the olfactory nerve of the traveler or gunner for many paces.

"The nest of the Shattuck Bunting is usually placed on a small horizontal branch, seven or eight feet from the ground; and I believe it is occasionally placed in the broken and hollow branches of trees. The eggs, four or five in number, are blue, spotted with reddish-brown toward the large end, and placed in a nest so slightly formed of slender grasses, circularly lined with horse or cattle hair, as to resemble as much as possible the nest of the species to which it is allied." (Audubon.)
"The **Clay-colored Sparrows** nest abundantly in Dakota, and especially along the Red River, in the open, low underbrush by the river-side, and among the innumerable scrub-willow copses of the valley. They pair here at the latter part of May, when the males come into full song; the nests are built and the complement of eggs laid, usually by the middle of June. During this month, while the females are incubating, the males mount the tops of the bushes and sing continually—indeed I know of no more assiduous and persistent songster than this little bird is, although his vocal efforts are of an humble sort. His ditty is a simple stave of three notes and a slight trill—nothing like the continuous song of the Chip-bird. In places where the birds are plentiful, several males may be in sight at once, each on his own bush clump, while his mate is nesting below. As soon as incubation is over, the habit is entirely changed, and the males become as inconspicuous as their consorts. The pairing season, during which the males may be seen continually chasing the females about the bushes, is of short duration; and, preliminaries adjusted, both birds set to work in earnest at their nest, with such success that it is completed and the eggs laid in a week or two. Most of my nests were found during the first two weeks in June. In one case, in which I visited a nest daily, I found that an egg was laid each day, till the complement of four was filled. I have not found more than four eggs in a nest, and sometimes only three. They are of a light green color, rather scantily and sharply speckled with sienna and other rich shades of brown—sometimes very dark brown. Generally the dotting is chiefly confined to the larger end, with only a speck here and there over the general surface; the dots are sometimes in an area at the butt, sometimes partially confluent and wreathed around it. The eggs measure about 0.62 by 0.50. The nest is always placed low; I never found one so high as a yard from the ground, and generally took nests within a few inches, in the crotch of a willow or other shrub, or in a tuft of weeds. The nest is inartistically built of fine dried grass-stems and the slenderer weed-stalks, with perhaps a few rootlets; it is sometimes lined quite thickly with horse hair, sometimes not, then having instead some very fine grass-tops. It varies a good deal in size and shape, according to its situation, but may average about three inches across by two deep, with a cavity two inches wide by one and a half deep. In those cases where I approached the sitting bird, she left the nest when I was a few steps away, and fluttered directly into concealment, without attempting any artifice or venturing to protest against the spoliation of her home.

"It is most probable that two broods may be reared, even in this high latitude, but I cannot so assert, as I found no nests nor heard the nuptial songs after June. In July the birds appear in greater numbers than ever, from the accession of the year's broods, and now go in little troops in the shrubbery along with several other kinds of Sparrows. I found them in all wooded and shrubby situations in Dakota, but never out on the high prairie. Early in the fall, in Dakota, they are joined by numbers of Lincoln's, Gambel's, and Harris' Finches, all of which flutter through the shrubbery together. They depart for the South early in October, according to my observations, though some may linger later. In spring their return may be noted on the Missouri River, in the region about Fort Randall for instance, toward the end of April, at the same time that the Bay-winged Buntings and Lark Finches arrive." (Coues.)

In his work, "The Ornithology of Illinois," Prof. Robert Ridgway writes as fol-
BREWER'S SPARROW.

follows: "The Clay-colored Sparrow is one of that group to which we have previously alluded, as characterizing a Campestrian Province. Its range is closely coincident with that of Sprague's Pipit, Baird's and Leconte's Sparrows, Harris' Finch, McCown's and Chestnut-collared Lospurs, and Lark Bunting; being the Great Plains, in their whole extent, from the valley of the Saskatchewan southwards, and to the eastward excuding sparingly into the prairie districts along the eastern side of the Mississippi River. In Illinois, the present species is known with certainty to occur only in the more northern portions of the State, although it no doubt inhabits the prairie districts well southward, especially in the more western counties."

To the West it is found to the base of the Rocky Mountains, and in winter it occurs along the southern border to Arizona and Lower California.

In its habits this bird closely resembles the Chippy, especially in its confiding familiarity, and its song is said to be also very similar to that of its congener. The nest and eggs of one species are hardly distinguishable from those of the other.

NAMES: CLAY-COLORED SPARROW, Shattuck Bunting (Audubon), Prairie Chipping-bird, Prairie Chippy.


DESCRIPTION: "Smaller than S. socialis. Back and sides of hind neck, ashy. Prevailing color above, pale brownish-yellow, with a tinge of grayish. The feathers of back and crown streaked conspicuously with blackish. Crown with a median pale ashy and a lateral or superciliary ashy-white stripe. Beneath, whitish, tinged with brown on the breast and sides, and an indistinct narrow brown streak on the edge of the chin, cutting off a light stripe above it. Ear-coverts, brownish-yellow, margined above and below by dark brown, making three dark stripes on the face. Bill, reddish, dusky towards tip. Legs, yellow.—Length, 4.75 inches; wing, 2.55 inches." (Ridgway.)

BREWER'S SPARROW, Spizella breweri Cassin, represents the foregoing closely allied species from the Rocky Mountains to the Pacific coast, south to southern California and Arizona. Dr. Heermann was constantly meeting them in the Tejon valley, associated with large flocks of other Sparrows, congregated around the cultivated fields of the Indians. Dr. Coues states that it is a rare summer bird at Fort Whipple, Arizona.

Prof. R. Ridgway found this interesting little Sparrow, while abundant in all fertile districts, almost exclusively an inhabitant of open situations, such as fields or bushy plains, among the artemisia especially, where it is most numerous. It frequents alike the valleys and the mountains. At Sacramento it was the most abundant Sparrow, frequenting the old fields. The song, he adds, for sprightliness and vivacity is not excelled by any other of the North American Finches, being inferior only to that of the Lark Sparrow in power and richness, and even excelling it in variety and compass. Its song, while possessing all the plaintiveness of tone so characteristic of the eastern Field Sparrow, unites to this quality a vivacity and variety fully equaling that of the finest Canary. This species is not resident there, arriving about April 9. He found its nest and eggs in the Truckee Reservation, early in June. The nests were in sage brushes, about three feet from the ground. They are built of dry grasses, rootlets, and are lined with hair. They resemble closely the eggs of the Chipping Sparrow.

DESCRIPTION: "Similar to S. pallida; the markings including the nuchal color more obsolete; no distinct median and superciliary light stripes. The crown streaked with black. Some of the feathers on the sides with brown shafts.—Length, 5.00 inches; wing, 2.50 inches." (B. B. & R.)
BLACK-CHINNED SPARROW, Black-chinned Chippy, Spizella atrigularis Baird. This Chippy is an inhabitant of the south-western border of the United States, from Texas to California, south into Mexico. But little is known of its history. Probably it has a very restricted area of distribution. Dr. Elliott Coues met with it at Fort Whipple, Ariz., where it arrives in April and leaves in October. In the spring it has a very sweet and melodious song, far surpassing in power and melody the notes of any other of this genus that the Doctor has ever heard.

DESCRIPTION: Tail, deeply forked. General color, bluish-ash, paler beneath, and turning to white on the middle of the belly. Interscapular region, yellowish-rusty, streaked with black. Forehead, loral region, and sides of head as far as eyes, chin, and upper part of throat, black. Quills and tail-feathers very dark brown, edged with ashy. Bill, red; feet, dusky.

Length, 5.50 inches; wing, 2.50; tail, long, 3.00 inches.

WORTHEN'S SPARROW, Worthen's Chippy, Spizella wortheni Ridg., is an inhabitant of New Mexico. "Regarding this new species," writes Mr. Chas. K. Worthen in a letter to the author, "I cannot give you a great deal of information, as up to the present time it seems to be a very rare bird and but little known. The type specimen I discovered among a lot of skins sent me by one of my collectors, Mr. Chas. Marsh, from Silver City, New Mexico, it having been taken in that locality June 16, 1884. I sent the specimen to my friend Mr. R. Ridgway, who named it to my surprise after me and described it in the Proceedings of the United States National Museum (Vol. VII, Aug. 22, 1884)."

SLATE-COLORED JUNCO.

Junco hyemalis Sclater.

PLATE XXIII. FIG. I.

Autumn's earliest frost had given
To the woods below
Hues of beauty, such as heaven
Lendeth to its bow;
And the soft breeze from the West
Scarcely broke their dreamy rest.

THE bright golden and crimson autumn landscape, embelished by a wealth of asters, golden-rods, and heavenly blue gentians, is enlivened by a great number of cheerful birds, many of them being more conspicuous now than during the exceedingly changeable spring time. They return from the North with their families, having reared from one to three broods. Instead of the one pair, that moved northward in spring, we now notice six or seven and even more individuals. Woodlands and thickets, the ornamental shrubbery of the garden, orchards, meadows, bushy road-sides, stubble fields, and pastures swarm now with birds, contributing much towards beautifying and making attractive every locality where they occur. The skies are bright and the sun still powerful; and there is an almost imperceptible haze that seems to soften the landscape and keep every object in true perspective.
One of the most charming and conspicuous birds of the dreamy autumn days is the Slate-colored Junco, or Snowbird. During this brilliant season we may observe it from the coniferous forests of British America to the magnolia and live-oak woods of the Gulf region. Departing from its summer home when the leaves of the forest trees assume their gorgeous coloring, it follows this transformation of the green into crimson and orange hues, until it has arrived in its winter-quarters in the States bordering the Gulf of Mexico. As soon as the nights get cool, and frosty, the Snowbird arrives from its more northern home, usually in company of Myrtle and Palm Warblers. They come suddenly during the night, and we get the first glance of them early in the morning, while they are skipping about among the shrubbery and on the ground, picking up seeds and insects. On the outskirts of the woodlands they are also very abundant, and in the bushes on the road-side they are noticeable everywhere. During the day the air is very quiet, soft, breezy, and dreamy, and new-comers from higher northern latitudes arrive daily. The most delicate species, especially the hosts of Warblers, Tanagers, Swallows, etc., have left weeks ago, though stragglers of some species may still linger. Among the autumn migrants none is more common and familiar than this dainty little Junco. The evergreens and ornamental shrubs in the garden as well as the thickets in fields, meadows, and on the forest border swarm with flocks of these lovely birds. They are chasing each other through the thickets, are running nimbly over the ground or smoothing their plumage. They enter fearlessly the large gardens and the parks of our crowded cities, hopping and flying around as unconcernedly and with as much familiarity as in the country districts. When flying or when chasing each other through the air, or sometimes when running over the ground, the tail is spread in a fan-like manner, the pure white exterior tail-feathers contrasting sharply with the black ones. The white tail-feathers, the dark ashy of the back, head, and breast, and the pure white underparts identify our little Snowbird at the first glance.

In the tangled thickets and in the ornamental shrubbery as well as in the weeds of the kitchen garden and among the firs, pines, spruces, and cedars the Junco is equally well at home, cheering up every spot by its lively ways and charming gladness. In flocks they fearlessly approach the dwelling houses, appearing under the windows and near the kitchen door to pick up seeds and crumbs. They become so tame and confident that they return every day to the same spot, picking up millet and hay seeds provided for them. Exposed places they do not frequent, unless the weeds are dense, the grass high, and bushy coverts not far away. Being much attacked by the smaller Hawks, which follow the migrating swarms of birds from the North to their winter-quarters, they are always on the lookout for these enemies, and the "apparent timidly they evince at certain times and places is due to their apprehensions of this danger." A strange sound, the cry of a Blue Jay, the sudden rustle of the wings of a hen will cause the whole flock to hurry to the nearest thicket as soon as possible. Having convinced themselves that all is safe, they fly down to the ground, one after another, only to return to the thickets in the same terrified way when the dreaded sound is again heard.

In Texas these and other northern birds are usually the forerunners of one of the icy "northers," appearing suddenly in large swarms. As by magic the outskirts of woodlands, the thickets in the ravines, the dense underwood in the bottom lands, the
weeds and grasses in the corn and cotton-fields and sugar plantations swarm with small birds, while Whooping Cranes, in the shape of a \( V \), with their leader in the front, are soaring on motionless pinion overhead, or they suddenly stop, and in spiral curves are ascending higher and higher, sometimes so high that they only appear as small spots. They utter a loud, clear, and piercing musical call, sounding like \textit{hurr, hurr}, which may be heard at quite a distance. Wild Geese and Ducks are also moving southward. The Passenger Pigeon I observed in large numbers during several winters, the bottom woods of all the creeks and rivers swarming with them. Though the air is still warm and sultry, Titmice, Bluebirds, and Wrens are seeking shelter in the nesting boxes and in old Woodpecker’s holes. As unexpected as the birds came, the roaring cold norther sweeps over the country. Among the dense and still green thickets the Juncos find an excellent shelter.

In south-eastern Texas the Snowbirds arrive usually by the beginning of November or late in October. By the middle of December even the last stragglers have arrived. In south-western Missouri they appear about October 15, and in southern Wisconsin and northern Illinois by the beginning of that month. They winter from the Middle States southward, and small flocks are sometimes found during cold weather as far south as New England. At Freistatt (Lawrence Co.), Mo., they were regular visitors at my feeding places during the whole winter, though the majority moved farther south.

The Snowbird does not excel by beautiful color or fine song. It is dressed in a plain but neat, tasteful, and becoming attire, being altogether a very handsome, attractive, and lovely bird, deserving to be affectionately cared for and protected by all who love the beautiful and poetical in Nature. Indeed, it is one of our most familiar birds, delightfully welcomed by old and young in many country places. Its summer home extends from the northern parts of the Union northward to the Arctic regions, breeding abundantly in northern New England, northern Wisconsin, Michigan, Minnesota, etc. In the mountain ranges of the East, especially in the Alleghanies, it is also a common summer sojourner. “The Black Snowbird,” says Dr. Elliott Coues, “is commonly supposed to come from the North in the fall and so it certainly does; but its sudden appearance, dependent upon changes of the weather, remained unaccountable till it was learned that the bird breeds in the mountains even as far south as Virginia and North Carolina, and flies up and down, according to exigencies of the weather.”

The spring migration of the Snowbird is also extended over a considerable period. In Wisconsin the first appear by the middle of March, while I have seen them in Lee County, Texas, in large flocks as late as April 22, at a time when the sweet bay (\textit{Magnolia glauca}) and the large flowering \textit{Magnolia grandiflora} were in full flower, and when even the most delicate summer residents had arrived long ago, when the woods were in full leaf since almost six weeks, and when the first brood of Bluebirds, Tufted and Carolina Titmice and other birds had left their nests. In Milwaukee I have observed them until late in May, at which time they suddenly disappeared. During their migration they are always partial to all kinds of shrubs and thickets, having a predilection for evergreens wherever they occur.

The Junco is a very gregarious bird and rarely only a few are observed. Flocks varying from a dozen to a hundred are always seen. Apparently the birds are suffering
comparatively little in their northern home from mammal and reptile foes. By their numbers and by their frolicsome play these birds imbue our gardens and all places where they occur with hilarity and happy life. Some are in pursuit of each other on the ground, others through the bushes and thickets, and still others are chasing each other through the air, exhibiting thereby a surprising beauty, their elegant movements and pure white tail-feathers being most conspicuous. During the bright October days these playful performances are often observed, and, when chasing each other, a quick tuck, tuck, tuck is frequently heard. Their common call-note is a soft chip. The song is not loud, but very sweet. It is rarely heard during the spring migration, but time and again I have listened with pleasure to the song of caged Juncos. They usually commenced early in April, but the full song was not heard until the beginning of June. Other birds in the same room, diligent songsters, seemed to inspire my caged Snowbirds. The chant consists of a number of faint whispering sounds, often interrupted by their call-note tuck, tuck, and their common chip. They intermingle also several other louder notes, which do not seem to belong to the real melody. For ten to twenty minutes they are sometimes engaged in their performance, being apparently themselves much delighted by it. To my ear the lay has much resemblance to that of the Red-poll Linnet.

On the ground these birds run around with great dexterity, and among the branches of trees and shrubs they are perfectly at home. They rarely perch in the tops of large trees. Their roosting places are always chosen in dense evergreens wherever such occur, offering them protection against cold weather and their many enemies. Often a whole flock finds shelter in a large dense Norway spruce or Scotch pine. In Houston, Texas, they retired during cold weather and during the night to dense masses of evergreen honey-suckles (Lonicera japonica and L. Halliana), loquat or Japan plum trees (Eriobotrya japonica) and magnolias. In fall and winter their food consists of the seeds of weeds and grasses and in spring and summer of insects, their eggs and larvae, which are by them consumed in incalculable numbers. Like many other members of the sub-family Spizellina, they often scratch on the ground among old leaves for food. Like all our native Sparrows, the Junco is a very useful bird to the farmer and horticulturist, and I cannot refrain from repeating that in treating the birds with kindness we exhibit the greatest kindness to ourselves.

In Wisconsin this bird is a common summer sojourner from Kewaunee Co. northward. During the days of my boyhood, when many parts of Sheboygan Co. were still covered with majestic pine woods, when the wintergreen, trailing arbutus, rattle-snake plantain, yellow lady's slipper (Cypripedium pubescens and C. parviflorum), the moccasin flower (Cypripedium spectabile), the trientalis, etc., were common flowers on the hillsides leading to our small little lake, the Juncos were abundantly met with. I observed them throughout the summer and they were doubtless nesting there. In Oconto Co. the Snowbird is, according to the observations of Mr. A. J. Schoenebeck, a common summer resident. Its nest he found as early as May 7, being built under the side of a log and containing five fresh eggs. It was constructed of grasses and dry clover leaves, and was warmly and smoothly lined with horse and cow hair. Sometimes the nest is built in the up-turned roots of trees, in overhanging banks, on stumps, and underneath a small dense shrub. The eggs, four or five in number, are of a whitish color, varying from a
Everywhere common is this winter the reddish-brown "confluent around the larger portion of the egg, but rarely covering either end." Average diameter .78 × .58 of an inch.

In New England the Black Snowbird breeds in all the mountainous regions. Dr. T. M. Brewer found it about Calais, Me., in all the islands of the Bay of Fundy, and throughout New Brunswick and Nova Scotia by far the most common and familiar species, especially at Pictou, "where it abounded in the gardens, in repeated instances coming within the outbuildings to build its nest." In a wood-shed connected with a dwelling Dr. Brewer's attention was called to the nests of several of these birds, built within reach of the hand, and in places where the family were passing and repassing throughout the day. They were usually called "Bluebirds" by the people. On his ride from Halifax to Pictou, he found these birds breeding by the road-side, often under the shelter of a projecting bank. Afterwards he found them nesting in similar situations among the White Mountains, the road-sides seeming to be a favorite situation.

During the breeding season the Snowbird inhabits North America from the United States northward to Alaska and the Arctic regions. In winter it is common all over the United States, except on the Pacific coast, where it is found sparingly.

The Junco is an excellent cage bird, especially when kept together in an aviary in small flocks. Nobody should keep birds in the cage who is not willing to care for them conscientiously, and to supply all their wants, if possible. If tenderly cared for, the Snowbird is an excellent cage pet, very happy, always smooth in plumage, and becoming very tame. Its food in the cage consists of all kinds of grass seeds, especially millet and Canary seed, and in summer it should have an additional supply of Mockingbird-food and meal-worms. My cage pets were so tame that they came on my hand and perched on my head.


DESCRIPTION: Everywhere of a grayer or dark ashy-black, deepest anteriorly; the middle of the breast behind and on the belly, the under tail-coverts, and first and second external tail-feathers, white; the third tail-feather, white, margined with black. Bill, pinkish-white. Young streaked above and below. Female a little lighter.

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CAROLINA JUNCO.

Junco hyemalis carolinensis Brewster.

The Snowbird found in the southern Alleghanies differs in some respects from the typical species. According to Prof. Wm. Brewster, who discovered the bird May 28, 1885, at Highlands, N. C., this variety is larger, with lighter, bluer, and more uniform coloration, and a horn-colored instead of a pinkish-white or yellowish bill. This new and interesting form is common everywhere on the mountains south of West Virginia,
and it seems to frequent such places where almost impenetrable thickets of rhododendron¹ and mountain laurels or kalmias², azaleas and andromedas are overshadowed by tall spruces and high rocky ridges. Nowhere do rhododendrons and kalmias, when in bloom, make such a glorious display as in the southern Alleghenies, where many of them are found approaching twenty feet in height. On many of the ridges the flame-colored azalea³ flaunts its gorgeous flowers. They are of every shade, from light lemon-yellow to the most brilliant fire-red, making a great contrast to the pretty delicate rosy-pink flowers of *Azalea nudiflora*, which grows among them. Both the azaleas and the mountain laurel are abundant throughout the woodlands of these mountains. The lily of the valley is everywhere under our feet. This is the breeding place of the *Carolina Junco*. "About Highlands," says Mr. Wm. Brewster, "it was seen everywhere; flitting along the snake fences that border the fields and roads, twittering shyly in the depths of the 'laurel' swamps, flirting unexpectedly from beneath the oaks in the open woodlands, and on the grassy, wind-swept mountain summits, hopping fearlessly among our horses or peering curiously at their riders. On the Black Mountain it was decidedly the commonest bird, ranging from an elevation of about 4,300 feet to the very top of Mitchell's High Peak. It was here found quite as numerously in the hardwood forests below 5,000 feet as among the spruces and balsams above that altitude. The mountain people call it 'Snowbird,' and say it spends the winter in the lower and more sheltered valleys, returning to the mountain sides as soon as spring begins. Thus it is doubtless a local and essentially resident form."

Mr. Geo. B. Sennett found the bird breeding in spring and summer, 1886, in the same locality at an elevation of 3,000 to 6,300 feet. At the last-named altitude, on the summit of Roan Mountain, he found it exceedingly abundant, outnumbering at this point all other species combined. "In July, on Roan Mountain," writes Mr. Sennett, "I found both fresh-laid eggs and young in all stages; whenever the almost constantly present and low-hanging clouds would lift for an hour or so, I could deviate from the main road and find a Junco's nest. My experience told me that the first brood was generally four, but often three, while the second brood was three, and rarely four. I found the birds nesting on the ground in all sorts of places,—in the open among the grass hummocks, along the edge of a cow-path, among the rhododendrons, or myrtle* tussocks (which look so much like the heather of Scotland), under the balsams, or under the deciduous trees of a lower altitude. Two nests, one of which was five and the other three feet from the ground, were found in balsam trees⁴; and I found one nest at an altitude of two feet, in the roots of an overturned tree."

**Oregon Junco, Junco hyemalis oregonus Ridgway.** The Oregon Snowbird represents the species in western North America, breeding along the Pacific coast region from the mountains of California northward to Sitka, Alaska. In its habits it is the exact counterpart of the Eastern Snowbird. Mr. Ridgway found it in summer an inhabitant of the pine woods of the mountains, but in winter descending to the lowlands, and entering the towns and gardens in the same way as the eastern species. In Oregon and

¹ *Rhododendron maximum*, *R. punctatum*, and *R. Catawbiense*. ² *Kalmia latifolia*. ³ *Azalea calandulacea*. ⁴ *Abies Fraseri.*

* Probably *Lelophyllum buxifolium*, Sand Myrtle. N
Washington it is a common bird, rearing often three and even four broods annually. According to Mr. A. W. Anthony the birds nest in various situations: in the hollows of the ground, under low bushes, the nest being flush with the surface; also in holes among the roots of bushes and trees. Many nests were found under wood-piles and some on the shelf of a railroad cut, which was screened by a thick curtain of vines. Nesting begins late in March or early in April. The nests are built of dry grasses, fine rootlets, old leaves, and are lined with a thick layer of cow hair. The eggs, four to five in number, are bluish or greenish-white, speckled and wreathed with blackish-brown.

**DESCRIPTION:** This form has a black or very dark slaty head, neck, and chest; the back and scapulars areumber-brown; sides distinctly light pinkish-brown or claret color, very different from color of chest.

**Point Pinos Junco, Junco hyemalis pinosus Loomis.** This local race was discovered June 21, 1892, at Point Pinas, near Monterey, Col., by Mr. Leverett M. Loomis. He subsequently found it a common bird, frequenting the more open places in the pine woods which largely cover the high, cold promontory of Monterey. “The fact,” says Mr. Loomis, “that a Junco should be found breeding at the sea level so far south in California, is very significant and in itself enough to suggest the existence at least of a local race. It will be interesting to learn the status of the birds breeding in the Coast Range, particularly those of Santa Clara County.”

**Thurber’s Junco, J. hyemalis thurberi Anthony,** breeds commonly in most of the desert ranges of south-eastern California, as well as in the southern portions of the Sierra Nevada.

**Shufeldt’s Junco, Junco hyemalis shufeldti Coale.** This variety from Fort Wingate, N. M., is very similar to the Oregon Junco.

**White-winged Junco, Junco aikeni Ridg.** This species is an inhabitant of the mountain regions of Colorado and Wyoming, straggling east in winter to central Kansas. Colored generally like the Eastern Junco; it is distinguished by its ashy-gray sides and chest, inclining sometimes to pinkish. Wing usually with two white bands. Color of back and head uniform plumbeous-gray.

**Gray-headed Junco, Junco caniceps Baird.** This is also an inhabitant of the Rocky Mountains, breeding from Fort Bridger southward. Head, neck, chest, sides, and upper parts except back, ash-gray, the belly rather abruptly white and the back rusty or rufous.

**Red-backed Junco, Junco cinereus dorsalis Ridg.** Inhabits the southern Rocky Mountain districts, especially New Mexico and eastern Arizona. In color resembling much the preceding, but “bill with upper mandible blackish, lower yellowish; iris yellow; plumage as in J. caniceps, but paler beneath, the much paler ash of chest and sides fading gradually into white on belly”; back conspicuously rusty or rufous.

**Arizona Junco, Junco cinereus palliatus Ridg.** This is an inhabitant of the depths of the pine woods of the mountainous regions of southern Arizona and Mexico.

**Pink-sided Junco, Junco annectens Baird.** This pretty species is also found in the Rocky Mountains from Fort Bridger northward to Idaho and Montana. It breeds among the pines. A nest was found by Dr. Merrill in Montana in June, at an elevation of 8,000 feet, was built under a shelving stone, in a little hollow dug out by the birds.
The structure was rather large and compactly built, composed of coarse, dry grasses, with an inner lining of fine yellow straw and hair of the mountain sheep. Eggs dull yellowish-white, spotted and blotched with reddish-brown and lavender. "Adult male and female (sexes essentially alike) with head, neck, and chest clear plumbeous, the lores blackish, in strong contrast; back and scapulars hair-brown" (Ridgway).

Guadalupe Junco, Junco insularis Ridg. Inhabits Guadalupe Island, Lower California.

Baird's Junco, Junco bairdi Belding. This species is found a resident in the mountains of Lower California.

All these birds resemble each other very much, each species being almost the exact counterpart of the other. For further particulars as to size and color I refer the reader to Ridgway's "Manual of North American Birds," or to Coues' "Key to North American Birds."

BLACK-THROATED SPARROW.

*Amphispiza bilineata* Coues.

Plate XXIII. Fig. 4.

This interesting little Sparrow inhabits the south-western part of our country from the lower Rio Grande and western Texas to Lower California and contiguous parts of Mexico, occurring north to Nevada, Utah, and western Colorado.

According to Mr. Robert Ridgway it "was found throughout the sage-brush country, the most desert tracts of which are its favorite abode. It was equally common in the western depression and in the Salt Lake Valley, as well as in intermediate localities. Unlike the Sage Sparrow (*A. belli nevadensis*), which frequents chiefly the more thrifty growth of the artemisia in the damper valleys, this species prefers the arid mesas, where the growth is scant and stunted; and we found it nowhere else so abundant as on the Carson Desert, near the Soda Lakes, where much of the surface consisted of loose, shifting sand. It also differs markedly from that species in being migratory, being merely a summer sojourner, and one of the latest to arrive, few, if any, making their appearance in the Truckee Valley before the first of May, the advance individuals being noted on the 13th of that month, in 1868. Like the Sage Sparrow, this species is remarkable for its peculiar song, which in pensive tone and sad expression harmonizes so perfectly with its desolate surroundings. It is from this song that the Indian name, *Wut-tu-ze-ze*, is derived, for the notes are very nearly expressed by the syllables *wut', wut', zeecece*, repeated once or twice, the first two notes quick and distinct, the last one a prolonged, silvery trill. Frequently a singer reverses, at each alternate repetition of the song, the accent on the first and last portions, thus producing a very peculiar effect."

All the ornithologists who have visited the lower Rio Grande, have observed this bird. Mr. Dresser found it at Matamoros, and Dr. J. C. Merrill discovered nests at
Fort Brown. Mr. Geo. B. Sennett, the painstaking and accurate describer of the ornithology of the lower Rio Grande, gives the following description: "Found at Lomita Ranch in even greater numbers than at Hidalgo the season before. It is the sweetest singer of all the birds that frequent the thorny bushes of that region, and I have willingly undergone a broiling sun and considerable laceration from thorns and spines of cactus to listen to its notes. I found three sets of its eggs in April at Lomita. Several nests were discovered in May, but they all contained young. My observations of its breeding habits differ somewhat from those recorded of it on the arid plains of the Utah Basin. Its nest differs from former descriptions in having more or less horse hair and few rootlets for lining. One nest was fully six feet from the ground, and others somewhat lower, but none were found very near the ground, and all were placed securely in crotches. The locality worked over this season had much less open and barren ground than my field of last year, cactus and large thorny bushes covering pretty thickly all spots free from chaparral or timber; yet I found the BLACK-THROATED FINCH as abundant as in the more barren country. Its eggs are perceptibly smaller than heretofore recorded; their length varying from .70 to .66 and their breadth from .55 to .52."

The ground-color of the eggs is a pure white with a slight bluish tinge.

I have observed the Black-throated Sparrow only a few times among opuntias and mesquit bushes near San Antonio and in thick shrubbery near the West Yegua, Lee Co., Tex. The bird is very quick in its motions, and when disturbed flies directly into the dense thickets. Dr. Coues found it very abundant in the southern and western portions of Arizona, and Lieutenant Couch met with it in northern Mexico. On one occasion, having halted during a norther in Tamaulipas, he heard a gay little "black-throated fellow, regardless of the bitter wind, from the top of a yellow mimosa, then in bloom, give utterance to a strain of sprightly and sweet notes, that would compare favorably with those of many more famed songsters."

NAMES: BLACK-THROATED SPARROW, Black-throated Finch, "Wut-tu-ze-ze" (Indians).


DESCRIPTION: "Sexes, alike. Above, uniform unspotted ashy-gray, tinged with light brown; purer and more plumbeous anteriorly, and on the sides of head and neck. Under-parts, white, tinged with plumbeous on the sides and with yellowish-brown about the thighs. A sharply defined superciliary and maxillary stripe of pure white, as also the lower eyelid, the former margined internally with black. Loral region, black, passing insensibly into dark slate on the ears. Chin and throat between the white maxillary stripes, black, ending on the upper part of the breast in a rounded outline. Tail, black, and lateral feathers edged externally and tipped on inner web with white. Bill, blue."

"Length, 5.40 inches; wing, 2.75; tail, 2.90 inches."

**Bell's Sparrow**, *Amphispiza belli* COUES, is a common bird in southern California, and thence to Cape St. Lucas, where all the extensive thickets are its favorite resort. It also occurs in Arizona as far north as Fort Whipple, where it was rarely observed by Dr. Elliott Coues. In the sage-brush on the Gila and Mohave Rivers it is abundant. It lives upon small seeds and insects, indifferent as to water, or depending upon what they obtain from dews and fogs. Dr. Heermann states that he found these birds in the mountains bordering the Casumnes River, and afterwards on the broad tract of arid land between Kerr River and the Tejon Pass, and again on the desert between that and
SAGE SPARROW.

The Mohave River. With only a few exceptions, these were the only birds inhabiting the desolate plains, where the artemisia (sage) is the almost exclusive vegetation. When disturbed, the bird chants merrily from some bush top, but at the approach of danger, drops at once to the ground and disappears in the shrubbery or weeds. Near National City, San Diego, Los Angeles, and other places in southern California this is a common bird, visiting frequently the orange groves and breeding sometimes in dense ornamental shrubs and cacti. The nest is said to be built of dry grasses and lined with finer grasses and sometimes hair. The eggs are light greenish-blue, marked with reddish-purple and rusty spots.


Description: “Upper parts, with sides of head and neck, uniform bluish-ash, tinged with yellowish-gray on the crown and back; beneath, pure white, tinged with yellowish-brown on the sides and under the tail. Eyelids, short streak from the bill to above the eye, and small median spot at the base of culmen, white. A stripe on the sides of the throat and spot on upper part of breast, with a few streaks on the sides, with the loral space and region round the eyes, plumbeous-black. Tail-feathers, black; the outer edged with white. Wing-feathers all broadly edged with brownish-yellow; the elbow-joint tinged with yellowish-green. Bill and feet, blue.

“Length, 5.70 inches; wing, 2.80; tail, 2.90 inches.” (B. B. & R.)

SAGE SPARROW.

Amphispiza bellii nevadensis Ridgway.

This is a local form of the foregoing and also known as the Artemisia Sparrow. Being an inhabitant of the artemisia or sage plains north to Idaho, Wyoming, Montana, east to Colorado and New Mexico, and south to the interior of southern California and northern Mexico, it is probably nowhere more abundant than in Nevada. Prof. Robert Ridgway, at Carson City, February 27, heard for the first time its sweet sad chant. A week later he found the sage brush full of these birds, the males being in full song and answering one another from all directions. In walking through the sage brush, these Sparrows were seen on every side, some running upon the ground with their tails elevated, uttering a chipping twitter, as they sought to conceal themselves behind the shrubs. Some were seen to alight upon the tops of dead stalks, where they sat with their tails expanded almost precisely after the manner of the Kingbird. The song of this bird is feeble, but is unsurpassed for sweetness and sadness of tone. While its effect is very like the song of the Meadow Lark singing afar off, there is, besides its peculiar sadness, something quite unique in its modulation and delivery. It is a chant, in style somewhat like the spring warbling of the Shore Lark.

On March 25, at Carson City, Mr. Ridgway found these Sparrows very abundant and everywhere the predominating species, as it was also the most unsuspicious and familiar. It was even difficult to keep them from under the feet. A pair would often run before Mr. Ridgway for a distance of several rods with their unexpanded tails elevated, and when too nearly approached would only dodge in among the bushes instead of flying off. On the 9th of April, walking among the sage brush near that city, he found several nests of this Sparrow, the female parent in each instance betraying the
position of her nest by running out, as he approached, from the bush beneath which it was concealed. With elevated tail, running rapidly and silently away, they disappeared among the shrubbery. In such cases a careful examination of the spot was sure to result in finding an artfully concealed nest, either embedded in the ground or a few inches above it in the lower branches of the bush. He did not find this species east of the northern end of Great Salt Lake, nor was it seen in the neighborhood of Salt Lake City, where the other species (A. bilineata) was so abundant. The eggs are light greenish, marked all over with very fine dots of reddish-brown, and around the larger end with a ring of confluent blotches of dark purple and lines of darker brown, almost black.

DESCRIPTION: Resembling A. bell, but purer ashy above, with the dorsal streaks very distinct, instead of almost obsolete.

PINE-WOODS SPARROW.

Peucaea aestivalis Cabanis.

PLATE XXIV. FIG. 5.

It is a beautiful April day, and the pine-barrens of south Florida are bespangled with millions of brilliant and charming flowers. The yellow bachelor's button\(^1\) is everywhere present. The Atamasco lily\(^2\) and Mrs. Mary Treat's zephyr flower\(^3\), closely allied to the former, are flowering profusely on the wayside. On the margin of slow flowing creeks the honey bell or andromeda\(^4\) grows in dense thickets, its fragrant waxy-white flowers hanging down in dense one-sided racemes. Its roots are always kept moist by a thick matting of sphagnum moss. Associated with it we often find a shrub with pretty, large leaves and showy white fragrant flowers. This is the large-flowering pawpaw\(^5\). The American olive\(^6\), an exquisite broad-leaved evergreen shrub or small tree, grows in the same localities. On the water's edge the umbels of white flowers of the spider lily\(^7\) are expanding, filling the air with a strong vanilla-like fragrance. On many places the ground is covered with the white waxy petals of the large-flowering magnolia, and the air is heavy with the strong and indescribably sweet perfume of the glorious flowers, which on their back-ground of large lustrous, leathery, dark evergreen leaves cannot fail to fill the soul with joy and admiration. The more we study this tree, the more beautiful of the American forest, the more we admire and love it. On its limbs and trunk we notice a number of epiphytes, especially air-plants of different species\(^8\), ferns and orchids\(^9\). In the flat pine-woods near by, the saw-palmetto\(^10\) forms dense thickets, imparting the landscape with a decidedly tropical appearance. Usually five to six stems, several feet high, form dense clumps, and from April to June, when the yellowish-green flowers open, the air is full of their grateful

\(^{1}Polygala lutea. \(^{2}Zephyranthes Atamasco. \(^{3}Zephyranthes Treatie. \(^{4}Andromeda racemosa. \(^{5}Asimia grandiflora. \(^{6}Osmanthus Americanus. \(^{7}Hymenocallis Caribana. \(^{8}Tillandsia utriculata, T. bracteata, T. Bartrami. \(^{9}Epidendrum canopseum and E. venosum. \(^{10}Sabal serrulata.
odor. Bees are swarming around them in large numbers. Even in the driest places, where the sand looks almost as white as snow, and where only stunted pines and oaks grow, we may find some beautiful plants. The sand rose-mary or sand heath\textsuperscript{1}, a pretty and peculiar heath-like shrub with reddish flowers, grows in abundance. The dwarf red bay\textsuperscript{2} with very aromatic leaves flourishes in such places to perfection. In these open pine-woods our eyes can roam often for more than half a mile in every direction. The many small lakes and the orange groves on their banks add variety to the landscape. As yet we do not find many ornamental plants in the gardens. The blossoming orange trees, though exceedingly sweet-scented, are not as showy as the flowering apple trees of the North. Sometimes our eyes meet gorgeous masses of fiery orange color, being enchantingly beautiful in the distance. On coming nearer we find beds of the Barbadoes lily or orange amaryllis\textsuperscript{3} in full bloom. This is, indeed, a sight worth a long journey. From all directions the harmonious and sprightly song of the Mockingbird falls on our ear. The Carolina Wren carols from almost every thicket, and in the tree tops and among the bushes countless numbers of migrants, on their way to the North, are hopping around in quest of food. In winter the palmetto thickets as well as the dense shrubbery of the adjoining hammocks are swarming with northern birds, which here find an abundance of food and excellent shelter. Among the summer birds I expected to find the Cardinal Redbird in large numbers, but I only noticed a few. Florida is very poor in songbirds, compared with Texas and the other Gulf States. Painted Buntings, Blue Grosbeaks, Chats, Orchard Orioles, Lark Finches, Scissors-tailed Flycatchers, so common in almost every garden and woodland in south-eastern Texas, do not breed in southern Florida.

In the pine-woods where the saw-palmetto and also the dwarf-palmetto\textsuperscript{4} form dense thickets, and where the intervening space is covered with low dense huckle-berry bushes, andromedas, and grasses, the PINE-WOODS SPARROW is an abundant bird, occurring from southern Florida to southern Georgia in all suitable localities. I met with it for the first time near Jacksonville and a few days later in Orange County. Its favorite haunts are always the palmetto thickets of the flat woods, which it occupies with the White-eyed Towhee or Joree and the Carolina Wren. So common is this Sparrow in such places that the boys call it the Palmetto Bird or Palmetto Sparrow. Were it not for the fine, loud, and clear song, the plainly colored and shy bird would be easily overlooked. Its grayish color harmonizes so perfectly with the sandy soil, the dry leaves, and the dead grasses that it requires a sharp eye to discover it and to follow its mouse-like movements among the dense herbage. Sometimes it sings for twenty minutes or more in the lower limbs of a pine, but as soon as it finds itself observed it dives down into the thickets, and it is with difficulty chased from its safe retreat. In the neighborhood of orange groves it is very numerous, but it rarely mounts an orange tree to carol its song. When strolling around in the lonely pine-woods I met with this bird, which is almost as conspicuous by its song as the Vesper Sparrow in Wisconsin. Long before I had made its acquaintance the song was familiar to my ear. When I for the first time heard the lay I thought it was the performance of a Wren or some other insectivorous bird, as I was unable to see the songster, nor could I say from what direction the music came, the notes being exceedingly ventriloquial. Sometimes they seemed to

\textsuperscript{1} Ceratola creroides. \textsuperscript{2} Persea Catesbyana. \textsuperscript{3} Hippeastrum equestre. \textsuperscript{4} Sabal Adansoni.
come from a dense clump of palmettos, and in the next moment they sounded as coming from a great distance. One morning, while roaming about among the flowering magnolias and andromedas, and then again in the flat pine-woods, I had the good fortune to notice the birds while engaged in their song right over my head in the branches of pines. They were at least from forty to fifty and more feet from the ground, where they could scarcely be seen. Since that time it was always easy for me to find the bird. When I threw a stick in the air the birds immediately darted down and disappeared among the low shrubbery and palmettos. The song resembles closely that of Bachman's Sparrow, but it is not as varied and musical. It is very liquid and fascinating, somewhat metallic and very varied. The bird is so numerous that the song is heard from all sides. The pine-woods would be lonely without this plainly-colored songster. Most diligently it sings early in the morning and late in the afternoon, but immediately before the breeding time it is heard during the entire day.

Among the North American Sparrows (Spizellinae) we find quite a number of exquisite songsters. There are no showy birds among them, their prevailing color being gray and brownish, but their attire is exceedingly rich and tasteful. In the high North we find the beautiful Fox-colored Sparrow, and in the northern and mountainous regions of our country the White-crowned and White-throated Sparrows occur, all being excellent songsters. The gardens of the East and North are the haunts of one of our most familiar songsters, the Song Sparrow. In the bushy outskirts of the woodlands of the central part of the country we find the sweet-voiced Field Sparrow, while the sage tracts of Utah and Nevada resound with the melodies of the Sage Sparrow. The sprightly and mellow strains of the Lark Sparrow add greatly to the charm and beauty of the woodland borders and gardens of Texas, and the pine-barrens of the lower South are enlivened by the strains of the Pine-woods Sparrow and Bachman's Sparrow. Each one of these birds has peculiarities entirely its own, and each one has its special attractions. When recalling to my mind the pine-barrens with their charming, though often hidden, floral beauties, the patches of saw-palmettos, the exquisite flowering andromedas, the lovely sand rose-mary, and other plants, the orange groves and the gorgeous masses of orange amaryllis, it seems to me as though the song of this bird were still in my ear.

The nest is exceedingly difficult to find, and it is only accidentally discovered while roaming around in the pine-woods. Mr. Frank M. Chapman, of the American Museum of Natural History, New York, found a nest near Gainesville, Fla., on May 21, 1887. "This nest was placed beneath a scrub-palmetto, a growth which everywhere here covers the ground, and was constructed almost entirely of fine dry grasses. It was well made and quite compact, and held well together when lifted from the ground. It was not arched over in any way, was perfectly round, with the sides or rims everywhere of equal height, in fact it was a symmetrical nest and well proportioned." The eggs were pure white in color, slightly glossy, and rounded ovate in shape.

In south Florida this Sparrow doubtless rears from one to three broods each year, the first full sets being found late in March and early in April, while nests with fresh eggs are found as late as June 25. The nest is almost always built under the overhanging fronds of a saw-palmetto or dwarf-palmetto, and is built exactly in the same
way as Mr. Chapman has described it, being well protected from sun and rain and many enemies by the dense palmetto leaves. The eggs, usually four, but sometimes only three in number, are pure white. The nest is securely hidden, and it is only found when we accidentally flush the female from it.

NAMES: PINE-WOODS SPARROW, Palmetto Bird, Palmetto Sparrow, Summer Finch.


DESCRIPTION: Sexes, alike. Feathers of upper parts, dark brownish or chestnut, margined with or streaked with black; lower parts of breast and belly, dull white; sides, flanks, and chest, pale grayish-buff; top of head streaked with grayish or brown; no white bands on the wing and tail-feathers without distinct bars; edge of wing, yellow. The variety is similar, but paler.

Length, 6.00 inches; wing, 2.35; tail, 2.57 inches.

**BACHMAN'S SPARROW.**

*Peucaea aestivalis bachmani* Brewster.

This is only a variety of the former, but a very valuable one, for which reason I enter more fully into its life-history than I usually do in treating of sub-species. This bird was discovered by Dr. J. Bachman, a friend and co-worker of the great Audubon, in April, 1832, at Parker's Ferry near the Edisto River, S. C. It has since been found from North Carolina through all the South Atlantic and Gulf States to eastern Texas, where it invariably inhabits the pine-woods. It is found north to Tennessee and southern Illinois.

Prof. Wm. Brewster observed these birds very closely at St. Mary's, Ga., a town situated on the very border line of southern Georgia, where he spent almost four weeks, from April 5 to early in May. In describing the pine-woods of that region, he especially mentions the bright green beds of palmettos that cover most of the ground. "Were it not for the half-wild cattle," Mr. Brewster continues, "that range at will through the country, the palmetto would probably usurp every inch of ground; but these creatures keep it within reasonable limits, and many spaces of closely cropped grass and stunted blueberries intervene. About such places I used to find the BACHMAN'S FINCH, a retiring little bird which might easily be overlooked by one unacquainted with its habit of skulking among the herbage and lying concealed until nearly trodden on. But no one with the slightest ear for bird music can long remain in ignorance of its presence after the breeding season has set in, for the male possesses vocal powers of a very rare order. His song is a prolonged, leisurely chant composed of several distinct bars or sets of notes, with brief pauses between, as if the bird stopped to take breath. The final notes of each bar have sometimes a rising, sometimes a falling, inflection, and the tone is varied in the most subtle manner. Now it has a full bell-like ring that seems to fill the air around; next it is soft and low and inexpressibly tender; now it is clear again, but so modulated that the sound seems to come from a great distance. The whole performance is very simple and I hardly know the secret of its charm. To be fully appreciated it should be heard in the soft twilight of an April evening, when the still woods are filled with dusky shadows. At such times it has moved me more deeply than I care to confess.
"The male always sings from an elevated perch, usually a dead twig close to the trunk of a southern pine. He sits perfectly motionless and is unaccountably hard to see. I have often stood directly beneath one for several minutes, vainly straining my eyes in the direction from whence the sound came, and perhaps finally discovered him within ten feet of my head in plain view. The ventriloquous character of many of his notes increases this difficulty. If disturbed in the midst of his song, he pitches to the ground beneath and at once seeks shelter in the grass."

Prof. Robert Ridgway detected the bird in southern Illinois, where it is known as the Oak-woods Sparrow. It is a summer resident there and breeding, but is not common. It inhabits old fields, where, perched upon a fence-stake or an old dead tree; it is described as chanting a very delightful song. He first observed the bird on July 12, 1871, on a road about half-way between Mount Carmel and Olney. The bird was then seen on a fence, and its unfamiliar appearance and fine song at once attracted Mr. Ridgway's attention as he was riding by. He speaks of its song as one of the finest he has ever heard, resembling most the sweet chant of the Field Sparrow, but is stronger, and varied by a clear, high, and very musical strain. Mr. Ridgway describes the song as resembling the syllables thééééééé-till-lut-lut-lut, the first being a very fine trill pitched in a very high musical key, the last syllable abrupt and metallic in tone.

Of the nesting of Bachman's Sparrow Major Charles E. Bendire gives the following excellent account:

"Through the kindness of Dr. Wm. C. Avery of Greensboro, Alabama, an enthusiastic naturalist, who has devoted considerable labor and no little time to the study of the nesting habits of this species, I am enabled to give what I consider the first reliable and accurate descriptions of the nest and eggs of Bachman's Sparrow. In addition to not less than five nests and several full sets of eggs, adult birds, and young of the year, all generously presented to the National Museum collection at Washington, D. C., Dr. Avery has sent the writer small pen and ink sketches of several of the nests and a beautifully executed crayon drawing, natural size, by Miss M. Erwin, which shows the peculiar and unique structure and shape of these nests as far as this genus is concerned, perfectly, and enables me to give a better pen picture of them than I could have done otherwise. Greensboro, Alabama, is situated in the central part of the State, about 140 miles north of Mobile.

"All the nests of this bird vary totally in structure from those of the other species of the genus Paececa, as far as known to me. They are all distinctly roofed over or domed, a feature only found in the nest of a closely allied species, Emberagra ruhi-virgata, the Texas Sparrow, which constructs a somewhat similar nest. They are cylindrical in shape, ... and all are constructed out of dry grasses exclusively, and are lined with fine grass tops only. Some are much more artistically and compactly built than others; the roof projects somewhat over the entrance in all cases. The measurements are taken from the best preserved nest, obtained May 8, 1888, near Greensboro, Alabama, containing four nearly fresh eggs. ... The base of the nest is always placed in a slight depression of the ground, and the entrance is invariably canted upwards, at an angle of about 15°, in some instances the elevation is greater still. The entrance to the majority of the nests found faced the west. The above-mentioned nest was found on
the side of a hill in a sparse growth of old-field pines\(^1\), and was supported in the rear by a tuft of grass.

"A second one, found May 9, in a patch of pine and plum bushes\(^2\) was held snugly between two tufts of broom sedge. It contained three young birds nearly grown and an added egg. The parents were perched on a pine, about fifteen steps from the Doctor, and manifested their alarm at his presence by their nervous movements. A short search revealed this nest. It resembled the one found on the 8th, except that the entrance was somewhat more inclined upward, and was not quite so well concealed. . . .

"On June 3 a fourth nest was found in a similar situation to the last, and as in former cases, the noise made by the alarm of the parent at Mr. Avery's presence attracted his attention and indicated to him where to search. In a letter dated June 4 he writes me regarding this find, as follows: 'Yesterday I found still another nest of Bachman's Sparrow, but it contained four fledglings instead of eggs. I had been looking for nests of this bird for several hours when, pausing a few moments to look at a tree called here ‘mimosa’\(^3\) and wondering by what agency it had been brought to this unusual spot amongst the pines, my attention was attracted by a dark looking little object, quadruped or reptile as I first supposed, running through the grass and uttering chip, chily, a sound more like the hissing of a snake than the scolding of a bird. I soon discovered my mistake, however, for the Sparrow, a Bachman's, remained about ten feet from me until I found its nest. Its entrance faced me, looking this time towards the north (the first three found all faced the west). It required a close search to find this nest, though I was standing not more than six feet from it when the peculiar hiss, as it were, of the parent bird and its rustling in the grass, startled me from my musings as to how the beautiful mimosa had reached that desolate spot amongst the pines. A peep into the cosy structure discovered the objects of my search; not four glistening eggs this time, but four outstretched reptile-like mouths and necks greeted my view. At my approach the old bird did not fly, but ran away a few feet from the nest and changed his scolding into an anxious seep, seep till I turned towards him, when he ran along ahead of me for some steps, then rose and perched upon a fallen tree top, chipping and turning about much after the manner of a Wren. Here, while I was examining him with my field glass, he surprised me by bursting into song, soft, sweet, and full of gladness as that which at times wells from his throat when the shadows of evening begin to creep over his sombre pines. It was the male bird that I surprised in the act of feeding his young, who thus expressed his satisfaction at having lured me from his nestlings.'

"On June 6 Dr. Avery found another nest of Bachman’s Sparrow, containing two eggs. It was domed like those previously found. The parent ran from the nest and the Doctor writes in this connection: 'I have yet to see one fly, as do other birds when disturbed at incubation. They all run, some showing greater alarm than others for the safety of their little thatched domicile.' On June 23 a sixth nest, containing four nearly fresh eggs, of Bachman's Sparrow was found by an old negro . . . . He had been ploughing up a field that had not been cultivated for years, and the oxen, said he, as well as himself, were startled by the bird running from the nest. He stated that he took the bird for a snake, and explained to me that he was at first afraid to go to the

\(^1\) *Pinus taeda*. \(^2\) *Prunus cichrea*. \(^3\) *Albizia Julibrissin*.
spot where the Sparrow was seen, and that he struck at the place first several times with his whip, till he discovered the parent and then her nest.' This seems to fully confirm the theory that *Peucaea aestivalis bachmani* imitates, as far as possible, the movements and hiss of a snake, when disturbed on her nest, and tries to protect it thereby, to some extent at any rate.

"A day afterwards the Doctor in passing within thirty steps of this last-mentioned nesting site, flushed four Sparrows which he took for early birds of this species, probably hatched in April. They rose like a covey of Bob-whites, all together, and with a whirr. There seems to be little doubt but that two broods are raised in a season, if not more. Bachman's Sparrow is mainly terrestrial in its habits, though when flushed it often alights in trees. Frequently, when suddenly disturbed, it rises with an audible whir.

Dr. Avery writes me that they sing at all hours of the day, but their song is especially striking and attractive at twilight, commencing with a prelude of some sweet, soul-stirring sounds, then changing to a trill, louder and more melodious than that of the Field Sparrow. This prelude is varied, and relieves the song of monotony, the little musician seeming to endeavor to make himself as entertaining as possible by frequent changes in the introductory notes of his strain."

NAMES: Bachman's Sparrow, Oak-woods Sparrow.


DESCRIPTION: Lighter than the type, "with streaks on upper parts bright rusty, the back often without black streaks."

Length, 5.30 to 6.25 inches; wing, 2.47; tail, 2.61 inches.

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CASSIN'S SPARROW.

*Peucaea cassini* Baird.

In the dry region of Texas, where the beautiful *Yucca Treculeana* forms a conspicuous part of the landscape, where the characteristic flowering willow¹, the evergreen sophora² with its lustrous leaves and deliciously fragrant flowers, the pretty silver bush³, the mesquit⁴, and a large number of cacti, pentstemons, small growing or stemless yuccas and many other characteristic plants grow in great profusion, Cassin's Sparrow is the most abundant member of its family. It is especially common where the mesquit forms thickets and open woodlands; here it is at times the only feathered inhabitant. In spring the Scissor-tailed Flycatcher as well as the Orchard Oriole and the Lark Sparrow are also very numerous in these localities. In the eastern part of the State the bird frequents the edges of the live oak prairies and places where the bumelia⁵, white-thorns, and other shrubs skirt the woodlands. In the vicinity of Austin, New Braunfels, and

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¹ Chilopsis saligna. ² Sophora secundiflora. ³ Leucophyllum texanum. ⁴ Prosopis juliflora. ⁵ Bumelia lanuginosa.
Fredericksburg I found the bird particularly common, but near La Grange, Schulenburg, Weimar, and Brenham it was also found more or less numerous, while near Houston it was a rare bird. In the region of the lower Rio Grande it prevails, according to Dr. Merrill and Mr. Geo. B. Sennett, in considerable numbers, especially near Brownsville. To the west it is distributed through southern Arizona, and in western and middle Kansas it seems to find the northern limit of its range. Northern Mexico is the southern limit of its breeding range.

In Lee County and near Austin, Texas, Cassin’s Sparrow arrives about March 20, remaining to the last days of October, when the largest number leave in scattered companies for the South. In spring, immediately after their arrival, the air is full of the sweetest music, as almost every male mounts the top of a small tree or shrub, pouring forth his most delightful strain. The song reminded me first strongly of that of the Bachman’s Sparrow, though it has some peculiarities which cannot be described, but must be heard in order to notice the difference. It sings most diligently before sunrise or late in the afternoon. During the calm nights of March and April, when the nocturnal sounds of the Chuck-will’s-widow, the enchanting song of the Mockingbird, and the loud what cheer, what cheer, of the Cardinal mingle with the notes of this Sparrow, when the air is full of the sweet fragrance exhaled by the flowering willow and the evergreen sophera or the strong carnation odor of the deciduous sophera (Sophora affinis)—this song is especially beautiful. The bird also sings frequently while rising in the air. The song is not loud, but very sweet and ventriloquial.

Cassin’s Sparrow, like all the other members of the genus, is a shy bird. Its neutral colors render it almost invisible while resting, and when approached it darts into the thickest of bushes. Its food, which consists in spring and summer mainly of insects, and in late fall and winter almost entirely of seeds of weeds and grasses, is mostly gathered from the ground. It only mounts trees and bushes when flushed or for the purpose of chanting its song.

The nests which I had an opportunity to examine, were all placed on the ground, near a tuft of grass or on the side of a low spiny cactus. A typical nest found May 3, 1882, was built under the overhanging leaves of the Yucca filamentososa in a mesquit prairie. It was constructed of grasses, lined with finer grasses and some horse hair. The four eggs were white, immaculate.

In its habits, Cassin’s Sparrow is the very counterpart of the Pine-woods Sparrow, and it is, therefore, not necessary to enter into a more elaborate description.

NAMES: Cassin’s Sparrow, Mesquit Sparrow.


DESCRIPTION: “Above, grayish, spotted with clear umber-brown and dusky, the upper tail-coverts with subterminal transverse, more or less crescentic, spots of dusky; beneath, dull grayish-white, faintly tinged with brownish on chest and sides.

“Length, 6.00 to 6.75 inches; wing, 2.50 to 2.70; tail, 2.65 to 2.90 inches.” (Ridgway.)

Several less known species of this genus enter our territory from Mexico or occur in California, Arizona, and New Mexico. As they all seem to agree in their habits with the Pine-woods Sparrow, it suffices, to make short mention of them.
The **Rufous-crowned Sparrow**, *Pecuca rufceps* Cass., inhabits the coast of California, but seems nowhere common. Its variety, Boucard's *Sparrow*, *P. rufceps boucardi* Ridg., occurs in southern New Mexico and Arizona. The **Rock Sparrow**, *P. rufceps eremeeza* Brown, another variety, is found in south-western Texas, south into Mexico. The **Rufous-winged Sparrow**, *P. caralis* Coues, is found in Arizona, while the **Mexican Sparrow**, *P. mexicana* Ridg., is a bird of the valley of the lower Rio Grande, south into central and western Mexico.

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**SONG SPARROW.**

*Melospiza fasciata Scott.*

**PLATE V. FIG. 7.**

Joy fills the vale;
With joy ecstatic quivers every wing,
As floats thy note upon the genial gale,
Sweet bird of spring!

Thou art returned
On a glad errand—to rebuild thy nest,
And fan anew the gentle fire that burned
Within thy breast!

The violet
Awakens at thy song, and peers from out
Its fragrant nook, as if the season yet
Remained in doubt;

While from the rock
The columbine its crimson bell suspends,
That careless vibrates, as its slender stalk
The zephyr bends.

Say! when the blast
Of winter swept our whitened plains—what clime,
What summer realms thou charmedst, and how was past
The joyous time?

Did the green isles
Detain thee long? or, 'mid the palmy groves
Of the bright south, where Nature ever smiles,
Didst sing thy loves?

Oh, well I know
Why thou art here thus soon, and why the bowers
So near the sun have lesser charms than now
Our land of flowers:

At the year
In gloom is wrapped, thy exile I shall mourn—
Oft as the spring returns, shall half sincere
Thy glad return.

**FH. PICKERING.**

Of the beauty and poetry of spring time little notice is taken in the large cities.

The seasons come and go without making any deep impression on mind and soul of most people. But how different is this in the realms of Nature! The inhabitants of our crowded cities can hardly have an idea of the pleasure and manifold enjoyment which the true friend of Nature finds in the country at all seasons of the year, even in midwinter, when ice and snow covers the ground. In early spring it is Nature's
awakening which charms him. Before the air gets balmy and warm, or before the first delicate blossom announces the approach of spring, the Robin and the Bluebird bring from the South the first glad tidings of its northward march. Soon after the arrival of these harbingers the first flowers appear. Modestly hidden in some sheltered nook they open their buds to the enlivening rays of the sun. Rough and wintry winds alternate with balmy breezes. The buds of the orchard trees and the wild crab on the woodland border begin to swell. More and more of the winged summer sojourners arrive from the South, flower after flower opens. In the woodlands the snowy trillium\(^1\) flowers almost unseen. When the beautiful blue hepaticas are nearly out of flower, the anemone, the dog’s-tooth violet, and the bloodroot are blooming profusely in sheltered nooks and corners. In the woods the wild plum, the June-berry, and the moosewood\(^2\) break into bloom and a week later the orchard trees are covered with white and pink blossoms. Then fluttering, chasing, twittering, song and jubilation pervades the fragrant wilderness of tender leaves and sweet blooms. The effect of this happy life in the flowery- adorned bushes and trees is as indescribable as it is beneficent. Large numbers of Wood Warblers in their bright-colored attires are flitting about in the blooming trees, leading a happy and joyful life in hunting for insects, which now appear in swarms among the flowers and the tender foliage. The true lover of Nature in the country needs not to go far to enjoy this spring time splendor. He cannot live in a bare and unattractive place. His house is embowered in a wealth of climbers and surrounded by masses of shrubs, by fruit and ornamental trees and flowers. The branches of the shade and orchard trees are alive with cheery Titmice, Wrens, and Bluebirds. They build their nests in the boxes provided for them, while the Martins occupy those placed on posts or on the roofs of buildings. At the time when the trees are in their richest and freshest green, and when they are embowered in a wealth of blossoms, an army of noxious insects makes its appearance, being, however, kept in check by the innumerable birds now moving northward. Incessantly these little migrants wage war against these insect enemies. We may now listen to the sweet strain of the Catbird, the enchanting song of the Brown Thrasher, the flute-like notes of the Robin, the home-like twittering of the Swallows. We observe the fire-hued Baltimore Oriole weaving its hanging nest high up among the slender twigs of an elm. We carefully open the canopy of dense green of an upright honey-suckle or a mock-orange and discover the glossy emerald-green eggs of the Catbird in a nest lined with dark rootlets. A great number of our birds frequent such surroundings, but I can only mention a few where I should like to describe in a more detailed way.

With the beginning of June the warmer season of the North has approached. In the gardens the lilies begin to bloom, following one after another from the orange lily\(^3\) in June to the noble golden-banded and Japan lily\(^4\) in August. The song of the birds is by the end of June gradually waning, their attention being now occupied by the rearing of their progeny. As their duties in that direction increase, they become almost silent. After having raised their young, many remain hidden in the thickest shrubbery to pass through the process of moulting. When this is over they slowly congregate in flocks more or less numerous. The Bobolinks, moving about in swarms by the

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\(^1\) \textit{Trillium nivale}. \(^2\) \textit{Cornus circinata}. \(^3\) \textit{Lilium umbellatum}. \(^4\) \textit{Lilium auratum} and \textit{L. speciosum}. 
end of July, are the first to take leave. The Swallows follow by the end of August, and thus one species after the other moves away, irresistibly away towards the South. During the month of October the gardens swarm with migrating Nuthatches, Brown Creepers, Kinglets, Palm and Myrtle Warblers and a large number of Sparrows. These also move southward as November sets in. Charmingly beautiful are these October days, the salubrious and brilliant days of Indian summer. The trees and shrubs are in their magnificent coloring. Then after the first hard frost each gust of wind shakes down the bright-hued foliage. Apart from a few belated stragglers the happy summer sojourners have disappeared. Still later arrive from the Arctic regions our winter birds, the Crossbills, Pine Grosbeaks, Red-poll Linnets, Tree Sparrows, and Great Northern Shrikes to visit our gardens, while over the snow-clad fields in dense flocks the Snow Buntings whirl about like flurries of Snow.

This picture of the coming and going, the appearing and passing away was before my mind while I was engaged in writing the life-history of one of our most familiar summer birds, the Song Sparrow.

Like the beautiful Bluebird and the vocal Robin, the Song Sparrow is one of the heralds of spring, arriving in the North usually as early as March 20, but the majority does not appear before the first days of April. When we hear the mellow warbling of the Bluebird, we may be sure to find the Song Sparrow also. Both arrive only a few days after the Robin. I have sometimes observed a few of these birds as early as March 10, but they disappeared when again very cold and stormy weather followed. Although it is a great satisfaction to look upon March as one of the spring months, and to try to force oneself in the belief that the balmy spring weather will soon bring out the delicious green tints on meadows and forests, and call forth the early blossoms and the arrival of birds, yet we of the North are forced to admit with each returning spring, that March is a blustering, unsatisfactory, decidedly disagreeable month with but very few exceptions, and it is only the thought of the real spring time that lies just beyond, that makes it at all bearable. Many Bluebirds perish during very cold and snowy March weather, though the Song Sparrows find food and shelter among the weeds and grasses of the swamps and in fence corners. A few, probably from high northern latitudes, sometimes winter even in sheltered places in the Northern States and New England. In the Middle States they seem to be quite common in winter, but their real winter home is found in the South Atlantic and Gulf States.

The summer range of the Song Sparrow extends mainly over the eastern part of the United States, from the Atlantic to the foot-hills of the Rocky Mountains, and the most northern point to which it has been traced are the plains of the Saskatchewan and the shores of Lake Winnipeg. How far its breeding range extends southward I cannot say. Prof. Wm. Brewster does not include it in his list of the summer birds of the mountains of North Carolina. In south-western Missouri it is a common winter resident, but it never breeds there. According to Prof. Robert Ridgway, it breeds chiefly north of latitude 40°. In southern Illinois he found it as a winter sojourner, “abundant, but very retiring, inhabiting almost solely the bushy swamps in the bottom lands, and unknown as a song bird. The same arc also probably its habits throughout Illinois and the adjacent districts. This is a remarkable instance of variation in habits
with longitude of one geographical race, since in the Atlantic States it breeds abundantly, as far south at least as the parallel of 30°, and is besides one of the most familiar of the native birds."

In New England and in the Northern States, from northern Illinois northward, the Song Sparrow is one of our best known and the most common of birds. Although plainly colored, it is one of our most beloved and popular songsters, being longingly expected as one of the real harbingers of spring by old and young. Its familiarity and confidence, its early arrival and especially its simple cheery strains combine to make it a favorite to everybody who loves Nature. In the northern part of our country we can hardly pass a garden replete with evergreens and dense ornamental shrubs without observing at least one pair. I found it particularly abundant all over Wisconsin and northern Illinois during the breeding season. Thickets of roses, dense wild gooseberry bushes, spiraeas, mock-oranges, bush honey-suckles, and also red cedars and junipers are its favorite nesting places. In the East, from Massachusetts southward to Delaware, the peat-loving plants, such as rhododendrons, azaleas, andromedas, and kalmias are often planted in dense masses. These beds, especially a collection of the gorgeous evergreen rhododendrons, are exquisitely beautiful when in flower and very attractive throughout the year. In soils containing lime they do not thrive, while in northern Illinois and Wisconsin the winters are too severe for them. These shrubs are always planted close together, soon forming dense thickets of leaves and foliage. Many of the small garden birds, like Chipping Sparrows, Indigo Buntings, Catbirds, Yellow Warblers, and Song Sparrows find a safe retreat and excellent nesting places in them.

The Song Sparrow, however, is not confined to the ornamental shrubs of the gardens. It is almost equally common in low grounds near brooks, in moist meadows and pasture lands and on the edge of swamps, where dense shrubbery affords it a safe retreat in danger and a good nesting site. On our old farm in Wisconsin this bird was very numerous in the low meadows on the small lake in the days of my boyhood. It was one of the first birds whose nest I found and to whose call-notes and song I listened.

In meadows and in other moist situations the nest is mostly built on the ground near a tussock of grass or a shrub, but near the habitations of man experience has taught the bird that it is safer to build its domicile in bushes. Sometimes nests have been found in hollows of apple and other trees and on branches six to eight feet from the ground. All the nests I have seen were placed in bushes one to three feet high or on the ground. Nests have also been found by the side of a railroad track where the trains were continually passing. Like the Chippy the Song Sparrow frequently builds in dense twining yellow and trumpet honey-suckles¹, and even in dense clematis and wild grapevines, which grow on verandas or cover arbors and garden walks. In the fields the nest is not infrequently placed under a bunch of clover or a growing corn stalk. Whether built on the ground or in bushes, the nest is always well made. The foundation consists of stout stems of grasses and rootlets; then the nest proper follows, being constructed of long slender grasses and sometimes hair. As the old birds hop around with great uneasiness and are lamenting incessantly when an intruder comes near the

¹ *Lonicer a fava* and *L. sempervirens.*
nest, they usually betray it themselves. For this reason it is easily discovered, and every

country boy is well acquainted with the breeding habits of this bird.

The first set of eggs usually numbers five, rarely four or six, and the second mostly

four. The eggs show a great diversity in coloration. The ground-color is greenish or
greenish-white, more or less thickly blotched and spotted with dark reddish-brown.

These markings vary greatly in size and color. In thirteen days, after the set is com-
plete, the eggs are hatched. During the first few days the young are fed with plant
lice, small green cater-pilars, and worms; later moths, butterflies, beetles, grasshoppers,
and many other injurious insects are brought home, and in about ten or twelve
days they are able to leave the nest. While the old male is caring for the young
until they are able to shift for themselves, the female prepares for a second or third
brood. The first set of eggs is usually complete by May 20, and by June 25 a second
brood is generally hatched. A third brood often follows in July. Nests found late in July
demonstrate the fact that some accident has befallen the preceding brood.

Late in August or early in September the Song Sparrows have abandoned their
abode near man. They are now usually found in the shrubbery near roadsides, in
tangled thickets, and on the bushy edges of swamps and creeks, or in the bushy border
of woods and fields. Being very quiet and retired now, they are rarely seen except by
the attentive observer. The tide of fall emigration to the South begins early in October.

“Collecting in small loose flocks, probably all of each group members of the same family,
they slowly move towards the South. As one set passes on, another succeeds, until the
latter part of November, when we no longer meet with flocks, but solitary individuals
or groups of two or three. These are usually a larger and stouter race, and almost
suggest a different species. They are often in song even into December. They apparently
do not go far, and are the first to return. In early March they are in full song, and
their notes seem louder, clearer, and more vibratory than those that come to us and
remain to breed.” (Brewer.)

As its name implies, the Song Sparrow is one of our most noted and conspicuous
singers, imparting even the dreary winter landscape in March with hope and beauty.
Early in the morning, shortly after day dawn, we hear its loud notes, and they do not
wane until the evening falls. Being one of our most constant musicians, its song is
heard from early spring until July and sometimes longer. It is repeated at short inter-
vals almost throughout the day. This song is very powerful, resonant, sweet, and sur-
passes that of all our northern Sparrows, with the exception of that of the Fox, Field,
and Vesper Sparrow, in beauty and melody. To my ear it sounds much like sh'nide-
sh'nide-sh'nide-sh'nide-zë zë zë zë zë, the first four syllables in a slow, the rest in a
quicker tempo. Bewick's Wren has a very similar song, though more hurried. This lay
is especially impressive when snow still lingers on the ground and few other birds are
heard. It is the sound of the opening spring. Plain and homely in its dress, its sweet
song and its gentle confiding manners render it a welcome visitor to every garden, and
around every rural home wherein such attractions can be appreciated. “Whenever these
birds are kindly treated they readily make friends, and are attracted to our door-steps
for the welcome crumbs that are thrown to them; and they will return year after year
to the same locality, whenever thus encouraged.” (Brewer.)
There are good and poor singers among the Song Sparrows. Those arriving first in spring, are northern birds, and are the most exquisite performers; those breeding with us are not quite as gifted songsters. Even the same bird changes in power and beauty of its voice as the season advances, the first song heard being the most inspiring and beautiful. The celebrated ornithologist, Thomas Nuttall, dwells with much force upon the beauty and earnestness of expression of song of the Song Sparrow. "When he first arrives," says Mr. Nuttall, "while the weather is yet doubtful and unsettled, the strain appears contemplative, and often delivered in a peculiar low and tender whisper, which when hearkened to for some time, will be found more than usually melodious, seeming as a sort of reverie, or innate hope of improving seasons, which are recalled with a grateful, calm and tender delight. At the approach of winter, this vocal thrill, sounding like an Orphean farewell to the scene and season, is still more exquisite, and softened by the sadness which seems to breathe almost with sentiment, from a decaying and now silent face of Nature. Our songster, never remarkable for sprightliness, as the spring advances, delivers his lay louder and more earnestly. He usually begins with a tsh'-tshé-te-tshë-te-tschë-te, and blends in a good deal of quivering notes. Individuals also excel, and vary their song from time to time with very agreeable effect; and it is only because our familiar vocalist is so constantly heard and seen, that so little value is set upon his agreeable, cheerful, and faithful performance."

The Song Sparrow is one of our most useful birds, feeding almost entirely on injurious insects during spring and summer. Large numbers of small cater-pillars are carried to the young. They are frequently feeding upon cabbage worms and moths. Rose-bugs, cut-worms, and all kinds of beetles they are continuously searching for. In the fall and winter they largely subsist on seeds of grasses and weeds. Near Buffalo Bayou, and later near the West Yegua and Alum Creeks in Texas, I met them every winter in large flocks, usually in company with many other Sparrows. During the day they visited the dense grasses and weeds in cotton, corn, and sugar-cane fields, retiring in the evening to the dense thickets in the bottom lands. Near Spring Creek they roosted with other birds in the low branches of trees densely festooned with Spanish moss (Tillandsia usneoides), which afforded them shelter during cold nights, besides protecting them against all kinds of enemies. When I passed the borders of the woods during the night, large swarms of birds were flushed from these moss roosts. The upper branches were usually occupied by flocks of Robins and Cedarbirds, while the Sparrows had taken possession of the lower ones. They leave south-eastern Texas early in March, and I have never noticed them after the 10th of that month in the places where my observations were carried on. In south-western Missouri, where they winter rather sparingly, they inhabit from November to the middle of March the moist bushy valleys and dense ravines. In their winter-quarters they are exceedingly shy, rarely approaching human habitations. In southern Louisiana they are often met with near the dense hedges of Cherokee roses, retreating during the night into these evergreen roses, which are covered all over with formidable spines.

The Song Sparrow has many enemies. In gardens many nests are destroyed by strolling cats, and many young and old Song Sparrows are killed by them. Cats should never be tolerated in garden or field. They do more harm to our familiar
garden birds than all other enemies combined. In the lowland skunks, raccoons, minks, and snakes are the Song Sparrow's chief enemies. Jays, magpies, and shrikes and also the parasitic cowbirds do much harm to this and all other small birds. The Song Sparrow will breed in all the country gardens of the North if well protected.

I have kept Song Sparrows in a large cage with other birds and also singly. They make excellent cage pets and become in time very tame. If kept singly they sing very diligently from March to June. If carefully supplied with a variety of food, they keep in good health for a long time. I supplied them in winter with millet and Canary-seed, adding in spring and summer "ants' eggs," crated hard boiled egg, Mockingbird-food, lettuce, and meal-worms. The latter they took fearlessly from the hand.

NAMES: Song Sparrow.—Singsperling, Sängerfink (German).


DESCRIPTION: Sexes, alike. "General tint of upper parts, rufous and distinctly streaked with rufous-brown, dark brown, and ashy-gray. The crown is rufous, with a superciliary and median stripe of dull gray, the former lighter; nearly white anteriorly, where it sometimes has a faint shade of yellow, principally in the autumn; each feather of the crown with a narrow streak of black, forming about six narrow lines. Inter-scapulars, black in the center, then rufous, then pale grayish on the margin, these three colors on each feather very sharply contrasted. Rump, grayer than upper tail-coverts, both with obsolete dark streaks. There is a white maxillary stripe, bordered above and below by one of dark rufous-brown, and with another from behind the eye. The under-parts are white; the jugulum and sides of body streaked with clear dark brown, sometimes with a rufous suffusion. On the middle of the breast these marks are rather aggregated so as to form a spot. No distinct white on tail or wings. Bill, pale brown above; yellowish at base beneath. Legs, yellowish.

"Length of male, 6.50 inches; wing, 2.58; tail, 3.00 inches." (Ridgway.)

MOUNTAIN SONG SPARROW, Melospiza fasciata montana Hensh. This form inhabits the Rocky Mountain districts, west to Nevada, eastern Oregon, and eastern Washington. According to Prof. R. Ridgway, this Song Sparrow is one of the most abundant resident species inhabiting the fertile portions of the Great Basin. It principally occupies the willow thickets near streams, but it is also found in the tule sionghs of the river valleys. In all respects, as to habits, especially in its familiarity, it represents in the West our well-known Song Sparrow of the East. Mr. Ridgway expresses the song thus: Cha-cha-cha-cha-wit'-tur'-r-r-r-r-r-tut. He found nests in the Wahsatch Mountains. They were generally among bushes, in willow thickets along the streams, about a foot from the ground.

DESCRIPTION: With larger wings and tail, smaller and more slender bill, general tone of plumage more gray, and streaks, both above and below, narrower.

HEERMANN'S SONG SPARROW, Melospiza fasciata heermannii Ridgw., inhabits the interior of southern California, east into western Nevada. It takes the place of its counterpart, the Song Sparrow, in California, and is also known as the California Song Sparrow. Whether or not it breeds in gardens I cannot say, but it is common on the bushy hill-sides, in canons and along the banks of creeks and rivers. It usually nests in bushes from four to six feet from the ground.

DESCRIPTION: This is a larger and darker-colored bird, with ground-color of upper parts decidedly brown or olive, the dark streaks, both above and below, heavier and blacker.
SWAMP SPARROW.

Samuel's Song Sparrow, *Melospiza fasciata samuelis* Ridg., is distributed over the coast region of California. Wherever there are salt marshes near the coast, this variety is sure to occur, being especially common near San Francisco. The nest is usually placed on the ground beneath tussocks of grass and sometimes in low shrubs growing on old sand drifts. Mr. Walter E. Bryant records a nest that has been found by Mr. Otto Emerson in an old oyster can, which had lodged sideways among some driftwood, in a willow. This variety is smaller than the foregoing.

Desert Song Sparrow, *Melospiza fasciata fallax* Henshaw. This form inhabits our southern border of New Mexico and Arizona, occurring in the willow thickets and marsh grass near water. In its habits and nesting it closely resembles the Eastern Song Sparrow. It is smaller and the general tone of coloration is more rusty than in the type.

The Rusty Song Sparrow, *Melospiza fasciata guttata* Ridg., inhabits the Pacific coast districts, breeding from western Oregon north to British Columbia. The markings of the plumage are more or less obscured by the prevalent dull rusty or sooty coloring.

The Sooty Song Sparrow, *Melospiza rufina* Ridg., seems to be restricted to the coast of southern Alaska.

Aleutian Song Sparrow, *Melospiza cinerea* Ridg., is an inhabitant of the Aleutian Islands, and east to Fort Kena, Alaska.

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SWAMP SPARROW.

*Melospiza georgiana* Ridgway.

If we desire to become acquainted with the Swamp Sparrow, a bird as rich in song as it is shy and retired in its habits, we have to explore its marshy retreats covered with a varied and rank vegetation in low meadows, pastures, and swamps. Such localities are almost everywhere abundant in the northern portions of our country. My native State Wisconsin, more especially Sheboygan County, is very rich in moist lowlands, marshy lakes, and dense swamps. Though avoided by most people, such localities are highly interesting and instructive to the student of plant and animal life. I shall here refer to a locality where I spent my boyhood. The hilly country at that time was mostly covered with a dense forest of white pines. There were many swamps surrounded by thickets. Under the trees near by the club moss flourished and the winter-green grew in dense patches. The small lake near my home, surrounded at some distance by forest-clad hills, had marshy shores covered densely with thickets and sedges. Its outlet meandered through low marshy land. The soil near the lake and just where the outlet began was very oozy, waving up and down under one's footsteps. A cool spring gushing forth from the foot of the hill south of the lake, showed a rusty-colored sediment indicating its iron properties. Near it grew birches, ashes, and elms, while the top of the hill was crested with magnificent white pines. On the edge of the lake near
by thickets of willows, alders, dogwood, viburnums, and leatherwood were found, shaded by tamaracks, ashes, and elms. The trees on the foot of the hill were the very paradise of Scarlet Tanagers and Rose-breasted Grosbeaks during the summer. At some distance north and west of the lake the land had been cleared. What at one time had been a dense forest, was now a rich grassy meadow, dotted in early spring with marsh marigold, and later with phloxes, stately lilies, and many other flowers. Along the edge of the outlet the water was covered with the leaves of the fragrant white water-lily and the yellow pond-lily. Rails, Gallinules, and Coots, leading their young over the floating leaves of these plants, were frequently seen. In those by-gone days wild Ducks were very abundant. The most beautiful species, the Wood Duck, hatched its eggs in hollow trees. Their downy young, barely out of the eggs, dropped themselves down from considerable heights without receiving the least injury. They at once instinctively took to the adjacent water. I, several times, held a young Wood Duck in my hand. It was hard to the touch like a rubber ball. Among the reeds and rushes colonies of Red-winged Blackbirds were nesting, and in the trees and high bushes and even in the roots of up-turned trees and in tree hollows Bronzed Grackles had their nests. In the immediate vicinity of the water, where clumps of wild goose-berry and black currant bushes and red osiers grew rather sparingly among wild balsams, cardinal flowers, milk-weed, and masses of ferns, in those early days the Swamp Sparrow was a common bird. It does not inhabit localities where dense thickets and trees cover the ground, selecting always half-cleared, half-wild moist places; its favorite haunts being the swampy edges of brooks, low bushy meadows, the borders of white cedar and tamarack swamps near fields and pastures. It is never found during the breeding season far away from such localities and never in fields or on dry ground. Whoever is familiar with this bird can easily find it in its swampy retreats, its loud, pleasant, and characteristic chant betraying its whereabouts. The inaccessibility of its marshy haunts is the chief reason that this splendid songster is comparatively unknown.

The Swamp Sparrow breeds from the Northern States northward to Fort Simpson, New Foundland, and Labrador. It winters from the Middle States southward, being particularly common in the Gulf States. I did not find it near Houston, Texas, though it was a rather numerous bird in the thickets near the West Yegua in Lee County. I also met with it in all marshy places near Vermillionville and New Iberia in Louisiana during January and February.

In its marshy home in the Northern States the Swamp Sparrow makes its appearance about April 15. At this time I have never heard its song. Keeping itself hidden in secluded thickets, it is very difficult to observe. Not before a month later its vernal song is heard, but mingling with the thousandfold voices of the Bobolinks, Redwings, Catbirds, Tanagers, Towhees, Rose-breasted Grosbeaks, and others, the lay, though very melodious, makes little effect on the mind of the general hearer. It sings most diligently late in May and throughout June. It is remarkable that almost all our great ornithologists have so little to say about this song, which is almost as loud and varied as that of the Song Sparrow. The lay resembles the syllables chee-chee-chee-chee-ze-ze-ze-ze-ze-ze, but without having heard the notes the reader can form no idea of the great

1 Impatiens pallida. 2 Asclepias purpurascens.
SWAMP SPARROW.

beauty of this song. It resembles somewhat the melody of the Field Sparrow, though it is louder and more varied. When disturbed it dives down among the grass and herbs to repose out of sight. On the ground its movements are as quick, as silent, and secret as those of a mouse, and once lost out of sight it is only with great difficulty to be found. But if we remain quiet it soon mounts another low shrub and sings again. Its loud, sweet, and somewhat plaintive notes are continued till late in the morning, and after sunset in the evening. The common call-note sounds like chuck, and when excited or when its nest is approached it utters incessantly sharp notes sounding like chick-chick-chick.

"Were it not for its abundance," says Mr. Winfred A. Stearns, "this timid and secretive inhabitant of the thickest shrubbery would be little known, so closely does it hug the dense coverts which it instinctively chooses as a screen from the danger of notoriety. It seldom ventures so far from its retreat that a hurried flight of a few seconds will not enable it to regain the thicket, and no oftener climbs the bushes to any considerable height from the ground. Moreover, such cover as the bird prefers is that growing in the greatest profusion in swampy or other wet places, access to which is doubly difficult from the treacherous yielding of the ground and the sturdy resistance of the mantling vegetation. If, however, we overcome such obstacles, and penetrate such recesses, we may be pretty sure to see the Swamp Sparrow in the comparatively free spaces beneath the woven canopy of foliage, fluttering in the shade, threading shyly among the briars, running nimbly over the ground, or even wading about in tiny pools."

This is a true picture of the Swamp Sparrow's breeding grounds. In such places I have found many nests during my boyhood. They were most generally built in a tussock of grass, sometimes in a dense goose-berry bush, and then again under the shade of a clump of ferns or huckle-berry bushes. The structure, which is well built, consists of coarse grasses and is lined with grasses and sometimes a few hair. Two broods are annually raised. The first set, usually consisting of five eggs, is found by the 20th of May, and a second set, usually containing four eggs, is found by the middle or end of June. The ground-color of the eggs is bluish-green or bluish-white, densely spotted, blotched, and clouded with dark and chestnut-brown. The eggs closely resemble those of the Song Sparrow, but the dense clouding usually suffices to distinguish them.

The food is largely collected from the ground. It consists of small cater-pillars, beetles, worms, and such insects which usually are found near water. During fall and winter the seeds of grasses and weeds form a large part of its diet.

NAMES: Swamp Sparrow, Swamp Song Sparrow, Spotted Swamp Sparrow.—Sumplesperling (German).


DESCRIPTION: Sexes, alike. "Middle of crown, uniform chestnut; forehead, black; superciliary streak, sides of head and back, and sides of neck, ash. A brown stripe behind the eye. Back with broad streaks of black, which are edged with rusty-yellow. Beneath, whitish, tinged with ashy anteriorly, especially across the breast, and washed with yellowish-brown on the sides. A few obsolete streaks across the breast, which become distinct on its sides. Wings and tail, strongly tinged with rufous; the tertials, black, the rufous edging changing abruptly to white towards the end.

"Length, 5.75 inches; wing, 2.40."

"Female with the crown scarcely reddish, streaked with black, and divided by a light line." (Ridgw.)
LINCOLN'S SPARROW.

*Melospiza lincolni* Baird.

Lincoln's Sparrow, though in some localities very numerous, is one of the least known of the whole group of *Spizellinae* or "Bunting Sparrows." Being plainly colored and in appearance much like others of the group, it is easily overlooked, even by the experienced field ornithologist. Its summer range extends from our northern border northward, and from the Atlantic to the Pacific. In the West it is much more common than in the East, but on the whole it is a bird which straggles in "such loose and desultory fashion that it cannot be relied upon." Though having been found breeding by Dr. Hoy near Racine, Wis., and in the high mountain ranges of the East and West, it breeds mostly north of the United States, in Labrador, the region of the Saskatchewan, the Mackenzie, and in Alaska. According to Mr. Trippe it breeds in the Rocky Mountains of Colorado, from 9,500 or 10,000 feet up to timber line, and Dr. J. A. Allen found it in the same State from 8,000 feet to above the limit of trees, occurring chiefly in the vicinity of wooded streams and in moist or swampy thickets.

The late Dr. Hoy, with whom I had frequently very pleasant discourses about his ornithological discoveries in Racine County, Wis., told me that he had found the nest on very moist ground, among grasses. It was built entirely of grasses lined with finer grasses, much in the way as the ground nests of the Song Sparrow. The eggs, having a greenish-white ground, were thickly marked with dots and small blotches of reddish-brown, often so numerous that they concealed the ground-color.

Mr. Egbert Bagg, Jr., found two nests in Hamilton Co., N. Y. The first one was discovered on the 13th of June, 1878, on a beautiful little pond. It was placed on the ground, where it was almost spongy with water, within about two rods of the pond, and about the same distance from the edge of the forest. It was not under the protection of any bush or stone, but was quite well concealed in some tall grass of last year's growth. It was composed entirely of dried grasses, the lining being neatly made of the finer spears. The three eggs measured .74 by .56. The ground was a pale green, covered with spots and blotches of different shades of reddish-brown. On one of them the spots were so numerous as to become confluent with and almost concealing the ground-color, while on another they were much smaller, so that the greenish-white of the ground-color was the predominant tint, except at the large end, where the spots became larger and more confluent, as indeed they did on all three. A second nest was found in 1880 in an entirely similar location.

Mr. Kennicott found nests at Fort Simpson and Fort Resolution, British America. A nest discovered June 14 was on the ground, built in a bunch of grass in a rather open dry place. It contained five eggs. The female permitted Mr. Kennicott to approach very close to her. Another nest was built in a bunch of grass growing in the water of a small pond.

During the winter this Sparrow is found far to the south in southern Mexico and even in Guatemala. In Texas I found it very numerous from the middle of November
to late in March in the moist thickets in Lee and Bastrop Counties, usually in places where many other Sparrows congregated. One day I caught one in a figure-of-four trap and placed it in a large cage together with about twenty-five of its congeners. It was so extremely wild and unruly that it flew with great force against the bars of the cage, thereby exciting all the other inmates in such a degree that I had to take it out again and give it its liberty.

NAMES: Lincoln’s Sparrow, Lincoln’s Finch, Lincoln’s Song Sparrow.


DESCRIPTION: “Upper parts, streaked with black, brownish-gray, and grayish-brown; tail-feathers, narrow and rather pointed, the outer ones shortest; under-parts, white, rather finely streaked with black, a broad cream-buff band across the breast, a cream-buff stripe on either side of the throat; sides tinged with cream-buff.

"Length, 5.75 inches; wing, 2.50; tail, 2.40 inches."

“Remark: The cream-buff band on the breast is distinctive of this species.” (Frank M. Chapman.)

FOX SPARROW.
Passerella iliaca Swainson.

Plate XXIV. Fig. 6.

There comes from yonder height
A soft repining sound, .
Where forest leaves are bright,
And fall like flakes of light,
To the ground.

It is the autumn breeze
That, lightly floating on,
Just skims the weedy leas,
Just stirs the glowing trees,
And is gone.

He moans by sedgy brook,
And visits, with a sigh,
The last pale flowers that look,
From out their sunny nook,
At the sky.

BRYANT.

The pine-barrens near the Atlantic coast, from New Jersey southward, contain much to interest us throughout the year. Even in midwinter the beautiful hollies, kalmias, andromedas and other evergreens, often growing in dense masses together, add a peculiar charm to the level landscape. October is especially beautiful in these pine-woods. No frost has yet touched the woodlands, and the flowers and foliage were never more beautiful than they are now. The ripened leaves of many shrubs and trees are as handsome as gaily colored blossoms. The flowers linger, many summer-blooming plants throwing up side-shoots from the old stems. The swamp maples have donned their deepest crimson and scarlet, and vie in brilliancy with the tupelos, whose spray-like horizontal branches are covered with small fiery leaves. The sweet gum is a gorgeous sight in its bright autumn colors. The aromatic sassafras is brilliant in yellow and scarlet, while the sumach and many shrubs of the heath family (Ericaceae) have turned to deep crimson, shading to purple. Many old trees and stumps are clothed from base to summit with Virginia creeper in most brilliant tints of crimson and scarlet, intermingled
with clusters of dark purple berries. The asters and golden-rods are never more beautiful than they are in October. The dry, hot summer has kept them back until the cooler weather of September and October came, when all the waste places and woodlands were suddenly ablaze with gold and azure. The gorgeous New England aster¹ is in its prime, its flowers varying from a soft rosy to a fine deep purple. Planted in good garden soil it attains a height from five to six feet. The golden asters² flower side by side with rudbeckias, small sun-flowers and blazing stars³, the last with rosy flowers on long wand-like stems. In marshy places the burr-marigold⁴ with showy yellow flowers is common. The little orchid, ladies' tresses⁵, with its spikes of deliciously sweet-scented pure white flowers, is quite common in damp places. The deep green hollies⁶, mingling with these bright colors, make charming pictures. Mostly they grow in shrub-like form, but fine dense trees, with the lower branches touching the ground and thickly set with their bright scarlet berries, occur frequently, displaying a high degree of beauty. There are spots here and there in these pine barrens at this season of such enchanting splendor, that no words can do them justice.*

Birds are at all times common in these woodlands, especially on the edges of swamps, densely covered with shrubs, trees, and climbers. The Indigo Bunting, the Field Sparrow, the Chewink, the White-eyed Vireo, the Chat, the Yellow Warbler, and, more southward, also the beautiful Cardinal Redbird, are numerous summer sojourners in the tangled masses of shrubs and trees. In fall all the thickets are swarming with migrating birds, and in October Black Snowbirds or Juncos, Song and Swamp Sparrows, White-throated and White-crowned Sparrows are exceedingly common, enlivening the bright-colored landscape everywhere with their presence. Among these fall migrants the Fox Sparrow, a large and richly colored bird, is also common in the pine-woods, where holly thickets and other evergreens afford it excellent shelter against its many enemies and the inclemency of the weather. At this time the Fox Sparrows move in small scattered flocks. They are also observed in localities where other members of the tribe occur, though they never mingle with them. I have found them common in October in Wisconsin and Illinois. A little later they made their appearance in south-western Missouri, and by the middle and towards the end of November I met with them in south-eastern Texas, where they frequented throughout the winter the thickets and the dense undergrowth of the margins of woodlands, retreating during cold weather and in case of danger into the interior where the underwood was denser and more tangled. During the migration and also in their winter-quarters the little flocks are skulkers, but are easily startled by throwing a stick into the thicket, when they rise with quite a whirring of the wings and a musical twitter. It is surprising how many different kinds of birds are sometimes found assembled in such a thicket. Cardinals, Towhees, Brown Thrashers, Song and Swamp Sparrows, Lincoln's Sparrows, White-crowned and White-throated Sparrows, Juncos, Field Sparrows, Wrens, Chippies, and even Chats and other Warblers left the thickets near the Buffalo Bayou or near the West Yegua and Bluff Creek in Texas, when I forced my way through them. The Fox

¹ Aster Novae-Angliae. ² Chrysopsis Mariana and Ch. falkata. ³ Liatris spicata and L. graminifolia. ⁴ Bideus. ⁵ Spiranthes cernua. ⁶ Ilex opaca.

Sparrows are much less common than their allies, only a few being seen in the large assemblages of different Sparrows in the cotton and corn-fields on the woodland border. All these birds do not venture to go far away from their coverets. If we throw a stick in the air they all fly heedlessly into the nearest thickets, not leaving them until entirely satisfied that all is safe.

Hawks of various kinds, especially Sparrow and Pigeon Hawks, are very abundant during the winter in the Gulf States, and if the small birds had to personify death, they would certainly represent him as a Hawk, for this is the form in which he most generally appears to them. The Hawk glides noiselessly along on the edge of the woods and alights on a bough near, where he hears the small birds twittering amongst the bushes or in the dense weeds in the adjoining field. Perhaps they see him and are quiet for a little, but he sits motionless as a sphinx, and they soon get over their fear and resume their play and feeding. Then suddenly a dark mass swoops down and rises again with a small bird grasped in his strong talons, gasping out its last breath. Its comrades are terror-struck for a moment and dash madly into the thickets, but soon forget their fear. They chirp to each other; the scattered birds reunite; there is a fluttering and twittering and rearranging of mates, then again songs, feeding, love, joy, jealousy, and bickerings.

Like the Towhee, the Fox-colored Sparrow prefers the interior of the woods, where it scratches among the old leaves and loose soil for food. As all kinds of insects are abundant in the leaf-mold, and seeds of grasses and weeds are also numerous, our beautiful birds do not suffer from want of food. In south-western Missouri they winter sparingly near creeks densely fringed with hazel bushes, briers, and climbers. They also winter in small numbers near St. Louis and in southern Kansas.

They leave their winter-quarters early, the first disappearing from south-eastern Texas at the beginning of March; a few days later all have left. At Freistatt, Lawrence Co., Mo., they were quite common about March 17, but a few days later none were to be seen. In southern and central Wisconsin they are usually common during the last days of March and the first week of April. These birds breed north of our northern boundary. Mr. Ernest E. Thompson has recorded them as breeding abundantly at Duck Mountain, Manitoba, and they were also abundantly met with at Fort Simpson, Great Slave Lake, on the Anderson and Swan River, Fort Resolution, Fort Yukon, Nulato, etc. According to the reports of Kennicott and MacFarlane the nests are found in trees as well as on the ground. A nest, discovered eight feet from the ground, was similar to that of Alice's Thrush. They were nearly all found after the middle of June, and a few as early as June 7. One found on the ground in a tuft of dwarf willows, was composed of coarse grasses, lined with some of a finer quality, a few deer hairs, and a small quantity of fresh and growing moss, intermingled together. Mr. MacFarlane, in speaking of this nest, states that all the nests of the Fox Sparrow he had previously met with had been built in the midst of branches of pine or spruce trees, and had been similar to those of Alice's Thrush, which, in this instance, it did not resemble.

According to Audubon, who found the birds breeding in Labrador, the nest is placed mostly on the ground, usually concealed by the drooping branches of evergreens.
Dr. Elliott Coues, unrivalled by any other naturalist in describing the life of our birds, writes as follows on the Fox-colored Sparrow:

"During the winter they are dispersed over the Southern States, beyond which, however, they do not appear to pass, as I have found no record. In March they again become plentiful in the Middle States; and, having already taken up their line of migration toward their homes in the North, their coming is with song of gladness and all the busy stir of the opening season. They are not all off until April, and during the sunny days that precede their departure, the males are fond of mounting the little bushes, or even the trees, to warble a few exquisitely sweet notes, the overture of the joyous music which, later in the year, enlivens the northern solitudes, whither the birds resort to nest. So musical is the Fox Sparrow, indeed, that even in autumn, when the transient glow and fervor of the nuptial period has subsided and common place occupations alone engage him, he forgets the dull season at times, and lisps fugitive strains of sweet memories awakened by the warmth and glamour of the Indian summer. But this is a mere fragment—the shadow of a song stealing across the mind, not the song itself, which we only hear in perfection when the bird's life is quickened in the sunny, showery April, and he leaves us with cheery 'good-bye,' promising to come again. What one of our fringilline birds is so entirely pleasing as this, my favorite? Strong, shapely, vivacious, yet gentle, silver-tongued; clad most tastefully in the richest of warm browns; and, that nothing may be wanting to single him out from among his humber relatives, a high-bred bird, exclusive, retiring. We do not find him mixing indiscriminately with the throng of Sparrows that accompany him in his journeyings and spend the winter with him. With a few select associates of his own kind, perhaps only two of three families that were reared together, he chooses his own retreat, and holds it against intrusion. In some little glade, hedged about with almost impenetrable briers, you will come upon him and his friends, nestling among the withered leaves on the ground, gently calling to each other in the assurance of safety. On your unwelcome appearance, they will hurriedly take flight together, throwing themselves into the thickest shrubbery. You will find such company, again, in the ravines overgrown with smilax and brambles that lead down to the brook; and as you pass along neglected fences, fringed with tall, rank weeds, you may surprise the birds out for a morning's ramble, and make them hurry back in alarm to the shelter of heavier undergrowth."

Of all our Sparrows this species sings most diligently in confinement during spring and early summer, and snatches of song can be heard even in winter. Its clear, loud, and melodious voice is unequalled by its congeners; all its notes are rich, full, varied, and prolonged. This song is only heard in the cage, when the bird is kept alone and not in company with others. It becomes very tame and soon takes its food from the hand if kindly treated. Like the Bobolink it becomes very fat in confinement if allowed to eat to excess, but if care is taken in the selection of its food, it can be kept in good health for years. I have kept quite a number of males in the cage and they were all splendid songsters, always happy and beautiful and exceedingly tame.

NAMES: Fox Sparrow, Fox-colored Sparrow, Rufous Sparrow.—Fuchsfink (German).

DESCRIPTION: Sex, alike. "General aspect of upper parts, foxy-red, the ground-color and the sides of neck being ashy; the interscapular feathers each with a large blotch of fox-red; this color glossing the top of head and nape, sometimes faintly, sometimes more distinctly; the rump unmarked; the upper coverts and surface of the tail continuous fox-red. Two narrow white bands on the wing. Beneath, with under tail-coverts and axillars, clear white; the sides of head and of throat, the jugulum, breast, and sides of body, conspicuously and sharply blotched with fox-red; more triangular across breast, more linear and darker on sides. Sometimes the entire head above is continuously reddish.

"Length, 7.50 inches; wing, 3.50; tail, 2.90 inches." (B. B. & R. II. p. 50.)

Townsend's Sparrow, Passerella iliaca unalischeensis Ridg., inhabits the Pacific coast region, from Kadiak south, in winter, to southern California. In winter these birds seem to be quite common in all suitable situations on our Pacific coast.

Thick-billed Sparrow, Passerella iliaca megaphyncha Ridg. This variety inhabits the Sierra Nevada and Coast Range, California. According to Prof. R. Ridgway it is a very common bird among the alder swamps in the ravines of the eastern slope of the Sierra Nevada during the summer. Near Carson City, April 25, in a swampy thicket near the streams in the level slopes, he heard its beautiful song for the first time; this was one of the most exquisitely rich utterances he ever heard. In richness and volume it resembled that of the Louisiana Water Thrush, qualities in which that bird is hardly equalled by any other North American bird. They were singing in all parts of that swampy thicket, and up the ravines as far as the snow line. From the nature of the place and the character of their song, they were at first supposed to be the Water Thrush, until specimens of these exquisite songsters were secured. Prof. Ridgway regards this bird as second to none of our singers, belonging to the Sparrow family, and though in variety, sprightliness, and continuity, and also in passionate emotional character, this song is not equal to that of the Lark Finch, yet it is far superior in power and richness of tone. Mr. L. Belding found this Fox Sparrow nesting in Calaveras Co., Cal. The nest is described as being built just above the ground, and sometimes at a height of five feet, and always in bushes and thickets. The eggs are like those of the Slate-colored Sparrow. This variety is larger than the type, with shorter wings and tail and a decidedly thicker bill.

Slate-colored Sparrow, Passerella iliaca schistacea Allen, occurs in the Rocky Mountain region, west across the Great Basin into California and Oregon, east, in winter to the Plains. Prof. Robert Ridgway found the Slate-colored Sparrow very plentiful in Parley's Park among the Wasatch Mts., in June, nesting among the willows and other shrubbery along the streams. There it is always found in company with the Mountain Song Sparrow, which in song it greatly resembles, though its notes are quite distinct, the ordinary one being a sharp chuck. The nests of the two species, he adds, were also much alike in manner of construction and situation, and the eggs so similar, that it required a careful observation to identify a nest when one was found. A nest, found by Mr. Ridgway, June 23, 1869, is described in a more detailed way. It was built in a clump of willows about two feet from the ground, being constructed externally of coarse decayed water-grass, and lined with fine hair and finer grasses. The eggs, four in number, were .80 x .67 of an inch, of very rounded oval shape, the ground-color of a pale green, blotched and marked, chiefly at the larger end, with brown spots of a wine-colored hue.

DESCRIPTION: This form is readily distinguished by the slaty head, back, and slaty spots on the breast, belly, and sides.
TEXAS SPARROW.

Embernagra rufivirgata Lawrence.

Plate XXXII. Fig. 3.

The flora as well as the ornis of south-eastern Texas, especially in the region of the lower Rio Grande, is very characteristic. Of birds we meet here quite a number of species not found elsewhere in our country. Trees of great beauty abound in the bottom lands, and the adjoining rather level country is covered with almost impenetrable thorny thickets, called chaparral. The many yuccas, always beautiful, are a magnificent sight when in flower. The cactus family is represented by many species. The Indian fig attains tree size, and other species, armed with formidable spines, form impenetrable masses. Underneath these often very large cactus specimens skunks and rattle-snakes find safe retreats. Dasylirions and agaves are also common everywhere. During summer the heat is very intense, but the winter months are very mild, and innumerable birds find excellent winter-quarters among the dense thickets of spiny shrubs. During the spring migration and in the breeding season the chaparral swarms with birds. While the Warblers, bound northward, hunt among the branches for insects, many of the resident species are engaged with their brood.

One of the characteristic species of this locality is the Texas Sparrow or Green Finch. Mr. George B. Sennett met with the bird abundantly on the lower Rio Grande. This painstaking and accurate ornithologist writes as follows: "This was one of the first birds we saw at Lomita, and remained constant during our stay. It is quite tame and confined to low shrubbery. Its song I can describe no better than Dr. J. C. Merrill has already done: a repeated chip-chip-chip, begun slowly but rapidly increasing until the notes run into each other, and which when once heard and identified, is always distinguishable. It feeds upon larvae and seeds, especially the seeds of the wild tomato, and begins to breed early."

Mr. Sennett adds that on April 19, 1878, a young bird more than half grown came under his notice and also a nest containing two eggs about to be hatched—all found in one clump of bushes. Many nests were found by Mr. Sennett as well as by Dr. Merrill. The doctor first found them in the vicinity of Brownsville, and later Mr. Sennett found them abundantly some seventy miles further up the river. "The domed nests are situated in the heart of bushes, generally from two to five feet above the ground. They were found in all sorts of open thickets. One I detected close by the roadside, in a clump of bushes, under a small tree; another on a dry knoll, which was covered with cacti, thorny bushes of various kinds, and scattering trees of mesquite and ebony, and in close proximity to nests of the Long-billed Thrasher and the Yellow-billed Cuckoo. Most frequently, however, nests were found in those depressions near woods, where water stands during the wet season, which, when dry, abound with grass hummocks and bunches of rank weeds covered with wild tomato vines. The nests are nearly round in shape, large for the size of the bird, and constructed of dried weed-stems, pieces of
bark, grasses and leaves,—sometimes with a little hair for lining of the bottom, but more frequently without. The complement of eggs is four, and two or three broods are raised in a season. Several sets of eggs were found in April, but many more early in May. . . . Dr. Merrill found fresh eggs August 5 near Fort Brown, and others slightly incubated on September 7. The eggs are pure white.

NAMES: Texas Sparrow, Green Finch, Texas Finch, Cactus Sparrow.—Texas-Fink (German).


DESCRIPTION: "Above, plain olive-green, the top of the head with two dull chestnut-brown (lateral) and one grayish or olive-greenish (median) stripes; sides of head, grayish, with a brown streak behind eye; lower parts, dull white, strongly tinged anteriorly and laterally with pale buffy-grayish; edge of wing, bright yellow.

"Length, 6.00 to 6.75 inches; wing, 2.60 to 2.75; tail, 2.50 to 2.70 inches." (Ridgway.)

TOWHEE, OR CHEWINK.

Pipilo erythrophthalmus Vieillot.

Plate XXV. Fig. 4 and 5.

Climbing the loose-piled wall that bems
The road along the mill-pond's brink,
From 'neath the arching barberry stems
My foot-step scares the shy Chewink.

Lowell.

Among the tenants of the shrubbery and undergrowth of our woodland borders the vivacious and rather jaunty Chewink, or Towhee, is my special favorite. The thought of this beautiful and poetical bird brings back to my memory recollections of my earliest woodland rambles. The fields and forests, the hills and vernal woodland glens of those days are still before me. The richly flowing and withal so tender song of the exquisite Rose-breasted Grosbeak and the enchantingly beautiful hymn of the Veery still seem to resound in my ears. In a remote corner on our farm was at that time an extensive swamp, covered by a dense growth of tamarack trees, elms, and ashes. Around this the trees were almost entirely cleared away, and thickets of hazel bushes, black haws, high bush cranberry shrubs, witch hazel, red branched dogwood, wild gooseberry shrubs, and dense masses of raspberry and blackberry bushes had sprung up. The many half rotten stumps were full of holes occupied by the ever active Nuthatches and Chickadees, by Flickers and Red-headed Woodpeckers. Bronzed Crackles were exceedingly common in the swamp, while the dense thickets surrounding it appeared to be the very paradise of Indigo Buntings, Catbirds, Thrashers, Yellow Warblers, Song and Swamp Sparrows and Vireos.

An old log fence, which separated this part of the farm from the adjoining woods, was converted into a picture of beauty by wild grape-vines and the Virginia creeper. Many of the thickets were covered by climbing plants, such as moonseed1, Virgin's bower2, and honey-suckles3. In May and June this locality was exceedingly beautiful,

1 Menispermum Canadense. 2 Clematis Virginiana. 3 Lonicera hirsuta.
1. PIRANGA ERYTHROMELAS Vieill. — SCHARLACHTANGARA. — Scarlet Tanager.
2. 3. HABIA LUDOVICIANA Stejn ♂ & ♀ — ROSENBRÜSTIGER KERNBEISSER. — Rose breasted Grosbeak.
4. 5. PIPILLO ERYTHROPHTHALMUS Vieill ♂ & ♀ — ERDFINK. — Chewink, Towhee.
TOWHEE, OR CHEWINK.

and the lover of Nature could hardly strike a more secluded and interesting place for his rambles. From the deep rich mould of decaying trees lying prostrate on the ground, immense specimens of ferns emerged. The twin-flower, the Jeffersonia, the moccasin flower, the yellow lady's slipper, the wintergreen and partridge berry, the tridentalis and bunch-berry flourished almost side by side. In some shady nooks large spaces were covered by the deep green pine moss. Dog's-tooth violets, hepaticas, the spring beauty and blood-root were the first flowers to open. Among the shrubs, at those days, the buffalo berry, the sheep-berry, the red-branched dog-wood, the June-berry, and the many wild cherry and plum trees attracted my attention. The fragrance of the blossoming trees and shrubs, of which I have mentioned only a few, the invigorating aromatic odor exhaled by the white pines and the young leaves of the black birches, the air ringing with bird song, made a deep and lasting impression on my mind. In later years I have rambled among America's most beautiful trees, the grand evergreen magnolias, among flowering rhododendrons, azaleas, and mountain laurels, among live oaks and palmettos; I have walked underneath trees festooned with garlands of flowering bignonias, trumpet creeper, and Carolina jasmine; I have spent many hours under trees covered entirely with the gray festoons of Spanish moss; I have gathered spider-lilies and crinums on the banks of the St. John's River and Lake Apopka in Florida; I have inhaled with delight the fragrance of the sweet bay in Louisiana and have roamed for years through the woods of Texas and southern Missouri and rejoiced in them all,—but that indescribable freshness and loveliness, above referred to, I have found only in the coniferous woodlands of my native State. When I returned after many years from the South and revisited my old haunts, the woods had been converted into fields, the shrubbery and swamp were no more, and only a few Rose-breasted Grosbeaks and Cedarbirds reminded me of that poetical spot of my boyhood.

One of the characteristic birds of the above described locality was the Towhee or Chewink. I used to look for this lively and sprightly tenant of the woods when the wild plum and the June-berry tree were in full flower, although I found later that it arrives at least fully a week or two earlier. Shortly after its arrival our bird is rarely heard, but as soon as the season opens with mild air and flowering trees and shrubs, the Chewink's metallic notes are sounding loudly through the forest. Late in May and in June the concert of the woodland choir is unsurpassingly beautiful. Then we hear the loud and varied song of the Rose-breasted Grosbeak, the flute-like notes of the Scarlet Tanager; from the murmuring brook the indescribable song of the Veery falls on our ear; the thickets resound with the song of the Catbird and the liquid strain of the Thrasher. Blue Jays scream and Flickers and Red-headed Woodpeckers are drumming on hollow limbs. A great number of minor notes can be distinguished among the voices of this bird concert. The loudest and most characteristic of all the sounds of this vernal bird jubilee are those of the Towhee; they are very peculiar, reminding one of a cymbal, but they are much more animated and beautiful. This call sounds distinctly like tow-hêe or che-wink. Hence the bird's common names Towhee, Chewink, Joreet, Charee,

1 Liana bortensis. 2 Jeffersonia diphylia. 3 Cypripedium spectabile. 4 Cypripedium pubescens. 5 Gaultheria procumbens and Mitchella repens. 6 Cornus Canadensis. 7 Lycopodium dendroideum. 8 Claytonia Virginica 9 Shepherdia Canadensis. 10 Viburnum Lentago. 11 Hymenocallis Iacera. 12 Crinum americanum.
Pink-pink, and Wink-wink. Its plumage is very tasteful, mostly deep black relieved by white and—on the sides—by a very fine chestnut-brown. This chestnut-brown color has obtained for our bird the name of Ground Robin and Swamp Robin. From its beautiful red iris it is often called Red-eyed Towhee.

The Towhee is one of our finest and most strongly characterized native birds. Frequenting close and sheltered thickets it spends much of its time on the ground among the old leaves, scratching and searching for insects and their larve. Though a tenant of retired localities, it is far from being a shy and wild bird. On the contrary, it is one of our most popular birds, being well known and well liked among the country people. Of its familiarity and popularity its many common names are an ample proof.

"Next to the splendid Cardinal," says Mr. Ridgway, "the Chewink is decidedly the finest of our terrestrial Finches, and in some respects is, perhaps, the most attractive of all. Without brilliant or gaudy coloring, his plumage is yet handsome by reason of its bold contrasts. His notes possess a peculiar charm, and notwithstanding his abode is in the thickets of the wildwood and the remote corners of the farm, no bird is more confiding in the presence of man."

Its chosen haunts are always the bushy woodland borders and the dense underwood in the forest, though it does not penetrate far into the dark interior. In Wisconsin it prefers such localities as I have described, and in northern Illinois it is usually common in the borders of woodlands traversed by a creek or a river, avoiding entirely the higher oak-woods on the prairies. Not many years ago it was a common bird in the woods near the Desplaines in the vicinity of Oak Park. Wild crab-trees, white-thorns, black haws, hazel and blackberry bushes formed dense masses of verdure on the edge of the woods, while the interior was also overgrown by extensive thickets. Its nearest neighbors here were Catbirds, Thrashers, Wood Thrushes, Yellow Warblers, Indigo Buntings, Red-eyed Vireos, Rose-breasted Grosbeaks, and Scarlet Tanagers, the latter three occupying the "upper story" of the woods, while the former were tenants of the lower. In Wisconsin the vegetation of its haunts is exceptionally dense and vigorous, no doubt owing to the many old tree trunks lying around on the ground and being in all states of decomposition. Old logs and low stumps are its common resting places, from which re-echos its loud metallic call-note which is usually accompanied by a peculiar flirt of its long tail. Brooks and springs are usually found not far away, or, in absence of these, ponds or swamps are certainly near at hand. In south-western Missouri I found the Towhee always in rather damp places, where the red snowberry, the basket-vines of the settlers, luxuriated vigorously and where dense thickets of hazel bushes, gooseberry shrubs, masses of wild roses (Rosa setigera), persimmon trees, often covered from top to bottom with wild grape-vines, smilax, or the trumpet creeper, were flourishing. In this locality the Cardinal Redbird, the Yellow-breasted Chat, the Hooded Warbler and Catbird, the Blue Grosbeak, Field Sparrow, Indigobird, the White-eyed and Bell's Vireos were the Towhee's next neighbors. The dense masses of snowberry bushes afforded all these birds excellent nesting places and shelter against the inclemencies of the weather and against their many foes. In the mountains of eastern Kentucky and Tennessee the Chewink is always to be found in the magnificent masses of mountain laurels (Kalmia latifolia), azaleas, andromedas, and rhododendrons, but it
does not appear to go high up in the mountains. In all these regions it is found on the borders of woodlands near fields and cultivated lands, but always in places where the undergrowth is dense. In the deep interior of extensive forests it does not occur. Swamps it also avoids, though it may be found on their edges.

Wherever the Towhee may occur in the breeding season, its metallic call-note is one of the leading bird voices in the concert of Nature, and its vivacity and liveliness does much to convert the localities where it has chosen its haunts into attractive and poetical spots.

It rarely alights on trees. Most of its time is spent on the ground where it runs around with great dexterity. It usually searches for food underneath the bushes, only alighting now and then on an old stump, a half decayed log or an old rail fence; where it often sits for many minutes uttering its metallic, far sounding notes, or cleaning and arranging its plumage. In close proximity the female answers, or another male not far away, but across the boundary line of its nesting range. In northern Illinois I observed three pairs breeding on a comparatively small tract of woodland not exceeding five acres in area. Their notes, blending together, were in themselves quite a woodland concert. When one called, the others responded. Though the breeding range of each pair was small, its boundary lines were carefully watched and every intruder was at once attacked and driven away if invading the premises of another pair.

The flight is rather quick, low, and short, and seems to be heavy when the bird has to overfly a naked tract. It usually flies a short distance when flushed, soon alighting again on the ground and disappearing among the bushes and thickets. While flying the tail is spread out in a fan-like manner. Often when walking through its haunts we may hear a rustling noise among the old leaves, and on approaching we see the Chewink busily engaged in scratching for food. This is done in the same manner in which the Fox Sparrow and the White-crowned Sparrow and others operate, i. e. with both feet at the same time. The spot thus laid bare is carefully searched for food. If frightened it runs with great rapidity along on the ground for quite a distance and suddenly reappears on an old stump or on a brush heap, reconnoitering or uttering its common note. It is neither shy nor retiring, but very cautious and prudently avoids danger. When convinced that the observer is harmless, it allows him to approach and may then be closely observed. In south-western Missouri several pairs nested near my house among the dense snowberry bushes, wild roses, and stunted black jack oaks. They were very tame, and gathered some of their food from the feeding places I had prepared for the winter residents.

Wherever the Towhee occurs it is easily detected by its loud and sonorous notes which resound through the woods from early morning until the evening falls. These melodious notes are very loud, varying somewhat during the mating season. We usually hear a simple loud che-wink or tow-hee, or a subdued wink, which is often prolonged into a sweet wink-wink. A louder and more energetic cheo-we-wink and wenk-wenk-wink is also heard, especially when the male challenges a rival near by. The common note of anxiety or alarm, when its haunts are invaded or its nest is approached, sounds like chuck-chuck. The Towhee has also a low, prolonged song, but it is rarely heard by the common rambler and is scarcely audible among the voices of the woodland choir.
It is entirely distinct from the clear sonorous *che-wink*, consisting of a number of rather monotonous, guttural notes which I am unable to describe. The common call-notes are uttered by both male and female. As a rule the one calls and the other replies. These sounds are so loud, mellow, sweet, and beautiful that we easily forget to expect a real prolonged song. They seem to be particularly suggestive of romantic woodland beauty when heard together with the musical *E-o-lie* of the Wood Thrush, which is frequently the case in northern and southern Illinois and Missouri.

For a nesting site the Ground Robin always selects a lonely spot in woods seldom trodden by human feet. Late in May and early in June the nest is completed in its northern habitat, while in south-western Missouri I have several times found it by the beginning of May. It is almost invariably built among very dense bushes, generally in a depression of the soil which was evidently scratched for this purpose by the bird, and its rim is, in most cases, level with the ground. Occasionally when it is built underneath a low growing bush it rests on the ground. I have found the structure on the side of old stumps, on or under fallen logs, surrounded and overgrown with masses of ferns, on and in brush heaps and among the shrubbery in fence corners. It is built in such a way that the material used for its construction is in perfect harmony with the old leaves and grasses surrounding it. The nest rests generally on a foundation of old leaves on which are placed plant-stems, grape-vine bark, pine-needles, and fine rootlets, and the cavity is lined with fine grasses. The shady retreats of the woods and sometimes the midst of damp forests, among a rank growth of ferns and other plants, are its favorite nesting places. It is said that the nest is sometimes built in bushes, but I have never found it higher than about five inches, in which case it was situated in a brush heap. It is almost always a bulky affair, but well constructed.

The eggs, usually four, sometimes three and rarely five in number, have a white ground-color, mostly with a faint shade of pink or bluish. They are marked or speckled with light reddish-brown; on some eggs the markings are bold and sparsely scattered, so that the eggs closely resemble those of the Cardinal or Cowbird, but as a rule they have a faint pink flush so that they can be easily distinguished from those of the above named species. They average in size .95×.72 of an inch.

Whether the nest is in a brush heap, on the side of a stump, underneath an overhanging bush, or under the shelter of a rotten log overgrown with ferns, it is always difficult to find, unless one by chance almost steps on it. When the rambler is looking for it, without being familiar with the habits of the bird, the search is likely to be without success, owing to the sagacity of the birds. If its domain is invaded by any intruder, the watchful male utters its alarm note, when the female at once leaves the nest and its neighborhood. Both reappear at some distance from it, uttering incessantly their notes of distress. By these manoeuvres they draw the attention to the place, where they are then hopping around, but they soon fly still farther away, repeating their trick in another place. Sometimes they lead the intruder in this way quite a distance from the nest, to which they then triumphantly return under the cover of low and dense bushes. The birds are now very quiet, and while the nest hunter is still searching, the female is probably quietly sitting on her nest. But if by chance the nest is discovered, the anxiety and excitement of the birds becomes truly pitiable. Their lamenting and
screaming is uttered in such plaintive and pitiful tones that the kind-hearted observer often quickly leaves the place. In Missouri several pairs were perfectly convinced of my harmlessness, hence they never showed any sign of excitement, when I inspected the nest. Frequently one, two, and even three eggs of the detestable parasite and vagabond, the Cowbird, are found in the nest of the Ground Robin. I often had occasion to call the attention of my readers to the fact that every brood, in which a Cowbird's egg is found, is lost. The parasite only leaves the nest, while the legitimate occupants have either been thrown out or robbed of their food by the young Cowbird and were thus doomed to starvation.—Even in the North with its comparatively short summers the Towhee seems to raise two broods, as I have found fresh sets of eggs as late as July 10 in Wisconsin. While the female hatches, the male not only guards her carefully, but supplies her with food and utters to her his sweetest and most persuasive notes. Thirteen and fourteen days is the nesting time, and the first days after the young are hatched the male alone supplies the nestlings with food. I have observed several times that the male was hatching while the female was looking for food. Perhaps these birds, like many others, attend alternately to their parental duties.

The Towhee inhabits the region east of the Rocky Mountains, being found as far north and west as Minnesota and eastern Dakota; and breeding from south-eastern Texas and northern Alabama and Georgia northward. It winters largely in the Gulf States. Although I have found no nests in Texas, I am convinced of their breeding in the woods near Spring Creek (Harris Co.), where I observed several pairs all the year round. In Texas and Louisiana, the Towhee usually appears suddenly in November with other seed-eaters from the North. In Missouri they are most common during the month of October. "As we walk along the weedy old 'snake' fences and thick hedges," writes Dr. Elliott Coues, "or by the briery tracts marking the course of a tiny water-thread through a field, scores of the humble gray Sparrows flit before us; while ever and again the jaunty Towhee, smartly dressed in black, white, and chestnut, comes into view, flying low, with a saucy flirt of the tail, and dashes again into the covert as quickly as it emerged, crying tow-hee with startling distinctness. In the spring it is less conspicuous, and more likely to be found in low, tangled woods, amid laurel brakes and the like, on the ground rustling and busily scratching the matting of the last year's leaves that covers the earth, doubtless in search of insects. Its notes are then louder, and oftener heard. Some say that the males precede the females in migrating; this may average true, but I have constantly found the sexes together at both seasons. This is only a partially gregarious bird, large gatherings being seldom witnessed. In fact it seems to prefer the society of the smaller and plainer Sparrows, among which it shines without difficulty, doubtless patronizing them in the genteel way, costumary with big folks, that is so exasperatingly oppressive to the recipients."

In Wisconsin they first make their appearance from the South late in April, the majority arriving during the first week of May. Should the season be far advanced, the first migrants sometimes appear by the middle of April near Milwaukee. They usually move in pairs or alone, never in large flocks. In mild winters some are found in sheltered places in south-western Missouri. Mr. Widmann saw several in winter near St. Louis in
company with Cardinals. In the spring of 1884 Mr. Widmann jotted down the following notes regarding the Towhee’s migration: “February 24, first arrival; March 13, first songbirds still scarce; March 17, arrival of bulk; March 23, many, noisy, conspicuous; March 31, transients in parties of six to eight; April 1, summer residents carrying building material; April 4, last transient; April 17 to 19, singing, fighting, love making; May 24, first young out of the nest.” In Milwaukee they can be observed during the spring and fall migration in large gardens among the ornamental shrubbery.

During winter I found the Towhee a very common resident along the Cherokee-rose hedges of southern Louisiana and also in the wax myrtle thickets. In southeastern Texas they inhabit in large numbers in company with other northern Sparrows the evergreen yupon thickets and the almost impenetrable masses of shrubbery overgrown with smilax and other creepers. They show the same fondness for dense underwood in the forest, the bushy edges of woodlands, ravines, and glens covered with dense thickets as they do in their more northern breeding ranges. I have rarely heard the inspiring tow-hee in the South, the birds usually keeping perfectly silent, and only their low chuck is a sign of their presence. During the night these thickets swarm with birds, but in the day-time most of them are hunting for food in the neighboring cotton, corn, or sugar cane fields. The Towhee, however, rarely joins these assemblages, never venturing to leave the safety of its bushy retreats.

The Towhee has many enemies, especially among the small mammals and reptiles. In Louisiana they are frequently killed by pot-hunters. This beautiful and valuable and in no way harmful bird, should be especially protected by the law wherever it occurs.

As a cage-bird the Towhee is well adapted to. In a few days it has forgotten the loss of its freedom, and in a few weeks after its capture it will take meal-worms out of the hand of its master. A change in the diet now and then is necessary or the bird will become very fat and soon dies. A mixture of various seeds, such as millet and Canary seed, meal-worms and now and then hard-boiled egg in winter, green milky oats and millet, lettuce, Mockingbird food mixed with grated carrots and all kinds of insects in summer will keep the bird healthy. The cage should be large and its bottom, especially in summer, overlaid with sods, which must be renewed every few days. The bird will scratch very much in the sods, searching for insects, and this exercise will prove valuable for its health.

**NAMES:** Towhee, Chewink, Ground Robin, Marsh Robin, Red-eyed Towhee, Pink-pink, Wink, Wink-wink, Joret, Jaree, Towhee Bird, Towhee Bunting, Pipilo, Turkey Sparrow.—Grundrötel (Brehm); Erdüxt, Tobi, Tschewink, Wink-Wink (Nhrig.) [German].

**SCIENTIFIC NAMES:** Fringilla erythropthalmus Linn. (1766). Emberiza erythrophalma Gmel. (1788), Wils. PIPILo ERYThROThALMUs ViELL. (1824), Audubon, etc.

**DESCRIPTION:** Adult male: Upper parts, black, sometimes margined with rufous; throat and breast, black; belly, white; sides, rufous; outer web of primaries, mostly white; tail, black; the three outer feathers tipped with white; outer web of the outer feather entirely white; iris, red. Adult female: Upper parts, wings, throat, and breast, bright grayish-brown; tail,fuscous; the three outer feathers tipped with white; sides, rufous; middle of the belly, white. Young in the first plumage have the back and under-parts streaked with black.

"Length, 8.35 inches; wing, 3.34; tail, 3.68; bill, .55." (Frank M. Chapman.)
WHITE-EYED TOWHEE.

Pipilo erythropthalmus alleni Coues.

WHITE-EYED TOWHEE, Florida Towhee, Allen’s Towhee, Charee, Joreet, Joree, Palmetto Chewink are the names of a variety of the common Ground Robin with a white, instead of a red, iris, and which differs also very much in its notes and song. This bird is distributed from the southern part of South Carolina and eastern Georgia to southern Florida.

Prof. Wm. Brewster found it quite a common resident at St. Mary’s, Georgia. According to his observations it “was chiefly a bird of the oak scrub, although it was also to be found in open pine-woods where it haunted the beds of saw-palmetto. Its note differed widely from that of the Red-eyed Towhee; the chewink was shorter and harsher, and in addition to its cry, both sexes occasionally uttered a sharp clear whistle that sounded like a sportman’s call to his dog. I am not sure that I heard the song, or at least identified it. These Towhees . . . were shy and retiring, rarely venturing far from their secure retreats.”

I met with the Joreets frequently in Orange Co., Fla., were I found them invariably inhabiting the oak scrub and the dense palmetto thickets, especially the latter, whence they announce themselves unmistakably by sharp whistles. When hearing these notes for the first time I did not know by what bird they were uttered, so different are they from the call-note of the northern Towhee. They are usually searching for food or running around under the overhanging dwarf palms. Now and then one mounts a palmetto leaf, uttering its loud jo-ree, and allowing the observer to see its pale yellow or whitish iris. Except for this mark, which can only be seen in close proximity, this Towhee looks exactly like the type. It is also a little smaller.

“This bird,” says Mr. J. C. Maynard, “frequents the scrub, never being found elsewhere. Like the Red-eye they spend the greater portion of their time on the ground, and on still mornings may be heard scratching among the leaves in all directions, for they are very numerous wherever they occur. These birds are exceedingly inquisitive and will follow one for a long distance through the bushes. The White-eyed Towhees are also sympathetic, for they will gather in large numbers around a wounded comrade when they hear its cries, evincing the utmost compassion for its misfortune. Although they possess similar habits to those of the more northern species, yet they are not as restless, neither is the ordinary call given as loudly or with as much energy. This note also has a different sound, like the syllables jo-ree with a very decided accent on the latter, the first being frequently given so quickly and so low, that it is not very noticeable. I have often heard the two varieties together and could always distinguish them by this utterance alone.

“Throughout the winter the White-eyed Towhees do not sing, but by the first of March the males may be seen on the highest boughs of the small live oaks, pouring forth their song which is lower and sweeter than that of the Red-eye. This outburst of song is the prelude to the breeding season, and soon the birds are busily engaged in constructing their domiciles. Although I have searched long and carefully for the nest yet, on account of the thickness of the bushes among which they build, never found one.
It is quite probable that the females sit closely, as they are very tame; which would also render the nests difficult to find. The first week in April, however, I was fortunate enough to capture a newly fledged young in the bushes, near our camp on Indian River. There were quite a number of the little Jo-rees, as the boys call them, about and their parents were extremely annoyed at my presence, scolding me vehemently while they hopped briskly about, jerking their tails over their backs, thus evincing as much anger as is possible for a bird to exhibit."

It is said that the Florida Towhees usually breed in young pines from three to ten and even twenty feet from the ground and that the nest resembles that of the Yellow-breasted Chat. In Florida I have been informed that they sometimes build in the dense clumps of saw-palmettos, but that they usually construct their nest on the ground. The nest consists of coarse weeds, pine needles, and grass, and is lined with finer grasses. Sometimes the eggs, which have a white ground-color, are densely speckled and spotted, sometimes they are almost unmarked.

The Arctic Towhee of Saskatchewan Chewink, Pipilo maculatus arcticus Coues, is distributed in summer over the region of the Platte River, the upper Missouri, the Yellowstone and Saskatchewan Rivers, north to Great Slave Lake. It winters from Colorado and Kansas to Texas. In its habits and appearance it is quite similar to the eastern species, but it seems to be much shyer, being easily frightened when it hides in the bushes until all danger is over. According to Dr. J. C. Merrill it is abundant in all parts of Montana wherever a stream with bordering underbrush affords the needed shelter. The nests are placed on the ground under some brush, a favorite place being small isolated cherry bushes so often seen near streams flowing down many of the mountains; lower, on the plains, any growth of bushes or shrubbery appear to answer well. The rim of the nest is flush with the surface of the ground, the birds scratching a hollow large enough to contain the nest. This is well and strongly built; externally are placed dead leaves and broad strips of bark; then a wall of finer strips of bark and blades of dry grass, lined usually with yellow straws. The eggs, four or five, have a white ground-color, slightly tinged with greenish and covered with dots and small spots of reddish-brown and lavender, most numerous on the larger end, where a more or less distinct wreath is formed. In some sets the ground-color is scarcely distinguishable on account of the very numerous markings which cover the entire surface.

Spurred Towhee, Pipilo maculatus megalonyx Coues. This variety inhabits especially the Rocky Mountain region, and is found west to southern California and north to eastern Washington, wintering in Mexico and Lower California. This Towhee seems to be especially common in New Mexico and Arizona. According to Prof. R. Ridgway it is common near Salt Lake City. When he first met with the bird he was surprised about its call-note which is very similar to that of the Catbird. The nest he found on the ground, among the scrub-oaks of the hill-sides: In Riverside, Cal., nests were found in low bushes by Mr. S. C. Evans, and Mr. O. Emerson, of Haywards, Cal., also found the nests in his locality in bushes, the lowest about ten inches from the ground.

Oregon Towhee, Pipilo maculatus oregonus Coues. This local form, which is also known as the Oregon Ground Robin, is a resident of the western parts of northern
California, of Oregon and Washington. In its nesting habits and traits it is said to be the counterpart of our Eastern Towhee.

On the Island of Guadalupe, Lower California, a closely allied species occurs, which is known as the Guadalupe Towhee, *Pipilo consobrinus* RIDGW.

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**GREEN-TAILED TOWHEE.**

*Pipilo chlorurus* BAIRD.

**PLATE XX. FIG. 7.**

This fine Towhee is a summer resident of the Rocky Mountains, north to eastern Oregon, Idaho, Montana, and Wyoming, and west its range is limited by the Sierra Nevada. Its winter home is Mexico, and probably also the lower districts of Arizona etc. Like all its allies it is an inhabitant of the dense shrubbery which it imparts with life and beauty. Mr. Robert Ridgway, while accompanying the expedition of Clarence King as naturalist, found it very generally distributed throughout the fertile mountain portions of the interior. He first met with it in the ravines at the base of the eastern slope of the Sierra Nevada. On the high mountain ranges it was a characteristic bird and the best known singer, as well as one of the most abundant of the Finches, being found in all bushy places, from the bases to the summits of the mountains. It is exclusively a summer species, arriving at Carson City about the middle of April. He describes the usual note of this bird as very peculiar, and, as nearly as can be described, a sweet laughing utterance of the syllables *kee-kek*, a little resembling the *tweet* of a Canary, but very musical. This curious note was generally uttered when anything unusual attracted its attention, such as the approach of an intruder. Then, with elevated tail, and its very conspicuous red cap raised, it would hop familiarly and unsuspiciously about. Mr. Ridgway says that it is a songster of high merit, in power and variety ranking very little below the song of the Lark Sparrow. The song varies in the modulations greatly with the individual, but the same general style is preserved. At times it seems to have a slight resemblance to the song of Bewick's Wren. In the early part of July, near Austin, in the canyons of the mountains, Mr. Ridgway found these birds breeding in the greatest abundance, and later in the same month a few of its nests were found on the East Humboldt Mountains. All of its nests, with hardly an exception, were placed from eighteen inches to two feet above the ground, among the thick bushes of a species of *Symphoricarpos*, or snowberry, which grows in great abundance upon the sides of the canyons of those mountains. The maximum number of eggs was four. It was also quite a common bird in the Wahsatch Mountains, though less abundant than the Spurred Towhee. The eggs are oval, neither end being apparently much more rounded than the other. “The ground-color is white with a bluish tint, over which is profusely diffused a cloud of fine dottings of a pinkish-drab. These markings are occasionally so fine and so thickly distributed as to give to the egg the appearance
of a uniform color, or as an unspotted pinkish-drab colored egg. Occasionally the dots are deeper and larger, and more sparsely diffused." (Brewer.)

Dr. J. A. Allen found the bird in Colorado. "This is one of the most interesting birds," he writes, "met with in the wooded portions of the great central plateau of the continent. In the mountains of Colorado it ranges from the foot-hills up to the limit of trees, and throughout the mountain valleys is one of the more common species. It affects the moister thickets near the streams, and possesses a peculiar and very pleasing song. In habits or notes it has but little resemblance to the group of Towhees with which it is commonly associated by systematic writers, presenting in these respects far more resemblance to the group of Sparrows so familiarly represented in the Atlantic States by the common White-throat, from which it only differs structurally in its relatively longer tail."

NAMES: **Green-tailed Towhee**, Green-tailed Finch, Green-tailed Bunting, Chestnut-crowned Towhee, Blanding’s Finch.


DESCRIPTION: "Above, dull grayish olive-green. Crown, uniform chestnut. Forehead with superciliary stripe, and sides of head and neck, the upper part of the breast and sides of the body, bluish-ash. Chin and upper part of throat abruptly defined white, the former margined by dusky, above which is a short white maxillary stripe. Under tail-coverts and sides of body behind brownish-yellow. Tail-feathers generally, and exterior of wings, bright olive-green, the edge and under surface of the wings, bright greenish-yellow; edge of first primary, white. First quill longer than eighth, fourth longest.

"Length, about 7.00 inches; wing, 3.20; tail, 3.65 inches." (B. B. & R., "North American Birds," II. p. 131.)

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**CAÑON TOWHEE.**

*Pipilo fuscus mesoleucus* **Ridgway.**

The type of several varieties of Towhees, among which the **Cañon Towhee** and the California Towhee are the principal forms, is known as the Brown Towhee (*Pipilo fuscus Swains.*), a bird inhabiting Mexico north nearly to the United States boundary.

The Cañon Towhee is an inhabitant of New Mexico and Arizona, where it has been found by many of our well-known ornithologists, among whom I will only mention Dr. Elliott Coues, Major Chas. E. Bendire, Dr. Palmer, Dr. Heermann, Dr. Henry, Dr. Kennerly, Mr. W. E. D. Scott, etc.

The best description of the Cañon Towhee’s haunts and nidification has been given by Major Charles E. Bendire, the well-known ornithologist and oologist of the National Museum, Washington, D. C. He writes as follows: "The late Dr. T. M. Brewer published the first correct description of the eggs from specimens collected by the writer in 1872, in the vicinity of the present site of Camp Lowell, about seven miles north-east of Tucson, Arizona. Here I found the Cañon Towhee nesting quite abundantly on the more or less open plains immediately back from the Rillitto Creek bottom, which are
here covered with straggling mesquite trees and bushes of various kinds, some of them attaining a height of ten or twelve feet, interspersed here and there with cacti and yuccas of different species, the cholla cactus predominating. The nests were usually found from one to two hundred yards distant from the creek bottom and scarcely ever more than a mile away from this, but never in the bottom proper, the chosen home of Abert's Towhee. According to Mr. W. E. D. Scott, who has done so much excellent work in Arizona in more recent years, the Cañon Towhee is equally abundant in the neighboring mountains and ranges well up to the pine forests. He found his first nests in the Catalina Mountains at an altitude of 3,500 feet, about the middle of March, and according to him the breeding period extended well into July. To explore the same localities that Mr. Scott did in 1883, would have been exceedingly unwholesome in 1872, on my second visit to Arizona, and still more so in previous years. The chances would have been more than even, that an inquisitive naturalist, venturing into the recesses of the Catalina Mountains, even with a fair-sized and well-armed party, would have been himself collected sooner or later by one of Chief Cachise's enterprising cut-throats who then roamed over these mountain ranges more or less at their own sweet will. The ornithologist collecting in Arizona at the present day cannot imagine the changes that twenty years have brought about in that country, and it is hard to realize the difficulties under which the earlier explorers labored. It would take too much space to enumerate even a few of these here, but having entered Arizona myself as early as 1857, although I had no means to collect anything then, I am quite competent to judge what risks and discomforts the pioneer naturalists of Arizona, Dr. Coues, Cooper, and Palmer, underwent in the interests of science. Only on my second visit to the Territory in 1872 was I enabled to add a little to our knowledge of the avifauna of that even then still little known region. Fortunately there was a cessation of hostilities, on our part only, however, against the hostile Apaches, for a portion of the year, as peace commissioners had been sent out from Washington to make terms with the hostiles, which enabled me to make a few interesting discoveries which I could not have done otherwise.

"I found my first nest of the Cañon Towhee on June 4, 1872; it contained two fresh eggs, and was placed in a mesquite bush about four feet from the ground and not particularly well concealed. According to my observations (I examined some seventy nests) by far the greater majority were placed in low mesquite trees, sometimes close to the trunk, in the forks of limbs, and again well out on a branch, rarely more than eight feet from the ground. An occasional nest was placed in a cholla cactus. None were found directly on the ground. The nest is a large one for the size of the bird, loosely constructed externally. It is composed of weed stalks and coarse, dry grasses, and is lined with fine thread-like rootlets and horse hair, when the latter is obtainable. It is an unusually deep nest. . . .

"The eggs are usually three in number; about one nest in ten contains four; occasionally I have found the bird sitting hard on but two, probably a second or third brood. On comparing notes with Mr. Herbert Brown of Tucson, an enthusiastic naturalist, who has made careful and extended observations over pretty much the same ground I did in 1872, I found the nesting season of 1872 must have been an unusually late one, as he has since then found many species breeding there fully two months earlier
than I did. Nests of this species with perfectly fresh eggs were found by me as late as Sept. 11, and it is reasonable to presume that as many as three broods are raised by some of these birds at least.

"The ground-color of the eggs of the Cañon Towhee is a very pale bluish-white, or very light pearl-gray, scarcely an egg in a series of one hundred and three specimens can be called pure white. As far as markings are concerned, these eggs can be divided into two types. In one the spots are sharp, well defined, occasionally connected with each other by lines and scralls, and principally concentrated about the larger end. Their color is a very deep brown, almost a black. This pattern includes the less heavily marked specimens. In the second type, the markings are less clearly defined, more irregular in shape, mere blotches, and much more profuse. The color is less deep, more of a claret-brown or vinaceous rufous. In addition fine shell markings of lavender and heliotrope-purple are scattered more or less profusely over the entire egg in both types. The eggs bear a certain resemblance to those of the Meadow Lark, especially to heavily marked specimens of the western race, Western Meadow Lark."

"In its habits and its call-notes the Cañon Towhee does not differ materially from Abert's Towhee. Neither can be called a songster. It is more or less terrestrial at all times, rather shy, sticking close to the underbrush, but not nearly as much so as Abert's Towhee. It is much more easily observed, as the localities frequented by it during the breeding season are much more open and free from undergrowth and creeping vines than the bottoms where the former lives. During winter I have noticed it frequently associated with other ground-feeding species like Zonotrichia leucophrys and intermedia, Melospiza fasciata fallax, Calamospiza melanocorys, Peucea carpalis and arizoneae, and Amphispiza bilineata, as well as others. Large flocks composed principally of the species mentioned would frequently alight on the open ground about my camp, especially about the picket line where the cavalry horses were tied up at night and fed, and at such times they would allow themselves to be approached rather closely, and it was generally an easy matter to select such specimens as one wanted while they were searching for food."

According to Mr. A. W. Anthony, who found the Cañon Towhee a numerous bird in south-western Mexico, the favorite nesting sites are thick bunches of cholla cactus and between the leaves of yuccas.

DESCRIPTION: Above, very dull grayish-brown; top of head, conspicuously rufous; sides, paler grayish-brown. The local region, chin, throat, and upper part of breast, pale yellowish-rufous, finely spotted on the sides and more coarsely across the breast with brown; an obscure spot on middle of breast; lower portion of breast and the upper part of belly almost pure white.

Length, 8.50 inches; wing, 3.80; tail, 4.70 inches.

**CALIFORNIA TOWHEE, Pipilo fuscus crissalis Cours**, also known as the Crissal Towhee, and Brown Towhee, inhabits the State of California, where it is said to be a constant companion of the California Thrasher, frequenting the dense chaparral and the thickets which line the mountain cañons. Its favorite abode is found in the vicinity of water courses, where it is generally seen in pairs. "It is at all times a familiar bird, boldly coming into the roads to feed and permitting a close approach. If compelled to retreat, it darts suddenly into the thicket, but returns as soon as the cause of alarm
ABERT'S TOWHEE.

Pipilo aberti Baird.

This interesting Towhee is an abundant inhabitant of the shrubbery, particularly in the cacti and yucca thickets of Arizona and Mexico, being especially numerous in the valleys of the Colorado and Gila Rivers. It is a large and long-tailed bird; and is said to be very shy, rarely leaving the chaparral which affords it an excellent protection against many intruders.

The best description of its habits and nidification has been written by Major Chas. E. Bendire, of the United States Army, and from it I quote the following:

"ABERT's Towhee is the largest of the plain colored Pipilos of the Pacific coast, and a quite different looking bird from the Cañon Towhee, its most striking characters being its uniform pale cinnamon color, only relieved by a slight edging of black around the base of the bill, and its unusually long tail. I found it a quite common resident, and breeding abundantly, in the vicinity of my camp on Rillito Creek, Arizona, if possible even more common than the Cañon Towhee. In its habits it is one of the shyest birds I know, and although I could readily find one of its nests, every hundred feet, in a certain limited area, it was quite a different matter to secure the parent for identification. I wasted more than one hour in watching for these birds. Their loud alarm note of huit, huit, indicated their whereabouts readily enough, but getting a good view of them was another thing. Even during the winter months they were hard to secure, and not by any means as social in their habits as the Cañon Towhee. I found my first nest with eggs on May 13, 1872, placed in a willow thicket, about three and a half feet from the ground. Outwardly this was composed exclusively of the soft inner bark
of the cottonwood, resting on a slight platform of small sticks and dry weed stalks. Inside the nest was lined with finer material of the same kind, and a few horse hairs. This first nest was a rather flimsy affair; most of those found subsequently were much better constructed, principally dry weed stalks, the soft inner bark of dry cottonwood logs, swamp grasses, fibres of wild hemp, an occasional leaf, and fine roots, entering into the composition of the nests. A few only were lined with horse hair, a material probably furnished by my herd which grazed in the vicinity and was daily driven into the creek bottom to water. The measurements of a nest taken by myself are 5.50 inches across externally by 4.00 inches in depth. Inner diameter, 3.00 inches; depth, 2.50. The inner cavity is very small for the size of this bird, scarcely large enough to accommodate the body. Its long tail sticks up out of the nest, when sitting on its eggs, at a perfect right angle, and it certainly must be an uncomfortable position for the bird to stay in for any length of time.

"All the nests I have found, about eighty in number, were placed in the densest thickets in the creek bottom proper, with but one single exception. This I found in the forks of a mesquite bush about four feet from the ground, on the open plain fully four hundred yards from its customary breeding places. . . . Fully sixty of these nests were placed in willow thickets, or on willow stumps around the tops of which young green sprouts had grown out again, the top of the stump itself making an excellent base for the nest. I found many such stumps in the creek bottom, cut off about three or four and a half feet from the ground. With the characteristic laziness of the native Arizonian, I presume, they found it easier to cut them at that height, as it obviated bending their backs to a certain extent. These young willow trees were from five to six inches in diameter, and were used for stringers or rafters on their adobe huts, to support the heavy dirt-covered roofs. I did not find a single nest directly on the ground; usually they were from two and a half to three and a half feet above it, and seldom more than five feet up. After willows, a species of ash was the next favorite, and I found one nest in such a tree fully twenty-five feet from the ground, placed in a fork in its topmost branches. Now and then a nest was placed in a bushy mesquite tree, and a couple of nests I found in wild currant bushes.

"The usual number of eggs laid by Abert's Towhee is three, sets of only two are by no means unusual, however; in but a single instance I found four. Their ground-color is a pale clay-blue. . . . The markings are sparse, sharp, and well defined, generally heaviest about the larger end, in color very dark brown, almost black in some, in others these dark spots are less intense and margined with vinaceous and rufous about the edges. The average size of eighty-three specimens, all but six collected by myself, is .94 x .70 inch.

"I believe fully three broods are raised during the season, as I found a perfectly fresh set of eggs on Sept. 10. Several other species also were laying then. Abert's Towhee has many enemies to contend against during the breeding season, and it is questionable after all, if they ever succeed in raising more than a couple of full broods. Small parties of Arizona Jays, from the mountains in the vicinity, were more than once met with by me, evidently bent on an egg-hunting expedition themselves, and no doubt some of the numerous species of Hawks, Owls, squirrels, and snakes, especially some of
2. " " " Licht. — " " — " " (female).
4. " " — " " (female).
the latter, destroy a good many of their young as well as the eggs. The shrill cry of alarm uttered by these birds when in distress, was more than once heard by me, when still quite a distance from the nest, due no doubt to the presence of some other intruder than myself. I frequently found broken egg-shells lying at the foot of the empty nest, where a day or two previously I had seen a single egg and had left it for the set to be completed."

NAMES: **ABERT’S TOWHEE, Gray Towhee.**

**SCIENTIFIC NAMES:** *PIILO ABERTI BAIRD* (1852).

**DESCRIPTION:** Upper parts, pale brownish-red, brighter beneath and more ochraceous; sides of head and chin, dark brown; bill and legs, yellowish.  
Length, 9.00 inches; wing, 3.70; tail, 4.85 inches.

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**CARDINAL.**

*Cardinalis cardinalis Lichtenstein.*

**PLATE XXVI.** Figs. 3 and 4.

When April woods were budding,  
And wild-flowers blooming bright,  
And wide the sun was flooding  
The world with warmth and light;  
When birds abroad were winging  
Their way without a fear,  
I heard a clear voice singing,  
"What cheer! what cheer! what cheer!"

No marvel that so gaily  
His madrigal resounds!—  
When new flowers open daily,  
And new-born life abounds;  
When in their course untrammeled  
Glide on the brooklets clear,  
Their banks with moss enamelled,  
"What cheer! what cheer! what cheer!"

In crowded streets lurks sadness,  
Even on the brightest days;  
Methinks 'tis only gladness  
That haunts the woodland ways:  
No hate, no grief, no quarrels,  
No scornful brows are here;  
And loud my Redbird carols,  
"What cheer! what cheer! what cheer!"

Would we forth oftener wander—  
We, long in houses pent—  
On Nature gaze and ponder,  
Beneath the sky’s blue tent,  
'Twould heal the mind’s diseases—  
Refresh our hearts grown sere:  
In woods, birds, brooks, and breezes  
"What cheer! what cheer! what cheer!"

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**THE CARDINAL,** known also as the Cardinal Redbird, Cardinal Grosbeak, Cardinalbird, and Redbird, is one of the jewels of our bird-fauna, being incomparable in the combination of proud bearing and gaudy coloring, and unexcelled in certain qualities of its song.* Few birds impart their haunts with such life, beauty, and poetry than this brilliant songster, one of the most famous among birds and highly prized by all bird lovers. Wherever it occurs in our southern States it is a conspicuous and charac-

teristic feature of the landscape, and its loud and melodious song cannot fail to inspire every lover of Nature with rapture and delight.

Like the Catbird, the Chat, and the Thrasher the Cardinal Grosbeak is a tenant of the shrubbery. It does not inhabit the trees like the Rose-breasted Grosbeak, and it likewise avoids localities where undergrowth is scarce. Its favorite haunts are open woodlands intermingled with dense bushes, thickets overgrown with climbing plants, and the brooks and rivulets fringed by shrubbery. All over the South the dense Cherokee rose hedges are its favorite haunts. Throughout the spring these localities resound with the many-voiced chorus of the Cardinal Grosbeak. Though loud, the song is enchantingly beautiful, mellow, and varied. The proud and noble bearing, and the rich scarlet color of its plumage combine to make an exquisite picture on the back-ground of the deep green foliage. In order to become thoroughly acquainted with the Cardinal in all its splendor, we must ramble through its favorite home in the Gulf region.

April is ready to give way to May. The splendid evergreen magnolia is in full flower, its large white blossoms fill the air with delicious perfume. The violet-like odor of the blooming wild grape-vines is almost overpowering. The cross-vine and several species of evergreen smilax, the sweet-scented Carolina jasmine and other climbing plants transform the thickets into impenetrable masses of green. Everywhere we notice the orange-scarlet blossoms of the trumpet creeper, hanging down from the branches of the forest trees. The observer, not acquainted with the plant, sometimes mistakes the bright-colored flower clusters for Summer Tanagers or Cardinals. Evergreen trees and shrubs form a characteristic feature of these woodlands, and in some places they are the prevailing part of the forest flora. Red-bays, different hollies, evergreen oaks, among them the famous live-oak, laurel cherries, sweet bays, loblolly bays, wax-myrtles, beautiful kalmias, sparkle-berry and andromeda shrubs, the sweet-scented American olive, and the most beautiful of all, the grand evergreen magnolia, are everywhere common. Many oaks, sweet gum, and tulip trees, the button-wood and other deciduous trees attain here gigantic proportions. Swamps and woodlands are bordered by thickets densely overgrown with creeping plants.

At this time of the year bird-life in the low shrubbery as well as in the woods and gardens is exceedingly vivid. The great throng of sprightly and richly attired Wood Warblers is now migrating northward, and in their company many other species are found. The magnolias fairly swarm with Warblers. The shrubbery in the woods, the orchard trees, the Cherokee rose hedges, and the tops of the tallest forest trees, all have their visitors. A few weeks hence the same birds will arrive in their breeding range in northern British America, where they will be engaged in the same way among the less attractive alders, birches, willows, and spruces. Magnolia and Blackburnian Warblers appear to be the most conspicuous as well as the most numerous sojourners in the flowering magnolias. Chestnut-sided, Black-throated Green, Black-throated Blue, Bay-breasted, and Yellow Warblers are scarcely less abundant. Vireos and Flycatchers are also present. The Warblers are always busy and full of activity. They are fluttering, flying, creeping, and hopping among the branches, always in search of insects. Oft they stop for a moment and sing their sprightly notes. In a playful way they frequently

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chase each other through the branches of the trees and the air. These armies of birds
save our forests from ruin, cleansing them, as they do, from the ground, carpeted with
mosses and ferns, to the tops of the tallest trees from injurious insects. Were it not for
the good and timely work of the birds, especially these migrating hosts, the trees would
soon be destroyed by their many insect enemies. They search each leaf and flower for
insects and they even take them with great celerity from the crevices of the bark. The
number of the Warblers alone is immense, and their good work is of inestimable value.
When they are ready with their good work in the South, they proceed northward, cleansing
every orchard on their way from insect pests. In south-eastern Texas and on the Gulf
coast this activity lasts till about May 10, when even the latest stragglers depart for
their northern home. Amid all this life, activity, and splendor the songs of a large
number of resident species resound. The incomparably charming song of the Mocking-
bird, and the sprightly strains of the Carolina and Bewick’s Wrens are heard on all
sides. The cheerful twittering of the Parula Warbler and Redstart, the peculiar chickty-
beaver of the White-eyed Vireo, the loud and plaintive peto-peto of the Tufted Titmouse,
and the gushing notes of the Orchard Oriole fall constantly on our ear. There are other
sounds. The Red-eyed Vireo sings in the South as persistently as in the North, and
the Chat is at home in almost every suitable thicket. The Yellow-throated Warbler
sings everywhere in the branches covered with swaying Spanish moss. Woodpeckers
are numerous as their rapping on hollow trees indicates. The fervent strain of the
Painted Bunting or Nonpareil, and the mellow notes of the Blue Grosbeak sound through
the thickets. But the loudest and most characteristic song among the woodland choir
is that of the Cardinal Grosbeak. We hear it in the early morning hours and during
the night, during the cool hours of the day as well as in sultry weather. High up in
the blue sky the Fork-tailed Kite in majestic flight describes its wide circles. How
graceful and fascinating his motions are, and how charming the contrast between the
pure white and dark of its plumage with the deep azure of the sky! Although a bird
of prey, it rarely feeds on small birds, snakes being its main game. In the water near
by little Blue and White Herons are seen, and occasionally a Snake Bird or Anhinga.
The splendid Fork-tailed Flycatcher, everywhere in Texas known as the “Bird of
Paradise,” darts in picturesque zigzag lines through the air, uttering incessantly its shrill
notes. In whatever direction the observer may turn his eyes, he will glance upon a vivid,
many-hued and beautiful picture. Yet this apparently restful and idyllic picture has also
its dark shades. Many a feathered robber darts in among the cheerful throng of inno-
cent songsters, causing fright and terror. On the water’s edge lurks the most dangerous
of our snakes, the venomous water moccasin¹, awaiting its prey. How often have I
been in danger when searching among the bushes for nests, while the exceedingly poiso-
nous moccasin snake or copperhead² lay coiled near my hand, ready for a strike. And
how often have I been warned not to proceed farther among the thickets of the woods
by huge specimens of the diamond rattle snakes³! Tree-climbing snakes, such as the
whip snake, the southern water snake⁴, pilot snake⁵, chicken snake⁶, black snake⁷, and

¹ Agkistrodon piscivorus. ² Agkistrodon contortrix. ³ Crotalus adamanteus. ⁴ Tropidonotus fasciatus.
⁵ Coluber obsoletus. ⁶ Coluber quadrivittatus. ⁷ Boscianus constrictor.
others wind in rapid motions through the brush wood, thickets, and the branches of trees, catching birds and plundering nests.

In these localities, particularly near the bushy edge of the woodlands, no other bird appears so numerous as nor sings so loudly and attracts more attention than the Cardinal Redbird. In brambles, among the hazel and holly bushes, in hedge-rows and in the thickets bordering brooks and swamps, this splendid bird is at home, fluttering, flying, and singing everywhere, enlivening its haunts in the most attractive way. In all the larger southern gardens, replete with masses of evergreen ornamental shrubs and climbers, the Cardinal is a common tenant. I can here only mention a few of the favorite garden shrubs in which the Redbird likes to take up its abode. Evergreen roses, such as the Cherokee, the Banksia and Macartney roses are frequently chosen as nesting sites and also such deciduous climbing roses, as the Marechal Niel, Lamarque, Chromatella, etc. Dense coniferous shrubs and trees, especially retinisporas, cedars, cypresses, cunninghamias, etc., intermingled with Cape jasmine, holly-leaved and sweet olives, banana shrubs, Japanese euonymus, privets, cleyeras, fragrant viburnums, form excellent haunts for this beautiful bird. Being very cautious, the Cardinal breeds only in such gardens where it is protected and where it feels safe, and in such cases the nest is often found in close proximity of the house. In most cases, however, it settles in an out-of-the-way corner, densely planted with evergreens. In the northern part of its habitat it is a wild and shy bird and usually avoids the vicinity of human habitations, choosing for its home remote thickets and half-wild pastures and woodlands.

The region inhabited by the Cardinal extends over all the Southern States, chiefly south of the 40° of latitude, being occasionally found as far north as Massachusetts. It is a rare bird in northern Missouri and not abundant in southern Illinois, Indiana, and Ohio. In south-western Missouri, although a well-known songster, it is not very numerous. Old settlers, however, told me, that thirty years ago it was much commoner than it is now, just as in the case of the Mockingbird, which is now a rare songster in that locality, owing to the fact that every nest is plundered for its young. During my five years' residence in the south-west corner of Missouri, the Cardinals were trapped each winter in large numbers, and sent to northern bird dealers. Sometimes, when brought in warm rooms, the sudden change of the temperature diminished their numbers rapidly. In all parts of Texas, visited by me, the Cardinal was an abundant bird, and in the fertile lands of southern Louisiana it formed a conspicuous part of the landscape. The undergrowth on the edges of cypress swamps, the wax-myrtle thickets, the orange groves, the hollies fairly swarmed with them. All over the South I found them most common in the very beautiful dense hedges of Cherokee roses, which sometimes line the road-sides for miles. These roses are most beautiful plants, the large fragrant white flowers are relieved by elegant glossy evergreen leaves. They grow exceedingly dense, and the stems and branches are provided with formidable spines. These hedges are a safe retreat for many birds, especially for different Sparrows and other small birds in winter, and for Mockingbirds, Blue Grosbeaks, Painted Buntings, Chats, Thrashers, White-eyed Vireos, and particularly for Cardinals in summer. Redbirds outnumber all

1 Osmanthus acuminatum, O. fragrans. 2 Michelia fuscata. * Cleteria Japonica. 4 Viburnum odoratissimum and V. Awafuki.
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others at all times of the year in these hedges, and during the breeding season dozens of nests can be found in a hedge not exceeding a mile in length. In the southern Alleghanies the Cardinal prefers the edges of brooks, rocky slopes, and dense ravines; where azaleas, rhododendrons, mountain laurels (Kalmia latifolia), sweet-scented shrubs (Calycanthus), and many others form dense and extensive thickets. In south-western Missouri the Cardinal's haunts are the dense thickets fringing the woods, the shrubbery in the ravines, the hazel copses, snowberry, wild rose, and gooseberry bushes, and especially thickets overrun with grape-vines and other climbers in spots where the woods have been cut down. In their northern habitat the scarcity of food frequently drives them to the farm yards, especially to corn cribs, hay and straw stacks, and manure heaps. They came in numbers of five to ten to my feeding place, which I had arranged for various birds in the woods bordering my house, in Missouri. At first they were exceedingly wild and suspicious, but they soon lost much of their usual shyness. They fed on sun-flower seeds, hemp, some oats, but did not eat corn, a fact proving that they only eat corn when they can find nothing else. During warm days, even in February, they sang beautifully in the underwood near my house. According to the observations of Mr. Otto Widmann, they are not uncommon near St. Louis, where they show a predilection for the "sink-holes," so peculiar to that locality. These places are usually densely overgrown with various shrubs and vines. In northern Florida I found this brilliant bird most numerous along the Chattahoochee and Suwanee Rivers, in the vicinity of Tallahassee and Monticello, and on the St. John's River. Further south, on the peninsula, they were not quite as abundant.

Wherever the Cardinal Grosbeak occurs it is a resident species. Only in the most northern portions of its range the inclemency of the weather and consequent scarcity of food drives it to temporary short wanderings in order to procure food. The northern Cardinals are far more shy than those of the Southern States, and their plumage is of a somewhat deeper red. The southern birds are a trifle smaller, of a more brilliant red, and quicker in motions. During the late fall they congregate and even associate with other Sparrows. They are not quarrelsome and generally live peacefully among themselves and with other birds. During the latter part of February I witnessed in the South violent contests among the males and happy calls of victory after one or the other of the combatants was driven away. The female always chooses the victorious male for her partner, the companies dissolve, and the pair selects its breeding range which is mostly small, but well guarded against intrusion by birds of the same species by the pugnacious male. Many of the males, especially younger birds, are compelled to remain bachelors. It is a well-known fact, that among the smaller birds, as a rule, there are more males than females. The breeding range is always chosen in a thicket, and the more secluded and hidden this is, the more the birds feel at home. Any thicket, if only dense enough, suffices for a pair. In Texas I found eight to ten pairs breeding on a space not exceeding an acre in area. As I have remarked in the foregoing, the Cherokee rose hedges all over the South are their favorite nesting sites, and I have found as many as ten nests in a mile's walk. In these hedges the birds as well as the nests are well concealed and very difficult to find. While walking along the hedge every few steps a Cardinal was flushed. Indeed, these hedges
appeared fairly to swarm with these exquisite songsters. Mr. Bradford Torrey, an excellent observer and a good writer, made the same observation while traveling in Florida. After speaking of the beauty of the Cherokee rose, Mr. Torrey writes: “I stopped, of course, to pluck a blossom. At that moment a female Redbird flew out of the bush. Her mate was beside her instantly, and a nameless something in their manner told me they were trying to keep a secret. The nest, built mainly of pine-needles and other leaves, was in the middle of the bush, a foot or two from the grass, and contained two bluish or greenish eggs thickly spattered with dark brown. I meant to look into it again (the owners seemed to have no objection), but somehow missed it every time I passed. From that point, as far as I went, the road was lined with Cherokee roses,—not continuously but with short intermissions; and from the number of Redbirds seen, almost invariably in pairs, I feel safe in saying that the nest I had found was probably one of fifteen or twenty scattered along the way-side. How glorious the birds sang! It was their day for singing. I was ready to christen the road anew,—Redbird Road.”

Cardinal Grosbeaks rarely alight high in the trees, keeping always in the low shrubbery, in which they also breed. The nest is usually not more than two to three feet from the ground, but I occasionally found one as high as six, eight or ten feet up in low branches of trees densely festooned with Spanish moss, or in the top of a small tree overgrown with vines. Though the vicinity of water is preferred, the nests are found in quite various places, but always in localities where thickets alternate with trees and open spaces. My first nest was found in Lee County, Texas, in a dense red cedar near a dwelling. Early in March I saw the female carry nesting material into the interior of the cedar. In four days the domicile, which could not be seen from the outside, was ready. Then the birds disappeared for several days. Six days after the nest was finished I found the first egg; in three days more the complement of three was full and in thirteen days the young were hatched. This nest was constructed entirely of fine rootlets and grasses; then a layer of old leaves followed and the interior was lined with finer grasses. Near Houston the Cardinals were more abundantly met with than the Mockingbird. A half an hour’s walk from my home in the western part of the city brought me to a prairie where groups of trees and dense masses of thickets were common. These prairie thickets consisted of small elms, red bud trees, viburnums, dogwood, etc., and were covered and mingled with the grotesque forms of the supple Jack (*Berchemia volabilis*), thorny smilax, Carolina jasmine, coral honey-suckle, blackberry bushes, grape-vine, trumpet creeper, cross-vine, poison ivy, and Cherokee roses. It was almost impossible to penetrate these masses of thorny bushes and creepers. In order to reach the more open interior I had to crawl on hands and feet. With torn clothes, scratched and bleeding hands I almost always returned from such an excursion. Cardinals nested in great numbers in these thickets, and also Mockingbirds, Chats, and Yellow-billed Cuckoos. On the edge White-eyed Vireos had usually their exquisite moss-covered nests suspended from a horizontal branch. Frequently I found the Cardinal’s nest on some low horizontal branch densely covered with Spanish moss. In such cases the domicile was imbedded in the moss, which formed the outside walls, the interior being lined with pine-needles or grasses. They were only discovered by accident, like those in the
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Cherokee rose hedges, when the female happened to dart from it. I also found nests in the corners of rail-fences overgrown and hidden by the trumpet creeper and poison ivy, in bushes overhanging the water, in brush-heaps, and especially in blackberry brambles. In most cases the nest is a frail, loose structure, built of rootlets, grasses, twigs, grape-vine bark and a layer of leaves, lined with pine-needles, rootlets, or grasses. Sometimes a few horse hairs also enter into the composition. The description of one nest suffices for almost all. On April 24, 1881, while walking through a pine-wood near Houston, I discovered several Cardinal nests, almost all in dense Cherokee roses. Long-leaved pines, sweet gum, oaks, and elms were the prevailing trees, and the ground was on many places covered with a dense growth of blackberry bushes. Bird-life was exceedingly abundant. While observing a pair of White-eyed Viros, I discovered a few steps from the domicile of these birds a female Cardinal on her nest. This was placed in the center of a rather open blackberry bush about two feet from the ground, and consisted like almost all nests in this region of a foundation of Spanish moss. Upon this were placed some dry elm leaves, shreds of grape-vine bark and grass-blades; the cavity was lined with fine rootlets, pine-needles, and grasses. Underneath the nest and around the shrub dense mats of partridge-berry (Mitchella repens) grew, the starry white flowers of which filled the air with a delicate perfume. This nest contained four eggs—three and four eggs always seem to complete the set.

The ground-color of the eggs is usually whitish or bluish or greenish-white. The markings are densely scattered over the surface. They vary from pale lavender and grayish to a dull reddish-brown. Some are so densely marked as to conceal almost entirely the ground-color. In some cases the eggs closely resemble those of the Cowbird's, in others they remind us of the Loggerhead Shrike's eggs and the Rose-breasted Grosbeak's. The female alone hatches the eggs, but it is guarded and now and then fed by the male. The time of hatching is about thirteen days. During the first few days the young are fed with small insects, especially green cater-pillars, moths, bugs, and all kinds of larvae; later they are also supplied with grasshoppers and beetles. Ten days after they are hatched they are able to leave the nest. They look exceedingly wild, and frequently I made the observation, that they all left the nest quickly and in great excitement, when I came near, disappearing in all directions among the bushes. Other young birds, when nearly able to leave the nest, act entirely in the same way, but they do not look so wild and unruly. The young are led by the parents into some thicket, where they remain until they are able to shift for themselves. In the meantime the female hatches a second and often a third brood. During the whole of the breeding season the male is extremely pugnacious, wild, and watchful, attacking and driving away from his haunts every intruder of his own species and also small nest robbers and squirrels. When danger threatens a warning call sounding like a sharp chp-chp is uttered. When I came near a nest both parents usually hopped around with raised crests in great distress. At such times they look very wild. In real danger, especially when a tree-climbing snake approaches, they even call other Cardinals to their aid, and other birds breeding in the same locality always join to drive away the intruder. One day, while walking through the thicket near the West Yegua Creek, I heard the screaming of many birds and when I came near, Cardinals, Mockingbirds, Summer Tanagers,
Kingbirds, Tufted Titmice, Carolina Wrens, and even Blue Jays were attacking a large snake which lay coiled around a Cardinal's nest. One of the young, almost fully fledged, was between the jaws of the snake. A stroke with a stick disabled the hideous reptile and a second killed it. When the birds saw their enemy dead on the ground, they returned to their nesting places with calls of victory. Only the Cardinals hopped around in great distress, uttering mournful notes and bemoaning the loss of one of their young. At the age of two or three months the young Cardinals usually congregate with others of their species and roost in great number in the dense evergreen thickets of the cypress swamps, in cane-brakes, and other more or less inaccessible localities. During the approach of evening they fly singly or in small flocks to these roosts. Nuttall made the same observation in South Carolina. "At all times," he writes, "they appear to have a predilection for watery groves, and shaded running streams, abounding with evergreens and fragrant magnolias, in which they are so frequent as to be almost concomitant with the scene. But though they usually live only in families or pairs, and at all times disperse into these selective groups, yet in severe weather, at sunset, in South Carolina, I observed a flock passing to a roost in a neighboring swamp and bushy lagoon, which continued, in lengthened file, to fly over my head at a considerable height for more than twenty minutes together. The beautiful procession, illumined by the last rays of the setting sun, was incomparably splendid as the shifting shadowy light at quick intervals flashed upon their brilliant livery. They had been observed to pass in this manner to their roost for a considerable time, and, at day-break, they were seen again to proceed and disperse for subsistence. How long this timid and gregarious habit continues, I cannot pretend to say; but by the first week in February the song of the Redbird was almost daily heard. As the season advances, roving pairs, living, as it were, only with and for each other, flit from place to place; following also their favorite insect or vegetable fare. . . ."

The Cardinal Grosbeak is an exquisite songster, and with the exception of the Mockingbird none of our songbirds is so famous. Some writers on cage birds have pronounced the song as monotonous and too lond, but they have certainly not heard good singers in their native wilds. "The verdict," Prof. Robert Ridgway adds, "is undoubtedly a just one when applied to many that we have heard; but there is probably more individual variation in quality of song than there is in any other. We have listened with peculiar pleasure to some whose vocal performance was characterized by a clearness and mellow richness of tone, a tender and passionate expression, and persistent vigor, that altogether were wholly unique. Even the females are good singers, though as a rule inferior to the males, and it is extremely probable that the impressions which some writers have received were derived from the songs of birds of this sex."

Audubon's description of the song is so true, and at the same time so poetical, that I would deem this life history incomplete, should I neglect to quote from it. "Its song is at first loud and clear, resembling the finest sounds produced by the flageolet, and gradually descends into more marked and continued cadences, until it dies away in the air around. During the love season the song is emitted with increased emphasis by this proud musician, who, as if aware of his powers, swells his throat, spreads his rosy tail, droops his wings, and leans alternately to the right and left, as if on the eve
of expiring with delight at the delicious sounds of his own voice. Again and again are those melodies repeated, the bird resting only at intervals to breathe. They may be heard from long before the sun gilds the eastern horizon, to the period when the blazing orb pours down its noontide floods of heat and light, 'driving the birds to the coverts to seek repose for a while. Nature again invigorated, the musician recommences his song, when, as if he had never strained his throat before, he makes the whole neighborhood resound, nor ceases until the shades of evening close around him. Day after day the song of the Redbird beguiles the weariness of his mate as she assiduously warms her eggs; and at times she also assists with the modesty of her gentler sex. Few individuals of our own race refuse the homage of admiration to the sweet songster. How pleasing is it, when, by a clouded sky, the woods are rendered so dark, that were it not for an occasional glimpse of clearer light falling between the trees, you might imagine night at hand, while you are yet far distant from your home—how pleasing to have your ear suddenly saluted by the well-known notes of this favorite bird, assuring you of peace around, and of the full hour that still remains for you to pursue your walk in security! How often have I enjoyed this pleasure, and how often, in due humbleness of hope, do I trust that I may enjoy it again!"

These words of our great Audubon so fully agree with my own opinion and observations that I have little to add. The song of this bird heard in the realms of Nature is quite different from that of caged birds. The latter do not exhibit the variety and sweetness which is so prevailing in the performance of birds in the freedom of Nature. Moreover, caged birds often become monotonous by repeating some passages of their song too often, which is not noticed or really overlooked by man in the song of wild birds. Of course, there are excellent and poor singers among Cardinals as among other birds. Being very diligent singers, their lay may be heard throughout the day and for six or eight months in the year. According to Nuttall the Redbird's song is more lively in wet weather; the sadness of Nature, softening and soothing the tender vocalist into a lively, pathetic, and harmonious reverie. "So highly were these birds esteemed for their melody," continues Nuttall, "that according to Gemelli Careri, the Spaniards of Havana, in a time of public distress and scarcity, bought so many of these birds, with which a vessel was partly freighted, from Florida, that the sum expended, at ten dollars apiece, amounted to no less than 18,000 dollars! Indeed Latham admits that the notes of our Cardinal 'are almost equal to those of the Nightingale,' the sweetest feathered minstrel of Europe. The style of their performance is, however, wholly different. The bold martial strains of the Redbird, though relieved by tender and exquisite touches, possess not the enchanting pathos, the elevated and varied expression of the far-famed Philomel, nor yet those contrasted tones, which, in the solemn stillness of the growing night, fall at times into a soothing whisper, or slowly rise and quicken into a loud and cheering warble. A strain of almost sentimental tenderness and sadness pervades by turns the song of the Nightingale; it flows like a torrent, or dies away like an echo; his varied ecstacies seem poured to the pale moon-beams, and like the desponding lover, seeking to hide his grief in solitude, his sapphic lays, wasted, as it were, in the desert air, now meet with no response but the sighing zephyr or the ever murmuring brook. The notes of our Cardinal are as full of hilarity as of tender expression; his whistling call is
uttered in the broad glare of day, and is heard predominant over most of the feathered choir by which he is surrounded. His responding mate is the perpetual companion of all his joys and cares; simple and content in his attachment, he is a stranger to capricious romance of feeling; and the shades of melancholy, however feeble and transient, find no harbor in his preoccupied affections."

In order to form a correct idea of the great beauty of the Redbird's song and of the charming impression it makes on the mind of the hearer, we are obliged to penetrate its bushy haunts. This is best done in the morning when the dew is still on the plants and the air laden with the fragrance of the flowers. In the northern parts of its range it is a rare bird, and extremely wild and shy, though conspicuous even in such secluded resorts by the brilliancy of its coloration, the power of its voice, and the activity of its disposition. In its southern home we have not far to go in order to hearken to its song. In the large gardens, where dense evergreen ornamental shrubs, coniferous trees, rose thickets and a wealth of climbing plants abound, the Cardinal is almost as numerous as in the secluded thickets of the wildwood. In these gardens it is a familiar bird, and its sweetest notes resound on all sides. From late in January, when the roses and camellias begin to open their flower-buds, until November, when the southern woods are brilliant with autumn hues, the many-voiced jubilee of these birds is heard, blending with the enchanting notes of the Mockingbird, the vivacious strain of the Carolina Wren and the notes of many other birds. On two occasions the marvelous beauty of the Cardinal's song was impressed most vividly on my memory. While walking along the edge of the forest near Spring Creek, Harris Co., Texas, one morning in early March, I heard the loud whistling notes of these birds on all sides, as I had never listened to them before. The trees consisted almost exclusively of hollies, some of them beautiful pyramids of deepest green, still sparkling with myriads of shining red berries. They grew with branches so low, that the trunks were entirely hidden. In these trees the Cardinals sang incessantly, heightening the effect and deepening the impression made by the surrounding landscape. At another time I passed a large garden in Houston. The magnolias were in full flower. The roses bloomed in a profusion the like of which I had never seen before. Cape jasmines, loquats, banana shrubs, retinisporas, cypresses, Cedars, raphiolepis, photinias, and many other ornamental plants flourished to perfection in this garden.

It was an ideal spring day of such beauty as I had never experienced in the North. The air was warm and laden with the fragrance of flowering tea and Noisette roses, magnolias, banana shrubs, and Cape jasmines. Though it was bright sunshine, the salubrious breeze from the Gulf made out of door rambling very pleasant. The Cardinals were at home in this garden. From every thicket the loud and melodious strain fell on my ear. I heard at least six males and several females at the same time. While singing they were usually perched on the top of some ornamental shrub, on an arbor or on the fence. Hardly ever I heard such a fine bird concert in a city, and it shows how a fine garden of the South is made attractive by the presence of this exquisite songster. Mockingbirds were also pouring forth their charming notes, and Orchard Orioles and Painted Buntings completed this bird jubilee. While singing the Cardinal raises its crest which gives character to the bird and reveals its whole beauty. I think, the effect of the

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1 *Ilex opaca*. 2 *R. Japonica* and *R. ovata*. 3 *Photinia serrulata*. 
song is much heightened by this raising of the crest; it also gives the bird a wild and conspicuous appearance which fits well to the loud and beautiful strain. Every unprejudiced fancier ranks the Cardinal among the very best of all songbirds. The ordinary song sounds much like *jehu-jehu-jehu-teá, teá, teá, teá-trrrrrrrrr;* but it is frequently changed and varied. The whistling *jehu-jehu* is oft repeated, and the *teá* sounds especially sweet and melodious. There are times in life which never pass out of one's recollection, moments and hours which brighten as "time steals away." This is with me particularly true of the spring and summer nights spent at a fort in Texas, in the years from 1879 to 1882. The broad verandas embowered in a wealth, of vigorous growing Marechal Niel, Lamarque, and other climbing roses, in evergreen honey-suckles, *Tecoma* *Capensis,* and other climbers were much frequented places during the beautiful cool evenings. The air was saturated with the perfume of flowers, particularly of those of the night-blooming jasmine (*Cestrum Parqui*). Far off, first in a low gentle tone, then gradually louder, fuller and sweeter the incomparable song of a Mockingbird sounded through the calm and beautiful night. One of his companions, inspired by the song of its rival, commenced to join and in a very short time almost all Mockingbirds far and near were rivalling in their music. At such times the Cardinals cannot withstand the temptation of joining the chorus of this nocturnal concert. At first one utters a few notes, which slowly increase in power, becoming louder, fuller, and more varied. Another and a third follows till their songs resound from far and near. I have heard this incomparably enchanting concert of Nature not only when the moon poured her light on the landscape, but also during very dark nights. The spring and summer nights in the Gulf region are unrivalled in beauty and salubrity of the air, but they are indescribably charming and bewitchingly beautiful when Mockingbirds and Cardinals join in their fascinating night concerts.

My friend, Prof. Robert Ridgway, of the Smithsonian Institution, offers the following description of the Cardinal's night song: "Not only do birds' songs differ materially according to the individual, but often each individual possesses a more or less extensive *repertoire,* the separate parts or tunes of which are so different from one another that, heard without the singer being seen, they might readily be attributed to different birds. This is particularly true of the Cardinal Grosbeak; and I have not the slightest doubt some observers have received an unfavorable impression of this bird's song from having first, or perhaps only, heard one of the less attractive tunes of an individual which half an hour later might be singing a song totally different, and far finer. A pet Cardinal, which I had for several years, sang six very distinct songs, besides minor variations. A remarkable peculiarity of this bird (though one which I believe to be characteristic of the species) was that one of these songs was almost invariably repeated until he himself became tired of it before he changed to another.

"The difficulty of expressing a bird's notes by words is well known, but the following attempt may give some idea of the different songs of my Cardinal:

I. *Hoit,— hoit, whoit, whoit (eleven times);* *hoit,— whoit, whoit, whoit (eleven times).*
II. *Wheu, wheu, wheu, wheu, wheu.*
III. *Tchew, tchew, tchew, tchew, tchew.*
IV. Bird'ie, bird'ie, bird'ie,—tchew, tchew, tchew, tchew.

V. Bird'ie,—bird'ie, bird'ie, bird'ie, bird'ie, bird'ie.

VI. Who'yt,—who'yt, who'yt, who'yt, chichichichichichi (a jingling trill, so long continued that it apparently ended only when the singer became 'out of breath').

"The notes of many Cardinal Grosbeaks are clear and tender—far sweeter than the mellowest notes of file or fageolet."

During summer, especially in the late afternoon, the Cardinals are often seen dusting themselves in the country roads, near Osage orange and Cherokee rose hedges. They are also exceedingly fond of bathing and are therefore rarely found far from the water. This bathing is usually done in the early morning hours. After their bath they mount the top of a bush, a dry branch or a fence, preening their wing and tail-feathers and sunning themselves until the plumage is dry.

The flight is low but rapid. It is rarely continued over a large tree and bushless space and never high in the air, being performed in glidings and jerks of the tail. The bird usually flies from bush to bush or from thicket to thicket. When alighted the crest is raised and the tail frequently jerked. On the ground it is perfectly at home, although its movements appear to be awkward. Its motions among the bushes and thickets are rapid and graceful.

Most of its food is gathered from the ground. It usually sits on one place, searching it thoroughly for seeds and insects, and then hopping to another spot where it continues its search for food. The latter consists during the spring and summer months almost entirely of insects and their larvæ. In autumn and winter berries and seeds are added to the bill of fare. The Cardinals are very fond of grasshoppers, and at times they scarcely touch anything else. The aromatic berries of the Mexican mulberry (Callicarpa Americana) are greatly relished, also those of the mulberry and holly. In winter the Cardinals are even more conspicuous in the dark evergreen foliage of the hollies than in summer, as almost all the surrounding trees and shrubs have shed their leaves. During the cold season the birds assemble in small flocks of five and more and roam around in search of food. They are frequently seen in company of other Sparrows on the borders of woods in cotton and corn-fields, where they are engaged in picking up all kinds of weed and grass seeds. They are very fond of burr grass seeds or sand spurs (Cenchrus echinatus), which are furnished with formidable spines. This grass is a very vile weed of the southern fields and the orange groves of Florida. When alarmed the Cardinals, like all the other bush-loving Sparrows, dart in a rather heedless way into the nearest thickets. I have often amused myself in throwing my hat or a piece of wood in the air, while observing the birds on the border of the woods. As soon as one of them saw the strange object, an alarm note was uttered and almost all the birds rose at the same time, and in a swarm, as quick as possible, tried to reach the covert. They are all aware of the great danger they are exposed to in the open field, as the smaller Hawks are always on the lookout for their prey in such places. As a rule these assemblages of Sparrows do not venture to proceed too far from their protecting thickets. More in the interior of the weedy fields we find the Grass Sparrows and Shore Larks, which find their best hiding places among the dense weeds.
Few other birds are such universal cage pets as the Cardinal Grosbeaks. They are trapped by the thousands each winter and brought to northern markets. Thousands are shipped annually to Europe, where they are everywhere regarded as cage birds of the highest rank. In Germany it has been raised successfully in the aviaries, and escaped cage birds have even bred in the forests. If carefully and kindly treated, the Cardinal will live for many years in confinement. A roomy cage and variety in food is very essential to keep the bird in good health. A mixture of Canary and sunflower seed, natural rice, millet, Kaffir corn, some oats, mealworms, grasshoppers, pieces of meat, and also Mockingbird-food mixed with grated carrots and all kinds of berries ought to be the Cardinal’s food in confinement.

In the South the Negroes commit great havoc among our beautiful native birds. Mrs. Olive Thorne Miller, in her interesting book, “In Nesting Time,” has told us how these idlers proceed in catching and disturbing the birds, and I can fully corroborate what she writes. In Texas as well as in Louisiana and Florida I have seen Negro boys with strings of dead Cardinals and other birds wandering through the streets of the towns, offering their booty for sale. It is a disheartening sight to every lover of Nature and to every noble minded man, to see how war is waged against the beauties of Nature. “No wonder,” says Olive Thorne Miller, “the Negroes know all about the birds, and lay violent hands on eggs, nests, or nestlings as they choose, creeping around as they do without a sound. It is only surprising that a bird is left, so persistently do they rob the nests.” But there are other enemies. The Blue Jays, oppossums, raccoons, and especially tree climbing snakes, destroy many broods.

This glory of our bird-fauna deserves everywhere careful protection and fostering. Stringent laws should be passed by the legislatures of the Southern States for the protection of birds, and these laws should be strictly enforced. We cannot have too many of these glorious birds in our woodlands and gardens.


DESCRIPTION: “Adult male: Uniform vermilion-red, pure beneath, darker and more brownish above. Lores, anterior portion of malar region, chin, and throat, black—this color meeting across forehead at base of culmen. Bill, bright vermilion-red; iris, brown; feet, horn-color. Adult female: Bill, eyes, and feet as in the male. Red of head and body replaced by olive-gray above, and grayish-buff or pale fulvous below; the crest, sometimes also the breast, tinged with red. Black of throat, etc., replaced by grayish. Young: Bill, dusky. Plumage much as in the adult female, but browner.” (Ridgway.)

Length, 8.25 to 9.25 inches; wing, 3.90; tail, 4.35 inches.

A variety, the Arizona Cardinal, C. cardinalis superbus Ridg., inhabits southern Arizona and western Mexico, south to Mazatlan. The colors are paler than in the type, otherwise the resemblance is very striking.

The Saint Lucas Cardinal, C. cardinalis igneus Stejn., is found in Lower California. East and central Mexico, north to Mirador, is inhabited by the Mexican Cardinal, C. cardinalis cocineus Ridg.; Yucatan by the Yucatan Cardinal, C. cardinalis yucatanicus Ridg. Another variety, the Cozumel Cardinal, C. cardinalis saturatus Ridg., is found on the Island of Cozumel, Yucatan.

Of the closely allied species I shall mention the Colima Cardinal, C. carneus Less., a bird of southwestern Mexico (Colima), and the Venezuelan Cardinal, C. phœnicus Gould, an inhabitant of the northern coast of South America and of Trinidad.
TEXAN CARDINAL.

Pyrrhuloxia sinuata Bonaparte.

The Texan Cardinal is an inhabitant of the dense thorny thickets or chaparral, consisting of mesquite bushes, prickly pear (Opuntia), and other cacti, yuccas and thorny shrubs, of the lower Rio Grande, being a rather common bird in southern Texas and in northern Mexico, and thence through southern Arizona to Lower California. Although a fine and elegant bird, it cannot compare in beauty and song with the Cardinal Redbird. It is very shy and suspicious and very difficult to observe in the almost impenetrable thickets. It seems to be a resident species wherever it occurs. In winter these Cardinals collect in small flocks, which roam around in the chaparral. According to Captain McCown, who observed these birds on the lower Rio Grande, they have a strong partiality for damp and bushy woods. So far as he observed they never ventured far from the river. He describes the bird as gay and sprightly, generally seen in company with others of the same species, frequently erecting its crest and calling to its mate or comrades. In its voice and general habits it appeared to him very similar to the common species.

No other ornithologist has studied the birds of the lower Rio Grande so thoroughly and has written more interestingly about them than Mr. Geo. B. Sennett. In the close vicinity of Brownsville he found the Texan Cardinals quite abundant. One day, while following up a brush fence just without the city, he observed eleven. At Hidalgo, further up the river, he met occasionally solitary pairs in the thickets away from the habitations.

"Their habits," Mr. Sennett continues, "I found to be much like those of the Cardinal Redbird, only they keep closer to the ground. I several times heard the whistle of the male, and I could readily distinguish it from the note of the common Cardinal. I found this species very shy; and when surprised, instead of flying boldly off to another bush, it would invariably dart toward the ground, and fly along the brush, behind some projection, or through the fence to the opposite side."

At Lomita, seven miles above Hidalgo, and sixty-five miles from Brownsville, Mr. Sennett found this Cardinal tolerably common. It breeds fully as early as the Virginia Cardinal, and there is little difference between the habits of the two, but the Texan is more confined to open and exposed situations near settlements. It was always shy and suspicious, so that Mr. Sennett rarely came upon it unaware.

"On April 17, at Lomita," writes Mr. Sennett, "and within a short distance of the river, I flushed a female from her nest, and found four eggs. The nest was about five feet from the ground, among the close-growing shoot of a small ebony stub, standing alone near a brush fence, and not far from the roadway. It was rather compact and small for the size of the bird, being about three and one-half inches in diameter on
ROSE-BREASTED GROSBEAK.

the outside, with an inside diameter and depth not exceeding two inches, and composed entirely of dried inner bark, grasses, pliant twigs, with a few rootlets for lining. The eggs had been sat upon a few days. In shape they somewhat resemble those of the Virginia Cardinal, but are more round, and are irregularly covered with spots in various shades of brown and lavender, which at the larger end are massed together, sometimes forming a band, but more frequently covering the entire end.”

NAMES: Texan Cardinal, Cactus Cardinal.


DESCRIPTION: Head with an elongated, pointed crest, springing from the crown. Upper parts generally pale ashy-brown; hood, sides of neck, and under-parts of body, rather paler. Long crest-feathers, bill all round including lores and encircling eye, wing, and tail, dark crimson. Chin and upper part of throat, breast, and median line of the belly, under tail-coverts, tibia, edge and inner coverts of the wings, bright carmine-red. Bill, yellowish.—Length about 8.50 inches; wing, 3.75; tail, 4.50 inches.

Female similar, with the underpart brownish-yellow; middle of belly and throat only tinged with red.

ROSE-BREASTED GROSBEAK.

Habia ludoviciana Stejneger.

PLATE XXV. FIG. 2 AND 3.

Frank-hearted hostess of the field and wood,
Gipsy, whose roof is every spreading tree,
June is the pearl of our New England year,
Still a surprisal, though expected long,
Her coming startling. Long she lies in wait,
Makes many a feint, peeps forth, draws coyly back,
Then, from some southern ambush in the sky,
With one great gush of blossoms storms the world.
A week ago the Sparrow was divine;
The Bluebird, shifting his light load of song
From post to post along the cheerless fence,
Was as a rhymer ere the poet came;
But now, O rapture! sunshine winged and voiced,
Pipe blown through by the warm, wild breath of the West,
Shepherd his soft droves of fleecy cloud,
Gladdness of woods, skies, waters, all in one,
The Bobolink has come, and, like the soul
Of the sweet season vocal in a bird,
Gurgles in ecstasy we know not what
Save June! Dear June! Now God be praised for June!

LOWELL.

AFTER an absence of twenty years I once more enjoyed the opportunity of rambling about in the haunts of my boyhood as of yore. This was in June, the real spring month in the northern parts of our country. In all my wanderings in the Eastern and Gulf States, through the mountains of the southern Alleghanies and over the flower-adorned prairies of Texas and the Indian Territory I have rarely found a spot more
beautiful and picturesque than the region of Elkhart Lake and the adjacent country. The whole territory is well supplied with springs, rivulets, and lakes. The hills and valleys in the days of my boyhood were covered with a primeval forest. Each valley has its stream, usually a shallow brook of clear, cool water, flowing between banks mostly fringed with dense shrubbery and vine-covered trees. A conspicuous feature of this locality are the extensive tamarack and white-cedar swamps, especially the great Sheboyan Marsh. In the latter the white cedar had attained immense proportions, but that deadly enemy of all forests, the lumberman, already in the days of my youth began his inroads, and the grand old trees that had resisted the storms of centuries, fell before the merciless axe. As a second growth almost impenetrable masses of black spruce, alders, dogwood, viburnums, leatherwood, and young white cedars and tamaracks have sprung up. The ground is thickly matted with sphagnum moss, from which immense clumps of cypripediums emerge. Wintergreen partridge berry, snowberry, many terrestrial orchids, dwarf cranberry bushes grow luxuriantly in this soft carpet of moss. When I visited this immense swamp in the first part of June, 1895, the beautiful white Labrador tea was in full flower. The charming stemless lady's slipper, the white and the large yellow lady's slippers were growing and flowering side by side with pitcher plants. About the middle of June the exquisite moccasin flower, of which I found very large clumps with fully expanded blossoms, was in full bloom. Among ferns, which here find a most congenial home, the cinnamon and Clayton's fern as well as the common bracken, and now and then a bunch of sweet-scented fern were met with. The outlet of Elkhart Lake, which forms the Sheboygan River, flows through this swamp. During the first part of June the chorus of bird songs in this locality is inscrably charming and varied. Indeed I have rarely heard so many fine songsters at one time. Catbirds and Orioles, Thrashers and Towhees, Vireos and a host of Warblers, all praised the beautiful month of June and its salubrious air in the serenity of these woodlands and swamps. The most charming song, full of variety and enchanted sweetness, was that of the most accomplished of our northern songsters, the Veery. It sounded from far and near, and the liquid, mellow notes filled the soul with gladness and delight. In the immediate vicinity of where I rested the sweetly flowing strain of the Water Thrush and the characteristic ditty of the Mourning Warbler came from the dense thickets of Labrador tea, red osier, and leather-wood. The Winter Wren, bubbling over with joy, was at home among the ferns and moss-covered prostrate logs, while Yellow Warblers, Vireos, Redstarts, Parula Warblers, Black-throated Green Warblers, and Flycatchers hopped about among the branches of trees over my head.

Elkhart Lake is a beautiful sheet of blue water, still fringed with much of its original forest growth, although the grand old white pines, oaks, and maples which formerly covered the valleys and crested the hills, have been cut down. For almost a score of years this lake has formed an attractive and popular summer resort. On the hills we often meet fine specimens of red cedar, furnished with branches to the ground.

1 Abies nigra. 2 Dirca palustris. 3 Gaultheria procumbens. 4 Chilogenes hispidula. 5 Ledum latifolium. 6 Cypripedium acaule. 7 C. niveum and C. pubescens. 8 Sarracenia purpurea. 9 Cypripedium pubescens. 10 Osmunda cinnamomea and O. Claytoniana. 11 Pteris aquilina. 12 Aspidium fragrans.
and with foliage of a bluish hue. In the woods, reaching down to the very edge of the water, white pines mingle with oaks, beeches, white birches, maples, hickories, hornbeams, and other trees. On lower ground and in the ravines the tamarack stands near sweet birches, ashes, and elms. Oft we find a marshy place on the lake's side, the home of the Swamp Sparrow, the Mourning Warbler, and the Water Thrush. The peaty soil in such spots is usually covered with sphagnum moss, in which the fragrant rosy pyrola flowered profusely. Near by, but in drier soil, we may pull the white flowers of the northern bedstraw and the fragrant false Solomon's seal. June-berry, plum and wild cherry trees are everywhere. Large white cedars reach out in a horizontal way over the water, and white birches, so common in these woodlands, grow abundantly near the water's edge. Springs emerge near the foot of the hills, sending their cold clear water in strong currents into the lake. Hither come the birds to wash themselves and to make toilet. White-thorns and wild crab trees are common, and the wild grape-vines, embowering many a tree, are now in flower, filling the air with a strong mignonette-like fragrance. Dry places in the woods are covered with dense prostrate bushes of juniper, and in shady nooks and corners one of the most charming and delicate plants, the harebell, with its pretty deep blue flowers was growing and blooming abundantly.

Most of the villas and hotels are built in the original forest, while near others many of the largest and finest trees have escaped the axe. Large elms, maples, whitepines, red and white cedars and other trees are met with everywhere around the houses. Foot-paths, mostly fringed on both sides with trees and dense shrubs, lead almost around the lake and everywhere through the woods. My friends and co-workers, Misses Hedwig and Else Schlichting, who both frequently accompanied me in my rambles in these beautiful June days, proclaimed that they were never "nearer to Nature's heart," that they never enjoyed out-of-door life more than on this beautiful lake and its surrounding woodlands, full of variety, regarding the Silva and the smaller forest flora, and replete with bird-life. There were no troubling insects, no venomous snakes, and as there were only a few guests in the hotels, the friend of Nature and especially the birds in the woods were little molested by human intruders. It is impossible to give within the limits of this sketch anything like a definite idea of these woods; I am only able to give a rough outline of this favorite locality.

Bird-life was exceedingly abundant during all June. Martins nested on the beams under the broad veranda of the largest hotel. Baltimore Orioles, uttering almost incessantly their loud and melodious notes, were flying from tree to tree. Song Sparrows chanted from all sides more diligently than any other bird. The Chippy was everywhere among the dense red cedars, and the Catbird and Robin made the air vocal with their music. The Phœbe nested under the verandas of some of the villas. Warbling and Red-eyed Vireos and Yellow Warblers had chosen, as they always do, the tree tops for their free concerts. Goldfinches or, as they are almost invariably called in this part of the country, "the wild Canaries" were common in the orchards and the Indigo Bunting

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* The last-named of the two friends of my childhood, a highly cultivated woman, an ardent friend of Nature, and a conscientious assistant of the author in his work, passed away on the 28th of July, 1895, after she had vainly sought relief in the beauty and quietness of Nature.

H. N.

1 Betula leata. 2 Pyrola rotundifolia. 3 Galium boreale. 4 Smilacina bifolia. 5 Juniperus communis var. alpina. 6 Campanula rotundifolia.
in the thickets of the woodland border. Cedarbirds were abundantly met with. King-birds were common tenants of the gardens, while Barn, Cliff, Wood, and Bank Swallows were seen in large numbers over the lake. Redwings were breeding in the reeds of the west end of the lake and Bobolinks near by in the low meadows. But no bird attracted more attention and none aroused my enthusiasm more than the exquisite Rose-breasted Grosbeak, of which I often heard three and four at the same time singing in the tree tops near the lake and in close proximity to the dwellings.

How the exquisite song of the beautiful bird filled my soul with rapture! And how many pleasant recollections of my boyhood did these notes recall to my mind! Only a few miles east of Elkhart Lake I spent my earliest youth, and there, on our small lake, especially near the spring on the south side, whither I was particularly fond to lead my steps during the spring and summer months, the Rose-breasted Grosbeak was a regular summer resident. The forest growth did not differ from that near Elkhart Lake, except that the white pines were more common and the white and red cedars entirely absent. Sweet and white birches were especially numerous. In these woodlands the songs of the Veery, the Purple Finch and Towhee were frequently heard, especially in the early morning hours and at sunset. The brilliant red plumage of the Scarlet Tanager gleamed among the deep foliage of the pines. But what most attracted me to this idyllic place was a wonderful and beautiful bird with a deep black head and blackish upper parts, a white rump and underside and a beautiful rosy-red breast. Its unique and loud song floated down from the tops of the white pines and birches; mounted almost on tiptoe, raising its wings, the underside of which showed a beautiful rosy-red color, and moving its body to and fro as if seemingly in an "ecstasy of enthusiasm and delight at the unrivalled harmony of its own voice." It could be heard sometimes almost for an hour in succession. In those early days I did not know its name. The boys called it "Red-breast," and by this appellation it was also known to the settlers. Its exquisite song as well as its brilliant color characterized the bird at once, and it could not be confounded with any other of the woodland minstrels. Much later, when I had an opportunity of reading Audubon's unrivalled description, I remembered my old favorite and learned its correct name. How I loved this song, a song entirely its own, enchantingly beautiful, mellow and sweet, rich and powerful, exceedingly touching and filling the soul with rapture and enthusiasm! Even the indifferent cannot help to listen to this strain with admiration. I felt, even when a boy, the power of this song, felt that this was an exceptionally wonderful bird and a glorious songster. And in my later years I have rarely heard a song more richly varied, more touching, more appealing to the heart, more striking than that of the Rose-breasted Grosbeak. I fully agree with Nuttall when he describes these notes as "wholly warbled, now loud and clear, now with a querulous and now with a sprightly air, and finally lower and more pathetic."

One must listen to the melody of the Rose-breasted Grosbeak in the beauty of the June woods in order to understand and appreciate its unrivalled harmony and sweetness. Most enchanting this song sounds in the bright moon-light nights when all Nature is silent and only the nocturnal notes of the Whippoorwill re-echo through the forest. These notes are delivered so gently and so full of melancholy and yet so lovely that I cannot find words to describe the impression they make on the mind of the hearer.
ROSE-BREASTED GROSBEAK.

"One year in the month of August," says Audubon, "I was trudging along the shores of the Mohawk River, when the night overtook me. Being little acquainted with that part of the country, I resolved to camp where I was; the evening was calm and beautiful, the sky sparkled with stars, which were reflected by the smooth waters, and the deep shade of the rocks and trees of the opposite shore fell on the bosom of the stream, while gently from afar came on the ear the muttering sound of the cataract. My little fire was soon lighted under a rock, and, spreading out my scanty stock of provisions, I reclined on my grassy couch. As I looked around on the fading features of the beautiful landscape, my heart turned toward my distant home, where my friends were doubtless wishing me, as I wished them, a happy night and peaceful slumbers. Then were heard the barkings of the watch-dog, and I tapped my faithful companion to prevent, his answering them. The thoughts of my worldly mission then came over my mind, and having thanked the Creator for all his never-failing mercy, I closed my eyes, and was passing away into the world of dreaming existence, when suddenly there burst on my soul the serenade of the Rose-breasted bird, so rich, so mellow, so loud in the stillness of the night, that sleep fled from my eyelids. Never did I enjoy music more: it thrilled through my heart, and surrounded me with an atmosphere of bliss. One might easily have imagined that even the Owl, charmed by such delightful music, remained reverently silent. Long after the sounds ceased did I enjoy them, and when all had again become still, I stretched out my wearied limbs, and gave myself up to the luxury of repose. In the morning I awoke as vigorous as ever, and prepared to continue my journey."

The Rose-breasted Grosbeak must be ranked among our most beautiful birds as well as among our most exquisite songsters. It is evidently a high-bred bird, being nowhere very common, living rather retired in the most beautiful parts of the forest and being of a quiet and noble disposition. Its accomplished song is a charming accompaniment to the notes of the Wood Thrush, the Veery, the Scarlet Tanager, the Towhee, and other woodland minstrels. It is heard most frequently from the bird's arrival until late in June or the beginning of July. The male sings even on the nest. "During incubation," says Dr. T. M. Brewer, "and in the presence of its mate, this Grosbeak is a persistent and enthusiastic singer, and, at times, carries his love of song so far as to betray his nest. This is more especially so when he relieves his mate, takes her place on the nest, and then apparently oblivious of the danger of lifting up his voice in song when upon so responsible a duty, attracts, by his melody, the oologist to his treasures."

The Rose-breasted Grosbeak is a late arrival. In Sheboygan County, Wisconsin, I have never heard its full song until the third week of May, but I have often seen males as early as the second week of the same month. It winters south of the United States, in the tropics, being especially numerous in southern Mexico, Guatemala, and Honduras. In the latter country Mr. Erich Wittkugel found it in the wooded mountain region west of San Pedro Sula. It winters also in Cuba, through all States of Central America south to northern South America, as far as Ecuador. In the collection of Colombian birds at the World's Columbian Exposition I found quite a number collected by C. Balen in the Andes during the winter of 1891 and 1892. In south-eastern Texas I have never seen the bird, but in southern Louisiana I met with small
flocks among the flowering magnolias late in April. These flocks consisted almost entirely of females, the males having passed through a week before. In the Ozark region of south-western Missouri I noticed the first flocks of males during the last week of April and in northern Illinois in the first days of May. The southern limit of the Rose-breasted Grosbeak’s breeding range seems to be St. Louis, where it arrives, according to Mr. Otto Widmann, in the last week of April. He writes me, that there it rears two broods each season, and that it leaves for its winter-quarters late in September.* It usually breeds from latitude 37° northward. How far it penetrates the British territory we do not know, but it is met with in the Selkirk Settlement and, according to Mr. E. E. Thompson, it is a tolerably common summer resident at Portage la Prairie, Manitoba, where it arrives about May 22. It migrates in large and rather scattered flocks, and the males arrive usually five or six days in advance of the females. At Shiocton, Wis., according to Mr. Grundtvig, this bird is rather common, and in 1882 he found a dozen pairs breeding in the vicinity of a house. He saw the first male May 9, the first female May 15, and the bulk about May 24. About its occurrence in the mountains of North Carolina, Prof. Wm. Brewster writes as follows:

“I found this species only in the country about Highlands and on the Black Mountains. In the former locality it ranged from (approximately) 3,500 to 4,500 feet; in the latter from 3,800 to 5,000 feet; in both it was far more abundant than I have ever seen it at the North. Its favorite haunts were the open oak woodlands. . . . Throughout these, at all times of the day, I was rarely out of hearing of its voice. The song did not seem to differ from that of our northern bird, but what a superb performance it is whenever heard—so rich, flowing, and withal so tender and plaintive! I know of no bird-voice more expressive of feeling and sentiment.”

This Grosbeak is an inhabitant of eastern North America, west to the Missouri plains, being more abundantly met with in the West than in the East. “I have nowhere found this beautiful bird more abundant,” writes Dr. Elliott Coues, “than along the Red River of the North, and there may be no locality where its nidification and breeding habits can be studied to greater advantage. On entering the belt of noble timber that borders the river, in June, we are almost sure to be saluted with the rich, rolling song of the rose-breasted male, and as we penetrate into the deeper recesses, pressing through the stubborn luxuriance of vegetation into the little shady glades that the bird loves so well, we may catch a glimpse of the shy and retiring female, darting into concealment, disturbed by our approach. She is almost sure to be followed the next moment by her ardent spouse, solicitous for her safety, bent on reassuring her by his presence and caresses. Sometimes during this month, as we enter a grove of saplings, and glance carefully overhead, we may see the nest, placed but a few feet from the ground, in the fork of a limb. The female, alarmed, will flutter away stealthily, and we may not catch another glimpse of her, nor of her mate even, though we hear them both anxiously consulting together at a little distance.”

Formerly the Rose-breasted Grosbeak, although not very abundant and of somewhat irregular occurrence, was a numerous bird in the Eastern States and New England, but now it is a rare bird in many places. Even in Indiana, Illinois, and Wisconsin it

* “In 1885 common Sept. 16, very numerous September 22, bulk present Sept. 25, and bulk departed Sept. 29.”
ROSE-BREASTED GROSBEAK.

has become a scarce bird of late in many localities. The reason for this sad fact is the uninterrupted and unexcusable war waged against our birds, especially those of bright colors. It has been recorded that in certain places, where our birds are protected, the Rose-breasted Grosbeak increases in numbers. Dr. J. A. Allen is of the opinion that it has increased in numbers in all parts of Massachusetts during the last twenty-five years, and in the Connecticut valley it seems now to be also a more common bird than in former years.

I have already alluded to the fact that this elegant bird is of a rather local occurrence. In Wisconsin we may find five or six pairs in a tract of woodland not exceeding two or three acres, while several miles away in a locality, apparently no less suitable, not one pair is found. Woods consisting partly of evergreens and partly of deciduous trees and shrubs are its favorite haunts. It prefers the borders of woods and the vicinity of lakes and streams, often also breeding in close proximity to houses, selecting for this purpose evergreens, ornamental and pear trees.

The nest is usually built among the dense foliage in some horizontal branch, very near the trunk of a tree, from six to fifteen feet from the ground, near the border of woodlands, or near springs, rivers, and lakes. I found the structures almost always in alders, birches, young white pines and cedars, and in northern Illinois the birds had a predilection for white-thorns and pear trees which were found in an orchard bordering the woodland. On the Des Plaines, in northern Illinois, I usually found the nests early in June. They were built in tracts of dense and rather low woods with an almost impenetrable growth of underwood consisting of different species of viburnums, white-thorns, wild crab trees, hazel and gooseberry bushes, grape-vines, Virginia creeper, and climbing bittersweet (Celastrus scandens). On the rank herbaceous plants several parasitic species of Cuscata or dodder, with yellowish or reddish thread-like stems, were twining in a luxuriant way. Oaks, hickories, elms, and ashes were the prevailing forest trees. Catbirds, Wood Thrushes, Towhees, Brown Thrashers, Red-eyed Vireos, and Scarlet Tanagers sang their sweetest notes. The nest was placed usually near the trunk of a white-thorn or a wild crab tree, and I discovered several on which the male was breeding, his black head being noticeable from quite a distance. During this time masses of flowering wild crab trees perfumed the wildwood air. The nest is not an elegant affair; it is, in fact, bulky, if not actually slovenly, being formed of long slender grasses, plant stems, and rootlets. The lining consists of finer grasses and fibres. It has on the exterior a diameter of about six inches and a depth of four inches. The cavity is usually three inches wide, by one and a half deep.

The eggs, generally three and four and rarely five in number, are greenish-blue, more or less spotted over the entire surface, with dots and blotches of deep and reddish-brown. They closely resemble the eggs of the Scarlet Tanager.

The late Dr. R. P. Hoy, of Racine, Wis., found seven nests about six miles from that city on the 15th of June, all within a space of not over five acres. Six of these nests were in thorn trees from six to ten feet from the ground, and all were in the central portion of the top. Three of the four parent birds sitting on the nest were males. When a nest was disturbed, all the neighboring Grosbeaks gathered around and appeared equally interested. Both nest and eggs so closely resemble those of the Tanagers, that it is difficult to distinguish them. Their position is, however, usually different, the Grosbeaks
generally nesting in the central portion of a small tree, the Tanagers' nest being placed on a horizontal limb.—The Rose-breasted Grosbeak is a very beneficial bird. In spring and summer it feeds largely on injurious insects, especially beetles, caterpillars, moths, and others which infest the trees. It even eats the Colorado potato beetle. Wild fruits and seeds of many kinds also constitute a part of its diet. In winter seeds form the main part of its food. It is said to eat green peas, and for this reason it is often killed, though the damage done in this way does not compare with the many benefits which it bestows. This elegant and useful bird, one of the jewels of our bird fauna, should be protected wherever it occurs by stringent enforcement of the laws for the protection of our native birds.

In the woods its flight is light and easy, but over large treeless tracts it is somewhat slow and heavy. During migration the flocks ascend high into the air, and then the flight is quick and constant.

Although the Rose-breasted Grosbeak is nowhere more beautiful and poetical than in its natal haunts, although its song is most thrilling and lovely in the fresh flowering June woods, the bird fanciers years ago ranked it among the most valuable cage pets. Large numbers are exported annually to Europe, where they are highly appreciated as cage birds. I have kept this Grosbeak frequently in confinement. It soon becomes tame and much attached to those who treat it kindly, taking flies, grasshoppers, mealworms, and other insects out of the hand. Mealworms are especially relished and while in song during spring and summer it should have from ten to fifteen each day. If these cannot be furnished hard boiled egg and "ant's eggs" (the dried larvæ of ants) should be substituted. Its main food in the cage should be a mixture of Canary, millet, and sunflower seed, and also Mockingbird-food mixed with grated carrots. If exclusively sustained by seeds it becomes exceedingly fat and soon dies. Therefore it is necessary to supply the bird with all kinds of fruits as the season offers them. Only those who are able to supply all the wants of this beautiful songster, should keep it in the cage. During spring and early summer, and also during bright moonshiny nights, it sings very sweetly in the cage. Though apparently a robust bird, it is easily affected by cold, suffering very much in cold wintry nights. The cage, which must be roomy and kept very clean, must always be kept in a warm place and out of draught. I knew a Rose-breasted Grosbeak which was kept in perfect health for over fifteen years. All the white of the plumage had become in time a very beautiful rosy-red.


DESCRIPTION: Male. "Upper parts generally, with head and neck all round, glossy black. A broad crescent across the upper part of the breast, extending narrowly down to the belly, axillaries, and under wing-coverts, carmine. Rest of under-parts, rump and upper tail-coverts, middle wing-coverts, spots on the tertaries and inner great wing-coverts, basal half of primaries and secondaries, and a large patch on the ends of the inner webs of the outer three tail-feathers, pure white."

Female entirely different. "Without the white of the quilla, tail and rump, and without any black or red. Above, yellowish-brown, streaked with darker; head with a central stripe above, and a superciliary one on each side, white. Beneath, dirty white, streaked with brown on the breast and sides. Under wing-coverts and axillaries saffron-yellow." (B. R. & R. II. p. 70.)
BLACK-HEADED GROSBEAK.

_Habia melanocephala_ Stejneger.

**Plate XX. Fig. 5.**

This fine bird," says Prof. Robert Ridgway, "was quite abundant in the fertile valleys and lower caños along the entire route, from Sacramento to the Wahsatch and Uintahs. Its range was exactly that of the Lazuli Finch, and it was observed that in the interior both these species reached their upper limit about where the summer range of the Louisiana Tanager commenced, viz, about the middle portions of the caños. It was abundant both at Sacramento and in the valley of the Truckee, in western Nevada, but was nearly restricted in the former locality to the willow thickets, while in the latter it preferred the shrubbery of buffalo-berry and other bushes. At the latter locality it was observed to feed, in May, upon the buds of the grease-wood (_Obione confertifolia_), in company with the Louisiana Tanager, Bullock's Oriole, and several other birds. It was also found in the shrubbery along the lower portion of the mountain streams, but was there less numerous than in the river-valleys, while at an altitude of about 7,000 feet it appeared to be entirely absent. It was consequently rare in Parley's Park, where, however, a few pairs were nesting in the thickets along the streams. It was frequently observed that the male of this species assists in incubation, being, in fact, more often seen on the nest than his mate. This species appears to be a perfect counterpart of the eastern Rose-breasted Grosbeak, its notes especially, in all their variations, being quite the same."

In his excellent work, "Birds of the North-west," Dr. Elliott Coues gives the following description of the **BLACK-HEADED GROSBEAK** and its habits:

"This interesting western ally and representative of our Rose-breasted Song Grosbeak, is of common and very general occurrence in the middle and western provinces of the United States. The easternmost instance is, I believe, that recorded by Mr. Allen, who found the bird in middle Kansas, breeding, in June. He saw young birds on the 11th, and the eggs of a second brood toward the end of the month. I have not observed any references beyond the United States to the northward; in the other direction the bird appears to extend through Mexico, on the table-lands. Many reside in that country; others, obeying the mysterious impulse of migration, enter the United States in April, and become extensively dispersed, as we have just seen, retreating to their warm winter-quarters in the fall. In the mountains of Arizona I found it to be an abundant summer resident from the beginning of May until the end of September. It appeared to shun the pine woods, preferring ravines wooded with deciduous trees and upgrown to shrubbery, as well as the thick willow-copses that fringe the mountain streams. Like others of the same beautiful genus, it is a brilliant and enthusiastic vocalist, its song resembling that of the Rose-breasted Grosbeak, and having much similarity to that of the Baltimore Oriole. Its ordinary chirp, or call-note, strikingly resembles that of Gambel's Plumed Quail—so closely, indeed, that I never could tell
which of the two I was about to see, both species often being found together in the creek bottoms. It feeds at times extensively upon willow buds, and similar soft, succulent vegetable matter; also upon seeds and berries, in their season, and upon various insects. Mr. Allen has noted its fondness for peas, causing it to be ungraciously regarded by the agriculturists of Utah.

"According to Dr. Cooper, a nest 'found May 12, at the eastern base of the Coast Range; was built on a low, horizontal branch of an alder, consisting of a few sticks and weeds, very loosely put together, and with a lining of roots and grasses. The eggs were only three, pale bluish-white, thickly spotted with brown, densely so near the large end; size, 0.95 by 0.70.' Dr. Heermann's account of the nidification is substantially correspondent, except as to the situation of the nest, which, he says, is 'formed with little care of twigs very loosely thrown together, and lined with roots; it is placed on the branches of a bush. The eggs, four in number, are greenish-blue, marked with irregular spots of umber-brown, varying in intensity of shade.' In nearly a dozen specimens, I can find no reliable differences from the egg of the Rose-breasted Grosbeak.

"During Mr. Allen's western reconnaissance, the species was first met with at Fort Hays, and afterward at various localities near the foot-hills of the Rocky Mountains, and in the valleys, up to about 8,000 feet. Its song and breeding habits, according to his observations, agree with those of the Rose-breasted Grosbeak, and the nidification is very similar. Mr. Merriam, who found the species to be quite numerous among the scrub-oaks at the foot of the Wapsatch Mountains, obtained a nest on the 22nd of July, in Teton Basin, Idaho. 'It was on a cotton-wood sapling, about five feet above the ground, and was composed of pieces of grass and vines laid carefully together, with their ends sticking out four or five inches; it contained two fresh eggs.' Mr. Trippe writes to me as follows:

"'The Black-headed Grosbeak arrives in the lower valleys of Bergen's Park, Colorado, about the 20th of May, and by the 1st of June has become quite numerous throughout the park. It rarely ventures higher than 7,500 feet, however, as it is rare in the valley of Clear Creek, and, indeed, quite uncommon outside of Bergen's Park, but is abundant from there down to the plains. It is the exact counterpart of the Rose-breasted Grosbeak in its flight, manner of feeding, and general habits and actions, and its song closely resembles that of the latter bird, but is nevertheless distinguishable. In September it disappears from the upper range in the mountains.'"

This bird is confined to the Western United States, east to the Great Plains.

NAMEs: BLACK-HEADED GROSBEAK, Mountain Grosbeak.—Schwarzköpfiger Kernbeisser (German).


DESCRIPTION: "Adult male: Hood, black; the throat, and sometimes postocular stripe (occasionally a stripe on middle of crown also), light cinnamon-ochraceous; wings and tail, black, varied with white, as in H. ludoviciana; back, mixed black and light cinnamon (sometimes uniform black); rump, collar round hind-neck, and most of lower parts, uniform buffy-cinnamon; belly and under wing-coverts lemon-yellow; under tail-coverts, white. Adult female: Above, dusky grayish-brown, streaked, especially on back and middle line of crown, with pale fulvous or buffy; beneath, pale fulvous or ochraceous; streaked on sides and flanks with dusky, but usually without streaks on breast; belly, pale yellowish, and under wing-coverts clear lemon-yellow.

"Length, 7.50 to 8.90 inches; wing, 3.85 to 4.20; tail, 3.40 to 3.90 inches." (R. Ridgway.)
BLUE GROSBEAK.

*Guiraca caerulea* Swainson.

Plate XVIII. Fig. 5.

There are moments of life that we never forget,
Which brighten and brighten as time steals away;
They give a new charm to the happiest lot,
And they shine on the gloom of the loneliest day.

The northern woodlands awaken from their winter sleep to real life when spring sends its first heralds, the Song Sparrow, Robin, and Bluebird. But not until May and June do the forests really resound with the thousand-voiced chorus of their plumbed inhabitants. During the early part of June the grand and exhilarating concert of the woodlands inspires even the indolent with delight and poetical emotions. This concert would seem incomplete were any of the Vireos, Warblers, Tanagers, Thrushes, or Woodpeckers absent. Their united efforts are indispensable. Further south in the Gulf region it is somewhat different, for there the woods are almost perpetually enlivened by numerous birds, and though they do not sing regularly, they often warble parts of their lays. In these southern woods winter is doubtless quite apparent also. Most of the trees have lost their foliage, and only the pines, the live-oaks, the grand evergreen magnolias, the loblolly bay, red bay, laurel cherry, and holly and a number of shrubs like the dahoon, the yupon or cassine and the wax myrtle make a splendid appearance in their garments of dark evergreen foliage. Where the undergrowth is dense, birds are wintering abundantly. What can be more charming than yonder evergreen holly, adorned with its bright red berries and enlivened by numbers of Cardinal Redbirds, hopping about among the dense branches! If the day is sunny and the air salubrious, they chant their loud rolling song in all directions, inducing other songsters to join them, until the whole woodlands ring with their sweet music. The Carolina Wren sings in the dense evergreen thickets or in the almost impenetrable cane-brakes or bamboos (*Arundinaria macrosperma*) its liquid notes, and along the edge of the woods hundreds of Field Sparrows warble their cheerful melodies. Without these feathered inhabitants the woodlands with their beautiful trees and shrubs would seem deserted and desolate. Their songs lend to them an indescribably poetic charm.

The bird song is to him who can understand and interpret it a poem, an idyl of life and happiness. At home it cheers us, in strange localities it is a touching and home-like greeting, and often it gives consolation in sorrow and sadness. What music has such enlivening touch of hope and bliss as the first spring greeting of the Bluebird, the tidings of spring’s approach brought by the Song Sparrow and Robin, when ice and snow still cover the ground! What blissful rapture fills the heart when in the South the flower-perfumed night is made melodious by the enchantingly sweet song of the Mockingbird!

No wonder, therefore, that man of true sentiment and dignity has ever been and will always be a friend and protector of the birds of song and beauty. Hunting
and killing them and robbing their eggs denotes a low degree of civilization, cruelty and want of feeling.

Man values and cherishes not equally all the feathered inhabitants of wold, field, and meadow. He may be fond of them all, but he generally prizes most highly those who manifest their confidence and attachment by seeking his company and depending to some extent on his hospitality, and who in the most beautiful season of the year come into close proximity of his dwelling, cheering him by their happiness and sweet music. None of our songbirds are such universal favorites in the North than the Robin, Bluebird, Song Sparrow, Catbird, Rose-breasted Grosbeak, Purple Martin, and Barn Swallow, and none enjoy the love and good will of man in the southern gardens more than the Mockingbird, Cardinal Redbird, Carolina Wren, Painted Bunting, Orchard Oriole, and the beautiful Blue Grosbeak, the subject of this sketch, with whom I wish to make my readers now more closely acquainted.

Audubon describes this exquisite bird as shy and recluse, effecting remote marshes and the borders of large ponds. The following life-history will show that, on the contrary, the Blue Grosbeak is at present one of our most familiar birds, never inhabiting marshy places and the interior of the woods, but preferably orchards, the ornamental shrubs of the garden and the brambles on the road-sides.

The Blue Grosbeak is one of the most refined and beautiful of all our native birds. The color of the male is a brilliant deep blue, darkest on back and almost black on the tail. Two small reddish-brown spots on the wing characterize the bird at once. The female is light brownish, darkest on the breast. When the sun falls on the plumage of the wings and tail, it has a faint bluish tint. Both birds have much similarity to the Indigo Bunting, only that the latter is much smaller and without the characteristic reddish-brown wing spots.

In all parts of Texas, from San Antonio, New Braunfels and Austin to Houston and thence through southern Louisiana to New Orleans, and from there to Tallahassee, Florida, I found the Blue Grosbeak a common, though nowhere an abundant bird. One of the delightful unfading pictures in my memory of the southern blackberry thickets, the Cherokee-rose hedges, and the shrubbery of the fence-corners is that of this elegant bird. I met with it for the first time on April 22, 1879, at Serbin, Lee Co., Texas. It was perched on a fence, uttering its lively strain after short intervals. As the bird was not shy I could observe it for quite a while. When approaching too closely it took wing and disappeared in a blackberry thicket, almost touching the ground when flying. At the end of the same month and at the beginning of the next I rambled about in south-eastern Texas, near Spring Creek. The farms in this locality are situated on fertile prairie land on the outskirts of very beautiful and dense woods. In the corners of the rail-fences a thick growth of blackberry bushes, wild roses, smilax, sassafras, and trumpet creeper as well as small trees and now and then a dense mass of Cherokee roses, occurred. Such places are not only the favorite haunts of Cardinals, Yellow-breasted Chats, Painted Buntings, Carolina Wrens, and White-eyed Vireos, they also form the true home of the Blue Grosbeak. Thickets of cacti (Opuntia Engelmanni), yuccas, and small trees covered with grape-vines, smilax, and trumpet creeper were found everywhere in the pastures and on the prairie.
When I visited this locality again in May, 1880, I found these birds still more numerous than the year before. May 18th I discovered the first nest on a road-side only a few steps from a much frequented wagon track. It was built in a very thorny blackberry bush, about two feet above the ground, and was so well hidden in the dense foliage that it could only be seen when the twigs were bent aside. This nest was a very pretty and compact structure, entirely different from what I had read about it. Externally it was constructed of corn-leaves mixed with long fibrous rootlets, large pieces of snake-skin and small dry leaves. The rim was made of catkins of the oak, intermingled with spider’s nests and caterpillar’s silk. A little cotton also entered into the composition. The cavity was lined with fine brown rootlets. The eggs, three in number, were of a uniform bluish-white, without spots. All other nests found subsequently were built in the same manner, and all were discovered near dwellings. Several domiciles found in gardens in rose-bushes, and one in a dense sweet myrtle (Myrtus communis), displayed in their construction also a few pieces of paper, parts of strings and muslin and in the lining a few horse hairs. Snake-skins, with the Blue Grosbeak, always are a favorite and characteristic nest-building material, forming sometimes almost the entire exterior of the nest. For what purpose this is used I am unable to say, but very probably it forms a protection against different animals, if not against the hideous nest-robbing snakes themselves. All the nests, of which I found about twenty, in 1880, were built from two to eight feet above the ground.

In the spring of 1881 I discovered many more nests in the peach orchards near the West Yegua Creek, Lee County, Tex. These nests were situated from three to twelve feet from the ground, and all were constructed materially of a very soft whitish woolly plant (probably a species of Gnaphalium), fine plant-stems, snake-skin, strings, spider’s nests, and the cavity was lined with fine rootlets. In the following year I discovered the first nest on May 13, in a peach orchard. It was built between the trunk and a sapling of a peach tree about six inches above the ground. Weeds in great luxuriance grew all around, screening the nest from observation. It was a very peculiar, though beautiful and artistic structure, built externally of broad shreds of corn-husks, a few plant-stems, and mostly of snake-skin, the latter arranged in a turban-like way. All over it was decorated with cinnamon-brown caterpillar nests, which gave the domicile a very odd appearance. A few days later I found another peculiar nest, which was placed in a half-pendulous way in a horizontal branch of a black-jack oak, about twelve feet from the ground. Above and below it was protected by a canopy of dense foliage. Fine shreds of corn-husks and pliable plant-stems, mixed with spider’s nests, formed the bulk of the material, and the cavity was lined with fine pieces of corn-leaves and tender grasses. A third nest was also in a rather extraordinary position. It was built in an almost pendulous branch of an oak on the woodland border and far from the trunk, about twenty-five feet above the ground, and entirely out of my reach. All the other nests were built in orchard trees and ornamental shrubs. One was placed in an apple tree only a few steps from a house and near a much frequented walk. Almost all contained four, only a few three, and none five eggs. In May of 1882 I found fifteen, and in June six nests of the Blue Grosbeak. In the South usually two broods are raised each year.
The country people of Texas love these strikingly beautiful birds to such a degree that they do not allow them to be molested in any way. The nests have a great resemblance to those of the Painted Bunting, but they are larger. In south-western Missouri, at Freistatt, Lawrence Co., the Blue Grosbeak is a tolerably common bird, breeding preferably in pear and apple trees, and sometimes even in snowberry, upright honey-suckle, mock orange, and prairie rose bushes. The construction of the nests differed much from those found in Texas. The exterior was usually built of fine bark-strips, rootlets, grasses, moss, and spider webs, and the lining consisted of fine rootlets. In this locality I found snake-skin never used in the construction of the nests.

A friend near Tallahassee, who has a special love for these birds, informs me that besides Cardinals, Mockingbirds, Bluebirds, Carolina Wrens, Painted Bunttings, and Orchard Orioles these birds breed every year in his garden in close proximity to the broad veranda of the house, embowered in masses of Marchal Niels, Chromatella, Lamarque, Woodland Marguerite and Banksia roses. They feel perfectly at home among the masses of camellias, Cape jasmines, holly-leaved1 and sweet olives8, cleyeras,5 euryas,4 abelias5, pittosporums6, banana shrubs1, magnolias9, laurustinus9, sweet viburnums9, silver shrubs11, Japan euonymus12, retinisporas13, cypress14, cunninghamias13, podocarpus16, and rose bushes. They prefer to nest in red cedars17, in Cherokee18 and Macartney19 roses and in pear trees. The nests do not differ from those found in Texas. In its nesting range the Blue Grosbeak is a very shy and quiet bird, rarely betraying its hidden domicile by its presence or warning call-notes. Near my house in south-western Missouri a pair had built its nest in a pear tree near a much frequented garden path, but it was not before the young were hatched that it was discovered. The female approaches and leaves the nest in a very quiet and stealthy way. Very early in the morning the female carries the material to the nest, but the work stops when the sun appears above the horizon. She also hatches the eggs without the assistance of her elegant partner. Sometimes the latter aids her in feeding the young, and this work is performed almost exclusively by him, when they have left the nest, while the female is preparing for a second brood. When approaching the nest we may hear a low warning note of the always watchful male. Without delay the female leaves her nest, flying low over the ground and hiding among the bushes. Her neutral colors perfectly protect her from observation, while the brilliant male is soon detected. But as the latter is always on the alert to keep out of sight and to hide in the shrubbery, we rarely see him near the nest. The pair is much attached to each other. In times of danger, when the female leaves the nest, the male utters a metallic call-note, not very unlike the common note of the Bobolink.

The Blue Grosbeak is a very diligent singer in the early morning hours, and in order to enjoy its song we must rise early. I have rarely heard its lively strain during noon-tide, and not until it becomes cooler, late in the afternoon, the lovely and varied song sounds through the air in its full beauty. While singing the bird is perched

1 Osmanthus ilicifolia. 2 O. fragrans. 3 Cleyera japonica. 4 Eurya latifolia variegata. 5 Abelia rupestris. 6 Pittosporum tobira. 7 Michelia fuscata. 8 Magnolia grandiflora and glauca. 9 Viburnum tinus. 10 Viburnum odoratissimum. 11 Elaeagnus Simoni. 12 Euonymus japonica. 13 Retinispora plumosa. R. obtusa, R. pisifera. 14 Cupressus funerea. C. Knightiana. C. Californica. C. torulosa, C. glauca pendula. 15 Cunninghamia Sinensis. 16 Podocarpus Japonica, P. Nagel. 17 Juniperus Virginiana. 18 Rosa Sinica. 19 Rosa bracteata.
in the top of a bush or small tree, on a post, or a telegraph wire. Not infrequently it pours forth its sweet strain while hidden in dense shrubs and vine-embowered trees. The lover of bird songs will scarcely tire to listen to these, although rather short, but exquisitely sweet, clear, melodious, and somewhat metallic notes. The whole performance has something very peculiarly and indescribably pleasant. Some observers claim that the song is much like that of the Indigo Bunting, and others compare it even to the Bobolink's unrivalled reverie. In my judgment it has not the slightest resemblance either with one or the other. Probably Cooper is not far amiss when he likens the song to that of the California House-finch. To my ear the song had always a great similarity to that of the Purple Finch, though not so quick and energetic. It sounds much like the following syllables: *this-these-tshe-woid-tshe-tshe*, but these sounds are so frequently varied and changed that words cannot do them full justice. In Texas I have often heard the song late in the evening, and at such times the slower and somewhat melancholic notes make a deep impression on the hearer. The bird sings from the time of its arrival late in April until the young are hatched and have left the nest.

Although of quick temper, this Grosbeak is a very peaceful bird. Its nesting range, although comparatively small, will be bravely defended against intruders of its own species, but with all the other birds of the shrubbery it usually lives in perfect harmony. Generally only one pair is found in a garden, yet in Texas I have observed four pairs breeding in a peach orchard of two acres. In this orchard I found quite a number of dense young mountain cedars, said to be a variety of the common red cedar, though its berries are about three times as large, of grayish color, very juicy, and highly relished by many birds, especially by the Cedar-birds, in winter. The Painted Bunting quite often nests near by and the Orchard Oriole, or Kingbird, sometimes built in the same tree.

In spring and summer its food consists mainly of all kinds of insects, especially smooth cater-pillars, moths, grasshoppers, plant-lice, bugs, and a few berries. The young are fed almost entirely with insects. Later in the season, during August, the families gather in loose flocks, which lead a rather retired life in the Cherokee rose hedges, in the bushy borders of the woods and in the shrubbery of pastures and fields. I have never found these birds in moist or marshy places. In September they subsist partly on insects and berries, partly on seeds. By the middle of October almost all have left Texas for their winter-quarters in southern Mexico, Yucatan, Honduras, Costa Rica, the West Indies, etc.

The flight of the Blue Grosbeak is short and low, usually leading only from one thicket to another. During migration it mounts high into the air and then its flight is rather hurried. On the ground, where most of the food is gathered, its motions are somewhat awkward. It usually searches one place thoroughly and then hops to another. In the branches of trees and shrubs its movements denote that in these it is perfectly at home. It has a predilection of perching in the tops of low bushes and trees, where it swings up and down.

In south-eastern Texas the Blue Grosbeak rarely makes its appearance before the 20th of April, and in south-western Missouri not before May 9th, always when the red clover is in flower. This beautiful bird would be much more common in Texas and Missouri, were not so many nests destroyed by the exceedingly numerous, half domesti-
cated pernicious Blue Jays, the fiercest, boldest, and most dangerous of all the enemies of our small birds.

The breeding range of the Blue Grosbeak extends over the Southern States, north to Washington, Pennsylvania, Kentucky, Missouri, and west to Texas, Indian Territory, and Kansas. A little larger variety, of a rather lighter blue color and with much broader and paler rufous wing-bands occurs in the western United States, especially in Arizona and California, north to Colorado. This is the WESTERN BLUE GROSBEAK, Guiraca cærulea eurhyncha COUES. It does not differ in its manners from the eastern form.

The Blue Grosbeak is well adapted for the cage, soon becoming very confiding and much attached to its keeper. I have kept several for a long time in the cage, and they lived peacefully together with a large number of African and Australian Finches. A mixture of millet, Canary seed, Kaffir corn, rice in its natural state, formed their main diet in winter, with an addition of all kinds of fruits. In spring and summer crated hard boiled eggs, ant's eggs, grasshoppers, and especially mealworms are a compensation for the insect food in its haunts. The French Creoles, in New Orleans, are great admirers of the Blue Grosbeaks, and they frequently keep them in cages, usually under the name of "Le Grosbeau ou Evêque bleu," its common name being "Blue Pop."

NAMES: Blue Grosbeak, Blue Pop.—Blauer Kernheisser, Bischof (German).


DESCRIPTION: "Adult male: Uniform dull ultramarine blue; lores, black; wings and tail, blackish; the feathers edged with bluish, the former with two fulvous bands. Adult female: Above, fulvous-brown; beneath, paler fulvous; wings and tail, dusky; the former with two light fulvous bands. Young: Similar to adult female, but colors more ochraceous, the wing-bands more rusty, etc. Immature males: The plumage of the adult male and female mixed, in various proportions, according to age. Adult males in winter: Blue or black, breast, etc., more or less obscured by light brownish or buffy tips to feathers.—Length, 6.35 to 7.50 inches; wing, 3.35 to 3.60; tail, 2.70 to 2.90 inches." (Ridgway.)

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INDIGO BUNTING.

Passerina cyanea Gray.

Plate XXVIII. Fig. 2 and 3.

Jes' so our spring gits everythin' in tune
An' gives one leap from April into June;
Then all, comes crowdin' in; afore you think,
Young oak-leaves milt the side-hill woods with pink;
The Catbird in the laylock-bush is loud;
The orchards turn to heaps o' roxy clonds;
Red-cedars blossom tu, though few folks know it,
An' look' all dipt in sunshine like a poet.

J. R. Lowell. (In "Biglow Papers.")

WE ARE rambling about in south-western Missouri on a beautiful day in May, and the soft, balmy air is filled with the delicious fragrance of the flowering wild grape-vines. The woods on the plateaus are much less beautiful and varied than in many other portions of our great country, consisting, as they do, mainly of the
1. PASSERINA CYANE A Vieill. 3 — INDIGOFINK. — Indigobird.
2. " " " ? — " " — " "
3. PASSERINA CIRIS Vieill. — PAPSTFINK. — Painted Bunting.
4. PASSERINA AMOENA Gray. — LAZULIFINK. — Lazuli Finch.
5. GUIRACA CAERULEA Swains. — BLAER KERNBEISSER. — Blue Grosbeak.
INDIGO BUNTING.

ungainly forms of the black-jack oaks. The prairies are at this time of the year a glorious sight, being embellished by gorgeous masses of bright-colored flowers. The woods are edged by broad borders of various shrubs, often intertwined and covered by luxurious climbers. During a great part of the year these thickets are swarming with many species of small birds. We hear the Catbird’s sweet medley, the Thrasher’s charming song. The Wood Thrush sounds its melodious E-o-lie through the forest, and the Cardinal’s powerful notes fall on our ear from all sides, filling the soul with hilarity and delight. The gushing strain of the White-eyed and Bell’s Vireos, the sprightly song of the Field Sparrow, the odd notes of the Yellow-breasted Chat, the notes of the Mockingbird, of the Yellow and Hooded Warbler, Red-eyed Vireo, Kingbird, Wood Pewee, of Traill’s and the Acadian Flycatcher, of the Lark Sparrow, Bluebird, Robin, and Blue Grosbeak are almost constantly heard. The Orchard Oriole pours forth its cheering melody, and in the near fields Lark Sparrows, Dickcissels, and Meadow Larks sing without interruption. The unpleasant screaming notes of the Blue Jay and the cawing sounds of the Crow, although not a fit accompaniment to the general bird concert, are nevertheless ever present, while the drumming of the Red-headed Woodpeckers and their loud ga-ruck, ga-ruck, ga-ruck, and the notes of the Flicker, the whistling of the Bobwhite are not out of place in Nature’s beautiful concert, the like of which we have never an opportunity to enjoy in the Northern States. Among these notes we hear a very bright and rapid warble, reminding us of the song of the Painted Bunting of the Southern States. Sometimes we may hear three or four of these performers at one time in close proximity. It is rather difficult to find the songsters among the dense snowberry, hazel, and blackberry thickets, but if we keep quiet, we soon see them perched in the tops of bushes or small trees, where the deep indigo-blue color of their plumage beautifully reflects in the rays of the sun. Sometimes they are ascending, as if in ecstacy, into the air and then descending again immediately.

The sprightly songster is the dainty little INDIGO BUNTING, or Indigo-bird, one of the jewels of our native ornis like its near relative, the southern Painted Bunting and the western Lazuli Finch. This elegant bird is a tenant of the dense shrubbery of the woodland border, the thickets in the fence corners, the bushes in the fields and pastures, and sometimes of the ornamental shrubs of the garden. Thorny bushes, especially blackberry brambles, and also dense snowberry bushes on the borders of woods and in waste fields and pastures are its favorite haunts. In Missouri and Arkansas it is a very common bird. In Illinois and Wisconsin it is rather locally distributed, being abundantly met with in one place and not at all in another apparently equally as well suited to its wants. In all parts of the East it is a more or less common summer sojourner, being a numerous bird in New England, especially in the southerly portions, becoming less common the farther north it proceeds. Westward it is found to the edge of the Great Plains, and northward to the southern parts of the British Provinces. I observed the Indigo Bunting late in April and early in May quite abundantly in southern Texas, but it was evidently migrating, and I do not believe that it breeds there, its summer home beginning in the northern part of said State.

Though the Indigo-bird in many parts of our country must be ranked among the most numerous summer residents, it is not at all a familiar and well-known bird like
the Song Sparrow or the Chipping-bird. The deep indigo-blue color of its plumage, though brilliant in the extreme, when the sun strikes it, does not readily attract our sight. Moreover it is a very wild and suspicious bird, not seeking man's society. This is especially true during the breeding season. In the spring migration, however, it often comes into the gardens, even in cities, with other Sparrows, and at such times it is perceived at once by its beautiful blue color, which is especially striking on the background of brownish or gray soil.

The Indigo Bunting is a late arrival, not appearing in northern Illinois and southern Wisconsin before the middle of May, although a few stray birds may be seen as early as May 9. In south-western Missouri I have never observed it before April 29.* From late in May until July and August it chants its bright and charming song, which has the only fault of being too short. It closely resembles the warble of the Painted Bunting and the Lazuli Finch, but it is louder. It certainly is difficult to decide which of the three birds is the best singer. The song consists of a repetition of short notes, at first loud and rapid, but gradually less frequent, and becoming less and less distinct. To enjoy the sweet lay of this bird in all its beauty, we must hear it in its bushy haunts. Though not a first class songster, it is certainly one of the most beautiful, active and animated, fascinating alike to the ear and the eye. It sings with equal animation in May and June, more sparingly in July and August, and not less during the noontide heat of summer than in the early morning or when the sun disappears behind the fiery-red clouds of the western sky. In Missouri I have listened to its sweet chant in the early days of August from the open window of my study. The bird was perched on a telegraph wire near my garden. Only a few birds were singing as late in the season. In my garden cannas, dahlias, tritomas, tiger¹, Leichtlin's², and Maximowicz's³ lilies and gladioli displayed their beautiful colors, while tuberoses, golden-banded⁴ and Japan lilies⁵ perfumed the air with their most delicious fragrance. While singing the Indigo Bunting often sits in the top of a large bush or small tree, also on posts and stumps, and even on chimneys and lightning rods, where the beautiful bird is sure to attract attention by its persistent ditty. Usually it keeps its place for a long time, repeating its notes almost incessantly. With great rapidity it darts down into the dense shrubbery when danger threatens, keeping hidden and quiet until it feels safe again. The female is still more suspicious and shy, though her neutral brownish-gray color well protects her from observation.

Miss Florence A. Merriam, in her fascinating manner gives the following description of the female Indigo Bunting and her ways:

"In walking among clumps of bushes in clearings or old pastures, look sharp if a small brown bird flies before you, especially if she calls cheep and twitches her tail nervously from side to side. Though she be a sparrowy-looking bird, look well to her shoulders and tail. If you discover a glint of blue and her cries call her mate, you will

* Mr. Otto Widmann of St. Louis, Mo., one of our most accurate and painstaking observers, gives the following report on the Indigo Bunting's spring migration for St. Louis: "April 28, first, a male, in song; April 29, an increase, a small flock of males; April 30, males in song in a few places; May 5, the bulk of the males and the first female arrived; May 6, males everywhere in noisy flocks and many transients. These two days (May 5 and 6) were the height of the season for males. May 9, the bulk of young males and the bulk of females arrived; birds mating; May 21, nest building; May 31, one of our most industrious songsters."

¹ Lilium tigrinum. ² L. Leichtlini. ³ L. Maximowici. ⁴ L. auratum. ⁵ L. speciosum.
ever after be a more trustworthy observer—for his brilliant coat is unmistakable. Having made sure of your birds, watch them to their nest—a compactly made cup—too cleverly hidden in the dense thicket to be easily discovered. The color of the eggs will again test your accuracy of observation; in varying lights they look green, blue, and white. The female Indigo is so suspicious that it is hard not to be vexed with her, but the primary virtues of an observer are conscientiousness and patience, so take your hard cases as a means of grace. However distrustful the poor mother bird is, her mate's cheery song makes up for it all. After most birds have stopped singing for the year, his merry voice still gladdens the long August days. I well remember watching one Indigo-bird who, day after day, used to fly to the lowest limb of a high tree and sing his way up from branch to branch, bursting into jubilant song when he reached the topmost bough. I watched him climb as high into the air as he could, when, against a background of blue sky and rolling white clouds, the blessed little songster broke out into the blithest round that ever bubbled up from a glad heart."

The nest is found in the bushy edges of woods, along roadsides, in neglected fields, in old pastures, and in orchards and gardens. Usually it is built in the center of a dense shrub, preferably a blackberry, hazel, or snowberry bush, sometimes also in climbing roses, in young black-jack oaks and in orchard trees, often quite close to the ground, but sometimes ten to twelve feet high. It is generally built in an upright crotch of a bush, and the material used is of a rather miscellaneous character, weed-stalks, grasses, rootlets, strings, bits of paper, etc., forming the outside of the structure, while the cavity is lined with finer grasses and rootlets. It is a rather large structure for such a dainty little bird. The eggs, usually four in number, are very pale blue or bluish-white and unmarked. Occasionally a set is found with eggs having a few dots. The eggs are laid in south-western Missouri by the end of May and in Wisconsin by the beginning of June, and a second set is deposited early in July in south-western Missouri. In Wisconsin only one brood is raised annually.

The nest is usually so well hidden among the shrubbery that even the friend of birds does not discover it very often. The male rarely sings in close proximity to his nest, and the plain-colored female, occupied chiefly with household cares, is perfectly safe under the canopy of dense foliage. Although little danger threatens to the hidden domicile by feathered robbers, the parasitic Cowbird seems to know exactly where to look for it, in order to drop its egg into it. When we are approaching the nest the female leaves it quietly, disappearing on the opposite side of the shrub. We can scarcely get a glimpse of her, so quickly does she leave the place. The female hatches the eggs alone, but she is assisted by her mate in feeding the young. The breeding time averages twelve days, and in twelve days more the young are able to leave the nest. Very small insects form the diet of the young and later they also receive small seeds. The food of the old birds consists almost entirely of all kinds of insects during spring and summer, but later in the season they greatly relish the half-ripe seeds of millet and the seeds of weeds, which they often search for on the ground, even in gardens and in company with other Finches.

"Being of little hardihood, this representative of a decidedly southern genus takes early departure in the fall, scarcely remaining through September." As it is one of the
latest arrivals in spring, it is one of the earliest migrants in the fall, leaving southern Wisconsin by the middle, south-western Missouri by the end of September, and in southern Texas they are not seen after October 15. They winter abundantly in southern Mexico and throughout Central America and the West Indies.

During the migrations they overfly in an easy way immense stretches of country, and during the breeding season they fly quite rapidly; even when there is no necessity for such wandering, they often fly more than a mile at a considerable height, moving from one pasture to another.

The Indigo Bunting is a great favorite with bird fanciers. I have frequently kept them in confinement and even caught them myself in trap cages. They were at first exceedingly wild and unruly, but in time they submitted to the kind treatment they received and became tolerably tame. When residing in Oak Park, Ill., I always kept a large number of native birds in cages, among them also several Indigo-birds. While cleaning the cage one day a fine male escaped. I saw him all day long, and also the next day, in the neighboring garden, replete with ornamental shrubs and evergreens. Then the bird disappeared and I had given up the hope to see him again. About eight days later my escaped bird appeared with a female in the same garden. They both hopped about on the ground, searching for food.—Among the bird-fanciers in Europe the Indigo Bunting has always been a great favorite. Vieillot, in his excellent work, "Les Oiseaux Chanteurs," published in 1790, describes and figures it and praises it as a cage pet. Dr. Carl Russ has raised several broods in his "bird-room."

Although generally fed on seeds only, every bird-keeper will soon find out that this is a mistake, for the bird will neither remain healthy nor endure long on such a diet. A little animal food, in the shape of a few mealworms, flies, spiders, small grasshoppers and a little hard-boiled egg, is indispensable, and giving these regularly our cage-pet will soon become so tame that it will take insects from between the fingers.


DESCRIPTION: "Adult male: Rich blue, deeper on the head, brighter on the back; lores, blackish; wings and tail, black; margined with blue. Adult female: Upper parts, uniform grayish-brown without streaks; wings and tail, fuscous, sometimes lightly margined with bluish; wing-coverts, margined with grayish-brown; under-parts, whitish, washed with grayish-brown and indistinctly streaked with darker; belly, whiter. Young: Resemble the female, but darker. Adult male in winter: Resembles the female, but has more or less blue in the plumage.

"Length, 5.59 inches; wing, 2.58; tail, 2.11; bill, .41." (Frank M. Chapman.)
LAZULI BUNTING.

*Passerina amœna* GRAY.

PLATE XXVIII. FIG. 4.

The beautiful little *Lazuli Bunting* or *Lazuli Finch* is one of the most common summer residents of California and the west coast, north at least to Puget Sound and east to the Great Plains. Mr. Ridgway found it common in California, Nevada, and Utah, inhabiting all the bushy localities in the fertile districts. He regards it the exact counterpart of the Indigo Bunting. The notes of the two are so much alike that their song would be indistinguishable but for the fact that in the Lazuli Bunting it is appreciably weaker. He found their nests usually in the low limbs of trees, near their extremity and only a few feet from the ground. Nuttall found the nest fastened between the stem and two branches of a large fern. It was funnel-shaped, being six inches in height and three in breadth.

According to the information of a friend in Santa Barbara Co., Cal., the Lazuli Bunting arrives there in the third week of April, remaining until late in October. There is hardly an orchard or a garden planted with ornamental shrubs uninhabited by one or more pairs of these sprightly and beautiful birds. They usually sing from the top of a silk oak, a silver tree, an Australian myrtle, a Jacaranda, or of other unique trees of those unrivalled gardens, and hides, when disturbed, often in the very large and dense masses of bamboos. They often build in rose bushes, dense myrtles, orange trees, and thorny shrubs, usually from five to fourteen feet from the ground. The nest consists of fine grasses, pliable plant-stems, and bark-strips, and is lined with fine grasses and almost always with hair. The eggs, usually four in number, are bluish-white, without spots, resembling those of the Indigo Bunting closely. My friend also states that the common name of this bird near Santa Barbara is "Indigo-bird," and that rarely one person out of fifty is acquainted with its correct name.

Dr. Elliott Cones found these birds in Arizona, but there they were not abundant. Dr. J. A. Allen observed them in Colorado up to 7,000 feet.

NAMES: Lazuli Bunting, Lazuli Finch ("Indigo-bird" in Cal.).—Lazulisank (German).


DESCRIPTION: "Adult male: Head, neck, and upper parts turquoise-blue, the back darker and duller; middle wing-coverts, broadly and greater coverts, narrowly tipped with white (sometimes tinged with ochraceous); breast (sometimes sides also), deep ochraceous, or tawny; rest of lower parts, white. Adult female: Above, grayish-brown; tinged with bluish on rump, the wing-coverts tipped with dull whitish or buffy; anterior lower parts, pale dull buffy, deeper on chest and fading into white on belly and lower tail-coverts. Young: Similar to adult female, but without blue tinge on rump. "Length, 5.00 to 6.25 inches; wing, 2.70 to 2.95; tail, 2.30 to 2.80 inches." (Ridgway.)

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1 Grevillea robusta. 2 Leucadendron argenteum. 3 Eucalyptus Australis. 4 Jacaranda mimosefolia. 5 Bambusa vulgaris, *Phyllostachys viridis-glaucescens*, *Ph. nigra*, *Ph. mitis*, and others.
PAINTED BUNTING.

Passerina ciris Vieillot.

PLATE XXVIII. FIG. 1.

UR grand evergreen magnolia (Magnolia grandiflora) is the queen of the southern forest, the most enchanting tree of the South, as it is the most poetical and dignified. Covered perpetually with large, leathery, glossy foliage, embellished, late in April by a wealth of milky-white, deliciously fragrant flowers and growing in an exquisite form, it is not only the most beautiful tree of North America, it is one of the most beautiful known anywhere. To see this glory of our southern forests in full bloom is worth a journey from a great distance. When I first beheld the magnolia in flower on the picturesque banks of Buffalo Bayou in Houston, Texas, I could not find words to express its beauty and grandeur. The noble trees, furnished with branches almost to the ground, were densely covered with large white flowers, which in a distance looked like stars, each well poised against a background of dense glossy foliage. The air around was scented with a most delicious perfume. I am incapable of describing the impression these grand trees made upon me to my readers. Many years have come and gone since I first saw these majestic trees in all their beauty, nobility, and grandeur, yet their glory is as fresh in my memory to-day as it was then. After securing several flowering branches and observing the many birds among their foliage and blossoms, I resumed my journey, but not without many "longing, lingering looks behind."

More than a hundred years ago William Bartram in his "Travels"* gave the following glowing description of the magnolia: "Behold yon promontory, projecting far into the great river, beyond the still lagoon, half a mile distant from me. What a magnificent grove arises on its banks! How glorious the palm! How majestically stands the laurel, its head forming a perfect cone! Its dark green foliage seems silvered over with milk-white flowers. They are so large as to be distinctly visible at the distance of a mile or more. The laurel magnolias which grow on the river, are the most beautiful and tall that I have anywhere seen, unless we except those which stand on the banks of the Mississippi; yet even these must yield to those of the San Juan, in neatness of form, beauty of foliage, and, I think, in largeness and fragrance of flower. Their usual height is about 100 feet, and some greatly exceed that. The trunk is perfectly erect, rising in the form of a beautiful column, and supporting a head like an obtuse cone."

This excellent description had the effect of promoting the culture of this tree largely for ornament in southern Europe, in the milder parts of Great Britain, and even in Japan and China. The most beautiful magnolias are doubtless to be found in the lower Mississippi valley, especially in and near New Orleans, and near Mobile Bay. They are the most exquisite in form, foliage, and flower, being royal in size, almost too symmetrical.

* "Travels through North and South Carolina, Georgia, East and West Florida, the Cherokee Country, the extensive Territories of the Muscovyges or Creek Confederacy, and the country of the Choctaws. By William Bartram. Philadelphia, 1791."
in outline, and exceedingly glossy in foliage. The Florida magnolias do not grow as vigorous, having smaller and less glossy leaves, being not as dense and flowering when quite small.

In autumn the cone-shaped fruits with bright red, highly aromatic seeds also form quite an ornament. Though originally growing in moist places along brooks and rivers, this magnificent tree has been largely transplanted into the southern gardens. In these it is perfectly at home, forming the most charming object imaginable. When late in April and early in May, the large white blossoms unfold and fill the mild air with their fragrance, when innumerable Warblers on their way to their northern breeding grounds are seen among its branches, when Cardinal Grosbeaks and Mockingbirds utter their song of jubilee, and Hummingbirds whir from blossom to blossom, then the friend of Nature stands before this glorious picture full of enchantment and surprise. Another beautiful magnolia of the southern forest is the sweet bay or swamp magnolia (Magnolia glauca). This is a much smaller tree, but its abundant creamy-white, cup-shaped flowers are still more fragrant than those of its ally. The leaves are smaller, thinner, and of a silvery-white color on the underside. Growing together in large masses in swamps, the glaucous underside of the leaves is very conspicuous, especially when the wind is blowing. Such a magnolia swamp in full flower is a sight always to be remembered. The loballoy bay\(^1\), the red bay\(^2\), the holly, the laurel cherry\(^3\), and the American olive\(^4\) are all very fine trees and often transplanted into the gardens, where they mingle with fragrant viburnums, with sweet olives, with myrtles, oleanders, many species of palms, pomegranates, Chinese hibiscus, Noisette, Banksia, and tea roses, Australian myrtles\(^7\) and bottle-brushes. Camellias, Cape jasmines, and other semi-tropical shrubs attain here an immense size. A magnolia-like plant, everywhere known as the banana shrub\(^8\), with deliciously fragrant flowers, is one of the jewels of these gardens. Pampas grass forms dense fountain-like clumps of great beauty, and several hardy bamboos of great elegance, growing in dense masses, adorn the finer gardens. Crinums, amaryllis, spider-lilies, and many other plants of our northern greenhouses are flourishing in the open air all the year round in this mild climate.

The charming southern gardens and woodlands as well as the hedge-rows of Cherokee roses on the road-sides and in the fields are enlivened by numerous birds. Here is the true home of the "many-tongued" Mockingbird, whose unrivalled song is heard by day and night among the fragrant blossoms of the magnolia, the orange tree, and the laurel cherry. The proud Cardinal Redbird, the elegant Blue Grosbeak, the ever active and ever loud Carolina Wren, the sprightly Orchard Oriole, and the pretty Yellow Warbler are the most prevalent birds in these gardens.

As the large evergreen magnolia is the most beautiful among our trees, the Painted Bunting is the most richly colored among our birds. When first seeing and admiring the magnolia, I also noticed this bird among its branches. With its shining purple-violet head, its green back, and its vermilion-red underside it was a striking picture among

\(^{1}\) Gordonia Lasianthus.  \(^{2}\) Persea Carolinensis.  \(^{3}\) Prunus Caroliniana.  \(^{4}\) Osmanthus Americana.  \(^{5}\) Viburnum odoratissimum and V. Awaftikl.  \(^{6}\) Osmanthus fragrans.  \(^{7}\) Myrtus Australis.  \(^{8}\) Callistemon rigidus, Metrosideros robusta and M. semperfores.  \(^{9}\) Michelia fuscata.  \(^{10}\) Phyllostachys viridi-glaucescens, Ph. Quilloi, Ph. algra, Ph. aurea, Ph. mits, Ph. Henonis, Ph. Sh. castillonis, Ph. violascens, Ph. bambusoides, Bambusa Metake, Thamnocalamus Falconeri.  \(^{11}\) Hippeastrum.  \(^{12}\) Hymenocallis.
the pure white blossoms and glossy green leaves. It was so full of glee that it chanted its bright notes incessantly. The first French settlers in Louisiana, being struck by the beauty of this songster, named it Nonpareil (the incomparable, the unequalled) and Le Pape, while the Spaniards called it Mariposa (the butterfly). Also on account of its brilliant plumage it was called PAINTED BUNTING, Painted Finch, and Paradise Finch. The name “Pop” and “Red Pop,” by which it is known by bird-dealers in southern Louisiana, is a corruption of the French Le Pape.

The summer home of the Painted Bunting extends from the Gulf States north to Indian Territory, Arkansas, and rarely to southern Illinois, southern Kansas, and North Carolina. In the mountains of South Carolina, Georgia, and Alabama it does not occur as a summer resident. I have observed it in great abundance in the Gulf region from Tallahassee, Fla., to Austin and New Braunfels, Texas. On the peninsula of Florida I have never seen it during summer, but I presume it will become numerous when the land is more extensively cultivated. The Nonpareil, like the Blue Grosbeak and the Orchard Oriole, seems to have acquired a special love for the habitations of man. This is doubtless due to the protection which such localities afford against various natural enemies. Not only because raccoons, oppossums, wild cats, birds of prey, and other robbers are apt to avoid the presence of mankind, “but as the country is more open about plantations it enables the birds to perceive more readily the approach of any intending disturber of their peace.” At the same time insects are much more abundant on the cultivated plants than on the wild vegetation, and this is another important fact why so many birds are found in gardens and orchards. In southern Louisiana, where the French settlers in the last century developed grand plantations and built opulent houses, where the golden orange glowed among the dark evergreen leaves, where magnolias and evergreen ornamental shrubs and roses formed the main attractions of these gardens, the Painted Bunting soon became one of the familiar birds. “A wealthy French planter,” writes Alexander Wilson in 1810, “who lives on the banks of the Mississippi, a few miles below Bayou Fourche, took me into his garden, which is spacious and magnificent, to show me his aviary; where among many of our common birds, I observed several Nonpareils, two of which had nests, and were then hatching.”

In south-eastern Texas, near Houston, the favorite haunts of the Painted Bunting are blackberry thickets on the borders of woods and along fences. But it is equally common in large gardens, where magnolias, laurel cherry trees, crape myrtles, and dense ornamental shrubs are common. In greatest numbers, however, I found this bird about one hundred miles west of Houston, on the West Yegua Creek, in Lee County. Every thicket, peach orchard, and forest border harbored one or more pairs of these lively and sprightly birds. In southern Georgia, near St. Mary’s, Prof. Wm. Brewster has also found this bird quite common. In his interesting way he writes as follows:

“The Painted Buntings or Nonpareils, as they are universally called by the townspeople, arrived April 23 and through the remainder of the month were abundant. I used to find them in flocks about the openings, where they spent much of their time on the ground. They were timid rather than shy, flying to the thickets upon the slightest alarm, but when once conscious of being pursued it was difficult to approach them. The brilliant plumage of the adult male makes him a conspicuous object either on the
ground or in green foliage, but it is no easy matter to see one among the flowers of
the trumpet-vine where they often seek refuge, apparently fully conscious of the pro-
tection afforded by the clusters of scarlet blossoms. The young males during the first
year are colored precisely like the females. They sing, and for aught I know, breed,
while in this condition. The song is a low, pleasing warble very un-Finch-like in
character. I should compare it to that of the Canada Flycatcher, but the notes are less
emphatic, though equally disconnected. The bird almost invariably sings in the depths
of some thicket, and its voice ceases at the slightest noise. Both sexes have a sharp
chirp of alarm, which closely resembles that of the Indigo Finch. Most of the Nonpareils
left St. Mary's by May 1, but a few pairs remained up to the time of my departure,
when they were apparently preparing to breed."

The Nonpareil, in Texas also known under the name of "Mexican Canary" and
"Texan Canary," arrives near Houston and in the West Yegua region from its winter-
quarters at a time when the deciduous trees and shrubs are in their full spring beauty,
when many of the resident species and summer sojourners are busily engaged with nest-
building, with hatching, or with feeding their young. The first males are usually seen
between April 10 and April 15, and the females arrive usually from six to ten days later.
About April 25 even the last stragglers have made their appearance and the cheery
carol of the Painted Buntings is heard from all sides. Generally at this time the
numerous small prairies and even the monotonous post-oak woods are covered with a
carpet of richly hued flowers. Innumerable beautiful blossoms cover the sandy soil,
mostly in groups or masses, each kind by itself. Dense bushes of coral plants (Erythrina
herbacea) display their glowing red flowers. Large places are covered with phlox (Phlox
Drummondii) of an intensely red hue, and the most sterile sandy spots are transformed
into veritable flower gardens, gaillardias, calliopsis, lark-spurs, lupines, and cacti of
different species in full flower forming an exquisite adornment of such localities.

As I had five or six breeding pairs every spring in close proximity of my house in
Texas, I had a good opportunity to observe them. Soon after its arrival the Painted
Bunting is one of the loudest and most cheery birds, spending its time in playing and
frolicking until the females arrive, when the playing turns into courting and fighting.
Usually extremely cautious and more frequently heard than seen, it seems to leave every
precaution out of sight when the females appear. The male is now very quarrelsome
and tries to attract the attention of the female in every way. He flies down to the
ground, hops about in all kinds of positions, spreading his wings and tail, turning
quickly around in a circle, and all the while singing his sweetest notes. This lasts a few
days, when the small flocks dissolve and the birds commence to pair. Being now rather
shy, they cunningly hide among the blackberry thickets and trees covered by a luxuriant
growth of vines or in thorny bushes and Cherokee roses, or even among the dense
festoons of Spanish moss. Like many other birds, after they are convinced that man is
their friend and protector, the Painted Bunting becomes very confident in some gardens.
Without fear it mounts the top of a magnolia, an orange tree, or an ornamental shrub,
and even the top of a chimney or lightning rod, singing its cheerful strain. In such
places it is easily detected and observed, and highly valued on account of its exquisite
beauty, its sprightly song, and its activity.
I have quite frequently kept the Painted Bunting as a cage pet, but in captivity its colors loose much of their brilliancy, and such a bird cannot be compared with those enjoying freedom. The colors of the latter are much more intense and brilliant, its motions are quicker and more graceful, its song brighter, more cheerful and varied, the beautiful southern landscape, the deep blue sky, the brilliant rays of the sun, and the mild, yet refreshing Gulf breeze adding to it a particular charm. Only in its native haunts the friend of Nature can fully appreciate the beauty and song of this elegant bird. When I kept it in the cage I considered it a very beautiful bird, but thought the name Nonpareil an exaggeration, but when later I observed it among the flowering magnolias, camellias, banana shrubs, orange trees, crape myrtles, and other fine trees and bushes I was convinced that the name was well chosen.

On a fine day late in April or early in May a dozen of these birds may be sometimes heard singing at the same time and in all directions, some hidden in the interior of thickets, others displaying their beauty in the top of a small tree or bush or on a chimney, while a few, more excited, rise into the air or ascend from a low shrub to the crown of a larger tree. Still others inspired by the song of the Mockingbird even warble at night. The song is very clear, melodious, and sweet, but short and not much varied, resembling closely the ditty of the Indigo Bunting. The Nonpareil is a very diligent songster, whose song is heard from early morn till late in the afternoon, even during noon, when the tropical heat of the southern sun puts to silence most other birds. During cold, rainy weather it rarely sings, but after one of the warm showers it is especially active and vocal.

In gardens, orchards, thickets, and on the bushy woodland border each pair selects a breeding range, the boundary lines of which are fiercely defended against intrusion by any other male of its own species. With the quickness of an arrow the jealous male darts down upon such an intruder and drives him bravely away.

With other birds it generally lives very peaceably. I often found nests of Lark Sparrows, Cardinal Grosbeaks, Orchard Orioles, Blue Grosbeaks, Chats, White-eyed Vireos and Mockingbirds near those of the Painted Bunting. These different birds, after having become accustomed to each other, seem to form one family. Upon the alarm note by one of them, the others of the neighborhood hurry to the spot in great excitement. There seems to be no end of lamentation if a snake or another nest robber has made its appearance, but if they have succeeded in driving the enemy away, they all join in a triumphant jubilee.

“At this period,” writes Mr. H. F. Peters, of Bonham, Texas, “the male is very attentive, but after nest-building has commenced he is quite another bird. He helps to find the place to build, and appears to be very particular about it, but as soon as it is decided upon, he retires from business. He never works; he is a little dude, too finely dressed to do any labor. I have frequently seen him sitting a few feet above the nest, singing unconcernedly, while his mate would be struggling with a yard or two of twine, or a piece of old rag to weave into the nest. I have never seen the male help in nest-building, or in feeding the young while in the nest, but have seen him feed them after they were fledged. . . . While the female is very gentle and tame, frequently coming to the door in search of material for the nest and food for the young, the male is shy and
keeps at a distance. When the young are full grown, he troubles himself no more about
them. The middle of August he leaves wife and family and goes south to his winter
home. The female and young remain until the second week in October."

This agrees fully with my own observations, except in regard to the migration of
the males, which I have seen as late as October 1.

I have found the nests in very different localities. In Louisiana they are often
built in orange trees, while in Texas they were frequently situated in peach trees, in
post-oaks, blackberry bushes, and in Cherokee roses. While writing these lines twelve
nests, which I found near the West Yegua, are before me. Eight of them were built in
horizontal branches, some in a half pendulous way, and the rest in upright crotches.
They are all small, compactly built structures, more or less similar to each other. Only
a few diversify regarding the material. Externally they are largely made of the soft,
wooly, whitish plant I have often alluded to in this work, of snake-skin, old leaves,
bark-strips, fine slender grasses. Near dwellings pieces of paper, rags, cotton, twine,
etc., enter into the composition. All these materials are mixed with spiders' and cater-
pillars' webs and with these the nest is also fastened to the branches. The interior is
lined with fine brown rootlets, and generally with hair. A very peculiar nest, consisting
almost entirely of pure white goose feathers, mixed with several long hairs, a few shreds
of plant-stems and spiderwebs, was found late in July in an upright crotch of a peach
tree. The lining of the cavity consisted of plant fibres and horse hair. Another peculiar
nest was built of the entire skin of a moccasin or copperhead snake arranged in a
turban-like manner, and within this the nest proper was formed, made of bark-strips,
rootlets, and fine grasses. Near the abodes of man the foundation of the nest usually
consists of paper. All the domiciles are usually so well hidden among the green foliage
that they are not easily discovered. In south-eastern Texas usually two broods are raised
annually. Nests of the second brood are often more carelessly built than those of the
first brood. The eggs, three to five, but generally four in number, are dull pearly-white
or bluish-white, speckled and blotched with reddish-brown, especially at the larger end.

The young are almost entirely fed with plant-lace, small cater-pillars, moths, and
other insects found on trees and shrubs, and insects in all conditions of life form the
main diet of the old Nonpareils. Later in the season poke-berries, elder-berries, figs, etc.,
are also eaten to some extent. In autumn and winter they subsist largely on all kinds
of small seeds, which they gather from the ground as well as from weed-stalks.

The winter home of the Nonpareil is found in Central America. Mr. Erich Witt-
kugel informs me that they are very common in the gardens of San Pedro Sula, Hon-
duras, from November to March, and, according to Dr. J. Gundlach, they are abundant
winter visitors in Cuba.—At their arrival in spring they are caught in great numbers
near New Orleans and sold to northern and European bird dealers. Vieillot informs
us that already in his time they were numerously imported to France and that they
successfully bred in confinement. In Germany, where these birds have often raised broods,
it was observed that the young males attain their beautiful color in the third year. In
the second year sometimes only a few feathers denote the sex of the birds. My caged
males usually lost the beautiful red of the underside, which was substituted by a yellow-
ish color, and the metallic green also lost much of its lustre. It is, in fact, difficult to
preserve the bright colors of old birds for a great length of time in confinement. To retain its beauty the Nonpareil requires, more than any other cage bird, sunshine, pure water, shady growing bushes where to seek repose at pleasure, and suitable food, consisting of millet, Canary seed, small mealworms, grated hard-boiled egg, dried larvae of ants, etc.


DESCRIPTION: "**Male:** Head and neck all round ultramarine-blue, excepting a narrow stripe from the chin to the breast, which, with the under-parts generally, the eyelids, and the rump (which is tinged with purplish), are vermillion-red. Edges of chin, loral region, greater wing-coverts, inner tertiary, and interscapular region, green; the middle of the latter glossed with yellow. Tail-feathers, lesser wing-coverts, and outer webs of quills, purplish-blue. **Female:** Clear dark green above; yellowish beneath. **Young:** Like female." (B. B. & R. II, pp. 87, 88.)

Length, about 5.00 inches; wing, 2.70; tail, 2.52 inches.

**Varied Bunting, Passerina versicolor GRAY.** According to Dr. J. C. Merrill, this beautiful bird seems to be rather abundant in the vicinity of Brownsville, Texas, frequenting mesquite chaparral. Its song has some resemblance to that of the Indigo Bunting, and is constantly uttered. This is a common species of northern Mexico and near Vera Cruz is known as the _Prusiano._

DESCRIPTION: Back and breast, dark wine-purple; occiput and throat, claret-red; forehead and rump, purplish-blue. Eyelids, purplish-red. **Female:** Fulvous-gray above, uniform pale fulvous below.

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**SHARPE'S SEED-EATER.**

Sporophila moreetti sharpei LAWRENCE.

The Seed-eaters are mostly small, thick-billed, plainly colored birds, which are found from the lower Rio Grande south to Brazil. Though lacking in brilliancy of plumage, they are always gay and smooth, cheery and full of life, and have a pleasant song. Many of them are especially valuable for the reason that they select for their haunts localities near the habitations of man. In gardens they please by their lovely manners and tameness as well as by their melodious ditty. In Europe many of them are highly prized cage birds. Dr. J. C. Merrill, who observed _Sharpe's Seed-eater_ near Brownsville, Texas, writes as follows:

"This curious little Sparrow is not uncommon during the summer months, and I am inclined to think that a few may pass the winter. During the breeding season the male has a very sprightly song, much resembling that of the Indigo-bird, but sweeter; this it frequently utters while perched on the topmost twig of a bush. They are usually seen in patches of briers and low bushes, at no great distance from water; they are very tame, and will permit a person to approach very closely. At least two pairs built within Fort Brown during the season of 1877. One of these nests, found nearly finished early in May, was in a bush about three feet from the ground: it was not pensile, but was placed on a small branch between three or four upright twigs, and was entirely composed of a peculiar yellow rootlet. It was destroyed by a violent storm before eggs
GRASSQUIT.

It is found in southern Texas and adjacent parts of Mexico.

NAMES: SHARPE'S SEED-EATER, Little Seed-eater.—Texanisches Pflächen (German).


DESCRIPTION: The top and sides of the head, back of the neck, a broad band across the upper part of the breast extending all round, the middle of the back, the wings and tail, with the posterior upper coverts, black. The chin, upper throat and neck all round, but interrupted behind, the rump, with the remaining under and lateral portions of the body, white; the latter tinged with brownish-yellow. Two bands on the wing, across the greater and middle coverts, with the concealed basis of all the quills, also white. Female: Dull yellow; olivaceous above, brownish-yellow beneath.

"Length, about 4.00 inches; wing, 2.05; tail, 1.90 inches." (B. B. & R. II, p. 91.)

GRASSQUIT.

Euctheia bicolor Gundlach.

This little Grassquit has been found repeatedly in the southern coast region of Florida. Mr. Maynard gives the following interesting description of the discovery of the Grassquit in Florida. He writes as follows:

"Although there are now but a few houses at Miami or vicinity, yet this section has been settled many years. The inhabitants who formerly occupied this spot, have left many evidences of their presence in the shape of ruinous walls, old wells, etc. Tradition points to this place as being the haunt of pirates, and we were informed upon reliable authority that one of those infamous men lived here until quite recently. Indeed, there are individuals now living who have seen him. He was a Spaniard named Yusippie, and was the leader of a band of blood-stained villains who lived upon the banks of the Miami, while the river formed a fine harbor in which to moor their vessels, that they might not be seen from the open ocean.

"Among the traces which these Spaniards have left behind them are evidences of cultivation of the soil. The ground has been cleared for some distance back of the old fort, but is now mainly grown up to bushes and trees; there are, however, frequent glades in the midst of these thickets which are entirely void of shrubs, being only covered with grass and low herbage. These spaces vary from a few yards to several rods in diameter, and are closely surrounded by foliage. The trees and bushes are so thickly covered with vines and creeping plants that their forms are entirely concealed..."
and they resemble rolling clouds of living green rising in huge billows one above the other. This deciduous mass is thickly starred with the large, white flowers of the *Ipomoea Bona-Nox* and the purple blossoms of the wild *convolvulus*, while the orange and yellow *Lantana Camara* fills the air with a peculiar fragrance. As can readily be imagined, these dense thickets were filled with birds, and therefore we frequently visited the lovely spots for the purpose of taking the various kinds found there.

"Mr. Henshaw was collecting here with me on the 19th of January, 1871, when his quick eye detected a small bird among the thick bushes, and he instantly secured it. After making his way into the thicket and searching for a time he returned, bearing his prize, but with a puzzled expression on his countenance, that instantly communicated itself to mine when I saw the little gray bird which he held in his hand, for it was a species which I had never beheld. It proved to be the Black-headed Finch, the first and, up to this date, the only specimen ever taken in the United States. As Mr. Henshaw brushed through the lantanas to secure the bird, the spicy odor of the crushed leaves filled the air and floated around us as we were examining the specimen; therefore the *Phonipara zena* is ever associated in my mind with the shrub upon which it is figured in my work."

It does not seem to be a resident species, but is evidently only a straggler from the near Bahama Islands, where it is a numerous resident in suitable localities. It is a rather plainer colored bird of a dull black color on head and lower parts and a dull olive-green on back, wings, and tail.

A near congener of this bird, the *Melodious Grassquit, Euetheia canora* Brewer, an abundant inhabitant of all suitable localities of Cuba, is a very beautiful and interesting little species.

According to a report of Dr. H. C. Merriam, it has been found on Sombrero Key, Fla. It is not improbable that it often visits the extreme southern Keys of Florida, if not the mainland also. The Melodious Grassquit would be an excellent bird for introduction into Florida, being a resident species in Cuba, and very beneficial, lively, and melodious. In Germany it is a highly esteemed cage bird, and young ones have been frequently raised in confinement by Dr. Karl Russ and other bird-lovers. These tiny birds of an olive-green color, with velvety black throat, cheeks, and face, and with a broad yellow collar round the black throat, are extremely lively in the cage, but they are veritable game-roosters if several are kept together. They live quite well on Canary and millet seeds in winter, but need a diet like the Indigo Bunting in spring and summer. They build a beautiful globular nest with a small entrance on the side. Like the small African and Australian Finches the pair frequently sits together even in the nest. The four, rarely five eggs, are grayish or greenish-white, minutely dotted and blotched with green, dark and light brown. The young birds leave the nest very early and when scarcely fledged.

The Cuba Finch or Melodious Grassquit is known in the eastern part of Cuba under the name of Senserenico and in the western part, according to Dr. J. Gundlach, Tome guin del Pinor is its common name,
SPIZA AMERICANA RIDGW.
SCHILDAMMER.
Dickcissel.
DURING the month of April and May the plain, monotonous prairie west and north-west of Houston, Texas, offers a magnificent sight. As far as the eye can reach, the grassy savanna is covered with a carpet of highly colored flowers. Phloxes¹, verbenas², lark-spurs, crowfoots³, gaillardias⁴, coreopsis⁵, and many other flowers impart these rich prairies with a beauty peculiarly their own. Everywhere we find the prostrate, very prickly stems of the mimosa or sensitive plant⁶, the rosy-purplish flower-balls of which exhale a delicate honey-like fragrance. The leaves of this interesting plant are very sensitive, bending, folding, and apparently shrinking away from the touch of the hand. Pure white, deliciously scented spider-lilies⁷ grow and flower abundantly in the black soil, and blue-eyed grass⁸ and the pretty nemastylis⁹ are also found in favorable places. Yuccas and opuntias, the latter armed with formidable spines, are everywhere numerous. Here and there the prairie is dotted with small trees and shrubs.

Among the birds, which chiefly appeal to the poetic feelings of the country people and move their admiration and enthusiasm, the Dickcissel or Black-throated Bunting is especially noteworthy. It is one of the most numerous and familiar inhabitants of these prairie districts, attracting the attention of even the indolent by its incessant chirping and twittering, which falls on the ear from all sides. Nowhere I found this bird more abundant than in the prairies of south-eastern Texas; in the interior of the State it is not so numerous. In the prairie regions of south-western Missouri and Illinois it is one of the most common summer sojourners. In most parts of eastern Wisconsin, as far north as Howard’s Grove, Sheboygan Co., it is abundantly met with. From Massachusetts and New York west to the Rocky Mountains and north to southern Ontario and South Dakota it is found in all suitable localities. I have never seen it in Alabama, Georgia, or Florida. In fact it is rare or entirely absent east of the Alleghanies.

The New England record of the Dickcissel* is interesting, though not so satisfactory as might be desired. “It seems that we have in this case a bird of the Carolinian and part of the Alleghanian Fauna, of rare though constant occurrence as far north as Massachusetts, yet irregular in its numbers during successive years, and locally distributed moreover.” It has been occasionally found in certain spots, some seasons, and again, it is not to be found in the same places at all.

The Dickcissel is one of the latest arrivals in spring, and one of the first to depart in autumn. In Texas it arrives about the middle of April, in south-western Missouri about April 28, and in eastern Wisconsin not before May 15, appearing always in small flocks from twelve to twenty and more.


“From its winter abode in tropical America,” writes Dr. Elliott Coles, “the Black-throated Bunting enters the United States in April, in small troops. Vast numbers pass up the Mississippi valley, some finding their final resting place in Iowa, but others lingering to breed all along the route. Many spread westward over the prairies of Kansas and Nebraska, and a part of the host reaches the Middle Atlantic States by the latter part of the month, some even penetrating eastward to southern New England, which forms their terminus. Rearing their young in nearly all parts of this great extent of land, from Texas to Nebraska, and New England, they depart before the approach of cold weather to their homes far south.”

While no brilliancy of coloration can be claimed for the Dickcissel, it is nevertheless a handsome bird, “with tasteful color contrasts, trim form, and a peculiarly smooth, neat plumage.” Arriving in more or less numerous flocks and being not at all parsimonious with their musical ability, their presence cannot be overlooked even by the inattentive. In Missouri the whole migrating flock mounts an isolated tree, preferably an apple tree, and each individual utters its ditty as loud and noisy as possible. This monotonous concert can often be heard for a quarter of a mile. Often for an hour the flocks remain in the same tree, uttering incessantly and untiringly their peculiar notes. When disturbed they fly to another tree in order to continue their music. Apparently these noisy troops are old males, the females arriving quietly a few days later.* This peculiar bird-concert can be heard for a few days, when the birds migrate northward, or the flocks dissolve. In the northern parts of the country they usually inhabit clover and timothy fields, while in Missouri, Illinois, and Texas they are partial to prairies. The open tree and bushless prairie does not suit the taste of the Dickcissel, but where a fence is found or a few isolated trees and bushes, on which the males can perch in order to sing and watch, they settle. Woods, hills, and swamps are avoided entirely. Neither too dry nor too wet places are chosen for their abode. Often we meet with the bird in localities where once the land has been covered with woods, having settled and increased in numbers with the increase of cultivation. In south-western Missouri I often found the nest in corn-fields and in Wisconsin quite often in fields of peas. Wherever the bird occurs it is easily detected. Its abundance in all favorable localities, its confidence and tameness and its noisy ditty soon attract our attention. Prof. Robert Ridgway, who observed it abundantly near Mount Carmel, Ill., writes as follows:

“While some other birds are equally numerous, there are few that announce their presence as persistently as this species. All day long, in spring and summer, the males, sometimes to the number of a dozen or more for each meadow of considerable extent, perch upon the summits of tall weed-stalks or fence-stakes, at short intervals crying out: See, see,-Dick-cissel, cissel; therefore Dickcissel is well-known to every farmer’s boy as well as to all who visit the country during the season of clover blooms and wild roses, when Nature is in her most joyous mood. Perhaps the prevalent name of this species is Little Field Lark, or Little Meadow Lark, a name suggested by its yellow

* Mr. Otto Widmann, of St. Louis, Mo., gives the following report of their spring migration in 1884: “April 26, the first breeder and two transients; April 28, still scarce; April 29, bulk of males arrived, many at stands and often seen on the wing going east; April 30, males noisy at stands; May 5, bulk of females arrived. This was the height of the mating season. Several parties were seen on the wing going east in the morning. May 9, young males arrived; May 20, young birds were still coming, and the species was usually seen in pairs.”
breast and black jugular spot, which recall strongly the similar markings of the Meadow Lark, and also the fact that the two frequent similar localities. The name Black-throated Bunting is probably never heard except from those who have learned it from the books."

When singing the male always mounts some high object, be it a fence-stake, a bush or a weed-stem, occupying the same position as shown on our plate (XXVII). As a vocalist we must rate it a very humble performer even during the mating season. "Its song is short and simple, even weak, and grows monotonous with repetition through the season of incubation, when the male, from the highest perch he can find near his nest, cheers his faithful mate with the assurance of his presence and protection. He seems to say, look! look! see me here! see! And if we do not like his performance, we may remember we are not asked to listen." (Dr. Elliott Coues.)

Where one pair nests, others are found in the immediate neighborhood. In the prairie region near Spring Creek, Texas, I found almost on every acre of ground a pair, and on the sunny, bright mornings the entire flower-adorned grassy prairie seemed to re-echo with their music. The nest is always placed on the ground, usually in a slight depression on the side of a tuft of grass, a bunch of clover, or a herbaceous perennial flower. In Texas I found the structure always in the prairie grass, in Missouri often near corn-stalks. Externally it is built of plant-stems, grasses, corn-leaves, and the lining consists of fine grasses. The eggs, usually four, rarely five in number, are uniform light blue, exactly like those of the Bluebird. Several ornithologists report that the Dickcissel in some localities departs from its usual habit of building on the ground. They found the nest several inches and in some cases several feet from the ground. In some parts of Illinois the structure was discovered in the tops of grasses, usually worked in among a bunch of thick grass, so as to make it quite firm. The late Dr. P. R. Hoy, of Racine, Wis., states that he never found the nest on the ground. He writes that during one season he visited and made notes of nineteen different nests. Ten of these were built in gooseberry bushes, four on thorn bushes, three among blackberry brambles, one on a raspberry bush, and one on a wild rose. None were within a foot of the ground and some were six feet from it. A few miles north and west of Racine, where I had an opportunity to observe these birds, they invariably had their nests on the ground. It was already remarked by Audubon that the Dickcissel appears to avoid certain districts, both in its migrations and for breeding, giving preference to fertile portions of the country, and in settling down to breed will make capricious choice of particular spots and confine itself to them. The fact of its becoming abundant in regions where it was scarce before, is also attested, but remains in many cases unexplained.

Its food consists largely of grasshoppers and all kinds of insects living on grass. In fall and winter it also subsists on the seeds of grasses and weeds. The Dickcissel is always and everywhere a highly beneficial bird.

These birds leave for their winter-quarters early. In eastern Wisconsin and northern Illinois they commence to move southward early in September. In south-western Missouri none were seen by the end of that month, and in south-eastern Texas they leave for their winter home early in October. The Dickcissel winters abundantly in Central America as far south as northern South America.
LARK BUNTING.

Calamospiza melanocorys Stejneger.

This interesting bird has a restricted range, being found from the Plains of middle Kansas north to Manitoba and Assiniboia, west to the Rocky Mountains, less commonly to the Pacific in southern California, and south to Guanajuato and Lower California. As I have never had an opportunity to observe this bird in its home, the grassy western plains, I quote the following from Dr. Elliott Coues' excellent work, "Birds of the North-west":

"The Lark Bunting is one of the most singularly specialized of all our fringilline forms. As implied in its name, it has somewhat the habits of a Lark, and shares the long inner secondary quills. An eminently terrestrial bird, yet the hind claw is neither lengthened nor straightened as is usual with passerine birds frequenting the ground almost exclusively. The bill is that of a Grosbeak, being shaped almost exactly like that of Blue Grosbeak for instance, and the sexual differences in plumage are as great as in that bird. But a more remarkable circumstance still is the seasonal change of plumage, which is exactly correspondent with that of the Bobolink, to which the species bears a general similarity in coloration. This fact was first noticed, I believe, by Mr. Allen: 'After the moulting season, the males assume the plumage of the female, the change in color being similar to that of the males of the Bobolink.' There is still another curious analogy, that the same writer has brought out: 'It has habits that strongly recall the Yellow-breasted Chat, singing generally on the wing, hovering in the same manner as that bird, while its notes are so similar to those of the Chat, as to be scarcely distinguishable from them.'

'I found it common from the plains in Kansas to the Raton Mountains, westward of which I never saw it. In some places it was extremely abundant, and fairly to be considered the characteristic species. This was in June, when the birds were breeding, apparently in straggling groups, keeping up somewhat of association, but by no means intimate companionship, still less flocking; each pair finding its own business sufficiently
interesting and absorbing. As I was traveling by coach at the time, I had no opportunity of looking for the nests. Judging from the fact that I saw scarcely any females, the birds were then either incubating or brooding over their young. The more conspicuous and voluble males were almost constantly in view, fluttering over the grass, every now and then starting up on tremulous wing, almost perpendicularly in the air, hovering and singing the while, till they dropped as if exhausted. Sometimes several were in view at once, and I used to watch their vocal rivalry with unflagging interest, as each strove, it seemed, to rise the higher, and carol the louder its joyous song.

"The Lark Bunting nests on the ground in open prairie, building, as usual in such cases, a rather rude structure of grasses and slender weed-stalks, with merely a little finer material of the same sort for lining. The nest is sunk flush with the surface of the ground. The eggs are commonly five in number, sometimes only four. They are of a clear pale bluish-green, and look almost exactly like those of a Bluebird, in fact, could not be distinguished with certainty, though rather larger and thicker.

"The following was prepared by Mr. Allen for this work: 'The Lark Bunting, though of rather local distribution and limited range, must be regarded as one of the most characteristic and interesting birds of the Plains. Generally in the breeding season a number of pairs are found in the same vicinity, while again not an individual may be met with for many miles. At other seasons it is eminently gregarious, roving about in considerable flocks. In its song and the manner of its delivery it much resembles the Yellow-breasted Chat, like that bird rising to a considerable distance in the air, and poising itself by a peculiar flapping of the wings during its utterances, then abruptly descending to the ground to soon repeat the manoeuvre. It is a very strong flier, and seems to delight in the strongest gales, singing more at such times than in comparatively quiet weather. I met with several colonies not far from Fort Hays in June and July, and later at Cheyenne, Laramie, and in South Park, and in the elevated open table-lands, between South Park and Colorado City. They were also frequent along the route from Colorado City to Denver, sometimes considerable flocks being met with. They were then moulting, and the parti-colored flocks of young and old were quite unsuspicous and easily approached. During the breeding season we found them exceedingly shy and difficult to procure, and were unsuccessful in our efforts to discover their nests.'"

NAMES: Lark Bunting, White-winged Blackbird.—Lerchenammer (German).


DESCRIPTION: "Adult male in summer: Uniform black, with more or less of a slaty cast, the middle and greater wing-coverts, white, forming a very conspicuous patch on the wing. Adult female: Above, brownish-gray, streaked with dusky, the white wing-patch, smaller; lower parts, white, streaked on breast and sides with dusky." (R. Ridgway.)

Length, 6.81 inches; wing, 3.40; tail, 3.10 inches.
AMERICAN STARLINGS
(BLACKBIRDS, ORIOLES, ETC.).

Icteridae.

Icteridae is a family of birds characteristic to America, like the Hummingbirds, Vireos, Tyrant Flycatchers, Wood Warblers, and Mockingbirds, and it plays a far greater role in the household of Nature than any of those mentioned. We find in this large family exquisitely colored birds, eloquent songsters, expert nest-builders, notorious nest-robbers and parasites destroying the happy family-life of other small birds. Among this family we find such beautiful and familiar birds like the Orioles, the Bobolink, the Red-winged Blackbird, and the Meadow Lark. They enliven their haunts by their abundance, activity, beauty, and especially by their gregariousness. Wherever they occur, be it in the grassy, flower-adorned meadow, in field and garden, in the swamp or on the woodland border, they impart to the landscape the peculiarity of their presence. With the exception of the Orioles and the Meadow Lark, all are exceedingly gregarious. When arriving and departing they move in large flocks, consisting often of thousands of individuals. Soon after the breeding season they commence to congregate into flocks, which move about in the locality until they migrate southward. On sunny April days we frequently see a whole flock mounting an isolated tree, where each one utters its peculiar notes until a most characteristic concert is heard. All these birds moving in large swarms are known by the rather insignificant name Blackbirds. The Baltimore Oriole, which is represented in the West by Bullock's Oriole and in the South-west by different other bright-colored species, belongs to the most beautiful and beloved of our garden birds. The Bobolink is one of our most poetical birds and a glorious songster, rivalling and surpassing the celebrated European Skylark.

Most of the members of this highly interesting family are exceedingly beneficial. The Bobolink belongs at the North to the farmer's best friends, and the same is true of the Red-winged and Yellow-headed Blackbird, the Meadow Lark and Orioles, and of the Rusty and Brewer's Blackbirds. The Grackles are doing some harm to the crops and they also become noxious by plundering many birds' nests, while the Cowbirds are destroying many a brood of our small insectivorous birds by their parasitic habit.
Among the one hundred and ten known species of the family about twenty inhabit our country. They are divided into the following genera:


Bobolink.

Dolichonyx oryzivorus Swainson.

Plate XXIX. Fig. 1 and 2.

A flock of merry singing birds were sporting in the grove;
Some were warbling cheerily and some were making love.
There were Bobolinkcon, Wadolincon, Winterseeble, Conquedle,
A livelier set were never led by tailor, pipe, or fiddle:
Crying, "Phew, shew, Wadolincon; see, see Bobolinkcon
Down among the tickle-tops, hiding in the buttercups;
I know the saucy chap; I see his shining cap
Bobbling in the clover there,—see, see, see!"

Up flies Bobolinkcon, perching on an apple tree;
Startled by his rival's song, quickened by his raillery,
Soon he spies the rogue afloat, curvetting in the air.
And merrily he turns about and warns him to beware!
"T'is you that would a wooing go, down among the rushes O!
Wait a week, till flowers are cherey; wait a week and ere you marry,
Be sure of a house wherein to tarry;
Wadolin, Whiskodink, Tom Deny, wait, wait, wait!"

Every one's a funny fellow; every one's a little mellow;
Follow, follow, follow, follow o'er the hill and in the hollow.
Merrily, merrily there they lie; now they rise and now they fly;
They cross and turn, and in and out, and down the middle and wheel about,
With a "Phew, shew, Wadolincon; listen to me Bobolinkcon!"
Happy's the wooing that's speedily doing, that's speedily doing,
That's merry and over with the bloom of the clover;
Bobolinkcon, Wadolincon, Winterseeble, follow, follow me!"

O what a happy life they lead, over the hill and in the mead!
How they sing, and how they play! See, they fly away, away!
Now they gambol o'er the clearing,—off again, and then appearing;
Poised aloft on quivering wing, now they soar, and now they sing,
"We must all be merry and moving; we must all be happy and loving;
For when the midsummer is come, and the grain has ripened its ear,
The haymakers scatter our young, and we mourn for the rest of the year;
Then, Bobolinkcon, Wadolincon, Winterseeble, haste, haste away!"

FROM the beginning of April spring is on its northward march. Many of our charming songsters have arrived from their winter home, and numbers of dainty flowers bloomed and disappeared. Almost every day is a revelation to us and brings us new delight. There were salubrious, sunny, and warm days, and cold and blasty ones
since the Robin and Song Sparrow announced spring's arrival. Even during the last week of April a heavy snow-storm may sweep over the extreme northern parts of our country. With the beginning of May the wild flowers are becoming more abundant, and each day brings us new arrivals from the South. The familiar Catbird, the famous Rose-breasted Grosbeak, the flame-colored Baltimore Oriole, and the most brilliant of all our birds, the Scarlet Tanager, are usually present by May 9. At this time the plum and cherry trees are in full bloom, and a week or ten days later the apple trees are like one sheet of rosy and white color. Thousands of elegant and sprightly Wood Warblers celebrate their annual spring festival among the flowering trees. How joyfully do they fly, dart, and hop about, and how cheery sound their strains!

This is the time of revelry of the Bobolink. In the grand concert of Nature, late in May and throughout June, no other performer is so well-known and beloved than this happiest bird of our spring. Coming "amid the pomp and fragrance of the season," the life of these birds seems all sensibility and enjoyment, all song and sunshine. On a warm and sunny day we hear their merry music from all sides in the low meadows. During the night they arrived from their winter home in the far interior of South America. And what glad tidings do they bring! Spring is really here at last, spring in all its glory, brilliancy, perfume, and music! The beautiful males in their jaunty attire of deep black, white, and buff, are bubbling over with exhilaration and happiness. They are the merriest of all our birds, ever in motion, ever rollicking and frolicking and singing, ever passing to and fro in easy flight. When half a dozen or more are sporting about over the fresh and sweet meadows, enamelled by countless flowers, and when the air is full of their tinkling and enchanting song, words are powerless to describe the impression of such activity and music. There is no plaintive strain in the whole performance. Each sound is full of glee and hilarity, full of sweetness and charming beauty. It seems to be the mission of this exquisite songster to pour joy, hope, peace, happiness, and exhilaration into our often so weary and depressed souls.

In the days of my boyhood the Bobolink was very abundant in the meadows surrounding our little lake. At that time I had the same feeling which one of our greatest writers so vividly describes:*

"Of all the birds of our groves and meadows, the Bobolink was the envy of my boyhood. He crossed my path in the sweetest weather and the sweetest season of the year, when all Nature called to the fields, and the rural feeling throbbed in every bosom, but when I, luckless urchin! was doomed to be mewed up during the livelong day in that purgatory of boyhood, a school room. It seemed as if the little varlet mocked at me as he flew by in full song, and sought to taunt me his happier lot. Oh, how I envied him! No lesson, no task, no hateful school; nothing but holiday, frolic, green fields, and fine weather."

I often counted a dozen or more singing Bobolinks in one meadow. Most of them were passing to and fro in easy flight. Others were perched on the tops of bushes or long flaunting weeds, and as they rose and sunk with the breeze, poured forth a "succession of rich tinkling notes, crowding one upon another like the outpouring melody of the Shylark, and possessing the same rapturous character." Frequently one descends

* Washington Irving.
in full song from a rocking bough or from the air, and flutters tremulously down to the earth, as if overcome with ecstasy at its own music. When one spreads its wings and bursts into ecstatic song, others are sure to follow. This sailing, frolicking, and singing in the air, and this rocking on the slender weed-stems is continued all day long in fine weather.

The Bobolink never sings before sunrise. It begins its sweet music when the more earnest and solemn melody of the Robin, which was heard from earliest day-break, is almost at its close. Nature seems to have ordained that the serious parts of her musical entertainment in the morning hours should first be heard, and that the lively and merry strains should follow them. In the evening this order is reversed, and after the comedy is concluded Nature lulls us to repose by the mellow notes of the Vesper Sparrow, and the pensive and still more melodious strains of the solitary Thrushes.*

One of our most congenial and amiable ornithologists, the late Dr. T. M. Brewer, has given an account of the Bobolink's song which is too faithful and vivid to ever grow out of date:

"Of all our unimitative and natural songsters the Bobolink is by far the most popular and attractive. Always original and peculiarly natural, its song is exquisitely musical. In the variety of its notes, in the rapidity with which they are uttered, and in the touching pathos, beauty, and melody of their tone and expression, its notes are not equalled by those of any other North American bird. We know of none, among our native feathered songsters, whose song resembles, or can be compared with it.

"By the time these birds have reached, in their spring migrations, the 40th parallel of latitude, they no longer move in large flocks, but have begun to separate into small parties, and finally into pairs. In New England the Bobolink treats us to no such concerts as those described by Audubon, where many voices join in creating their peculiar jingling melody. When they first appear, usually after the middle of May, they are in small parties, composed of either sex, absorbed in their courtships and overflowing with song. When two or three male Bobolinks, decked out in their gayest spring apparel, are paying their attentions to the same drab-colored female, contrasting so strikingly in her sober brown dress, their performances are quite entertaining, each male endeavoring to outsing the other. The female appears coy and retiring, keeping closely to the ground, but always attended by the several aspirants for her affection. After a contest, often quite exciting, the rivalries are adjusted, the rejected suitors are driven off by their more fortunate competitor, and the happy pair begin to put in order a new home. It is in these love quarrels that their song appears to the greatest advantage. They pour out incessantly their strains of quaint but charming music, now on the ground, now on the wing, now on the top of a fence, a low bush, or the swaying stalk of a plant that bends with their weight. The great length of their song, the immense number of short and variable notes of which it is composed, the volubility and confused rapidity with which they are poured forth, the eccentric breaks, in the midst of which we detect the words bob-o-link so distinctly enunciated, unite to form a general result to which we can find no parallel in any of the musical performances of our other song-birds. It is

at once a unique and a charming production. Nuttall speaks of their song as monotonous, which is neither true nor consistent with his own description of it. To other ears they seem ever wonderfully full of variety, pathos, and beauty."

As already remarked, the Bobolink is one of our latest arrivals. I never noticed one of them in eastern Wisconsin before May 11, and never before May 9 in northern Illinois. Usually the merry assemblages of these birds do not appear in full force before May 15 or 20 in Wisconsin. In Texas I have observed them only once during the migration, but I have frequently heard their tinkling call-notes during the night when they passed in low flight over the city of Houston. I heard them more frequently during the full than during the spring migration. One day late in April, while rambling about in a small prairie near the West Yegua, I heard quite a number of throats pour out one brief, hilarious, tuneful jubilee. I recognized these familiar sounds at once, and when looking skyward I detected the gay horde pushing northward. On an isolated live-oak the whole flock mounted, and, while many were rocking themselves in the exterior branches, others were soaring through the air and singing their merry strains. Although very sweet, this was not the full, familiar, and loud song, which I was accustomed to in my earliest childhood. Though very fascinating, there was a strange remoteness, something very peculiar about all the sounds. These northward moving flocks seemed to scent the fragrant meadows afar off and shouted forth "snatches of their song in anticipation."

The haunts of the Bobolink are invariably low meadows and grassy prairies. They are said to breed in New England in clover fields and to banter and chant in apple orchards, but this I have never observed. Where one pair settles we may find others in close proximity. In the days of my youth, when these hilarious songsters were much more abundant than they are now, all the low meadows were resounding by their merry songs. Frequently as many as a dozen sailed through the air in full song. The impression of such a concert during a warm and sunny June day is a deep and lasting one. It must be heard in order to be fully understood and appreciated. The plainly colored, quiet, and retired female selects a place for her nest in a small depression of the soil, while her gay partner is hovering above her in the air or is perched on a slender weed-stem which bends under his weight, all the while overflowing with song and eloquent with melody. The feathers of his neck and head are mostly ruffled, and the wings are somewhat spread while rollicking and singing. The nest is exceedingly difficult to find. It is always built in the open meadow or prairie, without so much as a bush, a perennial herb, or a tuft of grass to protect it or to mark its site. "Bobolink nests are concealed in the luxuriant herbage of meadows with such instinctive care for their safety as to be difficult to find except by accident, as when disclosed by the scythe or the mower. In the western country the saying goes that an Indian can hide behind three blades of grass; and the hiding capabilities of a tuft of herbage are never better displayed than in screening a Bobolink's nest, not only from casual observation, but from patient search. The female is said to employ some artifice in arranging the spears of grass about the structure, as still further protection, and she is careful in going and coming, threading her way shyly through the herbage, into which she flies at some distance usually from the cherished spot. As the males at such times are singing any-
where about, apparently with little thought in the matter, there is little or nothing to focus attention in one spot more than another in the waving grass."**

The nest is always a slight structure, composed entirely of grasses and flush with the ground. The eggs, four to five in number, are grayish-white, sometimes with a greenish or brownish hue, and the whole surface is blotched with chocolate-brown and with other indistinct shell-markings. The female constructs the nest alone and she hatches also the eggs without the assistance of the always merry and frolicking male, and she also feeds the young until they are able to leave the nest. In his hilarity and song, especially when flying easily and gracefully over the grassy plain, or when sitting on a slender weed-stem with ruffled plumage, the male is a picture of beauty and poetry. But this changes suddenly when the young leave the nest and parental responsibilities increase. The song is less and less frequently heard. After a while, when the young are able to fly, it ceases entirely. A sudden change takes place in the appearance as well as in the habits of the males. The merry players and happy musicians "throw off their black dominos, the medley ceases, and the carnival is over." The plumage of contrasting black, white, and buff, so conspicuous and striking, changes with almost instant rapidity into a brownish-gray, until they are no longer distinguishable either by plumage or note, from their mates and young.**

In the Northern States the Bobolink is one of the most beneficial of all our birds. Its food, from the time of its arrival until its departure, consists almost entirely of all kinds of noxious insects, especially of grasshoppers. When by the first of July the meadows are mown, large numbers of Bobolinks run over the half dry grass in pursuit of insects. When the grasshoppers, crickets, moths, and beetles do no longer find food and hiding places in the mown meadows, they move into the neighboring fields of barley in order to continue their ravages; but the Bobolinks are following them instantly. I have seen many hundreds of these birds in the barley fields by the middle of July, and all were hunting insects. At this time we are scarcely able to recognize our beautiful songsters of May and June. They are strange in their appearance and strange in their ways and habits. They do not fly and rollick around any longer, and they are also rather timid. In large flocks they move about in the locality, disappearing entirely by the end of July from their breeding haunts. I have seen large flocks in the reeds and sedges of the great Horicon and Koshkonong Marshes in southern Wisconsin early in August. At the same time they appear in the marshes of the Delaware River. They are now not any longer known as the Bobolinks, but have become the "Reed-birds." Late in August or early in September they leave the northern parts of the country, travelling mostly by night to elude observation. "Some still dark night you may know that the play is played out, hearing the chink-link-ink from the upper air as the birds speed on; that is the tinkle of the bell that rings the curtain down on the last act."**

A few weeks later they swarm in the rice plantations of South Carolina and Louisiana. Having become exceedingly fat on the different kinds of seeds, they are killed in immense numbers by sportsmen for the table of the epicure. They are now known


** For further information I refer the reader to Mr. Frank Chapman's article "On the Changes of Plumage in the Bobolink." The Auk. Vol. VII, 1890, p. 120—124.
as the "Rice-birds." Late in October they are leaving the United States, making a short halt in the West Indies, where they are said to feed on the seeds of the Guinea-grass. In Jamaica they receive a new appellation, being there called "Butter-birds." Everywhere in the South and the West Indies the Bobolinks are constantly killed in immense numbers. It is really a great loss to northern agriculture as well as to the great numbers of friends of Nature, that these birds are allowed by our modern governments to be killed in such countless numbers. These beautiful birds have become so scarce of late in many localities that something must be done in order to stop the wholesale slaughter at least in our own country. Even in the Southern States the Bobolink is probably much more beneficial than injurious, for it has been ascertained that they "feed greedily upon the larvæ of the destructive cotton-worm, and in so doing render an immense service to the cultivators of Sea Island cotton."

In allusion to its song the Bobolink has received quite a number of names in its natal haunts, being known as the Bobblincon, Bob, Robert, and Robert of Lincoln. Meadowink is of the same character with additional reference to the place where the birds are mostly found during the season of song. "Skunkbird" and "Skunk Blackbird" it has also been called from its resemblance in color to the notorious beast in mention. "Ortolan" it has been named during the autumn on the Atlantic coast.

The summer home of the Bobolink is found from the Middle States northward to Maine, Ontario, Manitoba, Assiniboia, and Alberta, and from the Atlantic Ocean west to Montana, eastern Nevada, Utah, and Idaho. Together with quite a number of other North American birds two specimens were obtained by Heinrich Gätke on the famous island of Heligoland as stragglers. The birds seem to winter from the West Indies southward, being found in great numbers even as far south as Brazil, Bolivia, and even Paraguay.

With bird fanciers in this country and in Europe the Bobolink is a great favorite. Large numbers are exported annually to Europe. They are usually caught at the time of their arrival in nets or trap cages, and they soon become accustomed to cage life. I often caught these birds, and when I lifted the cage from the ground they began to sing. Being very peaceful, they can be kept together with many other small birds. It is difficult to keep the Bobolink in the cage for any length of time, if fed exclusively with seeds. In addition to these they must get Mockingbird-food, mixed with grated carrots, mealworms, grasshoppers, and other insects, and fruit. I have kept several for three and four years, but they did not change their plumage in spring in the way as wild birds do, but they sang just as beautifully. Instead of the deep black color the plumage showed a mixture of black and brown spots, and the creamy cap on the hind neck and the white on the back were replaced by an inconspicuous drab and gray.


DESCRIPTION: "Male, in breeding plumage: Black; nape, buff; scapulars, rump, and upper tail-coverts, ashy-white; middle of back, streaked with black, buff, and ash; outer quills, edged with yellowish; bill, blackish; feet, brown. Male in fall, female and young, entirely different: Yellowish-brown above, brownish-yellow below; upper parts and sides below streaked with black; crown with median and lateral light stripes; wings and tail, dusky, with pale edges of the feathers; bill, brown." (Stearns & Coues, N. E. B. 1, p. 292.)—Length, 7.25 inches; wing, 3.75; tail, 2.75 inches.
THE COWBIRD, also known as the Cow Blackbird, Cow Bunting, Sheep-bird, Lazy Bird, Clodhopper, Shiny-eye, and Buffalo Bird, has a very bad reputation. Like the European Cuckoo it is a pernicious parasite, imposing its eggs upon other birds, leaving to them the hatching and the raising of the young. As it is an exceedingly common and rather tame bird in all the rural districts of the eastern part of our country, we are well acquainted with its habits. These birds are usually moving about in loose flocks among the grazing cattle and are often seen perched on the backs of the cows picking off all kinds of parasitic insects. The male is a plainly colored bird, deep black, with a chocolate-brown head. The female is brownish-gray.

The Cowbird’s geographical range is a large one. It is found over the whole of the United States and British America, north to Little Slave Lake. It winters from southern Illinois to southern Mexico, being very abundant in all suitable localities in the South Atlantic and Gulf States, where it is often seen in company of Red-winged Blackbirds. In south-eastern Texas I observed it in large flocks from the early part of November to the beginning of March, and many remained during the breeding season. In all the cultivated districts of the Northern States, east of the Rocky Mountains, it is one of the most numerous of our birds. Sparingly it occurs as far west as eastern British Columbia, eastern Washington, Oregon, and California, but it is totally absent west of the Sierra Nevada and Cascade Mountains. From the latitude of Houston, Texas, and New Orleans it is distributed to Little Slave Lake, Athabasca, latitude 55°, 33', and perhaps still farther into the Arctic regions in summer.

In Wisconsin and northern Illinois the Cowbirds make their appearance about the middle of April, often in company of the Red-winged Blackbirds. Without separating into pairs they remain together in smaller or larger assemblages, roaming about in the country, usually in pastures, near orchards and thickets, and on the woodland border. They derive several of their common names from their associations with the cows and sheep, and we often see them on the backs of these animals or among the cattle on the ground, where they find abundance of food in the droppings. They are not easily disturbed, so we may observe them at leisure. If flushed the whole flock alights on the ground at some distance, returning as soon as they feel safe. All of the members of the odd band act as if by mutual consent. When one flies down to the ground, the others follow at once, and when one rests, the others do the same. During the hottest time of the day they seek shelter in the shady branches of an isolated tree, where they are resting, preening their feathers and stretching in a droll way their legs or spreading their wings. At this time, especially from their arrival until late in June, we have an opportunity to become acquainted with their musical abilities. Quite a number of males may be seen perched on a fence, or the limb of a tree, each one uttering very singular harsh,

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guttural and croaking notes, which are accompanied by all kinds of comical motions. They stretch their legs, spread their wings and tail, lower and raise their heads, turn their neck, and make the impression as if these notes were produced with much trouble. Mr. H. D. Minot gives the following excellent description of the Cowbird’s musical performance, which fully corresponds with my own observations:

“There is something ludicrous, and yet pitiable, in the efforts of the male to express his passions musically. It is often as painful to hear him and see him, as to converse with one who stutters badly. He ruffles his feathers, spreads his wings and tail, gives a convulsive movement to his body, and yet produces nothing but a shrill, unmusical cluck-see. He often adds to this, or splutters out at other times, a chattering call, quite distinct from that of any other bird, or utters a few low guttural notes, not audible at a distance. He has in common with other members of his family a loud chuck; but he is not wholly destitute of musical powers. One may often hear in spring from the top of some tree, a clear, pensive, but rather shrill whistle, usually followed by a few similar but falling notes. These belong to the Cowbird, who also whistles sometimes as he takes to wing.”

During the breeding season the Cowbirds are always found where many small insectivorous birds occur, particularly on the borders of woods, near gardens, in pastures, near thickets and bushes. There are usually about one third females and two thirds males in the flocks. They live in polyandry and polygamy and the male pays his court to several females, or one female is courted by several males. “Polygamy,” says Dr. Elliott Coues, “is rare among higher birds; in no creatures are the parental and conjugal instincts more strongly developed or beautifully displayed. But the Cowbird illustrates this mode of life, and not in the lordly manner of the barn-yard cock, so devoted to his harem, so gallant and just to all. As in this species there is no love of offspring, neither can there be conjugal affection; all family ties are dispensed with. The association is a mere herding together in quest of food in similar resorts. The Cowbirds never mate; their most intimate relations are no sooner effected than forgotten; not even the decent restrictions of a seraglio are observed; it is a perfect community of free-lovers, who do as the original Cynics did. The necessary courtship becomes in consequence a curiously mixed affair. During the period corresponding to the mating season of orderly birds, the patriarchs of the sorry crew mount up the trees and fences, to do what they call their singing. They posture and turn about, and ruffle their feathers to look bigger than Nature made them; if their skins were not tough they would certainly burst with vanity. They puff out their throats and pipe the most singular notes, perhaps honestly wishing to please their companions of the other sex—at any rate, to their own satisfaction. Meanwhile the females are perched near by, but without seeming very enthusiastic—rather taking it all as a matter of course, listening at times, it may be, but just as likely preening their plumage, with other thoughts and an ulterior purpose. The performance over, it is a very little while afterward when the whole band goes trooping after food in the nearest cattle-yard or pasture.”

It is very interesting to observe the female Cowbird, ready to lay. She becomes uneasy and restless. Quietly and stealthily she leaves the flock, sallying forth to reconnoitre, “anxiously indeed, for her case is urgent, and she has no home. How
obtrusive is the sad analogy! She flies to some thicket, or hedge-row, or other common resort of birds, where, something teaches her—perhaps experience—nests will be found. Stealthily and in perfect silence she flies along, peering furtively, alternately elated or dejected, into the depths of the foliage. She espies a nest, but the owner's head peeps over the brim, and she must pass on. Now, however, comes the chance; there is the very nest she wishes, and no one at home. She disappears for a few minutes, and it is almost another bird that comes out of the bush. Her business done, and trouble over, she chuckles her self-gratulations, rustles her plumage to adjust it trimly, and flies back to her associates. They know what has happened, but are discreet enough to say nothing—charity is often no less wise than kind." (Cones.)

If we search closely we may find the parasite's egg in the nest of a Maryland Yellowthroat, a Vireo, a Song Sparrow, a Yellow-breasted Chat, etc. The egg is always deposited in nests from which the owners are absent. She never attempts to force a bird from her nest. It is a rather peculiar fact that the always watchful birds, being usually aware of everything that is going on in their nesting range, are so quiet and careless when the parasitic Cowbird is stealthily searching for a nest, and that they apparently do not notice it when the strange bird has occupied the place in their domicile. I have never heard that they even uttered a warning note, when the Cowbird was sneaking around in the vicinity of their home, while their screaming and lamenting seems to find no end when any other strange bird is approaching their nest too closely. I am of the opinion that in many cases the Cowbird cannot inflict her eggs on other birds entirely unnoticed. Exceedingly comical are the actions of the rightful owner when returning to her nest. She discovers the ominous egg at once; half astonished, half scared she utters her call-note and the male is on her side. Both are looking upon the parasite's egg with amazement and hop about greatly excited, and apparently they do not know what to say about the evidence of the Cowbird's unfriendly visit. At last they become silent. The male begins to sing and the female occupies her place in the nest. With this act the fate of her own brood is decided: the foster child will leave the nest in the best condition, while her own children are doomed to an early death.

"Such seems to be the fate," writes Major Charles Bendire, "of nearly all the young which have the misfortune to be hatched with a Cowbird for a companion. I have yet to see a nest containing young birds of both species more than a few days old; by that time the rightful offspring are either smothered or crowded out of the nest by their stronger foster brother, or starved, and he then absorbs the entire attention of the parents. Only in such cases where these are as large or larger than the imposter is there any likelihood to be an occasional exception to this rule. It can readily be seen what an immense amount of harm the Cowbird causes in the economy of Nature, granting that only a single one of its eggs is hatched in a season; to accomplish this a brood of insectivorous and useful birds is almost invariably sacrificed for every Cowbird raised, and they are certainly not diminishing in numbers.

"While a few of the selected foster parents resent the addition of a parasitic egg in their nest, either by abandoning it entirely or by building a new one over it, and occasionally even a third one, the majority do not appear to be much disturbed by such an event, and after a short time go on as if nothing had happened. A few species, like
the Indigo Bunting, for instance, will sometimes abandon their own eggs should the stranger's egg be removed, but apparently do not mind the loss of one or two of their own, and continue incubating just the same.

"Almost invariably the nests in which one or more of these parasitic eggs have been deposited contain only incomplete sets of their rightful owners. Where the Cowbird drops an egg in the nests of species considerably smaller than itself, as the Gnatcatcher, etc., its much larger size seems to be a positive advantage to the more rapid development of the embryo, as the egg must necessarily receive more animal heat than the smaller ones, which can scarcely come much in contact with the body of the sitting bird, and the development of the embryos in these must be more or less retarded thereby.

"It is ludicrous to see a fat, fully fledged young Cowbird following a pair of Chipping Sparrows, or some small Warbler clamoring incessantly for food and uttering its begging call of seerr-seerr most persistently, only keeping quiet while its gaping beak is filled with some suitable morsel, and stranger still to note how devoted the diminutive nurses are to their foster child. One would think that they might see through the fraud, at least after the young interloper left the nest, if not before, and abandon him to his fate, but the greatest attachment seems to exist between them until the Cowbird is able to shift for himself, when he leaves and joins his own kind."

Such is the Cowbird's bad reputation. For every individual in the flock of Cow Buntings four or five of our beautiful insectivorous birds had to suffer their death—and there are often many hundreds of these birds in a single horde. In localities where they are abundant they become a great nuisance, and their parasitic habit does more harm to our beautiful native birds than the much hated European Sparrow.

It is astonishing how many different species of our birds suffer from this parasite. Major Bendire, the celebrated oölogist and ornithologist of the National Museum in Washington, D. C., mentions ninety different small birds, comprising pretty much all the species nesting within the Cowbird's breeding range. These foster parents of the parasite range from the size of a Mourning Dove, down to that of the House Wren and Blue-gray Gnatcatcher. One would naturally suppose that birds breeding in holes like the Wrens and Woodpeckers, or build nests with a small entrance on the side, like the Parula Warbler, would be exempt from this infliction, but it is not the case. All these birds are exceedingly valuable in the household of Nature. I have found the egg of the Cowbird in a nest of Bewick's Wren, in one of the nesting boxes I had provided; the entrance hole was very small so that no Bluebird and not even the Tufted Titmouse could enter. Nevertheless the Cowbird deposited its egg in the nest. "It seems almost impossible," says Major Bendire, "that a bird of this size would be able to enter the small pendant nest of the Parula Warbler and deposit its egg therein in the usual way; still this species is occasionally imposed on, and it is possible that the egg is dropped in the nest with the beak." I have found from one to three Cowbird's eggs in one nest and other observers have even discovered five and seven, but generally only one egg is deposited in a nest. Although I have paid much attention to the subject I have never found more than one young Cowbird in one nest. In Texas, where I found two parasitic eggs in the nest of the Painted Bunting, and three in the nest of the Orchard Oriole, only one was hatched, while the other disappeared in a mysterious way with the foster
parents' own eggs. In the nest of a Yellow-breasted Chat in south-western Missouri three Cowbird's eggs were found together with two of the rightful owner; one disappeared before hatching and so did the owner's eggs, while two Cowbird's eggs were hatched. At the age of three days one of the young parasites disappeared and only one left the nest of its foster parents.

It is not unusual to find one or more of the eggs of the rightful owner thrown out of the nest, and it is supposed that the female Cowbird is responsible for it. This is doubtlessly done to enhance the chances of her own offspring. In other cases there are minute punctures in the shells of the remaining eggs, and this is probably done on purpose by the Cowbird, either with the beak or with the claws, to keep them from hatching.

The eggs of the Cowbird show a great variation in color as well as in size. They show a pearly-white, often a pure white, a grayish-white or pale bluish ground-color, and are more or less densely spotted with chocolate-brown, lavender and cinnamon-brown spots.

On page 271, Volume I, of this work I have quoted Mr. John Burroughs' opinion of the Cowbird and the way in which he rides the nests of our small birds of the young parasite. For many years I have followed his example, and I destroy every parasitic egg and every young Cowbird wherever found.

As soon as the young Cowbirds are able to shift for themselves they leave their foster parents, seeking instinctively the society of their own species. Young and old assemble into flocks, and these flocks again join others until large swarms are formed. With other Blackbirds, notably Redwings and Yellowheads, they frequent marshes where they find abundance of food in the seeds of wild rice and reeds. By the middle or the latter part of October they begin to migrate southward.

In south-eastern Texas, from Houston southward, I met also the Dwarf Cowbird, Molothrus ater obscurus Coues, but it was not common. On the Rio Grande and the adjacent Mexican territory, and thence westward to Arizona and Lower California, it replaces the typical species. It resembles the common Cowbird closely, being only a little smaller.


Length, 7.00 to 8.00 inches; wing, 3.87; tail, 2.87 inches.
RED-EYED COWBIRD.

Callothrus robustus RIDGWAY.

The Red-eyed Cowbird, or Bronzed Cowbird is an inhabitant of the lower Rio Grande region of Texas, south through Mexico and Central America to Panama. It has been found as far north as San Antonio, Texas.

Like the common Cowbird the female deposits her eggs in the nests of other birds, and the beautiful Orioles of that region, Audubon's Oriole, the Hooded Oriole, the Orchard Oriole, and Bullock's Oriole, appear to be the especial victims, and among these, according to Major Charles Bendire, Audubon's seems to be the worst sufferer. In nine sets of this species in the United States National Museum Collection there are only two, which contain the normal number of eggs, four. The other seven all contain from one to three of these parasitic eggs, with one or two of their own, and some of these are usually punctured. In none of these nests were eggs of the Dwarf Cowbird found in addition to those of the Bronzed Cowbird. The former appears to confine itself to the smaller Orioles only.

We are indebted to Dr. J. C. Merrill, U. S. Army, for the following account of this parasite:

"My first specimens were taken at Hidalgo, on the Rio Grande, seventy miles north-west of Fort Brown, where, however, they are not so abundant as lower down the river. Here they are common throughout the year, a small proportion going south in winter. Those that remain gather in large flocks with the Long-tailed Grackles, common Cowbirds, and Brewer's, Red-winged, and Yellow-headed Blackbirds; they become very tame, and the abundance of food about the picket lines attracts them for miles around. The Red-eyed Cowbird is readily distinguishable in these mixed gatherings from the other species by its blood-red iris and its peculiar top-heavy appearance, caused by its habit of puffing out the feathers of the head and neck.

"This habit is most marked during the breeding season and in the male, but is seen throughout the year.

"About the middle of April the common Cowbird, Brewer's, and Yellow-headed Blackbirds leave for the North; the Long-tailed Grackles have formed their colonies in favorite clumps of mesquite trees; the Redwings that remain to breed have selected sites for their nests; the Dwarf Cowbirds arrive from the South, and the Red-eyed Cowbirds gather in flocks by themselves and wait for their victims to build. The males have now a variety of notes, somewhat resembling those of the common Cowbird, but more harsh. During the day they scatter over the surrounding country in little companies of one or two females and half a dozen males, returning at nightfall to the vicinity of the picket lines. While the females are feeding or resting in the shade of a bush, the males are eagerly paying their addresses by puffing out their feathers, as above noted, strutting up and down, and nodding and bowing in a very odd manner. Every now and then one of the males rises in the air, and poising himself two or three feet above the female, flutters for a minute or two, following her if she moves away, and then descends to
RED-EYED COWBIRD.

resume his puffing and bowing. This habit of fluttering in the air was what first attracted my attention to the species. In other respects their habits seem to be like those of the eastern Cowbird.

"My first egg of the Red-eyed Cowbird was taken on May 14, 1876, in a Cardinal's nest. A few days before this a soldier brought me a similar egg, saying he found it in a Scissors-tail's (*Milvulus*) nest. Not recognizing it at the time, I paid little attention to him, and did not keep the egg. I soon found several others, and have taken in all twenty-two specimens the past season. All but two of these were found in nests of the Bullock's, Hooded, and Orchard Orioles. It is a curious fact that although Yellow-breasted Chats and Red-winged Blackbirds breed abundantly in places most frequented by these Cowbirds, I have but once found the latter's egg in a Chat's nest, and never in a Redwing's, though I have looked in very many of them. Perhaps they feel that the line should be drawn somewhere, and select their cousins, the Blackbirds, as coming within it. The Dwarf Cowbirds are not troubled by this scruple, however. Several of these parasitic eggs were found under interesting conditions. On six occasions I have found an egg of both Cowbirds in the same nest. In four of these there were eggs of the rightful owner, who was sitting. In the other two the Cowbird's eggs were alone in the nests, which were deserted. But I have known the Hooded Oriole to set on an egg of the Red-eyed Cowbird, which was on the point of hatching when found. How its own disappeared I can not say. Once two eggs of this species were found in a nest of the Orchard Oriole. Twice I have seen a broken egg of this Cowbird under nests of Bullock's Oriole on which the owner was sitting.

"Early in June a nest of the Hooded Oriole was found, with four eggs, and one of the Red-eyed Cowbird, all of which I removed when leaving the nest. Happening to pass by it a few days later, I looked in, and to my surprise found two eggs of this Cowbird, which were broken. These were so unlike that they were probably laid by different birds. Still another egg, and the last, was laid in the same nest within ten days. But the most remarkable instance was a nest of the Orchard Oriole, found June 20, containing three eggs of the Red-eyed Cowbird, while just beneath it was a whole egg of this parasite; also a broken one of this and the Dwarf Cowbird. Two of the eggs in the nest were rotten. The third, strange to say, contained a living embryo. As the nest was certainly deserted, I can only account for this by supposing that the two rotten ones were laid about the first week of June, when there was considerable rain, and that the other was deposited soon after, since which time the weather had been clear and very hot. On one occasion I found a female of the Red-eyed Cowbird hanging with a stout thread around its neck to a nest of the Bullock's Oriole. The nest contained one young of this Cowbird, and it is probable that its parent after depositing the egg was entangled in the thread on hurriedly leaving the nest, and there died. It had apparently been dead about two weeks. This case supports the view that the eggs or young of the owner are thrown out by the young parasite and not removed by its parent, though I could find no trace of them beneath the nest."

Several other species of Cowbirds inhabit South America.*

YELLOW-HEADED BLACKBIRD.

Xanthocephalus xanthocephalus JORDAN.

PLATE XXIX. FIG. 3.

The Blackbirds belong to the most characteristic features of our American landscapes. Wherever they occur, be it in their breeding haunts, on their way to and from the South or in their winter-quarters, they impart the landscape with the conspicuousness and peculiarity of their presence. Being eminently gregarious when not breeding, they move about in large black swarms. Though possessed of a special fondness for low marshy or watery places, we find them scouring the open cultivated country in quest of food, being frequently seen in fields, pastures, meadows, and orchards. The swarms of Blackbirds are familiar to every country boy, and their coming and departing is quite an event in rural life. The prevailing color of these birds is a deep black, glossed with bronze, violet, purple, blue, green, and gold. All the Grackles, as well as the Blue-headed and Rusty Blackbirds, are entirely black, while in the Bobolink, the Red-wings, and the Yellow-headed Blackbirds the lustrous black contrasts well with their other colors of bright red, yellow, and white. When arriving in spring they are exceedingly noisy and their characteristic call-note, a loud teck, is uttered by almost every individual of the swarm. Throughout the season, from their arrival in spring until they assemble again in swarms after moulting time, these peculiar sounds are heard always and everywhere. With the exception of the Cowbird, each species utters a few pleasant song-like notes.

One of the most beautiful and conspicuous birds in the marshes of the low rich prairies of Illinois, Wisconsin, Iowa, Minnesota, and thence westward to California, is the YELLOW-HEADED BLACKBIRD or Yellowhead. Being found in great abundance in one locality and not at all in another, it is a familiar bird in some places, while entirely unknown in others. Generally it occurs in the flat, moist prairies where extensive marshes, overgrown with luxuriant rushes and sedges, are found. While the Red-winged Blackbird is contented with small swamps in wooded and cultivated districts, the Yellow-headed Blackbird is only met with in places particularly adapted to its wants. It is at all times a gregarious bird and usually breeds in large colonies, one nest being found in close proximity to another. The smallest swamp offers all necessities of life to the Redwing, but for the sociable Yellowhead only the largest marshes offer an inducement for colonization. It has always been found in such places and, indeed, only in the
marshes of extensive prairies, never in swamps located in forest regions or where fields and woods alternate. The Yellowhead is therefore pre-eminently a prairie bird. I have observed this beautiful and interesting species in great abundance in the Calumet marshes of northern Illinois, and in the Koshkonong and Horicon marshes of Wisconsin. Its breeding range extends from Texas and New Mexico northward to the interior of the fur countries, where it was found to latitude 58°, and from Illinois to California. In Iowa, Minnesota, Kansas, the Dakotas, and Manitoba the Yellow-headed Blackbirds are found in large communities, but their occurrence is always restricted to extensive marshes. In some localities in California they are exceedingly abundant. Prof. Robert Ridgway reports that they abound in the marshes of California and that they even exceed the Redwings in number. Frequently their nests filled the rushes of their breeding places. Dr. Elliott Coues found them in large numbers in Kansas and New Mexico. Thousands were breeding in a marshy place near Laguna, just west of the Rio Grande, and they were also seen by him in eastern Arizona, but not in such plenty. About Klamath Lake, Oregon, they also have been found in abundance. They are said to reach the Saskatchewan by the 20th of May. Single specimens have been recorded from Florida, Pennsylvania, Massachusetts, and even from Greenland, and this erratic appearance in localities so remote from their usual habitat and from their route of migration sufficiently attests the nomadic character of the species.

Twenty years ago this beautiful bird was a characteristic and abundant summer sojourner on the Calumet marshes and of Calumet Lake, near which the city of Pullman has since sprung up as if by magic. At that time I had an excellent opportunity of observing these birds. I first visited the colonies of Yellowheads on June 10, 1878. Calumet Lake was then situated in the wide open prairie, about a mile from Kensington. The shallow water was bordered with a dense growth of reeds which ultimately attained a height of from six to eight feet. No tree, no shrub was found anywhere near this body of water, and only toward south-east the eye met a wooded elevation. It was a beautiful, warm day especially adapted for roaming about in quest of birds and flowers. At a distance of almost a half a mile I noticed these birds already in great numbers, and when I came nearer I also heard their voices. Large numbers were searching in the low prairie for food, and small flocks were incessantly flying away, while others were returning. Many were busy collecting and carrying nesting material. When I approached the edge of the water more closely I heard their noisy guttural and whistling sounds. Hundreds of them were gamboling and flying about among the rushes, or they were perched on the stalks of these plants which were bending under their weight. All of them were exceedingly active, and their movements among the reeds as well as on the ground were graceful and adroit. I found quite a number of nests in all stages of completion. Being all situated quite a distance from the shore, they could not be approached without the aid of a canoe. I attempted to reach several of the nearest by wading, but the water became deeper and deeper so that I had to return. When I paddled my small canoe with much difficulty through the rushes I had the good opportunity of examining many of the nests. They often were scarcely three feet apart and were built only a few inches above the water. They were attached to tall reeds or rushes, usually in the midst of clumps of the latter, and these were so
dense in their growth that the nests were not easily discovered. The material of which these nests are woven consists of coarse pliable sedges and grasses and the lining of finer grasses. This material is collected from the water and it is only used when thoroughly wet and soft. I saw many nests just begun or only partly finished and all the material was entirely wet. I also observed the birds gathering and carrying the wet grass-stems to their nests. Only a few of the structures contained a full complement of eggs, usually four or five in number, while many contained only one or two. A typical nest which I took with me measured 8.00 inches in length and 6.00 inches in width. The cavity was 3.00 inches wide and 2.50 inches deep. After the wet material has become dry the nest is very compact and durable, and it is also a very skilful piece of work. This nest is placed in a tuft of upright reeds, some of which pass through the walls, fastening it securely. Marsh Wrens and a few pairs of Redwings were breeding peacefully among them. The eggs, usually four and sometimes five in number, are dull grayish or pale greenish-white, and are densely covered with small spots and blotches of drab, purplish-brown, and umber. When I visited the colonies of these birds, myriads of May or June flies (Ephemera) were swarming over the water and in the air, so that it was almost impossible to keep the eyes open.

The Yellowheads never arrived before May 15 in this locality, and as the reeds and sedges in the swamps are small at this time they do not settle in their breeding haunts before the first week in June. As soon as the water becomes warm the rushes grow with great rapidity. By the 15th of June they are so strong and dense that the nests are well hidden and not readily seen at any distance. I have seen these birds swarming about throughout the winter from October to May in the marshes on the Gulf coast of south-eastern Texas. Even in May I have observed flocks of them. Their presence so far south at this season, and in such numbers, would indicate that they breed there.

At present the Yellow-headed Blackbirds are abundantly breeding in the Koshkonong and Horicon marshes in Wisconsin, and their light, neat, and elegant structures are frequently found in the dense rushes and sedges by the middle of June. Towards the end of summer they congregate into large swarms, assembling with Redwings and even with Cowbirds. They move about in the country for some time and pass southward by the end of October or earlier. Indeed, I have seen none of these interesting birds after the beginning of September in Wisconsin. Their food consists largely of grasshoppers, snails, all kinds of water-insects, May flies, etc. The young are exclusively fed on insects. Like the Redwings, the Meadowlarks, and Brewer's Blackbirds the Yellowheads are a great blessing to the farmer, destroying, as they do, immense numbers of noxious insects. According to Mr. W. J. McLaughlin, of Centralia, Kansas, these birds arrive in that region about the first of May, and all disappear about the 10th of June. He does not think that any breed there. During their stay they made themselves very valuable to the farmer by destroying swarms of young grasshoppers. On the writer's land the grasshoppers had deposited their eggs by the million. As they began to hatch, the Yellowheads found them out, and a flock of about two hundred made clean work on about two acres each day, roving over the entire lot in the manner of wild Pigeons, the rear ones flying to the front as the insects were devoured. In their winter-quarters
and late in fall they also subsist on all kinds of seeds, especially those of the reeds and sedges. Most of their food is picked up from the ground, and they even dig into the soft earth with their bills in search of insects and their larvae. It is interesting to watch them while running over the ground. They are straddling about with a quaint and graceful gait, entirely in the manner of the Redwings and others of the family.

The notes of the Yellowhead are harsh and not musical, but they are by no means disagreeable, while frequently their attempts to utter a song to the best of their ability is very amusing. Every sound is usually accompanied by raising and lowering the head, turning the neck, spreading the wings and tail, and stretching the legs. The common call-note is a loud teck, similar to that of all Blackbirds, but of a rather deeper tone, while the song, if song it may be called, consists of several whistling and many harsh and guttural sounds. When hundreds of these birds have alighted in an isolated tree and almost every male is uttering its peculiar notes, the effect of the concert is really pleasant. I have kept one for several years in a roomy cage, and from early April until the middle of July the bird was by no means parsimonious with its notes.

These birds are exceedingly gregarious, even in the nuptial season, breeding in large communities wherever found. As soon as the young are able to join they move about in dense swarms, and it is a very attractive sight to observe the immense black cloud-like hordes, moving along over the ground or speeding on in graceful undulating lines through the air.

There is no doubt about the real and aesthetical value of these birds. They belong to the most active and beautiful ornaments of our American landscape, and desolate and dead indeed would seem our tree and bushless marshy prairies without the presence of these elegant summer sojourners.

NAMES: YELLOW-HEADED BLACKBIRD, Yellowhead.—Gelbkopfstärling (German).


DESCRIPTION. "Male: Black, including the lores; head, neck, and fore breast, yellow; a large white wing-patch.—Length, 10.00 to 11.00 inches; extent, 16.50 to 17.00; wing, about 5.50; tail, 4.50 inches.

"Female and young: Brownish-black, the yellow restricted or obscured, and little if any white on the wing. Female much smaller than the male.—Length, 8.50 to 9.00 inches."

RED-WINGED BLACKBIRD.

*Agelaius phoeniceus* Swainson.

PLATE XXIX. FIG. 4.

 Why chidest thou the tardy spring?
The hardy Bunting does not chide;
The Blackbirds make the maples ring
With social cheer and jubilee;
The Redwing flutes his o-ka-lee.

R. W. Emerson.

Every locality has its characteristic vegetation and bird-life. In some favored places where the conditions are particularly propitious, we may find a large number of species, while in other spots less opportune only few birds occur. The birds of the mountains and woodlands are different from those of the plains and prairies, the field and meadow harbors others as the garden and orchard. Many birds have a restricted range of distribution, while others are found over an immense territory. In the foregoing pages* I have frequently alluded to the surroundings and associations of my youth, and particularly the "small lake" of my native State has often been mentioned. In that locality the conditions were exceptionally favorable to vegetation and bird-life, and almost all the species occurring in the region were found on the lake or in close proximity to it. Marshes and low meadows, thickets and openings, cultivated lands and large tracts of primeval forest, hills and valleys, small swamps filled with cat-tail flags¹, bulrushes², common meadow-sweet³, and the large blue flag or iris⁴, and extensive thickets covered with climbers were found everywhere in the vicinity of the lake. The marshy outlet was bordered partly by dense masses of thickets and partly by rank growing rushes and sedges. In early spring large tracts of meadow land were transformed into a yellow and green carpet by the marsh marigold, and in June the edge of the outlet appeared in some places at a distance like a beautiful blue ribbon by the masses of flowering blue flags. In the water the exquisite fragrant water-lily⁵ and the yellow pond-lily grew abundantly. How often have I observed the Virginia Rail and the Sora leading their active and timid young over the water-lily leaves! The conspicuous nests of the muskrats were numerous on the edge of the lake, and they formed quite a feature of the landscape especially in winter, when all the shrubs around them were leafless. The Pied-billed Grebe, the Hooded Merganser, the Wood Duck, Mallard, Blue-winged Teal, Pintail, and other Ducks were breeding unmolested at that time, and the lonesome, patient angler had always a good success, as fishes were very plentiful. The American Woodcock nested numerously in the moist woods. In the sloping beautiful woodland toward the edge of the lake the songs of the Veery, the Rose-breasted Grosbeak, and the Scarlet Tanager were familiar to the rambler, and in the evening the notes of the Whippoorwill lulled the hard working settlers into a sound slumber. Passenger Pigeons were seen in incalculable numbers, and some trees, especially

* See page 202.

¹ *Typha latifolia*. ² *Scirpus*. ³ *Spiraea salicifolia*. ⁴ *Iris versicolor*. ⁵ *Nymphaea tuberosa*. 
1. DOLICHONYX ORYZIVORUS Swains δ & θ - Bobolink.
5. STURNELLA MAGNA Swains - Wiesen-Stärling - Meadowtark.
RED WINGED BLACKBIRD.

beeches, were filled with their nests, which nearly without exception contained only one egg. How persuasive and sweet sounded their melodious, loud, and rather high song-like call-notes through the forest when they arrived in their breeding haunts from their foraging tour! How suggestive of spring in all its beauty were these sounds, and what charm did these notes and the drumming of the Ruffed Grouse lend to the glorious, almost untouched forest! How do I long to hear these sounds again! But alas! they are silent forever as are the whistling notes of the Bobwhite, and destroyed is the beauty of the once so magnificent forests. The meadows swarmed with Bobolinks, and although not yet exterminated, they have become quite rare of late.

The birds of the swamps and the marshy borders of the lake were comparatively safe from intruding enemies. With the exception of the black water snake, the mink, and the raccoon there was little to fear. The latter came here during the night to indulge in hunting and catching cray-fishes. Although the ground swung up and down under my feet near the edge of the lake and the outlet, there was so much to attract me that I could not resist from penetrating the seclusion of the rank vegetation, where gorgeous flowers, brilliant birds and butterflies, noisy katydids and restless dragon flies abounded, and where numerous bullfrogs called out in loud and "echoing bellow, w’rroo, w’arroo, w’orworro, hoaroom, which again was answered, or as it were, merely varied, by the creaking or cackling voice of their feathered neighbors." Here Marsh Wrens, Ducks, and other birds nested, and in August brilliant lobelias blossomed abundantly. There was no firm footing, still I ventured on, hidden from all the world at times by the tall reeds, the silk-weed (Asclepias), the stately typha, and thickets of shrubs. The Swamp Sparrow, the Maryland Yellow-throat, the Cedar-bird were often disturbed by me on their nests, and the Great Blue Heron casted ominous shadows when taking wing. The most characteristic inhabitants of such localities, however, were the RED-WINGED BLACKBIRDS who were breeding in large colonies among the reeds and swamp grasses. Indeed, they imparted to these and similar localities a beauty and life entirely their own, being the most conspicuous features of all the marshes and swamps.

In a former life-history I called the Bobolink the beauty and poetry of our grassy, flower-adorned northern meadows. In the same sense the Red-winged Blackbird is an almost ideal feathered inhabitant of our swamps and marshy lake borders. There would be little charm about such localities were they not inhabited by these beautiful and conspicuous birds. Since my earliest childhood this familiar bird is associated in my mind with the typhas, the water-lilies, the blue flags, the reeds and bulrushes, the peat and muck, the sphagnum moss and cranberry patches, and the nests of the muskrats.

The Red-winged Blackbirds arrive early in their breeding haunts. I have seen them in Sheboygan County, Wis., as early as March 10, and in northern Illinois by the first of that month. Large flocks were observed by me the 29th and 30th of January at Freistatt, Lawrence Co., Mo. Although arriving sometimes in advance of the Robins, they are rather irregular in their appearance, which is entirely dependent on the condition of the weather. They appear in flocks from twenty to a hundred and more, and are frequently seen perching on an isolated tree, where everyone begins to utter its notes at its utmost power. Some are calling out incessantly their characteristic con-cur-ce, or o-ka-lee, while many utter their whistling tū-tū and the rest their common call-notes tāck,
tack. This music seems something betwixt chattering and warbling, and there is so much confusion in this mad concert of spring that its impression is as unique as it is pleasant. There are often other notes heard, reminding one of saw-filing or the sound of a rusty hinge. The whole constitutes, as Mr. Nuttall says, a novel and grand chorus of discord and harmony, in which the performers seem in good earnest, and bristle up their feathers, as if inclined at least, to make up in quantity what their show of music may lack in quality. This concert can sometimes be heard for an hour or more if the weather be fair and is noticed at a distance of more than a mile. The birds look like dark clouds when they settle on a tree, and they present in their spring dress a very grand and imposing appearance, besides their filling the air with the matchless charm of their unique spring music. The first flocks which appear from the South consist of males; the females arrive from eight to ten days later.

I have observed them throughout the winter in vast swarms from Florida to south-eastern Texas. They frequent chiefly the sugar-cane and corn-fields, where they move about like black clouds, rising suddenly when disturbed with a thunder-like noise "and exhibiting amidst the broad shadows of their dark plumage, the bright flashing of the vermillion with which their wings are so singularly decorated. After whirling a little distance, they descend as a torrent, and darkening the branches of the trees by their numbers, they commence a general concert that may be heard for more than two miles" and which is quite similar to that of their spring arrival to which I have alluded. During the evening they retreat to their roosts in swamps, thickly covered with trees and shrubs, or to the dense woods in the low-lands. In the morning they leave their roosts at day-break; the immense swarms separate into smaller ones, which fly in all directions to forage. Near Houston, Texas, I often observed Yellow-headed Blackbirds and Cowbirds among the swarms of Redwings.

On the Atlantic coast they are found wintering from Virginia southward. Near the sea coast they frequent old fields of rice and corn. Wilson, passing in January through the lower regions of Virginia, frequently witnessed the aerial evolutions of great bodies of these birds. Sometimes they appeared as if driven about like an enormous black cloud carried before the wind, varying every moment in shape. Sometimes they rose up suddenly from the fields with a noise like thunder. At times the whole congregated multitude would suddenly alight in some detached grove and commence one general concert, that he could plainly distinguish at a distance of more than two miles, and when listened to at a distance of a quarter of a mile, the flow of its cadences was grand, and even sublime. The whole winter season seems one continued carnival. They find abundant food in the old fields, and much of their time is spent in aerial movements, or in grand vocal performances.

The breeding range of this Blackbird is a very large one, extending from Florida and south-eastern Texas northward to the Great Slave Lake and from the Atlantic west to the Pacific. In winter it is found south to Costa Rica. In southern Florida and the Gulf coast of Louisiana it is represented by the very similar Bahama Redwing.

After their arrival in the North small flocks are roving around in the country until May, when they separate in pairs and each pair moves into its own quarters. They are found in almost every marsh and small swamp covered with a few bushes and a
rank growth of marsh grasses, rushes, and sedges. The marshy edges of lakes and rivers are also chosen for a home. Marsh Wrens are often nesting close to the Red-wing's domicile, and the latter are sometimes found in the colonies of the Yellowheads. At quite a distance we hear the sweet con-cur-ee or their whistling ti-tū, besides their common call-note. Their bodies of jetty black, with a broad patch of vermillion on the shoulder, which sparkle in the sun's rays with pleasing effect, and their activity combine to make the Red-wing one of our most beautiful and interesting familiar birds. The June landscape, especially the swamp, would seem incomplete without the Red-wing. I can scarcely imagine how its notes would sound in the dense woods or on the mountain side. They belong to the swamp like the water, the sedges, and rushes. So much depends on association of familiar sounds with the season, or with circumstances under which they occur. As soon as the birds have settled in their haunts, the male is seen perched upon the summit of a bush standing in the water, where he utters almost incessantly his charming con-cur-ee and his whistling ti-tū, or he flies around in short and graceful circles, and sometimes also hovers in the air for seconds. This circular flying and hovering, which is always accompanied by its loud and peculiar notes, is usually observed when the nest is approached; doubtless the ever watchful and attentive male tries by these excited manoeuvres to attract the attention of the enemy to some other spot. If the nest is pillaged, for several days the pair evince great distress, and make frequent lamentations, but they soon prepare to remedy the disaster. They are so tenacious of the selected locality, that they often build a second and even a third nest within close proximity of the first one. Often only a few bushes are found in the Red-wing's haunts, and frequently the swamps are covered with an open growth of alders, button-bushes, and spirea. In all the small sloughs of the prairies of Illinois it is a common bird, and I found it equally abundant in Missouri, Arkansas, Louisiana, Texas, and Florida. Wherever found it is a familiar bird, owing to its charming beauty, its noisy disposition, and its abundance. In small swamps only one pair occurs, while in larger ones often a dozen or more may be observed. It has been recorded by Prof. R. Ridgway, that "the males are polygamous, each having under his protection from two to three or four demure looking females, hardly half his size, and dressed in homely garb, who attend quietly and assiduously to their domestic duties, while their lord and master mounts guard upon some prominent perch near by and cheers them with his song."

The nest I have always found in clumps of sedges and marsh grasses, but other ornithologists have often detected it also in bushes five to seven feet, and even higher, from the ground. Outwardly it is composed of dry slender pieces of sedges and grass-stems which are securely fastened into a bunch of rushes or other swamp grasses. These materials appear to be used only when wet, and they are well woven together, forming a very compact and substantial structure when dry. The interior of the nest is made of a little rotten wood, roots, a few pieces of muck and the cavity is lined with finer grasses. Usually the nest is so well hidden among the slender stems of a bunch of marsh grasses that it is not readily found. The eggs, usually four, rarely five in number, are light blue, marbled, lined, blotched, and clouded with dark purple and black markings, almost entirely about the larger end, but vary considerably in this respect.

The eggs hatch in thirteen or fourteen days and the young are cared for by their
parents with great devotion. The old male is now especially watchful and when an intruder approaches, he tries to direct his attention to some other point quite a distance from the nest. The young are fed almost entirely with noxious insects, of which they consume incalculable numbers. In the northern parts of the country they have but one brood each season, and I think there are only in rare cases two broods reared annually in the South. In August young and old birds begin to collect in small flocks, visiting the fields of corn; they are said to commit sometimes great depredations upon this cereal farther south. They attack the Indian corn only when in the milk; as soon as it hardens, they desist from these attacks, and seek other food. In Wisconsin they do little harm to the corn crop, but in southern Illinois and in the rice-fields of the South, where they gather in large swarms, they commit great havoc. These scenes of pillage are, however, for the most part confined to the lowlands of the Mississippi and the sea coast, and only last during a short period, when the corn is soft and milky.

On the other hand I have to state that the Red-wings “more than compensate the farmer for the mischief, by the immense benefits they confer in the destruction of grubs, worms, cater-pillars, and various kinds of larvae, the secret and deadly enemies of vegetation.” Every farmer knows that the fresh spring ploughing turns up an army of grubs and the larvae of myriads of noxious insects, which, if left to themselves, would be sufficient to destroy a large portion of the crop which the ground would produce. But just at this time come the immense flocks of Red-wings, the objects of the farmer’s aversion, and as they subsist almost exclusively on this kind of food, they resort at once to the open fields and cultivated grounds, and in this way compensate the cultivator of the soil doubly for all the damage they may do. During the months from March to July and August their food consists almost entirely of insects, and during that period “the amount of their insect food, all of it of the most noxious kinds, is perfectly enormous. These they both consume themselves and feed to their young. Wilson estimated the number of insects destroyed by these birds at a single season, in the United States, at twelve thousand millions.” (Brewer.)

A variety, the Sonoran Red-wing, *Agelaius phœnicicus sonoriensis* Ridg., inhabits northern Mexico and contiguous borders of the United States, from the lower Rio Grande valley and southern Arizona north to the lower Colorado valley, California, and Chilliwack, British Columbia.

A second variety, the Bahaman Red-wing, *Agelaius phœnicicus bryanti* Ridg., is found in the Bahamas, southern Florida, west to the Gulf coast of Louisiana (Lake Borgne), south to Yucatan and Nicaragua. Both varieties are in almost every respect identical with the common species.

**NAMES:** Red-winged Blackbird, Red-wing, Common Red-wing, Swamp Blackbird, Slough Blackbird, Red-winged Starling.


**Description:** **Adult male:** Uniform lustrous velvety black, with greenish reflection; shoulders and lesser wing-coverts of a bright crimson or vermilion-red; middle coverts, brownish-yellow or buff, and usually paler towards the tips. **Female:** Brown above, the feathers edged or streaked with rufous-brown and yellowish; beneath, whitish, streaked with brown; fore-part of throat, superciliary, and median stripe strongly tinged with brownish-yellow.—Length of male, 9.00 to 10.00 inches; wing, 4.88; tail, 3.84 inches. Female, 8.00 inches; wing, 3.99; tail, 3.12 inches.
BICOLORED BLACKBIRD.

Agelaius gubernator Bonaparte.

In California we find, besides the common Red-wing, two other similar species. One is the Tricolor Blackbird and the other the BICOLORED BLACKBIRD, the subject of this sketch. It is also known as the Red-and-black-shouldered Blackbird and the Crimson-shouldered Blackbird. It occurs abundantly along the Pacific coast from British Columbia south throughout California. According to the observations of several ornithologists, among whom may be mentioned Prof. Robert Ridgway, Dr. Heermann, Dr. Kennerly, and Dr. Cooper, this Blackbird is chiefly found in the warmer interior of California. It is found in scattered pairs throughout the Coast Range, even to the summits, where there are small marshes full of rushes, in which it builds. In its habits it much resembles the Redwing, and these birds are said to emit a variety of sweet and liquid notes, delivered from some tree near their favorite marsh. Large flocks can be seen in California whirling around in graceful curves, like dark clouds, chattering joyfully as they move along, or they are settling as a black veil on the topmost branches of some tree, indulging loudly in their harsh and jingling music.

Its nest has been found in willow bushes and tussocks of grass above the level of the water, in the marshes. It is composed of slender stems of reeds, mud, and fine roots, and is lined with fine grasses.

The eggs, usually four in number, are light blue or bluish-white, marked around the larger end with waving lines and streaks of dark brown. These markings are lighter than those on the eggs of the common Redwing.

SCIENTIFIC NAMES: Psarocolius gubernator Wagler (1832). AGELAIUS GUBERNATOR BONAPARTE (1837).

DESCRIPTION: Adult male, deep lustrous velvety black with faint greenish gloss; the lesser coverts, rich crimson; the middle coverts, brownish-yellow at base, but the exposed portion black.—Length, 9.00 to 10.00 inches; wing, 5.17; tail, 3.83 inches. Adult female, nearly uniform dark slaty-brown; lower parts, brownish dusky, more or less distinctly streaked with dull brownish-gray; chin and throat, pale buffy or pinkish.—Length, 8.00 inches; wing, 4.21; tail, 3.04 inches.

TRICOLORED BLACKBIRD.

Agelaius tricolor Bonaparte.

This beautiful species, which is also known as the Red-and-white-shouldered Blackbird, occurs in great abundance in California and Oregon. Mr. Ridgway observed it among the tule in the neighborhood of Sacramento, where it was very abundant, associating with the common Redwing, the Bicolored Blackbird, and the Yellow-headed Blackbird. By its conspicuous white stripe on the wing it may be easily distinguished from the other species, where they are all seen together. In his opinion the notes of the TRICOLORED BLACKBIRD differ considerably from those of the two other Red-winged Blackbirds.

Dr. Heermann, when hunting in the winter of 1852 in the marshes of Suisan Valley, Cal., often found, on hearing a dull, rushing, roaring noise, that the same was produced by a single flock of this species, numbering so many thousands as to darken
TRICOLORED BLACKBIRD.

the sky for some distance by their masses. In the northern part of California he met with a breeding place of this species that occupied several acres, covered with alder-bushes and willows, in the immediate neighborhood of water. The nests, often four or five in the same bush, were composed of mud and straw, and lined with fine grasses. The birds are very abundant near San Diego and Los Angelos, and not rare at Santa Barbara.

“The Tricolor,” says Dr. Elliott Coues, “is extremely abundant and resident in the fertile portions of southern California. It very rarely crosses the intermediate desert to the Colorado River; this arid tract forming a barrier to the eastward progress of many species, of great efficacy in distinguishing the littoral fauna from that of the Colorado valley. One who has traveled this region will not be surprised that birds with any fancy for green, watery places, decline the same journey. At Wilmington and Drumm Barracks I found the Tricolors flocking in vast numbers, in November. They thronged the streets of the town, and covered the military parade-ground; alone, so far as their congener were concerned, but on intimate association with hundreds of Brewer’s Blackbirds. Both species were almost as tame as poultry.... Often, as I sat in my quarters on a bright sunny day, the light would be suddenly obscured, just as by a quickly passing cloud, and a rushing noise ensued as the compact flock swirled past the window. They often alighted by hundreds on the roofs of the barracks, almost hiding the shingles, and every picket of a long paling fence near by would sometimes be capped by its bird. They were very noisy, chattering from daylight till dark—all the time they could see to fly about. Nobody troubled them much; but Hawks of various kinds—the Harrier, the Western Red-breast, and the Lanier—were continually dashing in among them, with terrible swooping, bringing death to not a few, and dismay everywhere. At this season the sexes kept mostly apart; the flocks of males seemed to largely outnumber the females. Very few of those I examined were in perfect plumage, much of the black being varied with different shades of brown and yellowish, and the white wing-bar being imperfect. In spring the birds resort together to marshy spots, breeding in loose communities. The nests and eggs do not differ appreciably from those of the common Red-wing.”

The eggs, four to five in number, are light blue, spotted, marbled, and blotched, chiefly on the larger end, with ashy-brown, sometimes blackish.


DESCRIPTION: “Adult male, glossy blue-black, the plumage with soft silky texture, the lesser wing-coverts deep crimson or lurid Carmine, the middle coverts white (tinged with buff in winter plumage). Adult female with plumage very soft and silky in texture. Similar in color to female of *A. gubernator*, but decidedly grayer in general cast of plumage.

“Male: Length, 8.50 to 9.00 inches; wing, 4.83; tail, 3.67 inches.

“Female: Length, 7.00 to 7.50 inches; wing, 4.23; tail, 3.16.” (Ridgway.)
MEADOWLARK.

Sturnella magna Swainson.

Plate XXIX. Fig. 5.

Go try the charm that Nature's presence yields;
Go seek the balm and fragrance of the garden,
And all the soothing influence of the fields.

Haunt leafy woods, with verdurous lights and shadows;
By bank of gurgling brook repose awhile;
Learn all the varying sweetness of the meadows,
The nod of grass, the wild flower's heavenly smile.

J. K. Stayman.

To the true lover of Nature nothing has so many attractions than country life, especially if he is the happy owner of a few or many acres of ground. For in whatever part of the country he may chance to be, he will see, understand, and love every part and phase of its beauty. This does, of course, not exclude the desire to see as much of the earth as possible, and to learn how many kinds of beauty it can show. He may visit countries heretofore unknown to him in the same way he likes to make new acquaintances, but comes back as gladly to the familiar spot as to the familiar face. The shrubs, the trees, and flowers, which he has planted with his own hands, and the birds which are familiar to him, delight him more than those about which no memories and anticipations cluster. This I found especially true while spending the month of November, 1895, on my place in Florida. Indeed, these days belong to the happiest and most charming of my life, and all this joy and pleasure was doubled by a similar interest in which a dear friend of mine so lovingly and enthusiastically participated. The woods through which I had to pass to and from the place, were in themselves a veritable flower garden. Never before had I beheld congregations of social flowers half so extensive or half so glorious. Golden and white and purple composite covered all the ground around the garden, and when I entered the latter I gazed upon a bewildering splendor of color and form. Most of the shrubs and trees had been raised by me from seed, and now, after a few years' growth in this congenial climate, I beheld them as beautiful specimens. About a dozen varieties of the large flowering evergreen Magnolia grandiflora with their magnificent glossy leaves, from different parts of the Southern States, imparted the place with a rare beauty. Dense specimens of abelias¹, banana shrubs², bamboos, American and sweet olives³, laurel cherry and Eugenia bushes⁴, oleanders, sweet myrtles, grevilleas or silk oaks, and a host of other broad-leaved evergreen shrubs, mostly from Japan and China, which had been planted four years ago, were growing singly and in groups. Fresh beauty appeared at every step. The bush tecoma or yellow elder⁵, only three years from the seed, had attained a height of fully twelve feet, the central shoots standing upright, while the others were arching to all sides and even to the ground, each terminated by a glorious cluster of trumpet-like fragrant yellow flowers. A similar species of the same genus⁶

¹ Abelia rapestris. ² Michella fiscata. ³ Osmanthus americanus and O. fragrans. ⁴ Eugenia australis, E. Micheli, E. Ugul. ⁵ Tecoma stans. ⁶ Tecoma velutina.
and the bush allamanda\(^1\) almost vied in splendor with the foregoing. The Cape tecoma\(^2\) also flowered in great profusion, and its orange-scarlet flower trusses could be seen from quite a distance. Now the gorgeous blossoms of the Chinese hibiscus came to view, now the large fragrant trumpets of the datura.\(^3\) Never fell the rays of the sun on brighter spangles, never kissed the light of the moon more delicately fragrant blooms. Some of the cestrum\(^4\) reached above my head and were covered with trusses of orange-colored aromatic flowers. The hamelia\(^5\), a beautiful native shrub of southern Florida, which ultimately attains a height of from ten to twelve feet, was covered with dark purple berries and vermillion-red flowers, which contrasted charmingly with the dense dark green foliage. The white flowers of the gigantic St. John's lily\(^6\) and of the scarcely less imposing, red flowering *Crinum amabile* and *Crinum augustum*, the powerfully fragrant sweet olive and the rare vanilla shrub\(^7\) perfumed the air of the whole place. Under a lattice-roofed arbor, covered with passion flowers\(^8\) and star jasmine\(^9\), exquisite specimens of the noble Chinese daphne\(^10\) and the dark evergreen laurustinus\(^11\) commenced to blossom. Yuccas in great variety and in splendid specimens, and graceful araucarias, cypresses, arbor-vitae, and retinisporas were interspersed among the other plants. A really tropical aspect is imparted to the plantation by the many noble palms, mostly cocos and date palms. The shining green leaves of the grand sago palms\(^12\) reflected the sun with dazzling effect. On the lake's edge transplanted specimens of the fetter-bush\(^13\) were flowering for the second time.

The pine-woods are delightful sauntering grounds at any time of the year, but more so in autumn. I found the much despised "poor sand" of these woods in a high state of natural cultivation. The whole ground was covered with patches of wild flowers. Some places were transformed into a sheet of white by the masses of pure white thoroughworts\(^14\), and others were brightened by the beautiful yellow blossoms of the golden sneezewort\(^15\). This was especially true of the border of the woods near the garden, and the combination of pure white and bright yellow was very striking. Near by quite a number of different species of plants were growing and flowering together as in a mixed border. The prevailing plant was the white *Petalastemon corymbosum*, a singularly elegant and highly ornamental flower. The bush liatris or blazing star\(^16\) and the grassy knot-weed\(^17\) were also flowering profusely. A gigantic species of thoroughwort\(^18\), six to eight feet high, with immense plume-like flower-stems, was everywhere met with, and in the evening the flowers exhaled a delicate fragrance. Many of the lakes were fringed by dense masses of golden yellow coreopsis\(^19\), like central gems girdled with sparkling brilliants. These are only a few of the most common wild November flowers of central Florida. The vegetation in the poor looking white sandy soil was something marvellous. When I set forth in the exhilarating freshness of the new day, rejoicing in the salubrious air, in the fragrance and beauty of the flowers, and in the pure wildness so close about me, I only regretted that so few birds were seen. I was, indeed, surprised to find such a dearth of small feathered inhabitants. When I

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\(^1\) *Allamanda nerifolia*.  
\(^2\) *Tecoma Capensis*.  
\(^3\) *Datura arbores* and *D. Knightii*.  
\(^4\) *Cestrum Bondouxi* and *C. La Martola*.  
\(^5\) *Hamelia patens*.  
\(^6\) *Crinum pedunculatum*.  
\(^7\) *Artabotrys odoratissimus*.  
\(^8\) *Passiflora caruca*.  
\(^9\) *Trachelospermum Jasminoides*.  
\(^10\) *Daphne Indica*.  
\(^11\) *Viburnum lous*.  
\(^12\) *Cycas revoluta*.  
\(^13\) *Andromeda nitida*.  
\(^14\) *Eupatorium serotinum*.  
\(^15\) *Helianthus tenuifolium*.  
\(^16\) *Liatris fruticos*.  
\(^17\) *Thysanella fimbriata*.  
\(^18\) *Eupatorium coronopifolium*.  
\(^19\) *Coreopsis aurea*.  

MEADOWLARK.

walked through the high grass around Lake Audubon, I now and then flushed a few Savanna Sparrows. In the long-leaved pines Blue Jays were screaming all day long. A pair of Shrikes was always near me while planting or walking around. When I sat down underneath a dense oak in the twilight of evening to observe the fiery and golden hues of the western sky, or when my eyes to the east fell on the quiet waters of the lake and the floral beauty around me, these birds, rather curious than confiding, uttered a number of peculiar notes, many of them imitations of the song of other birds. A few Mockingbirds were seen in the dense oaks and in the ornamental shrubs, but they were perfectly quiet. Ground Doves (Columbigallina passerina) were common among the grass of the orange grove and in the garden, and flocks of Mourning Doves (Zenaida zenaida) and Florida Bobwhites (Colinus virginianus floridanus) were abundant also. The plaintive pe-pee of the Phoebe was almost constantly heard throughout the day in the ornamental trees. On the place, which consists of thirty-five acres, of which fifteen are planted in orange trees, ten consist of water, and ten are reserved for a wild garden and ornamental purposes, shooting and hunting is not allowed. All the birds feel perfectly safe, but I am unable to account for their scarcity.

The most abundant and conspicuous bird during the entire month of November was our familiar and beautiful MEADOWLARK, Meadow Starling, Fieldlark or Old Fieldlark, an old favorite of mine. It was seen in troops of from five to twenty and more, and its song was heard almost incessantly. They frequently visited the garden, but were most numerous in the grass of the orange plantation. They often perched near me on a tree or on the latticed sheds, uttering their sweetest notes. Without the presence of these birds the place would have been well-nigh dead and desolate. They were all the time busily searching for food, which consists almost entirely of insects and of the seeds of all kinds of weeds. I observed them frequently in the act of catching the very large, awkward and exceedingly noxious lubber grasshoppers (Romalea microptera), and they also relish the very nutritious seeds of the sand-spur, one of the vilest weeds of the orange groves. I was informed that these birds are common summer residents in this part of Florida, though not so numerous as in winter.

The Meadowlark has a very extensive range of distribution, breeding from Florida and Texas to Nova Scotia and the Saskatchewan region and from the Atlantic to the Plains.

In the far West it is replaced by the Western Meadowlark, and in the South-west by the Mexican Meadowlark, both local varieties and very similar to the true species. I have found it a numerous summer sojourner from Wisconsin to Texas and Florida, being everywhere a common summer resident where it is protected and cherished. While it is a very familiar and confiding bird in many regions of the Central and Western States, east of the Plains, it is said to be shy, of retiring habits, and rarely seen in the vicinity of houses in New England and other parts of the East. This is doubtless due to the senseless and merciless slaughtering of these beautiful and extremely beneficial birds in the neighborhood of cities and towns, where so-called "hunters" are loafing through all the fields and woodlands to deprive our landscapes of their charming bird-life. In many places in the West the Meadowlark is highly appreciated for its beauty, familiarity, and song, and for its pleasant manners and its utility.
As its name implies, this bird has a predilection for meadows, and also for old and fallow fields and prairies. It takes up its abode also in clover, corn, and grain-fields, in grassy orchards and open woodland borders. In Texas and Louisiana it is abundantly found in the cotton and sugar plantations, and in Florida in the orange groves.

The Meadowlark is a true harbinger of spring, arriving in eastern Wisconsin often by the latter part of March or early in April. Indeed I have seen single individuals as early as March 20 in Sheboygan County. It announces its presence at once by its loud and exhilarating call-note, which sounds like he-ah-he-here, or, according to Nuttall, like et-see-dee-ah. When arriving they are usually assembled in flocks of ten to twenty or more, which frequently alight on an isolated tree, where all are singing their sweetest notes. This is an exquisite spring concert, full of hilarity and anticipation, but it is heard only when the weather is really mild and spring-like. If we observe closely we find that they are not only singing, but that almost every one preens its feathers and brings its plumage in order. All this reminds us of the Redwings and Yellowheads, and it really denotes their close connection with these and other Blackbirds. All their motions, with the exception of the flight, their walking on the ground, their positions while standing or perching, show that the Meadowlark is a true American Starling. With the true Larks it has nothing in common except its rather inappropriate name.

Soon after their arrival the flocks separate into pairs and each pair takes possession of its old haunts. In localities where these birds are numerous, they live close together. In Wisconsin I have counted six breeding pairs in a meadow, scarcely five acres in extent. Its breeding haunts in the Northern States are invariably meadows, clover, corn, and grain-fields and sometimes the grassy orchard, often in close proximity to farm-houses. I found them most abundant in cultivated regions, but while riding through the almost endless flower-adorned prairies of Texas, I observed them in large numbers also. This was in the salubrious days of April, when their hilarious song sounded from far and near. At this time the first brood followed their parents through the grass and the female was preparing for a second one.

The winter home of the Meadowlark extends from Arkansas, southern Illinois, etc. southward, but they are most numerous in the Gulf States. At Freistatt, in southwestern Missouri, they were always met with in winter; there they found refuge against the inclemencies of the weather in the corn-shocks or in dense tufts of perennial plants and prairie grasses. The majority, however, moved farther south. In Wisconsin these lively and home-like birds are scarcely seen after October 1, and by October 10 all have left northern Illinois. I have met with the Meadowlarks in large numbers in the sugar cane, corn, and cotton plantations of south-eastern Texas and southern Louisiana from early November to the last days of February.

They migrate always in loose flocks, mostly during day-time. They do not move rapidly, but tarry here in a meadow or prairie, or there in a field or pasture, searching for food, or resting and singing, for the Meadowlarks are scarcely ever out of song, and I have heard their merry call-note uttered with equal fervency in the almost lifeless prairies of Texas and Louisiana during winter as in their more beautiful and varied summer haunts at the North. Their flight much resembles that of the Quail. Although
short and quick, it is rather heavy and jerky. When the bird first rises from the ground, it flutters like a young bird until it has ascended twenty or thirty feet, when it pursues a bee-line course, with alternate sailings, and flutters until ready to alight, which is usually not at any great distance. When assembled in flocks shortly after their arrival or when ready to leave in the fall, they also never fly very far. They may start earnestly, but finding a favorable locality usually one after another is flying down to the ground, where they walk about in a very graceful attitude. In the height of the migration the flocks ascend high into the air and then they fly with great speed.

In Wisconsin the birds begin to build their nests early in May, in south-western Missouri fully a month earlier, and in south-eastern Texas full sets of eggs are found by the middle of March. The female constructs the nest alone, while the male is singing to her his sweetest notes. The structure is always placed on the ground, usually in the shelter of a thick tuft of grass, on the side of a few corn-stalks, a bunch of clover, etc. Often a covered passage is built to their hidden nest. This entrance is usually formed of withered grass, and so well conceals the nest that it can only be detected by flushing the female from it, or by the anxiety of her mate, who will frequently fly round the spot in so narrow a circuit as to betray its location. In many cases the nest is arched over on one side. These arched nests I have only found when nothing else was present to give the structure privacy. Usually it is placed in a slight depression of the soil. It is constructed of coarse grasses and lined with finer ones. The eggs, usually four in number, have a white ground-color and are marked irregularly with reddish-brown spots and lilac shell-marks. When the young have left the nest a second brood usually follows, and in the South often a third one. The parents are so much attached to their young that they utter the saddest notes if some accident befalls them. They fly around in great distress, for several days bemoaning their young in the most lamenting and mournful tones. "The saddest and most reproachful strains which birds have ever poured into my ear were uttered for days in succession from a Meadowlark whom I had deprived of his mate and his home during his brief absence. Not knowing what had become of them, he called so incessantly, with such sad surprise at no answer, such mournful beseeching and lamentation, that it made my heart ache."*

The Meadowlark is almost an ideal bird, one of our most valuable songsters. How beautifully contrasts the bright yellow with the deep black crescent on the breast in the sunshine of a lovely spring day's morning! And how impressive are the loud and exhilarating notes! When the farmer in the early morning follows his team to the field, his ear catches the finest and most delightful strains. Usually the bird is perched at this time on a fence-post or a rail while singing, and in performing its song it assumes an upright, proud position. Almost all day long it is the plougher's companion, following the fresh furrows to pick up grubs and all kinds of noxious insects, singing at the same time almost incessantly.

The song is exceedingly sweet and very charming. Any suitable stretch of grass land, every clover and grain-field may have its pair or its colony of Meadowlarks, "making very sweet idyllic music during the season of exultation. Great tenderness, almost pathos, is expressed in the liquid, sympathetic voice of these faithful creatures

and devoted parents." Their usual call-note, which is very melodious, sounds like he-ah-he-here, or et-see-dee-ah. It is very striking and almost constantly heard. The real song always expresses the same sweetness, plaintiveness, and almost wildness. It is uttered usually from a fence-post or tree-top, but also from the ground, and often when the bird is on the wing.

"Suffice it to say, therefore," writes Prof. Robert Ridgway in his interesting and valuable work, "The Ornithology of Illinois," "that while not a single charge has been laid at his door, so far as the author is aware, the Meadowlark is a very general favorite among lovers of birds, on account of his pleasant song, bright plumage, and pretty ways. His sweet, tender song is one of the finest to be heard in our rural districts, and is characterized by a delicacy of tone remarkable in so large a bird. It is usually interpreted by the country folks as imitating that laziness will kill you (accent on the penultimate syllable), while others imagine it to say: peek—you can't see me,—a very appropriate translation, we think, in the case of a bird which, like the present, plays at 'hide and seek' with us in the meadows."

There is something enchantingly striking in the song, a charm, a liquid flow, a hilarity and sweetness, which must attract the attention of every one, especially on a beautiful May or June day, when everything around us celebrates its spring jubilee, and when the Meadowlark will be roused to unwonted animation, singing far beyond the usual score of half a dozen notes.

The Meadowlark is one of the most valuable and beneficial birds to the farmer and fruit-grower. The quantities of noxious insects devoured in its summer haunts and the incalculable numbers of seeds of weeds which are consumed by it, should place this bird under the protection of man wherever it occurs and at all times. Grubs, worms, grasshoppers, crickets, etc., are especially relished.

Though an invaluable ally to the farmer and a favorite of all friends of the beautiful in Nature, the Meadowlark is hunted in many parts of the country as a game-bird. "That numerous class of men," says Wilson Flagg, "who would be more enraptured at the sight of 'four-and-twenty Blackbirds baked in a pie' than at the sound of their notes, though they equalled those of the Nightingale,—men who never look upon a bird save with the eyes and the disposition of a prowling cat, and who display their knowledge of the feathered race chiefly at the gun-shops,—martial heroes among innocent songsters,—have not overlooked a bird so plump as the Meadowlark. Vain is its lisping and plaintive song; vain is the beauty displayed in its hovering and graceful flight, in its variegated plumage and its interesting ways! All these things serve but to render its species the more conspicuous mark for gunners, who have hunted them so incessantly that they are now as shy as the persecuted Crow, and as elusive a mark for the sportsman as a Loon."

This bird should receive the special attention of our law-makers, as it is one of the most beneficial birds we have. Suitable laws in all parts of the country for the protection of this and other small birds are a great necessity, and these laws should be stringently enforced.

DESCRIPTION: "Plumage variegated. Feathers of back, blackish, each with a terminal reddish-brown area and sharp brownish edgings; crown streaked with black and brown, with pale median and supra-ciliary stripes, a blackish line behind the eye; lateral tail-feathers, white; the rest, and the inner quills and wing-coverts, black, scalloped with brown or gray; under-parts and edge of wing, bright yellow; the breast with a black crescent; the sides and flanks flaxen-brown with blackish streaks; bill, horn color; feet, light brown. Sexes, alike; but female less richly colored.

"Length of male: 10.00 to 11.00 inches; wing, 5.00; tail, 3.50; bill, 1.25 inches.
Female smaller: Length, 9.00 to 9.50 inches; wing, 4 25 to 4.50 inches."


The Mexican Meadowlark, Sturnella magna mexicana B. B. & R., a little smaller variety of the common Meadowlark, inhabits southern Texas and Arizona, especially the Rio Grande valley, and extends from there south to Costa Rica.

The Western Meadowlark, Sturnella magna neglecta Allen, which replaces the common species from the Plains westward to the Pacific, is very similar to our common Meadowlark. Its color on the back is a little paler and grayer, but its song is totally different.

Dr. J. A. Allen writes on this point as follows: "At the little village of Denison, in Iowa, where I first noticed it in song, it was particularly common, and half-domestic in its habits, preferring, apparently, the streets and grassy lanes, and the immediate vicinity of the village, to the remoter prairie. Here, wholly unmolested and unsuspicious, it collected its food; and the males, from their accustomed perches on the house-tops, daily warbled their wild song for hours together. . . . The song, however, was so new to me that I did not at first have the slightest suspicion its author was the Western Meadowlark, as I found it to be, the time being between daylight and sunrise, and the individual in question singing from the top of the court-house. It differs from that of the Meadowlark in the Eastern States in the notes being louder and wilder, and at the same time more liquid, mellower, and far sweeter. They have a pensiveness and a general character remarkably in harmony with the half-dreary wildness of the primitive prairie, as though the bird had received from its surroundings their peculiar impress; while if less loud their songs would hardly reach their mates above the strong winds that almost constantly sweep over the prairies in the hot months. It differs, too, in the less frequency of the harsh, complaining chatter so conspicuous in the Eastern birds, so much so that at first I suspected this to be wholly wanting."

This difference in the song has been "attested by all observers from Lewis and Clarke down to the present day." (Coues.)

The late Col. N. S. Goss, in his "History of the Birds of Kansas," writes as follows: "This western form is similar in habits and actions to the eastern bird, and differs so slightly in markings and color that were it not for its widely different song—rather bugle-like—it would have a doubtful standing as a race. It is thought by some writers to be less suspicious and more at home about our dwellings; this I account for on the ground that they are seldom disturbed or shot at, as it is too often the case in the Eastern States."
TRUPIAL.

*Icterus icerus* RIDGWAY.

Few of our North American birds are so strikingly beautiful as the Orioles. Although belonging to the Blackbird family, they are not gregarious, and they also depart from their relatives in the habit of being strictly arboreole. While the other members of the family, almost without exception, pick up their food from the ground, the Orioles mainly subsist on food found by them in the trees and bushes. The bill of the Orioles is slenderer and more acute, and the feet are weaker, exclusively fitted for perching, not for walking. The Orioles are mostly distributed over tropical America. Only three species reach the interior of our country and among these the Baltimore Oriole is the most familiar. Another species, the Orchard Oriole, is abundant in the Central and Southern States, while Bullock's Oriole is a common summer sojourner in California. Nelson's Oriole penetrates into the interior of Arizona and California, while the rest merely reach our southern border from tropical America. On the lower Rio Grande the following species are found more or less abundantly: Bullock's Oriole, Orchard and Hooded Oriole, Audubon's and Scott's Oriole. No other birds of the lower Rio Grande are such beautiful features of the landscape. Quite recently a new Oriole has been discovered in southern Louisiana and Mississippi. As this variety has, as yet, no common name, I propose to call it Bendire's Oriole, in commemoration of the distinguished ornithologist, who first made the facts about its occurrence in our territory known. Everywhere in this country I have found one or the other Oriole during the breeding season, with the exception of central and southern Florida, where even the Orchard Oriole does not occur.

The Orioles do not move in large conspicuous flocks like their congeners, the Blackbirds, and they are mostly seen in small assemblages during the season of migration. At other times they live in pairs only. The plumage of most of the species is very beautiful, the prevailing color being a bright orange or yellow, which is relieved by a deep black. The Orchard Oriole shows a combination of a rich chestnut-brown and black. Wherever these birds occur they make themselves prominent by a very loud, liquid, and mellow song. All excel by their architectural assiduity, each species building exquisite pensile nests, which usually hang down from the horizontal branches of large trees. All members of the genus are denizens of trees, isolated or in groups, avoiding low thickets and the deep interior of woodlands entirely. Many of them have a predilection for ornamental trees and orchards near the habitations of man. Although eating fruits of all kinds, they are of great value to the farmer and horticulturist, as their main diet consists of incalculable numbers of noxious insects, which infest the trees. Their aesthetical value should also find the appreciation of every intelligent person: They are not only exceedingly beautiful birds, but they are also very lively, delightful, and happy denizens of our groves and woodlands. The pair is so tenderly attached to each other, that great sorrow and distress is expressed in their notes and manners if an accident has happened to one or the other. Their flight is quick and graceful—in a word, they are almost ideal birds in every respect.

The TRUPIAL, the subject of this sketch, is a common bird in all the northern
countries of South America, but in the West Indies its occurrence seems to be only accidental. It is much kept in confinement, where it becomes very easily tamed, and is very fond of its keeper if treated kindly. It has been enumerated by Audubon among our birds on the ground that it has been observed repeatedly at Charleston, S. C.

DESCRIPTION: “Head and upper part of neck all round and beneath from tail to upper part of breast, interscapular region of back, wings and tail, black. Rest of under-parts, a collar and the lower hind neck, rump, and upper tail-coverts, yellow-orange. A broad band on the wing and outer edges of secondaries, white.—Length, 10.00 inches.”

AUDUBON’S ORIOLE.

_Icterus audubonii_ Giraud.

**A** EXICO with its grand mountain regions, its variety of hot, temperate, and cool climates, its wonderfully developed flora and rich tropical gardens, has also an exquisite bird-life. During the winter multitudes of our native birds there find a congenial winter home, and in summer gorgeous Tanagers, Callistes, Euphonias, Hummingbirds, Trogons, and especially flame-colored Orioles are abundant. Many of these birds are distributed northward to the Rio Grande. In the vicinity of Brownsville four species of Orioles are regular summer sojourners, among which **AUDUBON’S ORIOLE** is the largest. It is known in Mexico by the name of “Calandrina,” an appellation equally applied to four or five other species of Orioles.

It was first observed by Mr. John H. Clark, near Ringgold Barracks, Texas, feeding on the fruit of the hackberry. Lieutenant Couch met with a pair of these birds at Charco Escondido, Tamaulipas. Having brought down the male bird with his gun, the female flew to a neighboring tree, apparently unaware of her loss. She soon, however, missed her mate, and endeavored to recall him to her side with notes uttered in a strain of such exquisite sadness that Mr. Couch could scarcely believe them uttered by a bird; and so greatly did they excite his sympathy, that he almost resolved to desist from further ornithological collections. He adds that he never heard the lay of any songster of the feathered tribe expressed more sweetly than that of the species under consideration. At Monterey he found it a favorite cage bird. The female also sings, but her notes are less powerful than those of the male. Generally the flight of this bird was low and rapid, and it seemed to prefer the shade of trees. It was observed almost invariably in pairs, and the male and female showed for each other great tenderness and solicitude.

Mr. Geo. B. Sennett, the distinguished ornithologist of the lower Rio Grande, gives the following account of this bird:

“This large Oriole cannot be said to be very abundant on the Rio Grande, although it is by no means rare. I think it by far more retiring in its habits than any other of the family. If I were to go in search of it, I should seek dense woods, near an opening, with plenty of undergrowth, where also the Rio Grande Jay loves to dwell. It is a sweet singer, never very generous with its music, and only singing when undisturbed.
I remember once sitting in the edge of a woods, watching the movements of some Wrens, just outside, the only sounds to be heard in the woods being the discordant notes of the Rio Grande Jay, when suddenly, from over my head, there burst upon my ear a melody so sweet and enchanting that I sat entranced, and, listening, forgot all else. I soon discovered the whereabouts of the singer, and watching him as he flitted about from branch to branch, singing his wonderful song. I have no power to describe a bird's song, least of all this Oriole's."

These observations were made in spring 1878 at Hidalgo, Texas. In the following year we find Mr. Sennett at Lomita, seven miles above Hidalgo. "This year," he writes, "I was fortunate in obtaining, within our limits, nests and eggs of this large Oriole.... Three nests were found in heavy timber, some ten or twelve feet from the ground; they are half-pensile, somewhat like those of the Orchard and Bullock's Orioles, and attached to upright terminal branches. They are composed of dried grasses woven among the growing twigs and leaves, so as to form a matting light and firm. They measure on the inside some three inches in depth and rather more in width.

"The eggs are peculiar, resembling those of no other species found in that region. The ground-color is white, covered with fine flecks of brown, giving the egg the appearance of being covered with dust. Over these flecks, and principally at the larger end, are irregular stains and splashes of deeper brown, sometimes mixed with lilac, on which are coarse brown or black hieroglyphics."

Dr. J. C. Merrill, Surgeon of the U. S. Army, found Audubon's Oriole a resident throughout the year near Brownsville, Texas. "This fine Oriole," he writes, "is found in moderate abundance, and is the only species that is resident. During the summer months it is usually found in deep woods at some distance from houses, but during the winter it is less shy and retiring. They are frequently captured and offered for sale by Mexicans in this vicinity, but several I have kept would not sing at all in captivity. When free, their usual song is a prolonged and repeated whistle of extraordinary mellowness and sweetness, each note varying in pitch from the preceding. If once heard, it can never be forgotten."

Mr. Sennett reports the proportions of the occurrence of the Orioles at Lomita, Texas, as follows: Twenty Hooded Orioles, twelve Orchard Orioles, five Bullock's Orioles, to three Audubon's Orioles.

**NAMES:** Audubon's Oriole, Black-headed Oriole.

**Scientific Names:** *Icterus Audubonii* Giraud (1841). *Icterus melanocephalus* Hahn & Küster.

**Description:** Above, yellow, slightly tinged with olive; whole head and neck, wings and tail, black; greater wing-coverts and secondaries, sometimes with narrow white edgings; lesser wing-coverts, bright yellow; below, throat and middle of breast, black; abdomen, yellow like the back, but rather brighter.—Length, 9.25 inches; wing, 4.00; tail, 4.65 inches.
THE BLACKBIRDS, Wood Warblers, Tyrant Flycatchers, Hummingbirds, Thrashers, Tanagers, and Trogons are birds characteristic to America, as they are not found on any other continent. In the same sense the grotesque forms of the cacti, the very ornamental yuccas, the agaves, dasylirions, nolinas, etc., are to be regarded as characteristic American plants. These plants are found in great numbers and many species in our dry regions of the South-west, especially in southern and south-western Texas, southern Arizona and California, and all through Mexico. In these exceedingly dry and barren regions they grow singly as well as in groups and masses, and wherever they are found they are very conspicuous features of the landscape. The most beautiful of all these plants are the yuccas, or "palm lilies," as they are often called.

Their stiff leaves, which stand out in every direction, terminate into a very sharp point, and, in allusion to this sharp, needle-like weapon, they have received quite a number of popular names, such as "Adam's needles," "Spanish daggers," "Spanish bayonets," etc. The most beautiful and imposing of all the yuccas is a tree-like species with immense pendulous flower-stems. This is the palm yucca¹, an abundant species of northern Mexico. Another beautiful species is Trecul's yucca², which also attains tree-like proportions. Of smaller growth are the very spiny common Spanish dagger³, and the much more graceful dragon yucca⁴, the two last species occurring abundantly also in the South Atlantic and Gulf States.

In California and southern Arizona we find a number of other tree-like yuccas, not to be met elsewhere. Among these I shall only make mention of the Arizona yucca⁵, bearing edible fruit and comparatively short spiny leaves. Almost all the tree-like yuccas have the old dry leaves hanging down on the stem for many years, and, though not ornamental, they lend to the tree a very unique picturesqueness. This is especially true of Yucca baccata, which shows always under the crown of green leaves, masses of dry ones hanging down around the stem. Usually it grows in groups, and the dry hanging leaves form excellent nesting sites for the beautiful Scott's Oriole, or Yucca Oriole, a rather abundant bird, where these plants are common.

This exquisite bird is distributed from central Mexico northward to the southern border of the United States, occurring from Texas westward to southern California. It is met with where tree-like yuccas grow abundantly. In Mexico, where it occurs in the temperate as well as in the alpine mountain regions, it is called "Calandrina indio." Xantus met with it at Cape St. Lucas, Lower California, and he discovered a nest built in a bunch of moss hanging down from an old cactus; another was made in a bunch of climbing plants, suspended from a cactus. We are especially indebted to Mr. W. E. D. Scott for his accurate and very interesting description of the home and haunts and of the nesting habits of this beautiful Oriole. Mr. Scott writes as follows:

¹ Yucca flifera. ² Y. Treculeana. ³ Y. aloifolia. ⁴ Y. draconis. ⁵ Y. baccata.
"During the spring and summer of 1884 it was my good fortune to make the acquaintance of a number of birds whose breeding habits are at best but little known, and the following data give some of the results of such observations. Most of the notes on the species in question were made at a point, to be more fully described presently, on the San Pedro slope of the Santa Catalina Mountains, in Pinal County, Arizona.

"Here Scott's Oriole arrives about the middle of April, and is at once among the more conspicuous birds, both for its brilliant plumage and rich song. Few birds sing more incessantly, and in fact I do not recall a species in the Eastern or Middle States that is to be heard as frequently. The males are of course the chief performers, but now and again, near a nest, while watching the birds, I would detect a female singing the same glad song, only more softly. At the earliest day-break and all day long, even when the sun is at its highest, and during the great heat of the afternoon, its very musical whistle is one of the few bird songs that are ever present.

"From the time of its arrival until July 29 I heard the song daily, even hourly, and during the height of the breeding season often many were singing within hearing at the same time.

"This has been called 'a desert species,' and most Arizona birds might fall under the same grouping, at times, I suppose, but my experience with it is so very directly to the contrary that a word as to the surroundings of the home of this Oriole, as found by me, will perhaps give a better idea to the reader.

"There is a cañon that begins high up in the Santa Catalinas, and, dividing the hills and table lands on either side of it by its deep furrow, it extends for two miles or more, where it joins the valley of the San Pedro River. It is the upper or more elevated part of this cañon with which we have to do, at an altitude varying from four thousand to five thousand feet. The hills on either side are high, the cañon generally quite narrow. Live oaks are the trees of the hills and hill-sides, and reach in places to the bed of the cañon. Here in parts are groves of cotton-woods and sycamores, and some cedars, and, with the exception of the very bed of the cañon, where for a part of the year is a brook, the grass covers the surface of the ground. The brook begins to dry up in its exposed parts early in May, but all summer long there is running water for at least a mile in the cotton-wood grove, and in a number of places, even during the driest part of the year, the water rises to the surface, making 'tanks,' as they are called. Along this running water and about the 'tanks,' bird-life is very abundant, and here, surely no desert, is the summer home of many Scott's Orioles. There is very little cactus, and none of the 'chollas' that are so very characteristic of the deserts of the neighboring region.

"After August 7 I missed the song, although the birds were abundant until the 10th of that month, and I saw a single bird or so for the following three days. Then I supposed they were all gone, but on the 14th of September, about dusk, I startled one, an adult male, from a yucca where he had evidently gone to roost. He scolded angrily at me from the dead limb of a cedar near by for a few moments, when I left him to go to bed. Again, on the 18th of September, I heard a male in full song, and going closer found a party of four together, three old males and a young one of the year. This is my last note of their occurrence at this point.
"There are many yuccas (\textit{Yucca baccata}) in the cañon and on the hill-side, none of them exceeding ten feet in height, and it was in one of these, only a few feet from a wood near where some one passed daily, and close to a 'tank' of water, that on May 24 I found the first nest. It was carefully concealed under the half dead and dry leaves that hung downward close to the trunk of the plant. Two of the long pointed blades had still been green enough to allow the pulp to be picked away, and the tough fibers had then been frayed and used as a sort of starting point or foundation for the structure which was thus 'sewed'—I know no more appropriate word—fast to the edges of the leaf. I only caught a glimpse of the female and was not sure of the bird till later, when both parents were identified to my satisfaction.

The nest contained three fresh eggs, though four is the usual number, as three nests found during the next few days proved. These nests were all built in yuccas, none were far from water, and, strangely, for a rather shy and suspicious bird, all were within ten feet of the road. The last, that of May 30, to be spoken of in detail presently, was so near a much used trail, that the passer by might have touched it with the hand. The following descriptions of the nests in detail are copied from my notes:

'Nest of May 24. Built in a yucca, four feet from the ground. Sewed to the edges of five dead leaves which, hanging down parallel to trunk of the plant, entirely concealed the nest. Semi-pensile. Composed externally of fibers of the yucca and fine grasses. Lined with soft grasses and threads of cotton-waste throughout. The walls are very thin, at bottom not more than half an inch, and on the sides from one-eighth to a quarter of an inch thick. The whole nest was rather closely woven and very strong. Inside depth, three and a half inches. Inside diameter, four inches. The whole cup-shaped. Contains three fresh eggs; bluish-white in color, with a cluster of chocolate-brown spots, and others of lighter lilac-brown at the larger end, spotted very sparsely all over, mainly with a still lighter shade of the latter color, though a very few of these dispersed markings are also dark chocolate-brown. I have called this nest semi-pensile, as the edges of the yucca leaves are not simply attached to the rim or top edge of the nest, but are 'sewed' to the \textit{sides} of the structure—one blade for three inches, three for four inches, and the other two for more than two inches and a half. The nest is sewed to the blades or leaves about seven inches from where they join the trunk of the plant, and the blades are about twenty-two inches long.

'Nest of May 27. Built in yucca, about four feet from ground. Nest sewed to the edges of three leaves, all on one side of the structure and close together, being about three-quarters of an inch apart. Other leaves project downward at an angle of about 45°, and the nest rests on them, as it would on the slanting roof of a house. It is therefore not at all pensile. Is built of grasses, yucca fiber, and has cotton twine woven into its walls. Inside it is lined to within half an inch of the rim with small pieces of cotton batting, some cotton twine, and a little very soft grass. It is sewed to the edges of each of the three leaves it rests on for six inches. The walls on the sides are an inch, and at the bottom an inch and a half thick. The general inside shape is oval, the greatest diameter being four and the least three and a half inches. The greatest depth inside is three and a half inches. The walls on sides sewed to leaves are about six inches in depth, and on the side rising from the leaves four inches. It contains four
fresh eggs, that recall those of the Red-winged Blackbird in general appearance. The nest is sewed to the leaves about ten inches from where they join the trunk of the plant, and the leaves are about eighteen inches long. Other leaves hanging downward above those on which the nest rests almost conceal it.”

“Nest of May 30. Built in yucca, four feet from the ground. Composed of yucca fiber and fine grasses, and is very similar to that of May 24 in general appearance. The bottom of the structure inside is lined with a soft mat of cotton-waste. Semi-pensile, being sewed to six leaves of the plant, three of which almost conceal the nest from view. The nest measures: depth inside, four inches; depth outside, five and a half inches; inside diameter at top, four inches. The general shape of the interior is that of a rather large and shallow cup. Contains four eggs, partially incubated. Ground-color, bluish-white, with much the same colored markings as those of the nest of May 24. Their general shape differs, however, as they are much more pointed at one end and flattened at the other, the shape reminding one of the eggs of some of the Plovers. The sewing of the nest reaches on two of the leaves four inches; on one, five inches; on one, three inches; and on the other two, an inch and a half. The nest is fastened to the leaves about five inches from where they join the stem or trunk of the plant, and the leaves to which it is fastened are rather more than twenty inches long.

“Second nest of May 30. Similar in location to the first nest of same date and built in same kind of plant. Composed of grasses and yucca fiber, the latter mainly, and has in the inside at bottom a very thick lining of cotton-waste. Is semi-pensile, and is sewed to four green leaves—to one for six inches, the entire wall of the nest for its whole length being fastened. A second is sewed only for half an inch to the wall very close to the bottom of the nest. A third is very similar in its point of attachment, only that it is fastened for a little more than an inch, and the last is fastened for three inches in the ordinary way. The nest is very uneven in shape externally, being fully six inches deep on one side and not more than two inches deep on the other. The nest has an interior diameter of four and a quarter inches, and is very shallow and cup-shaped, being only two and a quarter inches deep at its deepest part. Four fresh eggs are the contents, and they vary only in not being so pointed as the other set of May 30. They are rather larger than any others measured. The general shape of the nest is an uneven, one-sided cup, with its greatest external diameter four and three-quarters inches. It is attached to the leaves about seven inches from the trunk of the plant, and the leaves to which it is attached are twenty-six inches long. It is built but little more than three feet from the ground, and partially concealed by overhanging leaves.

“The cotton and cotton-waste were doubtless picked up by the birds about the house and near a mill but a little distance away, where the waste is used in polishing machinery, etc.

“Some pairs of the birds, at least, raise two broods during the season. A fifth nest, completing my series, was found just finished on June 26, and all the eggs, three in number, were deposited by July 1, when the nest was taken. It was built in a sycamore overhanging the wood-road before mentioned, and about forty yards from water. It differs greatly from any of the others.

“Nest of July 1. Built in a sycamore tree, about eighteen feet from the ground.
SCOTT'S ORIOLE. 273

Pensile, being attached to the ends of the twigs. It is composed externally entirely of the fibers of dead yucca leaves, and there are hanging to and built into the walls four rather small dead leaves of this plant, that are partly frayed, so that the fiber is used in weaving them into the structure. The interior is lined with soft fine grasses, and only two or three shreds of cotton-waste appear here and there in the lining. The walls vary from a quarter to half an inch in thickness. The whole structure is very symmetrical and is a half sphere in shape. Inside the greatest depth is two and a half and the greatest diameter four inches. The entire set of eggs was laid, as the nest had been watched for a number of days. Three eggs compose the set, and differ from those already described only in being of a deeper bluish-white ground-color. This nest is attached to the twigs from which it hangs very much like that of a Baltimore Oriole.

"Ten minutes' walk from the house would have reached any of these five nests, and three of them were within a hundred and fifty yards of one another.

"The first young that I met with, that had left the nest, were seen on July 2, and on July 4 I saw many fully fledged, and apparently shifting for themselves. The following note is dated July 24: 'Young males, fully fledged, evidently of the first brood, were singing very softly.' 'A young male taken, beginning to moult from first plumage; the first noted in this condition.'

"The species here is a very common one, and it seems possible that after a few years' association with houses and people it may no longer be the shy, suspicious bird of the present, but become as familiar as others of the genus have. On their first arrival they were constantly in the oaks overhanging the house, and only seemed alarmed if too closely observed.

"That they do not always build in the yuccas, though doubtless that is the favorite nesting place, the nest of July 1 proves, and I feel confident that certain Orioles' nests that I have seen in the misseltoc of the oaks, and others pendant from the oak boughs themselves, are, from their general character, those of the species in question."

A few years later, Mr. Scott made some additional remarks. Since writing the above he found that the time of arrival is somewhat earlier, the bird having first been noted March 22, and became common within a week. On March 25 he heard a number of males in full song at an altitude of 4,500 feet, and on May 1 he found a nest at the same altitude. "I must so far modify my former views," says Mr. Scott, "as to state that I find fully as many of the birds breed on the arid plains and mesas, at an altitude between 3,000 and 8,000 feet, as seek a nesting site near water. I have found them with nests at least six miles from the nearest water that I know of."

NAMES: Scott's Oriole, Yucca Oriole.


DESCRIPTION. Above, black; lesser wing-coverts and lower back, bright sulphur-yellow; wings, black, tipped with white; below down to the middle of breast, black; belly and basal half of tail, bright sulphur-yellow; apical half of tail, black, the black extending farther up on central tail-feathers; bill and feet, black. Female above, olivaceous, slightly varied with black on the interscapulars; wings, blackish, wing-coverts, terminated with white; below, yellowish.

Length, 8.25 inches; wing, 4.00; tail, 3.75 inches.
HOODED ORIOLE.

Icterus cucullatus Swainson.

The Hoodee Oriole is one of the most beautiful and interesting of all the birds of the lower Rio Grande region. It is common in all the wooded localities as well as in orchards and near the habitations of man. How far it penetrates into the interior of Texas I cannot say, but I have never found it near Houston or in the region of Corpus Christi. Lieutenant Couch found it in the Mexican States of Tamaulipas and Nuevo Leon, where it usually nested in tree-like yuccas. Dr. J. C. Merrill, who observed it near Brownsville, Texas, gives the following interesting account:

"This is perhaps the most common Oriole in this vicinity during the summer, arriving about the last week in March. It is less familiar than Bullock's Oriole, and, like the preceding species, is usually found in the woods. The nests of this bird found here are perfectly characteristic, and cannot be confounded with those of any allied species; they are usually found in one of the two following situations: the first and most frequent is in a bunch of hanging moss, usually at no great height from the ground; when so placed the nests are formed almost entirely by hollowing out and matting the moss, with a few filaments of a dark hair-like moss as lining; the second situation is in a bush (the name of which I do not know), growing to a height of about six feet, a nearly bare stem throwing out two or three irregular masses of leaves at the top; these bunches of dark green leaves conceal the nest admirably; it is constructed of filaments of the hair-like moss just referred to, with a little Spanish moss, wool, or a few feathers for the lining; they are rather wide and shallow for Orioles' nests, and, though strong, they appear thin and delicate. A few pairs built in Spanish bayonets (yucca), growing on sand ridges in the salt prairies; here the nests are built chiefly of the dry, tough fibers of the plant, with a little wool or thistle-down as lining; they are placed among the dead and depressed leaves, two or three of which are used as supports. The eggs... can readily be distinguished from those of our other Orioles by the absence of irregular blotches and pen-marks and by the white or very slightly bluish ground-color. The markings are chiefly at the larger end in an irregular ring of spots of varying shades of brown and lilac. Some sets are precisely like large Vireos' eggs. The average size is .82 by .59, with comparatively little variation."

"Very common in this vicinity (Hidalgo, Tex.)," writes Mr. Geo. B. Sennett, "and among timber of any respectable growth. I found it more plentiful than all the rest of the genus combined. Like all the Orioles, its colors vary greatly with age and season. But even in its best plumage, I think it looks better at a little distance, when its buttercup-colored hood contrasts well with its velvet-black mask. The birds are very active, and so full of song that the woods are filled with their music all day long. The bills of these birds are more curved and pointed than the others, and admirably adapted for weaving the hair-like moss. Their usual nesting places are the hanging trusses of Spanish moss, everywhere provokingly abundant on the larger growth of trees. I have also found their nests on the lower limbs of trees and the drooping outer branches of
undergrowth; but wherever found, the inevitable Spanish moss enters largely or wholly into their composition. So durable is this moss that it lasts for years, and as a consequence there are everywhere ten old nests to one new one. The heart of the moss, when separated from its white covering, becomes the "curled hair" of commerce. The Hooded Oriole takes this dry vegetable hair, and ingeniously weaves it into the heart of a living truss of moss, making a secure and handsome home. I found one no higher than my head, and others thirty feet or more from the ground. They make a great ado when their home is invaded. Their complement of eggs is four, but sometimes five are found."

These observations were made at Hidalgo in 1877. In the following year Mr. Sennett again visited the lower Rio Grande and made his headquarters at Lomita Ranch, a little further up the river. "At Lomita Ranch," he writes, "the edges of forests and groves, hung with pendant trusses of Spanish moss, afford excellent places for nesting. They were continually peering about the thatched roof of our house and the arbors adjoining for insects. They were more familiar than any of the other Orioles about the ranch. There is little to add to my former observations. One nest was discovered in a corn-field, made of Spanish moss, which was interwoven with a couple of leaves of two corn-stalks, which it thus bound together; another was found in a truss of Spanish moss, having dried grasses for lining, instead of the usual dead and black hair-like moss. In several nests were horse hair and tufts of goats' wool." Nests were found by Mr. Sennett from April 25 to May 25.

Eggs three to five in number, white, speckled, chiefly on the larger end, with hair-brown, usually mixed with a few small, black specks or lines.

**NAMES:** Hooded Oriole.
**SCIENTIFIC NAMES:** *Icterus cucullatus* Swainson (1827). *Pendulinus cucullatus* Bonap. (1850).
**DESCRIPTION:** Tail, much graduated. *Adult male:* "Wings, a rather narrow band across the back, tail and a patch starting as a narrow frontal band, involving the eyes, anterior half of cheek, chin, and throat, and ending as a rounded patch on the upper part of breast, black." Hood and "rest of body, orange-yellow. Two bands on the wing and the edges of the quills, white. *Female* without the black patch of the throat; the upper parts generally yellowish-green, brown on the back, beneath, yellowish." (B. B. & R.)

Length, 6.50 to 8.50 inches; wing, 3.30 to 3.60; tail, 3.50 to 4.20 inches.

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**ARIZONA HOODED ORIOLE.**

*Icterus cucullatus nelsoni* Ridgway.

**PLATE XXXI. FIG. 3.**

One of the most conspicuous and beautiful birds of southern Arizona and California is this variety of the Hooded Oriole, which is known by ornithologists as the **ARIZONA HOODED ORIOLE or Nelson's Oriole.** In southern California, where it breeds abundantly in the California fan palms (*Washingtonia filifera*) and gum trees (*Eucalyptus*), it is known as the "Tailor Oriole," "Tailor-bird," and "California Tailor-bird," in allusion to its beautiful hanging nest, which often appears as if it had been sewn to the leaves of the palms and yuccas. The beautiful orange color of the Hooded Oriole is replaced in this variety by a less striking saffron-yellow. As this bird is not only common in its native haunts in the uncultivated regions of Arizona, but begins to take up its abode
in gardens even in towns and cities of southern California, I shall deal more fully with its life-history, especially with its nesting habits.

The collector, Mr. W. E. D. Scott, found this bird common in the same cañon, where he found Scott's Oriole such a conspicuous bird.

"The individual taste of birds," says Mr. Scott, "in the matter of their nests is so well exemplified by the great differentiation in the nests of the Hooded Oriole, which is a very common breeding bird in the cañon described on page 270. If, that I propose to give a detailed description of a few nests taken here during the past summer, and incidentally to call attention to other nests of the same species taken in regions close at hand.

"The birds arrive here about the middle of April, and are to be found until the last of September, and a few even well into October. Such, at least, was my experience during the season of 1884. They are not great songsters, but are very conspicuous, both by their plumage and by their peculiar call or rattle, which is very similar to that of the Baltimore Oriole, only it is more prolonged. Two broods are raised, and not infrequently three, during their stay here, and a new home is built for each brood. The old birds are great workers when building their nests, and the rapidity with which so elaborate a structure is completed is astonishing. Three or four days at most generally suffice to complete the structure.

"The nests which I found were all taken from three kinds of trees, cottonwood, sycamore, and a kind of ash; and, considering that the location of all were not a mile apart, it would seem that taste or fancy had much to do with producing in the same locality, where the materials used by all of the builders are abundant and easily obtained, structures varying so widely in general appearance, in the materials of which they are built, and in their method of building, as well as in mode of attachment to the tree. Some of the nests, it will be seen, are as truly pensile as those of the Baltimore Oriole; others are more like those of the Orchard Oriole; while one at least rests on a stout twig and is hardly to be regarded as a hanging nest at all.

"The following data are taken from the nests before me and from notes made when the nests were collected.

"No. 1. Nest of May 28. In a cottonwood, forty-five feet from the ground. Contained a full set of three eggs, which were fresh and of the usual coloration. The nest is a rather bulky structure, and is built externally of coarse green grasses, rather loosely woven, but so knitted and tied together as to form a very strong wall. The general appearance of the surface is smooth, though the contour of the whole is unsymmetrical. There is a distinct lining; which is of fine dried grasses very compactly laid together, but not woven, in parallel circles, one above the other, reaching to the rim of the nest. Just in the bottom there is one large feather of a Hawk and a little down.

"The nest is attached to three main twigs at the extremity of a branch, and one of these twigs is again divided into three smaller twigs. One of the main twigs has many leaves, and is fastened to the wall of the nest for five inches, and some of the leaves are woven into the structure. A second twig is attached at a point about an inch and a half from the first to the wall of the nest for four inches, and has three leaves, all of which are fastened to the nest. The twig spoken of as being divided into
ARIZONA HOODED ORIOLE.

three branches has a very strong band and reaving of grasses joining it to the nest just where it forks, and one branch is attached to the side of the nest for four inches, one for two, and one for one inch. Outside the greatest depth is six inches, while inside the greatest depth is three inches and a half, so that the bottom of the nest is very thick; in fact the walls are thick throughout, being fully half an inch at the rim of the nest where they are thinnest. The diameter of the inside of the nest at the top, where it is largest, is four inches, and the shape inside is that of a shallow cup.

"No. 2. A nest taken the same day, and in the same kind of tree, about forty feet distant from that just described, is almost identical with it in structure. It is attached on its sides to four twigs, the attachments varying from three to five inches. It was about twelve feet from the ground and contained three fresh eggs.

"No. 3. Nest of May 29. Ash tree. Thirty feet from ground. Three eggs slightly incubated. A typical and rather bulky, purse-shaped structure, with a very wide opening. The walls are not thick, except at the bottom of the nest, and are composed of dry yucca fibre rather loosely woven. The lining is of the same material, only finer and softer. The nest is fastened to two twigs and the clusters of leaves belonging to them. One twig is attached to the side of the nest for four inches, the other only slightly to the rim. The exterior depth is six and the interior depth four inches, and the diameter of the opening is three inches.

"No. 4. Nest of the 17th of June; in an ash tree, about twenty-five feet from the ground, and contained four eggs. It is a true pensile nest and is built of yucca fibre and grasses externally, the whole very loosely put together and but slightly woven. There is a very slight lining of a few horse hairs and a little cotton-waste. The walls are thick and the opening small. The general shape is that of a purse or pouch. The exterior depth is seven and the interior depth five inches. The opening, which is covered by leaves hanging over it, is oval, with a greater diameter of two and a half and a lesser diameter of two inches. The eggs are typical. There are a number of bits of long grasses and yucca fibers pendant from the walls outside, not having been woven into the structure.

No. 5. Nest of June 18. In a sycamore tree, twenty feet from the ground. Four typical eggs. Fresh. Closely resembles the ordinary structure of the Baltimore Oriole, but is rather shallower and the opening larger. Is attached to the tree only at three points on the rim of the nest, and truly pensile. Built of same material inside and out, i. e. fine dried grasses. The walls are about the same thickness throughout—about a quarter of an inch. It is very compactly woven and is symmetrical. The depth outside is three inches and inside two and three-quarter inches, and the opening has a diameter of three inches."

After having described a number of nests elaborately, Mr. Scott concludes his interesting sketch as follows: "This completes the description of five of the nests taken in the cañon proper; a word as to some other nests of this species, found at but a short distance away, will complete the record of nests observed. At a point on a cactus desert, about a mile from where most of the nests enumerated were taken, I found a nest of this species built on the trunk or stem of a yucca about eight feet from the ground. It contained young birds almost ready to leave the nest. The trunks of many
of the yuccas are covered with dead leaves hanging downward, and this nest, which is
a cup-like structure, built of green grasses closely woven, is placed on the outside of
the dried leaves and is only attached to one of them. It is rather more than three
inches deep, and is attached to a single leaf for this distance. No leaves cover it or
conceal it, and the general appearance is that of a cup resting against the trunk of a
tree with no apparent attachment to it.

"In the mesquite regions about Tucson the nests are frequently built in the mistletoe
that grows plentifully on that tree. These nests are generally symmetrical, shallow
cups in shape, and are almost always semi-pensile."

During the last week of March, 1884, Mr. F. Stephens found nests of this Oriole
in the Colorado Desert in a palm (Washingtonia filifera) grove, which is situated in
a cañon six miles south of Agua Caliente. "This grove of palms was tenanted mainly
by the California House Finch (Carpodacus mexicanus frontalis). Among the masses of
dead palm leaves, clustered below the living ones, were many Oriole nests. I climbed
several trunks to inspect the nests, finding that they were composed exclusively of the
strong hemp-like palm fibres, making a beautiful warm nest. All seen, except one,
were attached to the under sides of the masses of dead leaves, among the wind-frayed
filaments composing the ends of the old leaves. The exception was one apparently
sewed on the under side of a large green leaf. I much wanted to get it, as it was a
very pretty nest, but it was impossible to climb past the mass of old leaves which
surrounded the trunk some thirty feet from the ground, and was eight or ten feet in
diameter and pressed almost solid by the storms of years. I fired several shots at the
leaf stem, trying to cut it off, but the tough fibres were too much for my small shot.
Nearly all were the shallow, cup-like nests of the Hooded Oriole, but one was larger
and wider than this species is likely to make, and probably belonged to Scott's Oriole.
None were the more purse-like nests of Bullock's Oriole. Some nests taken were filled
with sound seeds of the palm, evidently placed there by a small species of mouse, of
which I saw one. No Orioles were seen in the cañon, but the following day I saw
several Bullock's Orioles in the cotton-woods around Agua Caliente."

That this beautiful Oriole has obtained a foothold in the fine gardens of southern
California is shown by the observations of Mr. Theo. D. Hurd, of Riverside, Cal., who
reports as follows:

"As all the accounts of the nesting of the Arizona Hooded Oriole that I have seen
are the results of observations in uncultivated regions, or where native vegetation
abounds, I thought a few notes from this locality might be of interest. Therefore, in
this article I will give my experience with this bird in the settled district (under culti-
vation) of Riverside; extending as it does over an area of about twenty square miles,
and as this land twenty years ago was a dry plain, no stately sycamore nor live oak
stands to offer the usual favorite nesting place. The past season of 1889 was a most
favorable one for the study of this bird, as they were exceedingly abundant compared
with previous years, even outnumbering our common Bullock's Oriole, which before
has been by far the more common of the two. The Arizona Hooded Oriole arrives here
about the middle of March, and probably commences building the first week in April,
as my first nest found contained a full set on April 23, and I heard of others being found a
few days before. The nesting extends through May and June, the latest date being July 1. The nest is almost always instantly distinguished from that of Bullock's Oriole by its light color—a peculiarity which is noticed in other localities, I believe—and it is invariably composed of fresh fibres of the fan palm, which has been planted here to a large extent. I have never seen the bulk of a nest made of anything else. Many nests contain no lining whatever, and none are very elaborately finished. The majority merely have a small amount of a cottony substance (also obtained from the palm), and a few will contain two or three feathers, or a long horse hair. For the rearing of the first brood the nests are usually suspended in overhanging branches of the blue gum (Eucalyptus globulus), but it is a noticeable fact that the second nests are more commonly attached to the leaves of the palm tree. Why this is I do not know, unless they want to begin laying as soon as possible, and therefore build where material is most easily obtained. When in the palms the nests are fastened directly to the under side of a large leaf, leaving a small opening on one, or more often on either side, for the bird to enter. A nest composed of fresh, pale yellowish material, thus suspended is a beautiful contrast against the green leaf, and is the handsomest of anything in the way of nests that I have seen, especially when four nests are in one small palm not over fifteen feet high. While the eucalyptus and palm are the two great favorite trees for nests, yet occasionally they build in others, chiefly the cotton-wood, poplar, willow, and English walnut, and in one instance a nest was suspended in a climbing vine on a porch, but these are exceptional cases. As a rule they do not built high, the highest being not over twenty or twenty-five feet from the ground, while from six to fifteen feet is the usual height. In size and shape the nests vary considerably, but probably no more than those of other birds, and not so much as some. The general shape is cup-like, the greatest diameter being at the top. Purse-shaped nests are very rare. When placed in palms, the tendency is to spread out more, often assuming the appearance of a hammock, and on several occasions I have known them so shallow that the eggs have rolled out during a strong breeze. A typical nest will measure about 2.75×3.25 inches, inside and outside diameter, and 3.00×3.50 inches in depth.

Prof. W. B. Evermann found it nesting quite numerously in Ventura County, Cal. The nests were usually suspended in sycamores, often in live-oaks, ranging from five to fifteen feet above the ground. They were composed of grass picked while green, so that the structure usually showed a bright straw-color.

Mr. Hurd describes fifteen nests, of which seven were built in palms. The eggs have a beautiful white ground, sometimes with a bluish tint, marbled, blotched, and dotted with large dashes and irregular zigzag lines of purple, brown, and black, chiefly at the larger end.

This Oriole is distributed over south-western New Mexico and southern Arizona, west to Santa Barbara, Cal., and south to Mazatlan and Cape St. Lucas.

NAMES: Arizona Hooded Oriole.

Scientific Names: Icterus cucullatus Nelsoni Ridgway.

Description: Like the Hooded Oriole, “with breast, etc., saffron-yellow, varying to gamboge (never orange).” (Ridgway.)
WHILE in the northern parts of our great country May is an extremely changeable month, a month of sunshine and cold spells, a month of hilarity and sufferings for our delicate insectivorous birds, in southern Missouri, in Arkansas and Texas it is the most exhilarating and beautiful time of the year. In the South the first days of May see the queen of our American forest, the grand evergreen magnolia, in full bloom. What a charm to the eye is this glorious tree, and how delicious is the fragrance of its incomparably beautiful flowers! Near it stands the noble, broad, evergreen live oak, densely covered with festoons of gray Spanish moss. In the gardens the wealth of roses in full bloom is almost overwhelming. Arbors are covered with Banksia roses, Japan honey-suckles, and Carolina jasmine, and wistarias climb high up on the mulberry trees, covering them with a sheet of fragrant blue flower trusses. Dense evergreen hedges of Cherokee roses often line the roads for miles. The gardenias or Cape jasmines, frequently eight to ten feet in height and diameter, have opened their waxy-white, deliciously scented blossoms among the abundant deep glossy green foliage. The crinums and the amaryllis (Hippeastrum Johnsonii) are flowering in gorgeous masses, vieing in beauty with the lilies of the northern gardens. Woodlands and ornamental plantations, orchard hedges and swampy thickets are replete with bird-life. Indeed, there is scarcely a moment that we do not see or hear birds in this "month of rosy beauty." In south-western Missouri this time of the year is distinguished by a very salubrious, pure, and mild air, and, though we do not find here the semi-tropical plants alluded to above, the grassy prairies are covered with countless numbers of wild flowers, and the woodlands and dells are exceedingly rich in flowering shrubs and trees. How desolate and dreary would these gardens, woodlands, and prairies be without the poetry and life imbued to them by frolicking and singing birds!

In the southern parts of our country bird-life is at its best in the "poets' month of May," when "every rose-bush has a nest and every thorn a flower." At this time the most delicate and beautiful songsters arrive from their winter-quarters among a wealth of foliage and blossoms, sunshine and salubrious air. Many of the earlier
1. Icterus galbula Coues.♂ - Baltimore Oriol - Baltimore Oriole (male).
2. Icterus galbula Coues.♀ - - - (female).
arrivals, like the Robin and Bluebird, have raised their first brood of young. The air is vocal with the sweetest music of innumerable birds. The inimitable song of the Mockingbird, once heard from one of the grand magnolias or from an arbor covered with flowering "Marechal Niel" or "cloth of gold" roses, makes the heart long for the sunny South and its untold attractions through all our life-time. Not to speak of the Cardinals in the Cherokee rose hedges, the Painted Buntings in the orange trees, and the Blue Grosbeaks in the banana shrubs, abelias, myrtles, and laurustinus!

Among the choristers of the southern gardens, from Texas and northern Florida to southern Illinois and Missouri, the Orchard Oriole, Garden Oriole, and Orchard Hangnest, is one of the most abundant and conspicuous. When I first beheld this bird, clad in a robe of deep black and rich chestnut, I was strongly impressed by its extremely sweet, hilarious, and flowing strains, and by its confiding and attractive manners. Its song, which is always accompanied by fluttering motions and by swingings up and down, to and fro, is usually uttered from the top of a small tree or a large bush. I have observed this sprightly songster, which is rather a more southerly bird than its brilliant relative, the Baltimore Oriole, equally abundant from Texas and northern Florida to south-western Missouri. Although a common bird in the Rio Grande valley of Texas, I have never found it in the orange groves of the peninsula of Florida. In Wisconsin as well as in northern Illinois it is a very rare bird, seldom seen or heard. In New England it is said to be most numerous in the Connecticut valley, but rare in Massachusetts. According to Mr. R. Ridgway it is much more abundant in southern Illinois than the Baltimore Oriole and the same can be said in regard to its distribution in Kansas. In southern Missouri, where the Orchard Oriole is one of the most common birds, I have never seen the Baltimore Oriole during the breeding season. The Orchard Oriole is found east to the Atlantic Ocean and west to the base of the Rocky Mountains.

Although a numerous bird in the mesquit prairies of Texas, the Orchard Oriole is pre-eminently a garden and orchard bird, being one of the most familiar and beloved birds of the South. In Texas it is scarcely absent from any peach orchard, and in Louisiana it is abundantly met with in the orange groves. In northern Florida and southern Georgia it is a regular tenant of the pear plantations, and in south-western Missouri apple orchards constitute its favorite haunts. In Houston, Texas, it often nests in a magnolia in close proximity of a house, and in New Orleans the structure is often found in one of the dense evergreen tree-like privets (Ligustrum Japonicum), so common in the streets of the "Crescent City." In south-western Missouri it builds its nests in quite a number of different shade trees, even in the coarse branches of Scotch pines. In Pennsylvania these Orioles have been observed building in willows along creeks, and the only pair which I have met with in northern Illinois was observed in willows near the Desplaines River. In south-eastern Texas these birds usually make their appearance by the middle of April. The first arrivals are old males. A few days later the young males, which are easily distinguished by their incomplete coloration, follow, and about five or six days later the females make their appearance.

Prof. Wm. Brewster found this Oriole abundant in St. Mary's, Ga. "Another frequenter of the village shrubbery," he writes, "was the Orchard Oriole. His flute-like voice, which bears some resemblance to that of the Fox Sparrow, could be heard almost
any time after April 10. Our garden offered especial attractions to these Orioles, for
the hedge of wild olive trees that bordered it on two sides was overrun with Cherokee
roses and trumpet-vines among which they found a congenial shelter. They were fond,
too, of sipping the honey from the trumpet-flowers, and it was no uncommon thing to
see half-a-dozen collected about a single cluster. In this occupation they were almost
invariably joined by numerous Hummingbirds;—and such a group, with a setting of
green leaves and scarlet and white blossoms, formed the prettiest picture imaginable."

In south-western Missouri the first old males arrive by the 28th of April. As these
delightful and conspicuous songsters are very abundant, they can scarcely escape
observation. They are, however, very partial to certain favorite localities, and are
often absent in places where we would with certainty expect them. The following is
from my journal:

"Freistatt, Mo., April 28, 1885. Spring in all its glory is here at last. Every-
where the eye meets flowering trees and shrubs, and from all sides the sweet music of
birds falls on our ear. The air is remarkably clear and refreshing on this plateau
of the Ozark Mountains. Just now the southwind is blowing so strongly during day-time
that all the apple trees bend northward. By the middle of May this strong wind will
have ceased to blow. Now is the time when the most beautiful of our vocal summer
sojourners arrive. While sauntering through the woodlands and the adjoining orchard
this morning I was saluted by the loud rattling tarrirrrrrrr and the sprightly song of the
Orchard Oriole. While singing its gushing strain, it was perched in the upper slender
branchlets of an apple tree, almost hidden among the dense foliage, and its notes were
accompanied by fluttering and swinging motions. This is one of the characteristic traits
of all the Orioles, but especially of this species. The song always reminds me of the
Rose-breasted Grosbeak. The notes are rapidly enunciated, and so hurried and gushing
that the ear can scarcely follow them, but they are extremely harmonious, loud, and
varied. I agree with Dr. T. M. Brewer, who describes the performance as consisting 'of
shril and lively notes, uttered with an apparent air of great agitation, and that they
are quite distinct and agreeable, though neither so full nor so rich, as are those of the
more celebrated Golden Robin.'

"The exquisite and varied strain of the Orchard Oriole, its loudness and rapidity,
its gushing liveliness and hilarity is a true picture of the now absolutely reigning spring.
The white erythronium¹, the common blue violet², as well as the arrow-leaved³ and the
bird's-foot violet⁴ are blooming abundantly in the fence corners and in the borders of the
woods. The prairies are covered with a carpet of shooting stars (Dodecatheon
Meadia), varying in color from pure white to deep rosy. In the trellises covered by
Japan honey-suckles (Lonicera Halliana) the Catbird, just arrived from its winter home,
inspects its old nesting-quarters. Bluebirds are busily engaged in feeding their young
in the nesting-box fastened to a small oak. From the thickets of the adjoining wood-
lands the enchanting song of the Cardinal and the screaming of the very abundant
highway robbers, the Blue Jays, falls on the ear. Mockingbirds and Thrashers sing, and
Flickers and Red-headed Woodpeckers announce their presence by their incessant
drumming and loud call-notes. The air, which is characterized by its pureness, and

¹ Erythronium albidum. ² Viola cucullata. ³ V. sagittata. ⁴ V. pedata.
tranquility, is, indeed, vocal with the music of numerous birds, and a more beautiful spring day can scarcely be imagined.

"May 9. The red clover is in full bloom. The Orchard Orioles are very abundant. The females have arrived this morning or during the night, and the very ecstatic and vocal males are wooing them in their sweetest songs. All are very fearless coming into close proximity of the house. The Bluebirds breeding for the second time have to keep up a constant fight against the extremely numerous and half-domesticated Blue Jays. In the early morning these nest plunderers and murderers approach the nesting-box in a very quiet and sneaking way, usually in numbers from four to five, and the lovely Bluebirds scarcely succeed in defending their home.

"May 11. The Orchard Orioles have settled now, each female having selected her mate. The Bluebirds in the nesting-box are now comparatively safe, and their enemies, the Blue Jays, dare scarcely show themselves. The guardian, protector, and ally of the small birds is the ever watchful and courageous Kingbird, who drives away all the robbers, from the size of a Blue Jay to that of an Eagle.

"May 21. Six pairs of Orchard Orioles are nesting near my house. Their song can be heard almost incessantly in the grand concert of Nature. With an almost thousand-voiced song of jubilee the plumed choir greets the rising sun. Cardinals, Bluebirds, Bewick's Wrens, Kingbirds, Wood Pewees, Great-crested Flycatchers, Carolina Chickadees, Tufted Titmice, Flickers, Red-headed Woodpeckers, Robins, Catbirds, Thrashers, Wood Thrushes, Indigo Buntings, Blue Grosbeaks, Yellow-billed Cuckoos, Field Sparrows, Yellow Warblers, Red-eyed Vireos, Bell's and White-eyed Vireos, Lark Sparrows, Martins, Barn Swallows, Orchard Orioles, and even Blue Jays sing and call as loud as they can. How rich and varied is bird-life here yet! But it will not take long before man has destroyed this beautiful idyll. With Argus eyes I have to watch the nest of the Mockingbird built in a prairie rose clambering over a fence on the country road. These inimitable songsters have already become very scarce, as every nest obtainable is robbed of its young.

"To-day I found the first Oriole nest. It is built in a young mulberry about six feet above the ground. It is a pensile structure, and so well hidden among the foliage, that only a trained eye can detect it. Like all the nests of this bird, it is built of long slender grasses, which are cut with the bill and used green and fresh. The Oriole's assiduity in weaving the long slender grasses into such a beautiful basket-like structure is really astonishing. The color of the grasses, even when dry, shows a greenish hue, preventing the nest among the branches and leaves from being seen. Dry grasses and other material are never used in the external construction, but the inside is usually lined with fine plant wool and feathers. Like almost all the nests which I have measured, this is three inches in diameter and three inches long. The birds usually work from three to four days to complete the structure.

"With one exception all the nests found by me in Texas were similar. All were built in horizontal or half upright branches, and while some were hanging nests, most of them were half pensile. All were lined with cotton or feathers. May 8, 1881, I discovered a very peculiar nest, not quite finished, near Spring Creek, Texas, only a few yards from a dwelling. For several days I had observed a pair of these birds carrying
fresh green grasses to a laurel oak (*Quercus imbricaria*), that was densely covered with large hanging festoons of Spanish moss; they disappeared always in a certain bunch of moss, yet I could see no nest. At last, on taking down the branch, I was surprised to find a beautiful structure in my hands. The grasses and threads of moss were all firmly woven together with grass; the entrance was on the side. There is no doubt that the birds make frequently use of these festoons of dense moss, as I have often seen them climbing around in them. They could not be better protected, it being exceedingly difficult to find the nest among the bunches of moss.

"June 11. Orchard Oriole nests are found almost daily. I even discovered one in a top of a dense Scotch pine only a few steps from a much frequented veranda. Another one was built close by in an apple tree, and a third one in an Osage orange. A fourth nest stood in a black jack oak not far from the nest of a Robin; in the top of the same tree a Kingbird had its nest. Not quite six feet from it, in a neighboring tree, a pair of Bluebirds were nesting. In another oak tree near the house, about fifteen feet from the ground, a fifth nest was discovered. Under this tree the children play and chatter all day long and a hammock is constantly swinging to and fro. The gushing, sprightly, and melodious song of the Orchard Orioles as well as their rattling notes, sounding like *terrrrrrrr*, are frequently heard. Their flight is quick and graceful, and their motions among the branches of the trees are very adroit. They rarely come down to the ground. Almost all the nests found by me contained four, several five, and a few three eggs. They have a pale bluish-white ground-color, and are blotched with purplish and spotted on the larger end with a few deep markings of dark purplish-brown."

The sociability of this Oriole is one of its most marked characteristics, and has been noticed by all observers who have had an opportunity to study its habits. Audubon says that he has known no less than nine nests in the same enclosure, and that all the birds were living together in great harmony. I have found five and six nests in one orchard and garden, and two even in one tree.

The Orchard Oriole is a more restless bird than the Golden Robin. This sprightly bird is ever in motion, flying, hopping, and climbing about in the trees, often swinging head downward in its search for food. Now and then we may see it flying down to the ground after some fallen bug or worm, but in the next instant it is again fluttering amidst the foliage, prying for lurking prey. All the time its search is accompanied by its hurried and sprightly notes. Prof. Robert Ridgway, an excellent connoisseur of bird song, says, that the male is an excellent songster, his notes having an ecstatic character, quite the reverse of the mournful lament of his larger and more brilliantly colored cousin.

The Orchard Oriole is a highly beneficial bird, as its food consists almost exclusively of insects, which are captured mostly in trees and shrubs, especially among the flowers and leaves. In pursuing its prey it is exceedingly active, fluttering amidst the foliage, climbing among the branches, or flying and springing after bugs and moths on the escape. Of insects "it consumes," according to Dr. T. M. Brewer, "a large number, and with them it also feeds its young. Most of these are of the kinds most obnoxious to the husbandman, preying upon the foliage, destroying the fruit, and otherwise injuring the trees, and their destroyers render an incalculable amount of benefit to
the gardens they favor with their presence. At the same time they are entirely innocent of injury to crops of any description, and I cannot find that any accusations or expressions of suspicion have been raised against them. They seem to be, therefore, general favorites, and, wherever protected, evince their appreciation of this good-will by their familiarity and numbers."

I have observed that the parents returned to the nest, during one hour, thirty-seven times with insects, carrying from one to four at a time. These were mostly cater-pillars and moths. When the young are very small, they are fed exclusively with plant lice and other diminutive insects, and when they are fully grown, grasshoppers and beetles are carried to them in large numbers. The smaller insects are collected from the foliage and the flowers, and the sharp and pointed bill is also well adapted to draw lurking insects from the crevices of the bark. In Texas they also relish ripe figs, which are cracked or stung and nibbled by insects. I have never seen that these and other birds, who visited the fig trees, took perfect and not over ripe fruit. They consumed only those figs which were cracked, very juicy, and full of insects.

The Orchard Oriole leaves south-western Missouri early in September, and in south-eastern Texas I have seen none after the second week in October. From the time of their moulting, when the young are able to shift for themselves, until their departure these birds are perfectly silent, live very retired, and are scarcely seen in their spring haunts. With joyful song and in great activity and hilarity they arrived, silently and unnoticed they depart for their winter-quarters.

Their winter home is found from southern Mexico to Panama.

NAMES: Orchard Oriole, Orchard Hangnest, Brown Hangnest.


DESCRIPTION: Bill, slender; tail, moderately graduated. "Adult male: Head, neck, middle of chest, back, scapulars, wings (except lesser and middle coverts) and tail, deep black, the greater wing-coverts, quills and secondaries edged, more or less distinctly, with pale chestnut or whitish; rest of plumage, uniform rich dark chestnut or bay, deepest on breast. Adult female: Upper parts, yellowish-olive, much duller and grayer on back and scapulars; wings, grayish-dusky, with two white bands, all the feathers with paler brownish-gray edgings; tail, yellowish-olive, like rump, etc.; lower parts, entirely light olive-yellow. Young male, second year: Similar to adult female, but lores, chin, and throat, black. (The chestnut and rest of the black appearing in patches, increasing in extent, during successive seasons.) Young of the year: Similar to adult female, but suffused with brownish, especially on upper parts.

"Length, 6.00 to 7.25 inches; wing, 2.90 to 3.25; tail, 2.65 to 3.20 inches." (Ridgway.)
THE SPLENDOR of our North American autumn landscape has always been a favorite theme with the writers on the beauties of Nature. More exhilarating and anticipating, however, is the beauty of the woodlands in spring. Although little notice has been taken by our writers of this beauty, the true lover of Nature, who is accustomed to worship in her inner temple, recognizes the subtle charm of our woods at this season, and realizes the variety and harmony of the apparel which our trees put on to celebrate the return of the vernal season. No other time of the year exhibits so striking a contrast in the appearance of different species of forest trees. Nature alone knows how to blend various distinct forms and many distinct shades of color in one harmonious whole. The forests of Europe, composed of a few species only, are far inferior to the woodlands of our own country, composed, as they are, of a very large variety of magnificent species. In May from the top of a northern hill, or better, from one of the high summits of the southern Alleghanies, "over which is spread the most varied, luxuriant, and magnificent collection of deciduous trees in the world," may be seen the American forest in its most charming aspect, the outlines of individual trees veiled but not hidden, by the opening leaves, which vary on each species in form and color. The opening of the buds is a sensation of indescribable beauty to the cultivated mind. This first flush of woodland beauty lasts only a few days, but they are precious days to the lover of Nature. How exquisitely charming are the horse chestnuts, the maples, and especially the wild plums, cherries, hawthorns, oaks, and hickories in their misty spring apparel! The contrast in the mixed woods, where white pines are interspersed among a large number of species of deciduous trees, is beautiful beyond description.*

At this time the brilliant flowers of the red maple celebrate the coming of spring. This tree is certainly one of the most beautiful objects to be seen in our woods, when covered with fruit, which varies in different individuals in brilliancy. In the Southern States, where this tree grows with particularly large and brilliant fruit, among the most magnificent trees of our country, the evergreen magnolias, the dense hollies and finely formed laurel cherries and other broad-leaved evergreens, it makes a note of color in the landscape and a sensation on the mind which time does not dull. Among this variety of budding trees almost all colors can be observed, but the shades of red, bronze, green,

and white are particularly noticeable. No system of color language can accurately describe the varied shades of the early dresses of our trees and shrubs. Many of the hues are softened and subdued, in contrast to the gaudy colors of autumn. How lovely is the shadbush (*Amelanchier canadensis*), in full flower, among this variety of budding trees, and what charm adds the sheep-berry (*Viburnum Lentago*) with its deep bronze-green unfolding leaves to the road-sides and forest copses! And how beautiful is the tender green young foliage of the beech!

When the army of Juncos, White-throats, White-crowns, and Fox Sparrows in their migration have flown further north, and the Chippies have become more abundant; when a few Thrashers and Towhees are heard introducing themselves to the passers-by, just before the Catbirds, Bobolinks, and Orioles arrive, this time may be called the misty season of the year. Now the leaves prepare to unfold and the bud-scales grow to their largest size. You can name no special date when this season is in its height. When the new leaves begin to unfold, the misty season vanishes, and color is added to the landscape. Now the host of Warblers, the most elegant and attractive of our birds, appear in great numbers. At the same time, in Wisconsin about May 9, the Scarlet Tanager gleams in the bronzv colored and green unfolding foliage. The Rose-breasted Grosbeak announces its presence by its enchantingly sweet song in the mixed woods, where the oaks now appear as if decked with scraps of maroon velvet. And what is this flash of fire in yonder drooping fresh green branches of the stately elm? Surely, the **Baltimore Oriole** has arrived, making the air vocal with its flute-like, extremely touching notes, and by its rattling *tarrrrrrrr*. It imbues the vernal trees with an indescribable charm and poetry, and in its fiery orange plumage it really seems like an arrival from the tropics. We see these birds flash through the blossoming trees, and all the time hear their warbling and wooing notes. Although observed in many different trees, the Baltimore Oriole has a predilection for the broad spreading elms standing near the stateliest mansion as well as by the humblest farm house.

The elm is the most picturesque, the most beautiful of all our northern trees. Though not donned in broad, shining evergreen foliage, and not bespangled with large fragrant flowers like the noble magnolia of the South, the broad head of light pendulous branches, supported by a strong stem, is unsurpassed for picturesqueness and beauty. No other northern tree is associated in the mind of the people to an equal extent with the idea of home. It forms the most remarkable feature of the northern domestic landscape, and the bright-colored, sprightly and familiar Baltimore Oriole is always associated with this stately tree, especially in New England. Indeed, it is one of our best known and most beloved birds, “famous alike for its flash of color, its assiduity in singing, and its architectural ability.”

There are few of our birds combining so many of the gifts and graces of their class as the Baltimore Oriole, in showy array of orange, black, and white, and an excellent entertainer in song and manners. That it is a highly esteemed and familiar bird is shown by its variety of popular names. In allusion to its bright orange plumage it is called “Golden Robin,” and “Fire-bird,” and from its exquisite pensile nest it received the name “Hangnest.” Its more common name of Baltimore Oriole is not derived from the city of that name, but from the Earl of Baltimore, who became the lord of Balti-
more in colonial days. The correspondence of yellow and black on his heraldic livery with the coloring of this bird, which was abundant in his new estates, sufficed to make this Oriole known as the "Baltimore Bird."

These brilliant and extremely lively birds are hailed as the true harbingers of the approaching warm and flowery season. Coming from their winter home in Central America, southern Mexico, and the West Indies, they make their appearance in southern New England in the first week of May, in southern Wisconsin and northern Illinois rarely before the 9th and 10th of that month, always when the plum and cherry trees are white with blossoms. They announce their arrival by their loud and liquid song and by their rattling call-notes. There can be scarcely a more enchanting and beautiful picture imagined than these fiery, exceedingly active and vocal birds in the masses of white blossoms and tender green foliage! It seems as if they were trying to induce us to take part in their jubilee and pleasure. Indeed, they fill the soul of every lover of Nature with enthusiasm and ideal thoughts, and even the indolent listen to the song and enjoy it. In southern Missouri I have never seen this Oriole, and in southern Louisiana I have seen the males pass through rapidly by the 20th of April. About a week later I observed small flocks of migrating females in the flowering magnolias. At the North the males precede the females about six or eight days. The latter always arrive when the apple trees are in full bloom, and there can be no more beautiful sight than the gorgeously colored wooring male on the side of his humbler mate amid the wealth of white and rosy blossoms. They are extremely regular in the time of their arrival, and year after year they appear at any point about the same day.

The Baltimore Oriole has a very extensive range of distribution, being found at various seasons throughout eastern North America south to the West Indies and Central America. Its breeding range extends from the Atlantic to the Plains, and from Texas and Florida to the interior of British America, having been traced north to the 55th parallel of latitude. Dr. J. A. Allen met with it at the base of the Rocky Mountains, in Colorado, and in Kansas he found it, as well as the Orchard Oriole, abundant. I have never observed it during the breeding season in Texas and south-western Missouri, and never in Florida, though Dr. T. M. Brewer has received nest and eggs from Monticello, in northern Florida. According to Audubon it breeds in Louisiana and Texas, and this is probably true to some extent in some localities, for we know that the Baltimore Oriole, even in the North, is abundant in one locality and exceedingly scarce or not at all found in another. In Wisconsin and northern Illinois it was once a very numerous bird, but its very beauty has led to its destruction. Its brilliant plumage made it desirable to the hat-bird collector as well as to the pseudo-ornithologist. "Women's heartlessness," as Celia Thaxter calls it, is to a great extent responsible for the depopulation of our groves, orchards, meadows, and woodlands. It has been often the case in New England as well as in other parts of the country, that all the male birds in one district were exterminated within a short time after their arrival from the South.

The favorite haunts of this brilliant bird are cultivated districts, well watered, and where large trees are scattered around. In Wisconsin I have found them especially in the scattered elms of the cleared lowlands and even in Lombardy poplars near houses,
and in Illinois in large oaks and maples. Further south, on the Mississippi and Ohio, the beautiful tulip trees are its favorite haunts. Wherever it occurs it prefers the society of man, breeding in large trees in gardens, orchards, pleasure grounds, pastures, and on the outskirts of woodlands. It even enters towns and larger cities. For a number of years a pair nested regularly in one of the large elms standing in a street in the city of Milwaukee. Wherever it feels safe it soon becomes very much attached to man, singing and nesting frequently in close proximity of dwellings. It is a peculiar fact that we find these Orioles common in one locality and not at all in another apparently just as well suited to its tastes. It is partial to particular sections, especially to hilly and well-watered regions, while several miles away none may be found. With most of our country people these birds are great favorites, and they do not allow that these fiery plumed tenants of their domain be in any way molested. Gay and brilliant in plumage, lively and pleasant in its manners, a quick and graceful flyer, and a vocalist of rare power, "with pathos, beauty and variety in its notes," the Baltimore Oriole must be a great favorite with everyone who is not indolent and without feeling.

The Baltimore Oriole is one of our most conspicuous and melodious vocalists, announcing its presence from the time of its arrival until the young are hatched. No bird song of our gardens is so impressive, so loud and full of hilarity. The Golden Robin is indeed the herald of the blossoming season. At all events, the blossoms of the fruit trees and the Orioles come together. We hear their first notes when the cherry and apple trees wear their full spring array. Then they are in high spirits, "gaily flashing from one tree to another, and sounding forth their golden-toned trumpets from the fragrant clouds of white bloom, amid which they spend many an hour while the blossoms remain." The few notes of which the song of this Oriole consists are uttered frequently, with great force and fine modulations. It also possesses a considerable power of imitation, and its attempts of uttering a few notes of such birds as the Cardinal, the Scarlet Tanager, and the Rose-breasted Grosbeak, are no failure. Its sweet whistling is especially heard in the early morning. If we look for the songster we are likely to find it among the swaying branches of an elm or in the blossoming orchard trees, where it is busily engaged in searching for insect food. Peering into every crevice, under each leaf, into every flower cup for its prey, it warbles at the same time incessantly its flute-like notes. When flying from one tree to another, it also sings or utters its rattling call-notes trrrr to assure its mate of its presence and whereabouts.

At its arrival and until the time of the appearance of the females the notes are loud and rather shrill, and the noisy rattle is more frequently heard than later. At this time the males are also more restless, very active and pugnacious. "When, a few days after their arrival," says Dr. T. M. Brewer, "they are joined by the females, the whole character of their song changes, which becomes a lower-toned, richer, and more pleasing refrain. During their love season their resonant and peculiarly mellow whistle resounds in every garden and orchard, along the highway of our villages, and in the parks and public squares of our cities. Nuttall, generally very felicitous in expressing by verbal equivalents the notes of various species of our songbirds, describes the notes of its song as running thus, Tshippe-tshayia-too-too-tshippe-tshippe-too-too, with
several other very similar modifications and variations. But these characters give a very inadequate idea of their song. It must be heard to be appreciated, and no description can do justice to its beauties. The notes are of an almost endless variety, and each individual has its own special variations. The female, too, has her own peculiar and pretty notes, which she incessantly warbles as she weaves her curiously elaborate nest.”

The movements of the Oriole among the branches are very quick and graceful. On the ground it is not at home and it rarely alights on it, except when gathering nesting material or when pursuing an escaping insect. The flight is extremely elegant and quick, usually from tree to tree. When flying far, it ascends high into the air above the trees, and then speeding on rapidly.

Though so bright and beautiful birds, such exquisite songsters and hilarious tenants of our groves, the interest which the Baltimore Oriole never fails to excite, centers, after all, in the masterpiece of its pouch-like nest, “which its clever bill, like a needle with the eye at the point,” suspends for our admiration from the drooping bough of an elm or other tree, under a canopy of tremulous foliage. It is woven in the most wonderful manner and of quite characteristic substances. Both birds participate in building this beautiful structure. Sometimes the female does most of the weaving, while the male supplies the material, and again the male seems to be mainly the architect. Other birds are mostly engaged in the early morning hours in the construction of their domiciles; the Orioles, however, do not confine themselves to special hours of the day, but are diligently working all day long, until the nest is complete. Where they are protected, and, in consequence, feel safe, they are easily observed at their work, and we may even assist them in supplying them with nesting material. As may be supposed, so elaborate a structure is not the work of a few days, but may require a week or more. It is always purse-like or deeply pouched, and one of the most perfectly pensile nests imaginable. It is usually six to eight inches long, about four inches in breadth, and somewhat contracted at the opening, and pouched out below. It is suspended from a horizontal branch, usually at a great distance from the trunk, where it is out of the reach for almost all climbing animals. The nests which I found in Wisconsin and Illinois, were placed from twelve to forty feet, and in the lowlands even higher, from the ground. There are usually three classes of nests. Those built in the elms in the meadows are mainly constructed of the tough silky fiber of asclepias, mixed with horse hair and lined with plant down. These are the most beautiful of all the nests. A second kind of nests is usually found in gardens. These are mainly built of strings, twine, grasses, and a few horse hairs which give the structure shape and substance. The interior is lined with feathers and cotton. A third class of nests is mostly constructed of horse hair and a few strings, and lined with cottony substances. This last is the most substantial and lasting structure, hanging on the trees often for years. I frequently supplied these birds with all kinds of strings, ranging in color from pure white to orange, scarlet, green, blue, brown, and black, but I have never observed that they made use of bright-colored material; they invariably selected the white, black, and dark brown strings. The same observation has been made by Miss Hedwig Schlichting, who, during her long residence in Howard’s Grove, has
frequently furnished nesting material for these birds. Never were red, yellow, blue, or green strings accepted.

In building the nest, the Orioles usually begin with a string and a few asclepias or hemp fibers, which they skilfully wind around the twigs; then they take horse hair, which they interweave with the other material until the rough skeleton of the nest is formed. So well is the work of weaving performed that we must be surprised by the close texture of the finished fabric. In weaving and forming the nest not only the bill is used, but also the whole body. The female usually sits in the nest turning her body to all sides and working with her bill, while the male climbs around on the outside, working diligently with his bill.

Audubon tells us that he has found nests in Louisiana made entirely of the soft Spanish moss, and such a nest, built in a flowering tulip tree, is figured in his magnificent work, "The Birds of America." A nest which Dr. T. M. Brewer received from Monticello, Fla., was constructed of the same material. The eggs, four to five in number, are white, marked with dots and curving lines and streaks, appearing as if made with a pen and black ink.

While the female is hatching, her mate sings his most caressing notes, carries food to her and keeps a sharp lookout for all enemies who may penetrate his haunts. At this time he is extremely suspicious, and the presence of a cat, a dog, a squirrel, or a snake brings him down to the lowermost branches. Birds of prey are vehemently attacked and boldly driven off. When the nest is approached they utter notes of such deep sadness that the kind hearted observer retires immediately. I have seen the male driving away Crows and Grackles, and a writer in the "Audubon Magazine" says, that he has seen one administer such a severe thrashing to a marauding Blue Jay, who was prowling about his home, that the rascal went off quite crest-fallen and hid himself in a cedar tree, where he stayed half an hour before he dared to venture out from its sheltering branches.

When the young are hatched both parents are busily engaged providing them with food, and as they grow larger and hungrier the old birds are all day long busily engaged in collecting innumerable noxious insects, the sole diet of their offspring. When the young are pretty well feathered, but before they are able to fly, they climb around over the edge of the nest, extending finally their excursions to the surrounding twigs, until they are able to use their wings.

I know no bird that shows such an intense love and attachment to its mate or young as the Baltimore Oriole. When an accident has befallen one of the parents or the young, the surviving cry for days in the most pitiful and mournful tones. When I one day caught a female in a trap and kept her in a cage, the male uttered notes of such extreme sadness and showed such great tenderness and solicitude that it even came in the room and alighted on the cage, where the mate was kept. This attachment and love impressed me so deeply that on the next morning I set both free.

The Baltimore Oriole is a bird of great value in the household of Nature. To the agriculturist and horticulturist "it renders immense service in the destruction of highly injurious insects; among the most noteworthy of these are the common canker-worm and the tent caterpillar, both great pests to orchards." (Brewer.) The
"Audubon Magazine" gives the following truthful description of the Oriole's excellent services:

"The first notice we have of the Baltimore's presence is his sweet whistle heard in the early morning. If we look for him we shall find him high up among the branches of an elm or oak, or sycamore or cherry tree, busily looking for food, and if we take a little time to watch him, may see how systematically he goes to work to secure his breakfast. He will very likely alight on some large branch near the trunk of the tree, and thence work outward toward the smaller branches, going carefully over almost every twig, and always flying back to the main branch to begin his examination of a smaller one. He peers into each crevice of the bark; looks under each leaf; and takes out from each blossom the insects which have gathered there to feed on the sweet honey. The little bunches of eggs hidden last autumn in the crannies and nooks where the mother beetle or moth thought they would be safe, do not escape his keen sight and his strong, sharp-pointed bill; the cater-pillar, just hatched out and beginning to feed on the tender leaves, is far too slow to get away if the Oriole once espies him; and the insect which is about to lay its eggs in the fruit which is just now forming, will have to be very quick and cunning if it is to avoid the sharp eyes of Lord Baltimore. All through the spring and summer this is the Oriole's work, performed day after day, constantly, carefully, faithfully. No one can know how much good he does by his unceasing warfare against the insects; no one can know how many trees he saves, how many barrels of fruit he gives to the farmer, fruit which but for him would be eaten up by the grubs, or having been stung by insects would drop off from the trees before ripening.

"But there are some people who believe that the Oriole does a great deal of harm. They say that he eats the peas in spring and destroys grapes in great numbers in the autumn.

"Perhaps the Baltimore Oriole is not altogether perfect. He does visit the pea vines, but it is probably more to get the insects which gather about the sweet white blossoms than to eat the peas. But even if he should take a few of them, what a trifle in money value this loss would be when compared with the great good that he does by destroying the insects; and the same is true with regard to the few grapes he may eat.

"Without the Oriole, and other birds who do such work as he, we might not have any vines at all on which to grow grapes. There are many learned people who believe that the terrible disease, due to a small insect, which has destroyed so many of the finest vine-yards in France, is caused by the wholesale killing of birds which takes place in that country. The Oriole may do some little harm in the way indicated, but his services to man are very great and far outweigh the value of a few small fruits."

Like all the Orioles the Golden Robin is an excellent cage bird. If fed and cared for in the same way as the Mockingbird is treated in confinement, it thrives very well. It leaves its summer home in small scattered flocks late in August and early in September.


1. *Icterus Bullocki* Bonap.
2. *Icterus Parisorum* Bonap.
3. *Icterus Cucullatus Nelsoni* Ridgw.
BULLOCK’S ORIOLE.

*Icterus bullocki* Bonaparte.

**PLATE XXXI. Fig. 1.**

THE friend of Nature who for the first time enters California is surprised and astonished by the singular aspect of the landscape, by the many peculiar plants, trees, and shrubs, and by the many rare birds. Everywhere he notices new and entirely different features in the landscape, and the ear listens to strange songs and call-notes. With the exception of the Himalayas, where bush and tree-like rhododendrons in many species and magnificent magnolias abound, no mountain range in the world can show such a floral beauty as the Sierras of California, and they are unsurpassed in their magnificent forests of coniferous trees, in their beautiful canyons, cascades, and mountain lakes and streams. The foaming and thundering waterfalls are always found amidst a magnificent growth of conifers, the grandest and most gigantic in the world. Here we find the sugar pine¹, the noblest of its genus, the beautiful silver pine², the grand Douglas spruce³, the finely formed incense cedar⁴, the magnificent red fir⁵, and above all the groves of big trees⁶, single trunks of these giants often measuring thirty-five feet in diameter. Some of them, having attained a height of 325 feet, are certainly from 2000 to 3000 years old. They are always found in groves by themselves, and sauntering about among these giants “in the Indian summer is one of the most delightful diversions imaginable. The woods are calm and the ripe colors are blazing in all their glory; these cone-laden trees stand motionless in the warm, hazy air, and you may see the Crimson-crested Woodcock, the prince of the Sierra Woodpeckers, drilling some dead limb or fallen trunk with his bill, and ever and anon filling the glens with his happy cackle. The Hummingbird, too, dwells in these noble woods, and may oftentimes be seen glancing among the flowers or resting wing-weary in some leafless twig; here also are the familiar Robin of the orchards, and the brown and grizzly bears so obviously fitted for these majestic solitudes, and the Douglas squirrel, making more hilarious, exuberant, vital stir than all the bears, birds, and humming wings together.”*¹

In the coniferous regions of these mountains we find a noble assemblage of flowers of noble families. The mountain streams are fringed with strange shrubs, and in the mountain meadows as well as in the rich soil of the woodland openings Humboldt,
Washington, leopard, and red lilies¹ abound and flourish luxuriantly, attaining often a height of eight to ten feet and more. Further down in the valleys the exquisite broad-leaved madroña² and the lovely mazanita³ beautify the landscape together with California lilacs⁴, garryas, oso berry⁵, and other shrubs. The most beautiful of the evergreen trees of this region is the California laurel⁶, its dense growth and symmetry commanding attention wherever found. Another charming evergreen tree is the islay⁷ with its abundant lustrous leaves, its racemes of white flowers, and its handsome fruit. The tollon or California Christmas berry⁸ is a common tree of the coast region. In winter, "when its branches are covered with great clusters of scarlet fruit, whose effectiveness is increased by the contrasting color of the ample lustrous dark green foliage, the tollon is more beautiful perhaps than any other North American tree." Few countries can vie in beauty with the California spring flora. I can only mention the gorgeous mariposa or butterfly tulips⁹, and the yellow California poppy¹⁰. Near many rural homes groves or single specimens of the evergreen oaks¹¹ form an exquisite feature.

The birds occurring in gardens and woodlands are different from those of our eastern groves. Instead of one Bluebird we find here two species. The eastern Kingbird is represented by the Arkansas Kingbird (Tyrannus verticalis), and the Ruby-throated Hummingbird, the only species of the entire Eastern North America, is represented west of the Rocky Mountains by at least eight species. The Bush-tit, Townsend's Solitaire, the Plainopepla, the Cactus Wren, etc., find no representatives in the East. The fiery-colored Baltimore Oriole is represented in the California gardens by the less gorgeously colored BULLOCK'S ORIOLE, California Oriole, California Hangnest, California Firebird, or California Golden Robin.

It is found throughout the Pacific shore, from western Kansas and Texas to the Ocean and from Mexico northward to Washington. In the California gardens, especially in the evergreen oaks, it is as confiding and familiar as its eastern congener. Mrs. Sophia Zimmermann, now of Santa Barbara, Cal., has sent me the following description:

"The beautiful spring flowers have vanished. The waving grain-fields fill the heart of the farmer with hope for a rich harvest. Now, at last, our Orioles and Kingbirds arrive. They are late comers, rarely arriving at San Miguel before the 15th of April. The first brood of the House Finches are ready to leave the nest, but I am unable to detect the Orioles at their work of building. Not before April 23 I notice high in an oak, close to our dwelling, a pouch-like nest; it is built very near their old domicile. The nest is always an exquisite piece of workmanship, and the birds usually complete it in a few days. The eggs, four to five in number, are bluish-white, marked with blotches and zigzag lines of dark brown.

"All the nests I have found, hung in the extremity of horizontal branches. Some could be reached by hand, others were placed high up in the trees, while the majority stood in half-height. Only now and then two nests were found in one tree. The nesting material differs with the locality. Grasses, horse hair, moss, hemp-like fibers, wool-strings, and twine are usually employed in the construction of the nest. From the many

¹ Lilium Humboldtii, L. Washingtonianum, L. pardalimum, L. rubescens. ² Arbutus Menziei. ³ Arctostaphylos glauca. ⁴ Ceanothus. ⁵ Nuttallia cerasiformis. ⁶ Lonicella californica. ⁷ Prunus ilicifolia. ⁸ Heteromeles arbutifolia. ⁹ Calochortus. ¹⁰ Eschscholtzia californica. ¹¹ Quercus dumalis, Q. agrifolia.
nests which I found near our home I infer that quite a number of new pairs have settled. This I attribute to the excellent nesting material with which the birds are provided, and to the fresh water which is always placed conveniently for their use. I usually deposit all kinds of strings, especially the soft white threads of unraveled cotton cloth, on the branches of the oaks. All the nests are works of art, and those constructed of the unraveled cotton threads appear on the outside like a Turkish bathing towel. It seems as if such a nest had been woven by skilful hands. Most of the nests are purse-shaped, the longest I measured was eleven inches in length. The young are fed exclusively with insects. Our trees around the house are entirely free from insects, which is due to the many birds we have here, while near and in San Francisco, where these and other birds are absent, often already in June the trees are bereft of their leaves by all kinds of insects.—The song of Bullock's Oriole is exceedingly melodious, tender, and touching, reminding us of the tones of a violin touched by a master hand. They leave us in July, and we often wish we could depart with them, for now the days appear, which do not please us. No beneficial and refreshing rain falls throughout the summer. Brooks and ponds dry up. The mercury shows 110 to 115° F. in the shade during the afternoon, and everybody who is able to leave, spends several months on the sea shore, which is only thirty miles away. Everywhere we see the tents of a happy and nonchalant people, enjoying the cool sea breeze and the magnificent landscape in a manner, which, in this proportion, is not found in any other part of the country."

A nest which Mrs. Zimmermann has sent me, is built entirely of the unraveled threads of cotton; it is about eight inches long, by five in width. Its outside appearance reminds one of a rough bathing towel.

Dr. Elliott Coues has given us the following classic life-history of this Oriole:

"In the pine-clad mountains of Arizona and New Mexico, I never saw it until about the middle of April; then, and until the cool weather of September, I was almost daily gratified with the sight of the gaily-hued birds gleaming through the sombre foliage like tiny meteors, and with the sound of their musical voices awakening echoes along the deepening aisles of the woodland.

"In the countries just mentioned, the belts of thick cotton-wood and willows that generally fringe the streams are favorite resorts, perhaps because the pliant twigs are best suited to their wants in constructing their nests. All the Orioles are wonderful architects, weaving pensile nests of soft, pliable, fibrous substances, with a nicety and beauty of finish that human art would vainly attempt to rival. These elegant fabrics are hung at the end of slender twigs, out of reach of ordinary enemies; and though they may swing with every breath of wind, this is but cradle-rocking for the callow young, and it is a rude blast indeed that endangers the safety of their leafy home.

"Little time passes after their arrival before the modestly-attired females, rambling silently through the verdure, are singled out and attended each by her impetuous consort, who sings his choicest songs, and displays the prowess she admires most. His song is an elegant paraphrase of the Baltimore's, with all its richness and variety, though an ear well skilled in distinguishing birds' notes can readily detect a difference. Their courtship happily settled, the pair may be seen fluttering through the thicket they have chosen, in eager search for a building place; and when a suitable one is found, no time
is lost in beginning to weave their future home. It is a great mistake to suppose that birds of the same species always build in the same way. Though their nests have a general resemblance in style of architecture, they differ greatly according to their situation, to the time the birds have before the nest must be used for the reception of the eggs, and often, we are tempted to think, according to the taste and skill of the builders. In their work of this sort, birds show a remarkable power of selection, as well as of adapting themselves to circumstances; in proof of which we have only to examine the three beautiful specimens now lying before us. Each is differently constructed; and while all three evince wonderful powers of weaving, one of them in particular is astonishingly ingenious, displaying the united accomplishments of weaving and basket-making. Before proceeding, we may premise that the idea of the nest is a sort of bag or purse, closely woven of slender pliant substances, like strips of fibrous bark, grass, hair, twine, etc., open at the top, and hung by its rim in the fork of a twig or at the very end of a floating spray.

"The first nest was built in a pine tree; and if the reader will call to mind the stiff nature of the terminal branchlets, each bearing a thick bunch of long, straight, needle-like leaves, he will see that the birds must have been put to their wits' end, though very likely he will not be able to guess how they made shift with such unpromising materials. They made up their minds to use the leaves themselves in the nest, and with this idea they commenced by bending down a dozen or twenty of the stiff, slender filaments, and tying their ends together at the bottom. If you have ever seen a basket-maker at work, with his upright pieces already in place, but not yet fixed together with the circular ones, you will understand exactly what the birds had thus accomplished. They had a secure frame-work of nearly parallel and upright leaves naturally attached to the bough above, and tied together below by the bird's art. This skeleton of the nest was about nine inches long, and four across the top, running to a point below; and the subsequent weaving of the nest upon this basis was an easy matter to the birds, though, if one were to examine a piece of the fabric cut away from the nest, he could hardly believe that the thin yet tough and strong felting had not been made by some shoddy contractor for the supply of army clothing. Yet it was all designed in a bird's little brain, and executed with skilful bill and feet.

"Perhaps the young birds that were raised in the second nest did not appreciate their romantic surroundings, but their parents were evidently a sentimental pair. If they did not do their courting 'under the mistletoe,' at any rate they built a cosy home there, tinting the sober reality of married life with the rosy hue of their earlier dreams. The nest was hung in a bunch of the _Arceuthobium oxycedri_, an abundant epiphytic plant, that on the western wilds represents the mistletoe, and recalls the cherished memories of holiday gatherings. The nest was a cylindrical purse, some six inches deep and four broad, hanging to several sprays of the mistletoe, which were partly interwoven with the nest to form a graceful drapery. The felting material was long, soft, vegetable fibre of a glistening silvery lustre, in artistic contrast with the dark-hued foliage. A few hairs were sewn through and through, for greater security, and the pretty fabric was lined with a matting of the softest possible plant-down, like that of a button-wood or an _Asclepias._
"The general shape and the material of the third nest were much the same as those of the last; it was, however, suspended from the forked twig of an oak, and draped, almost to concealment, with leaves. But it had a remarkable peculiarity, being arched over and roofed in at the top with a dome of the same material as the rest, and had a little round hole in one side just large enough to let the birds pass in. Such a globular nest as this is probably exceptional; but now it will not do to say that Orioles always build pensile pouches open at the top.

"The eggs of this species are four or five in number, and rather elongated in form, being much pointed at the smaller end. They measure, on an average, just an inch in length by about two-thirds as much in greatest diameter, which is much nearer the larger than the smaller end. In color they are very pale bluish, or rather whitish, with a faint, dull blue shade, and are everywhere irregularly overrun with fine, sharp hair lines of blackish-brown, or blackish with a slight tinge of purplish. These curious zigzag markings are characteristic of the eggs of a majority of the birds of the family (Icteridae). They have no definite style, but wander at random over the surface, and in no two specimens are they alike. Thus, in one specimen, the lines, fine as hairs, are wound round and round the butt, with such regularity that they hardly ever interfere; in others they are snarled up in different places, and sometimes, particularly at a sharp turning-point, the lines spread into little spots; and there are often a few such isolated markings in various places over the egg."

Further accounts of the nidification of this beautiful species are given. Dr. Merriam, who found it very abundant in Utah, says: "They build a beautiful hanging nest, often ten and a half inches deep, and composed of fibres of grass, flax, and the inner bark of vines, which is generally lined with wool. The first lot were deep and solid; were composed chiefly of the fibres of flax and dry grass, and had a grayish appearance, while the second lot—which were built by the same birds after their first had been taken—were not very deep, had evidently been made in haste, and were principally composed of the inner bark of small bushes and vines, giving them a brownish look. They generally conceal their nests among the leaves on the top of a willow, from eight to ten feet above the ground, in such a position that it rocks to and fro whenever there is a little wind."

In all the fertile portions west of the Rocky Mountains, Prof. Robert Ridgway found this Oriole. In May, when he visited the valley of the Truckee, near Pyramid Lake, he observed them in great numbers in company with Louisiana Tanagers and Black-headed Grosbeaks, feeding on the buds of the grease-wood. In certain localities there was scarcely a tree that did not contain one or more nests of the Bullock's Oriole, and as many as five have been found in a single tree. The notes of this species, according to Mr. Ridgway, who has a fine ear for bird-song, are neither so distinct, so mellow, nor so strong, and their effect is quite different from that produced by the splendid mellow whistling of the eastern species. On the Shasta plains Mr. Lord noticed, "in the nesting habits of this Oriole, a singular instance of the readiness with which birds alter their habits under difficulties. A solitary oak stood by a little patch of water, both removed by many miles from other objects of the kind. Every available branch and spray of this tree had one of the woven nests of this brilliant bird hanging from it, though hardly known to colonize in this manner."
RUSTY BLACKBIRD.

Bendire's Oriole, Icterus gularis yucatanensis von Berlepsch. This handsome bird has been found by Mr. E. A. McIlhenny on Avery's Island, New Iberia Parish, Louisiana, June 3, 1893. His attention was first called to a flock of four by their unfamiliar whistle, which is a soft flute-like note; this is repeated from time to time as the birds move from limb to limb in search of food. On dissecting a specimen Mr. McIlhenny found a number of small green cater-pillars and several spiders, but the principal food seemed to consist of the small purple figs, which were just ripe. While in search of food they move about exactly as the Baltimore Oriole does, swinging from slender twigs head downward, looking under limbs for insects, and moving continually about. He observed the remaining three birds again on June 5 in some fig trees in the plantation garden.

Several years previously this Oriole had been observed by several persons in Louisiana as well as in Mississippi and from this we may infer that this beautiful Oriole breeds there. Mr. Allen Mehle asserts that he has seen a flock of about two hundred on his place at Mississippi City, Miss., in July 1892.

DESCRIPTION: Head, breast, under and upper tail-coverts, orange; wings, black, with orange markings at their base; back, black from base to neck to upper tail-coverts. It is much larger than the Baltimore Oriole.

RUSTY BLACKBIRD.

Scolecophagus carolinus Ridgway.

The Rusty Blackbird inhabits eastern North America, west to the Plains. It breeds from northern New England and northern Michigan northward, and winters in large numbers in the Southern States, usually in company with Redwings, Yellow-heads, and Cowbirds, remaining associated with them until the spring migration is over. I have noticed in their winter home that they are fond of the company of cattle, being frequently seen among the herds in the pastures. The birds are not at all shy, but they never come in the towns and cities in such immense numbers as Brewer's Blackbird.

In Texas I observed them from late in November to the end of February, and in Wisconsin they usually make their appearance early in April. Without lingering long they pass northward. Like other Blackbirds, they often gather on an isolated tree and sing. Their notes are quite agreeable and much more melodious than those of other
species. They are usually seen in moist and marshy places, where they are walking around in search of all kinds of aquatic insects, snails, and seeds.

Nests of these birds have been found at Calais, Me., and thence northward through Nova Scotia and Labrador to Alaska. A nest found June 12 by Mr. MacFarlane, near Fort Anderson, was placed on a branch of a spruce, next to the trunk, eight feet from the ground. Another one was placed in the midst of a branch of a pine, five feet from the ground. Whenever the nest is approached, both parents evince great uneasiness, they do all in their power by flying from tree to tree in its vicinity, to withdraw the attention of the invader from the spot. The breeding range of this Blackbird has been traced to the 69° north latitude. Mr. Dall found them about May 20 at Nulato, and their nests were discovered at Fort Yukon and at Sitka. In Alaska the nest is usually built in bushes standing in water. It is made of plant-stems, grasses, and moss, lined with finer grasses.

The eggs, four to five in number, are light green, and are only sparingly covered with blotches and shades of purplish-brown.

NAMES: Rusty Blackbird, Rusty Grackle, Ferruginous Blackbird.


DESCRIPTION: General color, black, with purple reflections; the wings, under tail-coverts, and hinder part of belly, glossed with green. In autumn the feathers are largely edged with ferruginous or brownish, so as to change the appearance entirely. Spring, female dull, opaque-plumbeous or ashy-black; the wings and tail sometimes with a green lustre....

Length of male, 9.50 inches; wing, 4.75; tail, 4.00 inches.—Female, smaller.

BREWER’S BLACKBIRD.

Scolecophagus cyanocephalus Cabanis.

PLATE XVII. FIG. 3.

FROM early November to the beginning of April all the thickets in the sheltered ravines and on the woodland border near Houston, Texas, swarm with northern birds. Consisting partly of evergreens, these thickets offer them not only an excellent shelter against the cold northerners, they also furnish an abundant supply of food. In the gardens of the city, among the thickets of roses, in the magnolias, loquats, cedars, and other evergreen trees and shrubs a large number of northern birds take up their abode during the winter. Goldfinches, Juncos, Phoebes, Cedarbirds, White-crowned and White-throated Sparrows, Golden-crowned and Ruby-crowned Kinglets, Nuthatches and Woodpeckers are the most common winter sojourners in the larger gardens. The most conspicuous and abundant winter-bird, however, is the exceedingly gregarious BREWER’S BLACKBIRD.

During several winters I had the good fortune to observe these Blackbirds in large swarms in south-eastern Texas. They usually appeared in the streets of the
city early in November, generally in the quiet and sultry weather which oftentimes precedes a very cold norther. Early in April they depart for their northern home. I have never seen more audacious and bold birds. Without fear they run about in large flocks in the most crowded streets, among wagons and horses, and they also enter fearlessly the door yards. The inhabitants are so accustomed to these birds that no one seems to think of disturbing them. In their fearlessness and tameness I can only compare them to the European Sparrows, with whom they also share the peculiar caution and sagacity. Being well acquainted with man, they well distinguish between friend and foe. They always move together in flocks of fifty to a hundred and more. Especially in the forenoon, but also during the rest of the day, we may see them walking about on the streets, on the commons, and in the gardens in the manner of Pigeons, picking up all kinds of seeds and insects. If too closely approached they all fly to the nearest water oaks, which are so abundant in the streets of the city. In these broad-headed and dense trees they also rest and sing when in the proper mood. When one flies down to the ground, the whole flock soon follows, spreading over a large space. One is always trying to get ahead of the others, and the last flies over the heads of the foremost in order to get in front of the flock. Although the majority leaves for the North, a few remain to breed in suitable localities. I found several nests May 5, 1881, in thickets of small post oaks about twenty feet high, near Rose Hill, Harris Co., Texas. They were built in the tops of the oaks, about twelve to fifteen feet from the ground, and contained from two to five eggs each. The ground-color is a dull greenish-white, marked with a few blotches of very dark brown and many irregular spots of lighter brown. The nests were composed exteriorly of strong slender plant-stems and coarse grasses, and were lined with finer grasses.

The range of distribution of this species extends from the Great Plains to California and during the breeding season from Texas and Arizona north to the Saskatchewan. In winter it migrates south to the table lands of Mexico. Although I have enjoyed excellent opportunities of studying the habits of Brewer's Blackbird, I deem it my duty to quote from the classical life-history which Dr. Elliott Coues presents in his excellent book, "Birds of the North-west":

"Several kinds of Blackbirds are abundant in Arizona, but the present surpasses them all in numbers, and in its general diffusion plays the part that the Cowbird takes in the farms of the East, and that the Yellow-headed Blackbird fulfills in the settlements on the plains. They are eminently gregarious when not breeding. Yet I never saw such countless numbers as those of the Red-winged Blackbird during its migrations. Troops of twenty, fifty, or a hundred are commonly seen; they have no special fondness for watery places, but scour the open, dry ground, and scatter among straggling pines and oaks; they come fearlessly into the clearings about houses, the traveler's camp, and the stock-yards, gleaning plentiful subsistence from man's bounty or wastefulness. Much of their time is spent on the ground, rambling in hurried, eager search for grain and insects; they generally run with nimble steps, hopping being the exception, when they have satisfied their hunger, and are moving leisurely with no particular object in view. The movements are all easy and graceful, the bird's trim form and glossy color setting it off to great advantage. At full speed the head is lowered and fixed; in slower progress
it is held upright, bobbing in time with each step. When a flock is feeding, they pass
over a good deal of ground, without seeming to examine it very closely; every one tries
to keep ahead of the next, and thus they scurry on, taking short flights over each other's
head. At the least alarm, the timid birds betake themselves to the nearest tree, perching
in various attitudes. A favorite posture, so easy as to appear negligent, is with the
body held nearly upright, the tail hanging loosely straight down, while the head turns
in various ways, with the whim of the moment. When excited, the bird often sits low
down, firmly on its legs, with elevated and wide-spread tail, constantly flirted, while
its watchful eye peers down through the foliage. However compactly a flock may fly
up into a tree, they generally scatter as they alight all over the branches, so that it is
rarely that more than two or three can be brought down at a shot. On the ground
the case is quite different; there they often huddle so close together that the whole flock
may be decimated. Their behavior in the presence of man is a curious mixture of
timidity and heedlessness; they come to the very door-step, and yet a sudden movement,
or a shout, sends them affrighted into the nearest trees. The next moment they begin
to straggle back again, at first singly or in little squads, till the more timid ones are
reassured and come streaming down together, when the busy search for food is resumed.

"Their hunger satisfied for the time, the birds betake themselves to the trees, often
passing the whole period of digestion snugly ensconced in the thick foliage. Then their
concert opens; and if the music is neither sweet nor soft, it is sprightly, and not dis-
agreeable, for it suggests the careless joviality and lazy good humor of Blackbirds with
their stomachs full, and satisfactory prospect of future supply. The notes are energetic,
rapid, and varied, with a peculiar delivery, which, like the yelping of the prairie wolves,
gives the hearer a very exaggerated idea of the number of the performers. The usual
note is like the sound of pebbles smartly struck together, rapidly repeated an indefinite
number of times; it is varied at irregular intervals by a long-drawn liquid whistle,
which has a peculiarly pleasing effect in breaking the monotony of the other notes, and
mellowing the whole performance. The ordinary call-note is exactly between the rough
guttural chuck of the Redwing and the clear metallic chink of the Reedbird.

"...In the fall the lustre of the plumage is obscured, and its uniformity inter-
rupted by dull gray edging of the feathers. But even in autumn some males are
found nearly as richly clad as in the spring time, and I do not think that even the
dullest colored females and young are ever so decidedly rusty brown as the Rusty
Grackle. The sexes may be known by their disparity in size, aside from the difference
in plumage; moreover, the eye of the male is clear lemon-yellow, that of the female brown.
The perfect male is lustrous greenish-black, changing abruptly to purplish and violet on
the head."


SCIENTIFIC NAMES: Psarocolius cyanopephalus Wagl. (1829). Scolecophagus cyanopephalus
CAB. (1851). Quiscalus breweri Aud. (1841).

DESCRIPTION: Old male in summer uniform glossy greenish-black, the head and neck glossy violet-black.
Old female uniform brownish-slate, with soft silky gloss.
Length, 9.50 inches; wing, 4.95; tail, 4.17 inches.
GREAT-TAILED GRACKLE.

*Quiscalus macourus* Swainson.

WHEN I think of this bird," writes Mr. Geo. B. Sennett, "it is always with a smile. It is everywhere as abundant on the Rio Grande as is the English Sparrow in our northern cities, and, when about the habitations, equally as tame. This bird is as much a part of the life of Brownsville as the barrelero rolling along his cask of water or the mounted beggar going his daily rounds. In the towns or about the ranches, he knows no fear; is always noisy, never at rest, and in all places and positions; now making friends with the horses in the barns or the cattle in the fields, then in some tree pouring forth his notes, which I can liken only to the scrapings of a "cornstalk fiddle"; now stealing from porch or open window some ribbon for his nest, then following close behind the planter, quick to see the dropping corn. With all his boldness and curiosity, the boys of the streets say they cannot trap or catch him in a snare. He will take every bait or grain but the right one; he will put his feet among all sorts of rags but the right ones: and the boys are completely outwitted by a bird. He performs all sorts of antics. The most curious and laughable performance is a common one with him. Two males will take position facing each other on the ground or upon some shed, then together begin slowly raising their heads and twisting them most comically from side to side, all the time steadily eyeing each other, until their bills not only stand perpendicular to their bodies, but sometimes are thrown over nearly to their backs. After maintaining this awkward position for a time, they will gradually bring back their bills to their natural position, and the performance ends. It is somewhat after the fashion of clown's doings in a circus, who slowly bend backward until their heads touch their heels, then proceed to straighten up again. It is a most amusing thing to see, and seems to be mere fun for the bird, for nothing serious grows out of it.

"With all their familiarity, I have seen these birds in the open chaparral as wild and wary as other birds, knowing very well when out of gunshot range. Their flight is rather slow, and when they make an ascent it is labored; but once up, with their great tails and expanse of wing they make graceful descents.

"As a general thing, they are gregarious in all their habits. Great numbers breed all along the river, usually in scattered colonies, similar to Redwings, but their nests are higher, and not often near the water. The ebony is a favorite tree for them to breed in; and wherever these trees exist in towns or about ranches they are always occupied with nests of these birds, sometimes in great numbers. My first eggs were taken from an ebony tree near our room, in which were six or eight nests. They were found in great numbers in the young willows and rank undergrowth of the resacas; and in the great 'heronry' in the salt marshes, half-way between Brownsville and the coast. We found their nests about two feet above the water in the rushes, and from four to thirty feet above the ground when in trees. They are shaped like those of our familiar Purple Grackle, and not much larger. They are composed of grasses principally; but, when convenient, paper, rags, feathers, anything, are woven in, and not infrequently
BOAT-TAILED GRACKLE.

Quiscalus major Vieillot.

WHILE roaming about in the low, marshy prairie districts of south-eastern Texas, no birds attracted my attention more than the large number of water-birds. Pelicans and Anhingas were met with everywhere. The Florida Gallinule (Gallinula aculeata) I found most common in such swamps where the fragrant water-lily and the beautiful yellow water chinquapin, sedges, and reed grass grew luxuriantly. In the shallow water of the prairie ponds I often observed the beautiful Roseate Spoonbills (Ajaja ajaja) among the large numbers of Snowy Herons (Ardea candidissima) and Little Blue Herons (A. cerulea). Early in the morning they leave their roosts in the dense forests and towards evening they return. In order to become acquainted with the different Herons and their breeding habits, it is necessary to visit the deep swampy woods. At first we pass places overgrown with immense oaks, elms, sweet gum, pecan trees, and magnolias. Hollies, laurel cherry, and American olive trees form the underwood. Many of the smaller trees are covered from the ground to the top with grape-vines, smilax, and bignonias or cross-vine. More in the interior we find larger and smaller ponds, densely overgrown with button bushes. Surrounded by a dense forest of large trees, far away from the abodes of man, almost continually in a quiet semi-darkness, these ponds are the very paradise for many water-birds. On our way through the dense forest we start a family of wild Turkeys. Quick as thought they disperse and none can be found. If we remain perfectly quiet, we may hear after a while the persuasive call-notes of the mother. It is very quiet in this part of the forest, although the Spring Creek offers excellent abiding places among the dense hollies, the moss-covered magnolias, and the vine-entangled thickets on its borders. Most of the birds are found on the woodland’s edge. We penetrate farther

1 Nelumbium luteum. 2 Bignonia capreolata. 3 Cephalanthus occidentalis.
and farther, without finding anything of special interest. We proceed a few steps more. With a thunder-like noise, as if by magic, hundreds of birds rise and fly to all directions. We see their white and blue plumage and hear their cries. We disturbed a colony of breeding Snowy and Little Blue Herons. Everywhere around the pond on the branches of the trees we notice the frightened birds. Almost every button bush contains a nest of these birds and there are hundreds of the loose structures built of sticks and stems. The bushes all around are covered with their white excrements, and the moist, warm air is filled with the strong and unpleasant smell of fishes. The nests in the bushes belong to the Little Blue Herons, while those in the trees around the pond are Snowy Herons' nests. The Great Blue Heron (Ardea herodias), the American Egret (Ardea egretta), and the Green Heron (A. virens) are common, but not so numerous as the two first named species. Now and then we may also have the good fortune of meeting the Yellow-crowned Night Heron (Nycticorax violacens) and the very interesting and rare Wood Ibis (Tantalus loculator).

In the colony of the Little Blue Herons I observed for the first time the breeding habits of the very conspicuous and beautiful Boat-tailed Grackle, or Jackdaw. When the Herons took wing, large numbers of these birds followed them and the noise they made far superseded that of their neighbors. When examining the button bushes I found in every one not occupied by the Herons a Jackdaw's nest. From the nearest trees they uttered their peculiar call-notes sounding like cree-cree-cree. They seemed to live in perfect harmony with their neighbors. A few days later I found another colony of these birds in a very dense grove of small oaks in the open prairie near Spring Creek. Being eminently gregarious at all seasons, the nests were found close together, sometimes two and three in one small tree. These birds resemble the Bronzed Grackle very much, but they are more pleasant in all their manners, and their song and call-notes are much more musical and higher in pitch. They appear in south-eastern Texas rarely before the middle of March from their winter home, and always in large swarms. They announce their arrival by a mad and grand chorus of singular notes, which is performed in some isolated tree. Just before the time of mating, the flocks of these Grackles "execute sudden and unaccountable evolutions, as if guided by some single commanding spirit; now hovering uncertain, then dashing impulsive, now veering in an instant, and at last taking a long, steady flight towards some distant point." The nests which I found were large but well constructed. The materials used were coarse plant-stems, grasses, and bark-strips, and the lining consisted of finer grasses. The eggs, from three to five in number, are greenish, tinged with olive and brownish, and marked with irregular blotches of deep brown and black.

The Boat-tailed Grackle inhabits during summer the maritime districts from Texas north to Virginia. Its foods consists of all kinds of insects and seeds, and it has the bad reputation of stealing eggs and young of other birds.

DESCRIPTION: "Adult male with a metallic gloss greenish, changing through steel-blue on back, scapulars, lesser wing-coverts, and lower breast to violet on head, neck, chest, and upper breast; length about 15.00 to 17.50 inches; wing, 7.22; tail, 7.14 inches. Adult female: Similar in color to same sex of Q. macrourus, but lighter and more dawny beneath, and much browner above, the head and neck of an amber tint; length about 11.50 to 13.00 inches; wing, 5.61; tail, 5.31 inches." (Ridgway.)
PURPLE GRACKLE.

*Quiscalus quiscula* JORDAN.

PLATE XVII. Fig. 6.*

Among the Blackbirds the Grackles are the most abundant and conspicuous. They are eminently gregarious, exceedingly noisy, and always in a happy and cheerful mood. Wherever they occur they soon attract attention by their beautiful glossy black color, by their long, boat-shaped tail, and by their noisy disposition. We rarely see one alone. They migrate in large flocks, and the swarms visiting the corn-fields look like black clouds as they move on in an undulating course. Even during the breeding season they are gregarious. Being exceedingly tame and breeding frequently in gardens, even in villages and towns, the Grackles are well-known and familiar birds. There are three different forms or varieties of Grackles scouring our country. The typical form, inhabiting the country east of the Alleghanies, from Georgia northward to Massachusetts, is the Purple Grackle. The Florida Grackle, *Q. quiscula angles* Stejn., is a little smaller than the type and has a rather restricted range of distribution, being only found in Florida and in the southern part of the Gulf States west to Texas. The most abundant and best known of the three varieties is the Bronzed Grackle, *Quiscalus quiscula anaeus* Stejneger, of the Mississippi valley. Its range is very extensive, breeding from Louisiana and Texas northward to Great Slave Lake, east to the Alleghanies, southern New England, and New Foundland, west to the eastern base of the Rocky Mountains. West of the Rocky Mountains the Grackles are entirely absent from the landscape. All these forms are so alike in their habits, that it will suffice to treat more fully of the most common variety, the Bronzed Grackle, also known as the Crow Blackbird, Boat-tailed Blackbird, Common Grackle, Corn-thief, and Corn Blackbird.

When in Wisconsin the harbingers of spring, the Robins, Bluebirds, Song Sparrows, and Meadowlarks, arrive, we may also look for the Grackles. They are first seen in the last week of March or early in April. Moving in large, noisy swarms, their arrival cannot be overlooked in the rural districts by all those who have open eyes and ears. The males appear first, the females follow a few days later. Shortly after their arrival the large swarms dissolve into smaller ones which remain together, until after the breeding season old and young again congregate into immense swarms. They then move about in large hordes like black clouds, creating great havoc in the corn-fields. By the middle of April till nesting time begins, they follow the furrows of the plough, picking up all kinds of insects. During the evening hours they fly in scattered flocks to their roosts in the woods of the lowlands and swamps. In the prairie regions they often roost in large numbers in the ornamental evergreens near farm-houses, and they even enter villages and towns, where they spend the night in the willows and orchard trees.

Their flight is rather heavy, and the long boat-like tail appears to be of disadvantage as they proceed onward. Having reached a certain height they fly easily

* The bird figured is the Bronzed Grackle.
and quickly. Their call-note, a very loud and peculiar *tack, tack*, is constantly heard at intervals while they are flying, but when walking on the ground they are perfectly silent. They are equally well at home on the ground, among the branches of trees, and in the air. Cultivated, well-watered, and wooded localities are always selected as a home, while the vast dry prairies, arid mountainous regions, and the deep interior of large forests are avoided. Being rarely molested by man in their breeding haunts, they fearlessly enter gardens and orchards even in villages and towns.

Early in June the nest is completed and a full complement of eggs found. Usually they build in large bushes and in trees of all sizes, but I have often discovered nests in the upturned roots of large trees and in Woodpecker’s holes. In trees the nest is placed from five to twenty-five and sometimes fifty feet from the ground. In the neighborhood of dwellings it is preferably built in Lombardy poplars, but I have found it also in pines and firs, in willows and orchard trees. These birds can be induced to breed in gardens if suitable nesting-boxes are provided. Although a bulky structure, the nest is very compact and well built. In cavities only soft, slender grasses are used, but in trees and bushes plant-stems, grasses, and mud are employed, and the interior is lined with finer grasses. Often several nests are built in one tree. The eggs, four to six in number, are light greenish or smoky-blue, with irregular marbelings, dots, blotches, and scrawls of blackish distributed over the entire surface.

The young are fed exclusively with all kinds of insects. When they have left the nest, the loud *carack-ack-ack* of the hungry bobtails is almost constantly heard, but they are instantly silent when they hear the warning notes of the old birds.

This Blackbird has a bad reputation as a destroyer of corn. “Their depredations on the maize crop or Indian corn,” says Nuttall, “commence almost with the planting. The infant blades no sooner appear than they are hailed by the greedy Blackbird as the signal for a feast; and, without hesitation, they descend on the fields, and regale themselves with the sweet and sprouted seed, rejecting and scattering the blades around as an evidence of their mischief and audacity. Again, about the beginning of August, while the grain is in the milky state, their attacks are renewed with the most destructive effect, as they now assemble as it were in clouds, and pillage the fields to such a degree that in some low and sheltered situations, in the vicinity of rivers, where they delight to roam, one fourth of the crop is devoured by these vexatious visitors. The gun, also, notwithstanding the havoc it produces, has little more effect than to chase them from one part of the field to the other. In the Southern States, in winter, they hover round the corn-cribs in swarms, and boldly peck the hard grain from the cob through the air openings of the magazine. In consequence of these reiterated depredations they are detested by the farmer as a pest to his industry; though, on their arrival, their food for a long time consists wholly of those insects which are calculated to do the most essential injury to the crops. They, at this season, frequent swamps and meadows, and familiarly following the furrows of the plow, sweep up all the grub-worms, and other noxious animals, as soon as they appear, even scratching up the loose soil, that nothing of this kind may escape them. Up to the time of harvest, I have uniformly, on dissection, found their food to consist of these larvae, caterpillars, moths, and beetles, of which they devour such numbers, that but for this providential economy, the whole
crop of grain, in many places, would probably be destroyed by the time it began to germinate. In winter they collect the mast of the beech and oak for food, and may be seen assembled in large bodies in the woods for this purpose. In the spring season the Blackbirds roost in the cedars and pine trees, to which in the evening they retire with friendly and mutual chatter."

Crow Blackbirds are, indeed, no desirable acquisitions for a garden or park, as they plunder every nest, which they find. All our "small birds seem to have a standing grudge against this Blackbird and rarely let pass an opportunity to pursue and harass it. It would seem that this hatred is not without just cause.” (Wm. Brewster.)


DESCRIPTION: Deep glossy black, "perfectly uniform brassy-olive or bronze" above and below, "never with mixed tints, and always very abruptly defined against the color (steel-blue, violet, purple, or brassy-green) of neck; wing-coverts never with mixed metallic tints; wings and tail always purplish or violet-purplish, never bluish."

"Length, 12.75 inches; wing, 5.65; tail, 5.52 inches.—Female, smaller.

The typical form, the PURPLE GRACKLE, is deep black with mixed metallic tints; wings and tail bluish-violet or bluish.


The Florida Grackle is smaller, with larger bill.

Ravens, Crows, Jays, and Magpies.

Corvidae.

Ravens, Crows, Jays, and Magpies form a group of birds known as the Crow family. All its members are strong, robust, often large birds. Ravens and Crows are nearly all entirely black, while in the Jays the blue color prevails. Magpies show much white and black in the coloration of their plumage. Almost without exception the members occurring in the United States are resident species, only moving from one place to another in quest of food.

None of the species can be called songsters, although many understand exceedingly well to attract attention by their loud and far sounding cries. The Jays are able to imitate certain notes of different birds very well. All are exceedingly cunning and sly, sagacious and prudent, excelling in this respect all other birds. They well understand to avoid danger, and therefore it is often very difficult to approach them. In the woods they warn other birds and even mammals, and for this reason they are often a great terror to the hunter. They have a sharp eye and a fine ear, walk well, fly easily and continuously, and move about among the branches of shrubs and trees with great dexterity. Being omnivorous in the true sense of the word, they lead a rather easy life, as they find always and everywhere something to satisfy their appetite. In their haunts they are always conspicuous. Carrion is to many of them a feast. The eggs and young of other birds are robbed wherever opportunity offers. They are all ferocious, murderous highway robbers, not deserving our good will and protection. Beautiful as the Jays are in the forests, in the gardens and parks, they are a nuisance owing to their nest-robbing propensities. If allowed to multiply they soon exterminate most other birds in their neighborhood.
The family is divided into the following genera:
5. *Cyanocitta* STRICKLAND. Blue Jays. Two species.

The American Raven, *Corvus corax sinuatus* RIDGWAY, is only a variety of the European species, and exceedingly rare in all the localities where I have made my observations. It is distributed over the western parts of the country from the Rocky Mountains to the Pacific, and south to Guatemala. Dr. Elliott Coues found hundreds, if not thousands of them at Fort Whipple, Ariz. “Throughout the western wilds they hang on the footsteps of man, needy adventurers, claiming their share of his spoils, disputing with the wolves and vultures for the refuse of his camp.”

Its main food is carrion. Color entirely black. Length, 24 to 25 inches.

The Northern Raven, *Corvus corax principalis* RIDGWAY, another variety, inhabits northern North America, south to British Columbia, etc.

The White-necked Raven, *Corvus cryptoleucus* COUCH, inhabits the valley of the Rio Grande and Gila, south into Mexico. Major Chas. Bendire found this Raven to be common at Tucson, Ariz.

**COMMON CROW.**

*Corvus americanus* AUDUBON.

O wild, free rover of the upper sky,
How small from that clear height must man appear.
Cresting on earth—his grave forever near—
With clouds and tears dimming his earth-bent eye.
Though lifted far above the earth, goest by,
Companioned by the friendly atmosphere,
Scanning the large horizon, blue and clear,
And seeing far, pine forests darkly lie
A cloud of green moveless upon the hill.
There in the shelter of the sombre trees
With numberless companions thou wilt rest;
No sound to fright, but only the slow breeze
To sing and rock to sleep the forest’s guest,
And with content his quiet hours to fill.

H. J. LOOMIS.

NOTWITHSTANDING the constant persecutions to which the Crow, has been subjected from the beginning of the settlement of our country to the present time, it is still a well-known and abundant bird in most localities from Florida and Texas to the Arctic regions and from the Atlantic to the Great Plains. Though numerous
in the East, it appears to be most abundant in the Mississippi valley. I found the Crow breeding from Wisconsin to Texas in all well wooded localities. In the prairies of Illinois it is a rare bird during the breeding season. Its true home is the forest or localities where woods and cultivated lands alternate. The deep interior of extensive woods is usually chosen for its nesting haunts. From its headquarters in the forest foraging excursions to all the adjoining cultivated lands are undertaken. Pastures and fields are usually the places where the Crows congregate, and here they also search for food. When not molested the Crows become very tame, breeding fearlessly in the edges of the forest or even in isolated large pines near dwellings.

During my five years' residence at Freistatt, Lawrence Co., Mo., a pair nested each year in the dense oak forest behind my house. As early as the beginning of March the pair was seen in its haunts. Very early in the morning they flew to the neighboring fields in quest of food. When they left the forest their loud caw, caw was a very familiar sound. All the Crows in the neighborhood congregated in the pastures among the cattle and in freshly ploughed fields, where they walked about in search of food. They only utter their peculiar caw, caw while flying or when perched on the trees; when walking on the ground they are perfectly silent. Their food consists of all kinds of insects, seeds, snakes, frogs, mice, and young birds. At this time they commit great havoc in the fields, where they pull up the sprouting corn.

Originally a very tame and unsuspicious bird, it is now exceedingly cunning, sagacious, and prudent. Its life being constantly threatened, it is always on the lookout for danger, and it knows well to distinguish between friend and foe. Whenever anything is seen that causes alarm, the sentinels of the flock give their signal and the warning is passed from bird to bird.

The pair above mentioned began nest-building in the second half of March. The bulky structure was always placed in the top of a dense oak, about forty feet above the ground, among the thick foliage where it could not be seen from below. It was built of sticks, corn-stalks, plant-stems, leaves, and grasses, and was lined with grasses. The eggs, five to six in number, are pale bluish-green, often with a tinge of olive; they vary from almost unmarked specimens to those thickly spotted with dark brown. When I climbed the tree on the 9th of May, the young were almost fully fledged. The parents were very wild and wary, and furiously flew over my head and around me, uttering their wild cries. When the young are hatched the old birds become exceedingly pernicious. Insects, small snakes, and frogs do not suffice any longer. They now plunder every bird's nest they are able to find; they even came into my poultry yard to carry off eggs and young chickens. They do this very slyly and quietly. With the exception of Cooper's Hawk, I do not know such a bold robber as the Crow. One day in April one of these birds perched on the fence, only a few steps from my house. An old hen with about a dozen chickens, only a few days old, was in the yard. Suddenly the Crow swooped down, caught a chicken with its bill, and went off, flying away near the ground. In a few weeks the Crows carried off about twenty chickens varying in age from one day to four weeks. Notwithstanding a constant watchfulness chickens and eggs disappeared. Not before a pair of Kingbirds had taken up their abode on the premises, the depredations stopped. As soon as a Crow made its appearance it
FISH CROW.

was courageously attacked and driven away. Since the Kingbird’s arrival not only
the chickens were safe, but also all the songbirds of the garden.

While residing in a small cabin in the woods near the West Yegua, Lee Co., Texas,
quite a colony nested in the high oaks and pecans in the rich bottom woods. The
nests were placed fifty to sixty feet above the ground, and most of them were inaccessible.
They were constructed of twigs and bunches of Spanish moss. In Texas I never saw
such large flocks as farther north.

In Wisconsin the Crow is a common bird in all favorable localities. Late in fall
they move in large swarms southward, being observed in immense numbers on the
Mississippi throughout the cold season. In the forest behind my house at Freistatt,
Mo., thousands spent the nights from late in November to late in February. Very early
in the morning they left their roosts and flew in scattered flocks in all directions. At
this time they are very watchful. Before they left the forest in the morning or returned
to it in the evening, their leaders or scouts, usually two old and exceedingly sagacious
birds, investigated the territory. They flew to and fro several times, and when every-
thing was found to be in good order, they uttered peculiar sounds and the rest followed
immediately.—Without doubt the Crow devours countless numbers of noxious insects,
but on the other hand the depredations which it commits, especially in the corn-fields,
and its nest-robbing propensities, do not entitle this bird to our protection.

The Florida Crow, *Corvus americanus floridanus* Baird, inhabits the peninsula of
Florida. It has a larger bill and shorter wings and tail than the type.

NAMEs: Common Crow, American Crow.—Krähe (German).


DESCRIPTION: Glossy black, with violet reflections.

Length, 19.00 to 20.00 inches; wing, 13.25; tail, 8.00 inches.

FISH CROW.

*Corvus ossifragus* Wilson.

This bird ranges from southern Connecticut to Louisiana, being confined either to
the maritime districts or to the banks of rivers branching from them. Being smaller
and quicker in its motions than the Common Crow, this species is even more injurious.
It plunders countless numbers of birds’ nests and commits great depredations upon the
fruit in the gardens, especially upon figs and grapes. Their favorite haunts are the banks
of the rivers. They soar up and down over the water, and in a very dexterous manner
“snatch up with their claws dead fish, or other garbage found floating on the surface.”
I have seen them in large numbers in early November soaring over the St. Johns, in
northern Florida, and quite a number of them were feasting on the carcass of a large
dead rattle-snaKe. I saw them even in the large trees in Riverside Park, near the city
of Jacksonville. They usually build their nests in the tops of lofty pines. They are
smaller than those of the Common Crow, being constructed of twigs and plant-stems,
lined with grasses and Spanish moss. The light blue or greenish eggs are blotched
with light brown.

DESCRIPTION: The color of the bird is a deep glossy black.—Length, 15.50 inches; wing, 10.50; tail, 7.00.
CLARKE'S NUTCRACKER.

Nucifraga columbiana Audubon.

The range of this species," says Dr. Elliott Coues, "is nearly coincident with the zone of coniferous vegetation in the West. It rarely descends below an altitude of 3,000 feet, and has been observed on peaks 10,000 feet high. A hardy bird, finding its food at all seasons, Clarke's Nutcracker is not a true migrant; that is to say, it does not move north and south at regular periods. But the individuals are never thoroughly localized; they are restless birds, scurrying continually among the mountains. The nearest approach to a regular movement appears to be their flying down mountains in severe weather, and returning to the more elevated situations to breed. This seems to be the case, at any rate, in latitudes from 45° southward, although they nest quite low down in more northern situations.

"Like others of this omnivorous family, Clarke's Crow is an indiscriminate feeder upon vegetable substances, giving preference, however, to the seeds of the pine, berries of the cedar, and acorns. Prying into a pine-cone with its long and peculiarly shaped beak, it gouges out the seeds, often hanging, while thus engaged, head downward, like a Thistle-bird swing under the globular ament of a button-wood. It also eats insects of various kinds, and has been observed pecking at dead bark to obtain them, and making short sallies in the air for the same purpose, like a Woodpecker. It sometimes descends to the ground in search of food, walking easily and firmly, like a true Crow; but we may infer, from the length and sharpness of its claws, that it does not spend much of its time on the ground."

My friend, the late Capt. B. F. Goss, of Pewaukee, Wis., gives the following account on the nesting habits of Clarke's Nutcracker: "Clark's Crow is a common resident of the region described (Fort Garland, Colorado), but has a higher range than Maximilian's Jay. I found it most abundant in the mountain valleys, above the foot hills. In that dry climate the trees on the sunny exposure of the valleys are dwarfed, scattering, and interspersed with thick bunches of bushes, while the opposite side, looking northward, is covered with a heavy growth of timber. It was in and around such timber that I found these birds, and there I looked diligently for their nests. Many times they showed great concern and watched me closely, peering down and scolding from the thick foliage overhead. I thought their nest must be near, and searched everywhere in the neighborhood, even climbing to the tops of high trees; but I have no doubt now that their nests were across the valley, half a mile away. I spent more than two weeks in this fruitless search, returning every night to camp, tired and disappointed. Any one who has tramped over mountains, in the light air of 9,000 feet elevation, will understand how exhausting such labor is; but I particularly wished to get the eggs of this bird, was sure they were nesting in the neighborhood, and did not like to give it up. One evening, after a particularly hard day's work, as I sat by my camp-fire, looking
CLARKE’S NUTCRACKER.

up the valley, one of these birds left the high timber and flew across to the other side. Its direct and silent flight suggested that it might be going to its nest, and that I had been looking in the wrong locality. Accordingly, with renewed hope, I started early next morning to the hill where I had seen it go. After climbing over the rocks and through the bushes for some time I sat down to rest, when I noticed something on a tree about thirty feet away that looked more like a squirrel’s nest than anything else. On closer inspection, however, I saw that it was a bird’s nest, and climbing up a short distance, was delighted to find a Clarke’s Crow sitting on its nest. She sat very close, only leaving when touched by my hand. The nest was built near the end of a horizontal limb, about ten feet from the ground, in an open, conspicuous situation. It was bulky, coarsely constructed, and very deeply hollowed, the bird when on it showing only part of her bill and tail, pointing almost directly upward. She was soon joined by her mate, when, after hopping about in a listless manner for a few minutes, both disappeared. They were silent when near their nest, but noisy enough elsewhere. On further search I found several old nests and one new one, apparently abandoned. All were similar in construction and situation to the one described, and evidently belonged to the same species. The nest with young was found May 21. From finding these nests, and from other observations made, I am satisfied that Clarke’s Crow breeds in open, warm situations, preferring steep hill-sides; had I known this earlier I believe that I should have found more of their nests.”

The color of the eggs is light grayish-green, irregularly spotted and blotched with a deeper shade of gray, chiefly at the larger end.

NAMES: **Clarke’s Nutcracker**, Clarke’s Crow.

**SCIENTIFIC NAMES:** *Corvus columbianus* Wilson (1811). **NUCIFRAGA COLUMBIANA** Aud. (1838).  
*Picocorvus columbianus* Bonap. (1850).

**DESCRIPTION:** General color, bluish-ash; forehead, chin, sides of the head, especially round the eye, white; wings, greenish-black; tail, white, upper tail-coverts, greenish-black.

Length, 12.00 inches; wing, 7.00; tail, 4.30 inches.
PIÑON JAY.

Cyanocephalus cyanocephalus Stejneger.

This bird inhabits the Rocky Mountains, west to the Cascade Range and the Sierra Nevada, and from Mexico north to British America. It was discovered in 1840 by Prince Maximilian zu Wied, and was formerly known by ornithologists as Maximilian's Jay.

According to the observations of Dr. Elliott Coues, who found the Piñon Jay a permanent resident at Fort Whipple, Arizona, it feeds "principally upon Juniper-berries and pine seeds; also upon acorns, and probably other small, hard fruit. Notwithstanding its essentially corvine form, the habits of this bird like its colors, are rather those of the Jays. It is a garrulous and vociferous creature, of various and curiously modulated chattering notes when at ease, and of extremely loud, harsh cries when in fear or anger. The former are somewhat guttural, but the latter possess a resonance different both from the hoarse screams of the Long-crested Jay, and the sharp, wiry voice of the Blue Jay. Like Jay's, it is a restless, impetuous bird, as it were of an unbalanced, even frivolous, mind; its turbulent presence contrasting strongly with the poised and somewhat sedate demeanor of the larger black Crows. With these last, however, it shares a strong character—its attitudes when on the ground, to which it habitually descends, being Crow-like, and its gait, an easy walk or run, differing entirely from the leaping progression of the Jays. It shares a shy and watchful disposition.... It is highly gregarious, in the strict sense of the term. Immense as the gatherings of the Crows frequently are, these birds seem to associate rather in community of interest than in obedience to a true social instinct; each individual looks out for himself, and the company disperses for causes as readily as it assembles. It is different with these small, Blue Jay Crows; they flock, sometimes in surprising numbers, keep as close together as Blackbirds, and move as if by a common impulse. As usual, their dispersion is marked, if not complete, at the breeding season; but the flocks reassemble as soon as the yearlings are well on the wing, from which time until the following spring hundreds are usually seen together. On one occasion at least, I witnessed a gathering of probably a thousand individuals."

Capt. B. F. Goss was the first naturalist who found the nest and eggs of this bird. "In May 1879," writes Mr. Goss, "I took nine sets of the eggs of Maximilian's Jay in Colorado. Their nests were all found within from five to nine miles east and south-east of Fort Garland. This region lies along the western base of the Sangre de Christo Mountains, is broken by hills and spurs from the main range, and has an elevation of about 9,000 feet. The nests were all in high, open situations, two of them well up the steep mountain sides, and none in valleys or thick timber. All were in small piñon pines from five to ten feet up, out some distance from the body of the tree, and not particularly well concealed. They are large, coarse, and deeply hollowed structures, much alike, being made mostly of grayish shreds of some fibrous plant, or bark, which breaks up into a mass of hair-like fibres, these forming the 'lining, while some weeds and
grass are worked into the general fabric. I did not measure any of them before removal, and afterwards accurate measurement could not be made, as being loosely constructed, they spread and flattened. They must have been about as deep as wide, deep enough to receive the whole body of the bird, only part of the head and tail showing above the edge. The birds are close sitters, several not leaving till the nest was shaken, and I could have caught some of them with my hand. On being driven from the nest, they would alight on an adjoining limb, and, with lowered head and half-extended wings, utter their peculiar querulous cry. One nest contained five eggs, six contained four each, and two three each; both sets of three were partly incubated. Two nests were taken May 5, five on the 10th, and two on the 11th, 1879. The eggs are quite pointed at the small end. The ground-color is bluish-white, splashed all over with small spots of dark brown, thickest at the large end.

"The nest is easily seen, and I am surprised that so few have been found. The bird is a restless wanderer, choosing the most unfrequented places. It often changes its haunts, and may be plenty one year where it is scarcely found in another. Probably the food supply has something to do with its movements. It is gregarious, and partly so even in the breeding season. It is locally, and very appropriately, called the "Píñon Bird," for its home is in the piñon pines, and it is rarely seen far from them."

NAMES: Piñon Jay, Maximilian's Jay.


DESCRIPTION: "General color, dull blue, paler on the abdomen, the middle of which is tinged with ash; the head and neck of a much deeper and more intense blue, darker on the crown. Chin and forepart of throat, whitish, streaked with blue.

"Length, 10.00 inches; wing, 5.90; tail, 4.50 inches." (B. B. & R. II, p. 260.)

AMERICAN MAGPIE.

Pica pica hudsonica JORDAN.

LIKE all the members of this family, the Magpie is a bird of bad reputation, a rascal, a thief, a murderer, a robber, and a rogue in general. It is distributed over western North America north to Alaska, south to New Mexico and Arizona, east to the base of the Rocky Mountains. "Magpies," says Dr. Elliott Coues, "are very common at Fort Randall through the winter, as at other points higher up the river. They keep mostly in troops in the wooded river-bottom, and, notwithstanding the severity of the weather, they are not familiar and impudent, as they are represented to be in times of scarcity. In fact I have always found them wary and watchful, on the alert for suspicious approach, and rather difficult to shoot. When a flock is feeding, as they habitually do, down among the bushes, one or more are perched, apparently as sentinels, on the high trees overhead, and the hidden birds below are instantly warned of danger by their discordant screams. I have more than once succeeded in getting
within range of one of these picket-guards, and at the report of my gun, scores of birds, of whose presence I was entirely unaware, have sprung up from the bushes all around, where they had been feeding in perfect silence. I once procured several specimens unexpectedly and unintentionally, the birds having come to feed upon the carcass of a horse I had poisoned to secure wolves. Six or eight Magpies were found dead next morning, besides several coyotes and a skunk. It is stated that this method has also been successfully employed to destroy the birds, when, from their numbers and under stress of hunger, they proved a nuisance by alighting on the sore backs of horses and mules to pick at the raw flesh. An Indian boy at Fort Randall succeeded in capturing a number alive with a common 'figure-of-four' trap, showing that their native cunning is sometimes at fault. During the whole season of 1873 I did not see a single Magpie along the northern border of Dakota."

The following observations, made by Mr. M. Trippe in Colorado, will be read with interest:

"Common; resident; breeds. The Magpie abounds from the plains up to 10,000 feet, rarely venturing higher than that limit, while it is most numerous below 8,500. It is a social bird, although not gregarious, being usually found in pairs or small parties of from three to six or eight, but quite often goes alone. It is very voracious, living upon seeds, carrion, insects, etc., and being especially fond of the eggs and young of other birds, of which it destroys very great quantities. It is easily caught and tamed, even when old, and soon becomes very cunning and mischievous, exhibiting the same traits as the Crow, and, like that bird, is said to imitate the human voice with some aptitude. It has almost an infinite variety of notes, some low, gurgling, and musical, some harsh and discordant, others squeaky and grating. It is very noisy at times, and quite silent at others, when engaged in robbing birds' nests or foraging near dwellings or barns. It has a loud, rapid chatter, uttered as an alarm cry, and, with its extensive vocabulary, seems at no loss to convey its ideas to its fellows. It prefers, as a rule, the vicinity of streams, and the brushy valleys, but often wanders among the pine groves on the hill-sides, and pays frequent visits to the vicinity of slaughter houses. It is common along road-sides, where its bright plumage and harsh cries attract the attention of the traveler. The Magpie is not a shy bird, but if frequently shot at soon learns to keep out of range. Among the foot-hills, the Magpie begins building in April; the nest is quite an elaborate affair, and occupies several days in its construction. It is placed in the fork of a small, bushy tree—which is never a pine—from six to fifteen feet from the ground, and composed externally of stout sticks, ingeniously placed and wedged together. Upon this is a layer of smaller twigs, and then a layer of fine clay one-half or three-quarters of an inch in thickness, which, being applied soft and well worked in, becomes very hard, and binds the whole structure firmly together. On this again is a soft lining of fine twigs, hair, feathers, and any proper material which they can find. Over the whole, rising from the walls of the nest, is a dome of twigs and sticks, very ingeniously and securely woven together, and framing a shelter for the bird while setting. There are two openings, opposite each other, evidently to make room for the long tail of the bird, which could never be brought within the nest. The eggs are five, of a pale greenish, very thickly obscured with spots and dashes of pale purplish-
brown, varying somewhat in intensity and being somewhat thicker at the larger end. In the foot-hills, the young are hatched about the first of June, at Idado Springs nearly three weeks later, or not for two months after the appearance of the broods of Clarke’s Nutcracker—a singular fact, considering the intimate relations of the two birds, and their similar habits, range, and food.”


Description: “General color, black. The belly, scapulars, and inner webs of the primaries, white; hind part of back, grayish; exposed part of the tail-feathers, glossy green, tinged with purple and violet near the end; wings, glossed with green; the secondaries and tertials with blue; throat-feathers spotted with white in younger specimens.

“Length, 19.00 inches; wing, 8.50; tail, 13.00 inches.” (B. B. & R. II, p. 266.)

The Yellow-billed Magpie, Pica nuttalli Audubon, is confined exclusively to California, where it is an abundant bird in many localities. It is the true counterpart of the foregoing species.

Description: “Bill, and naked skin behind the eye, bright yellow; otherwise similar to the former.”

BLUE JAY.

Cyanocitta cristata Strickland.

Plate XVII. Fig. 1.

The life of all our small birds is a constant struggle for existence. They are always surrounded by danger, and even the quiet darkness of the night does not afford them perfect safety against nocturnal robbers. The number of their enemies is an exceedingly large one. These are facts verified by all observers who study the life of our birds in the freedom of Nature. Even in gardens and orchards, where the presence of man should serve as a protection, they are not as safe as could be desired. Having arrived in their breeding haunts from the South, they now act as if all sorrow and danger was over. They are in an ecstasy of song and happiness, filling the soul of every cultivated and feeling mind with rapture and anticipation. Yet even in the most favorable localities they have to be on a constant lookout for enemies. In the woods no nest is safe from the depredations of squirrels, raccoons, and opossums. In the lower thickets and on the ground numerous nests fall a prey to snakes and mice. Owls, flying squirrels, skunks, and other robbers destroy under the cover of darkness what has escaped the attention of the day robbers. In the gardens cats kill countless numbers of old birds and destroy their nests. The English Sparrow deprives our native songsters of their nesting sites, and, where numerous enough, drives them away. Near villages and towns the small “bad boy” with his sling-shot, air gun, etc., is the terror of all our songsters.

Among the smaller native birds there are also quite a number of robbers and
murderers. The Butcher-bird kills many an innocent songster. Countless broods of our small insectivorous birds are doomed to an early death by the Cowbird's parasitical propensities. The Grackles plunder many nests. None of these, however, can compare with the Blue Jay in robbing the smaller birds of their eggs and young. Notwithstanding its great beauty, this bird is a villain, a rowdy, thief, and murderer of the very lowest character.

Being one of the most beautiful birds of our woods, nobody would imagine this fine dude to be such a rascal, coward, and marauder. Its prevailing color is a glossy sky-blue; wings and tail are crossed with black bars and tipped with pure white, and around the neck runs a deep black collar; the underside is grayish. The very conspicuous crest, which gives the bird a proud, selfish, and gallant appearance, is always carried erect while roving through the woods, but when silently sneaking around and when pursued by an enemy, little is to be seen of it. Notwithstanding its brave appearance, the Blue Jay is the greatest coward of all our familiar birds. Among small birds he really accepts the countenance of a lord, tries to impose by his superiority and bravery, and annoys by his noisy and saucy disposition. But he is only a braggart. In the face of danger, or when attacked by a bird of his size or by a company of smaller ones, his courage is gone, and he proves himself to be the most ridiculous and wretched coward imaginable. When real danger threatens he sneaks away silently, and when attacked by a Robin, or Kingbird, he screams in the most terrible manner.

While living at Freistatt, Lawrence Co., Mo., I resided for several years on the edge of an extensive forest, consisting of a dense growth of mostly middle-sized oaks and some hickories. In front of the house there was the ornamental garden on one side and a large orchard on the other. Everywhere among the shade and orchard trees I had placed nesting-boxes for Bluebirds, Bewick's Wrens, Titmice, and Great-crested Flycatchers. Although the Blue Jays had nested in considerable numbers around my cabin in Texas, I found them here much more abundant and presumptuous. Their loud and vehement jay, jay was constantly heard, especially in sultry and rainy weather. As they were exceedingly numerous, their cries resounded from far and near. With great regularity they were roving about in the forest, usually in small scattered troops of from ten to twenty. This they kept up from late summer to early spring, when the flocks separated into pairs. They frequently came down to the ground, but rarely left the woods. During the cold season they mostly subsist on acorns, stored by them in crannies of trees and knot-holes. Frequently they also visit the corn cribs, where through the crevices they pick the corn from the cobs. Having never been molested, they have become half domesticated, and fearlessly approach the door-yard in search of food. They are hardy birds, and in their choice of food are not at all particular. I saw them eat all kinds of refuse from the kitchen, even cooked potatoes and the frozen apples on the trees. When deep snow covered the ground they obtained their share of food in the poultry yard, which they fearlessly entered. Were we not convinced, that the Blue Jay is a villain and murderer during the breeding season, we would be obliged to admire him for his tameness and beauty, his proud, lively, and exceedingly cunning manners, and his gift of mimicry. In fall and winter the life of the Blue Jay doubtlessly affords much pleasure to the friend of Nature, but in spring and summer, as we will
presently see, he is the disturber of the general peace and creates only excitement and trouble.

Among the branches of trees the Blue Jay is perfectly at home, but on the ground his movements are less adroit. His flight from tree to tree is quick and graceful, but over large treeless tracts it is rather heavy and lingering. This inferiority the sly bird well knows, and therefore he does not venture to leave without compulsion the protection of the woods. Most birds of prey are not able to capture him in the woods, but they easily catch him while flying.

Admirable is the Blue Jay's imitative power. As soon as the warm rays of the spring sun fill the woodlands with new life, he shows a great difference in his demeanor. The soft mild air, the flowers of early spring, the echoing song of the Cardinal appear to inspire him also with poetical feelings, if a rascal like him is at all capable of higher emotions! We now hear not only his loud and penetrating jay, jay, but also many other well imitated notes, like the common cry of the Catbird, the caw, caw of the Crow, the mewing of the house cat, the barking and whining of a young dog, etc. The nearer the breeding time approaches, the greater the development of the Jay's faculty of imitation. An exceedingly comical effect it produces when he mimics the call of the Sparrow Hawk, and immediately after the frightful notes of his victim, or when he utters the be-ay, be-ay of the Red-shouldered Hawk and a moment later the anxious cries of a hen dying in his talons. The first imitations drive all the small birds to the bushes or other hiding places, while the second notes create terror and anxiety among the poultry. Every fowl tries to escape in the quickest way possible, while the gallant rooster turns his head into the air to espy the supposed enemy. In such apparently malicious way he often scoffs the small birds and the hens. He likewise imitates the crowing of a rooster and the cackling of a hen. One day, while sitting on a log in the woods, to observe a pair of Cooper's Hawks on and near their nest, I was startled by the persuasive caw note of a hen leading her young; an anxious cackling, as if an enemy was approaching, followed immediately. When, a few moments later, I heard the painful cry of a chicken, I at once rushed into the thicket whence these notes came, to scare away the robber, but I only found the Blue Jay who flirted his tail in a most contemptible manner and sneaked away apparently well satisfied with his mockery.

Early in April a pair of Bluebirds began to build in a nesting box made of a piece of a hollow bough, and another pair selected one made of boards. In flocks of five and six the Blue Jays roamed through the garden and committed all kinds of mischief. They were quite a terror to the Bluebirds whom they frequently chased about. In the early morning hours they visited in a sneaking manner the nesting boxes, attempting continuously to get into the interior. The Bluebirds fought bravely, but they were unable to resist these villains. Several broods were destroyed before they succeeded to raise a few young. When on their piratical excursions, the Blue Jays are perfectly silent, and my attention was only attracted to the spot by the anxious cries of the Bluebirds. In the spring following I took special precautions to protect my favorites from the murderous attacks of these birds. I made the entrance holes of the nesting boxes smaller and kept always on the watch for these rascals. Yet all care seemed to be in vain, as only one brood left the nest, while the other was killed when first trying its wings. In
the same way they destroyed the broods of the Tufted Titmouse and Bewick’s Wren. I caught them in the act of sucking the eggs of the Mourning Dove, the Yellow Warbler, the Red-eyed Vireo, and the Catbird. I saw them kill old Bewick’s Wrens and the young of the Yellow-breasted Chat, the Cardinal, and the Field Sparrow. As soon as the gallant Kingbird arrived in the orchard, the Blue Jays did not dare to leave the protection of the woods.

By the third week of April the flocks separate and the pairs commence at once to construct the nest. For this purpose usually a secluded part in the forest or a very dense tree is selected. The male now exhibits a variety in his notes which is sometimes astonishing. The common call-note is now less often heard. A low, deep persuasive chatter is most frequently uttered during the season of love, and also a musical whistle, sounding like Frederica. These last notes are usually accompanied by dancing motions and by lowering and raising the head. The birds were so abundant in this tract of forest near my home, that I counted eleven pairs breeding on an area of about one acre, and during the months of May, June, and July I found not less than forty-one nests. In southern Missouri as well as in Texas two broods are annually raised. There is scarcely a more sagacious, sly, and cunning bird conceivable than the Blue Jay. In Missouri it often nests near houses, but it approaches its domicile so quietly and stealthily that most people are not aware of its breeding near the dwelling. One pair had built its nest near my kitchen door in a dense black jack oak, but I did not find it before the young were almost fully fledged.

All the nests I found were built from twelve to forty feet from the ground, and though bulky, were always firmly placed among dense twigs. The materials used in their construction are various. The exterior is usually made of twigs, rootlets, strips of bark, paper, rags, strings, etc., and the cavity is lined with wool, cotton, grasses, and feathers. The eggs, four to six in number, are dull olive-green, thickly spotted with dark brown. When the young are hatched, the parent birds become exceedingly injurious by robbing the nests of our small insectivorous birds of their eggs and young. These depredations are performed very stealthily and often in the absence of the mother bird from her nest. Sometimes the marauder is caught by the rightful owners in the act of robbery. They furiously attack him, and even their neighbors come to their assistance. Like every coward he tries to sneak off silently, seeking refuge in the densest thickets. But his assailants follow him closely, attack him from all sides and pounce down upon him; he screams in the most frightful manner until he has reached the safe interior of the forest.

His food consists at this time almost entirely of animal substances and some fruit. In winter he visits the corn cribs and the barn yards. In fall he also stores acorns and beech nuts in crevices of bark and tree holes for winter’s use. The acorn is held between the toes and the branch and the shell is broken by repeated blows of the bill.

The Blue Jay is a very hardy bird, finding his food at all seasons. For this reason he is not a true migrant, that is to say, he does not move north and south at regular periods, but is a constant resident even in the severe climate of Wisconsin.

From the preceding it will be seen that the Blue Jay is an exceedingly injurious bird, creating great havoc among our small insectivorous songsters. Where not molested
he multiplies so rapidly that in many localities steps should be taken to check his becoming too numerous, or many of the very beneficial small birds will become exceedingly rare. In gardens, parks, and orchards the Blue Jay is decidedly out of place and should never be tolerated. In many parts of the West this bird is almost as tame, but more sagacious and sly and much more dangerous than the European Sparrow. A few pairs in the woods are a great ornament, but they should nowhere be allowed to become abundant. Disagreeable as it is to witness the extermination of any feathered creature, I should not hesitate to sign a death-warrant of every Blue Jay roaming about near human dwellings, in parks and orchards.

When pursued these birds become very shy and wary, shunning, as much as possible, man's society. This is especially the case in many localities in the East, where nowhere this robber has been allowed to become very abundant. No other bird annoys the hunter more than the Blue Jay, as he seems to give the alarm to all dwellers of the woods that their foe is approaching.

The Blue Jay is one of the best cage birds, especially when reared from the nest. He becomes very tame and reconciled to confinement, learns to imitate the human voice and easily learns to whistle whole songs or parts of such. Bird fanciers almost all agree in the statement that the "Blue Jay is more ingenious, cunning, and teachable than any other species."

The geographical distribution of this Jay extends over all eastern North America, west to the Plains, and from the fur countries south to Florida and eastern Texas.

A variety, the Florida Blue Jay, Cyanocitta cristata florincola Coues, is found in Florida and the Gulf coast of south-eastern Texas. It does not differ in its habits from the common species.

**NAMES:** Blue Jay, Jay, Jay Bird, Rain Jay, Rain-bird.—Blauhäh (German).


**DESCRIPTION:** Sexes almost alike. "Crest about one-third longer than the bill. Tail, much graduated. General color above, light purplish-blue; wings and tail-feathers, ultramarine-blue; the secondaries and tertials, the greater wing-coverts, and the exposed surface of the tail, sharply banded with black and broadly tipped with white, except on the central tail-feathers. Beneath, white; tinged with purplish-blue on the throat, and with bluish-brown on the sides. A black crescent on the forepart of the breast, the horns passing forward and connecting with a half-collar on the back of the neck. A narrow frontal line and loral region, black; feathers on the base of the bill, blue, like the crown."

Length, 12.25 inches; wing, 5.65; tail, 5.75 inches. (B. B. & K.)

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**Steller's Jay.**

*Cyanocitta stelleri* Cabanis.

Steller's Jay and its varieties inhabit particularly the mountain regions of the West. They are all similar to each other and are the same cunning, bold, and noisy fellows as their eastern cousin, the Blue Jay.

Steller's Jay inhabits the Pacific coast of North America, from Sitka south through the Cascade and Coast Range to Monterey Bay, Cal.
The Blue-fronted Jay, *C. stelleri frontalalis* Boucard, is found in the southern coast ranges and the Sierra Nevada of California and western Nevada, from Fort Crook south to Lower California.

The Black-headed Jay, *C. stelleri annectens* Ridgway, is an inhabitant of the northern Rocky Mountains, south to the Walsatch Range, west to eastern Oregon and Washington.

The Long-crested Jay, *C. stelleri marcrolopha* Coues, represents the foregoing in the southern Rocky Mountains, especially in southern Arizona and north-western Mexico.

It may suffice to treat more fully of this last variety, as all the others agree with it in every respect.

"Having enjoyed excellent facilities," writes Dr. Elliott Coues in his classical way, "for studying the habits and manners of the Long-crested Jay in the pine-clad mountains of Arizona, I offered, on a previous occasion, an account substantially as follows: When I was traveling westward, in the spring of 1864, I saw some of these Jays in the Raton Mountains, in New Mexico, which I believe to be about their eastern limit, at least in this latitude, for they were strongly attached to pine-clad mountains, and are found as high up as timber grows. In crossing the Rocky Mountains, through Whipple's Pass, I did not happen to meet with any; to the westward still, in the lofty forests of the San Francisco Mountains, they were abundant, and at that time (July) had just reared their families, and were rambling through the tops of the trees together. The old birds were in sorry plight, literally with a 'crest-fallen' air, and full of pin-feathers. But when I came across them the third time, in the pineries about Fort Whipple, they were in good trim once more, and saucy as ever. They live in the mountainous parts of Arizona all the year, for they are able to endure severe cold, being of hardy nature, and well clothed with soft, thick plumage, while their food is such as can be procured at any season. Thus being non-migratory, their permanent habitat may be given with some accuracy; it includes the wooded Rocky Mountain region at large....

"All Jays make their share of noise in the world; they fret and scold about trifles; quarrel over anything, and keep everything in a ferment when they are about. The particular kind we are now talking about is nowise behind his fellows in these respects—a stranger to modesty and forbearance, and the many gentle qualities that charm us in some little birds and endear them to us; he is a regular filibuster, ready for any sort of adventure that promises sport or spoil, even if spiced with danger. Sometimes he prowls about alone, but oftener has a band of choice spirits with him, who keep each other in countenance (for our Jay is a coward at heart, like other bullies) and share the plunder on the usual terms in such cases, of each one taking all he can get. Once I had a chance of seeing a band of these guerrillas on a raid; they went at it in good style, but came off very badly indeed. A vagabond troop made a descent upon a bush clump, where, probably, they expected to find eggs to suck, or at any rate a chance for mischief and amusement. To their intense joy, they surprised a little Owl quietly digesting his grasshoppers, with both eyes shut. Here was a lark! and a chance to wipe out a part of the score that the Jays keep against Owls for injuries received time out of mind. In the tumult that ensued, the little birds scurried off, the Woodpeckers overhead stopped tapping to look on, and a snake that was basking in a sunny..."
STELLER'S JAY.

spot concluded to crawl into his hole. The Jays lunged furiously at their enemy, who sat helpless, bewildered by the sudden onslaught, trying to look as big as possible, with his wings set for bucklers and his bill snapping; meanwhile twisting his head till I thought he would wring it off, trying to look all ways at once. The Jays, emboldened by partial success, grew more impudent, till their victim made a break through their ranks and flapped into the heart of a neighboring juniper, hoping to be protected by the tough, thick foliage. The Jays went trooping after, and I hardly know how the fight would have ended had I not thought it time to take a hand in the game myself. I secured the Owl first, it being the interesting Pygmy Owl, and then shot four of the Jays before they made up their minds to be off. The collector has no better chance to enrich his cabinet than when the birds are quarreling, and so it has been with the third party in a difficulty, ever since the monkey divided cheese for the two cats.

"It is difficult to describe the notes of this Jay, he is such a garrulous creature, and has such a variety of outcries. He ordinarily screams at the top of his voice, until he is tired or something attracts his attention. This cry is something like that of a Blue Jay, but hoarser and heavier; its base quality distinguishes it in a moment from the harsh outcry of either Woodhouse's or Maximilian's Jay, both of which birds run higher up the scale. He has also a call sounding like the rataplan of a Flicker; and again, when greedily regaling on acorns, or hopping aimlessly about, or peering curiously down through the pine fronds to watch a suspicious character, he talks to himself in a queer way, as if thinking aloud, and chuckling over some comical notions of his own. Such loquacity has given a good name (Garrulinae) to the whole tribe of Jays.

"The Long-crested Jay will eat anything eatable. It is said Jays kill and devour small birds, and doubtless they do so on occasion, though I do not think it is habitual with them. They suck eggs, despoiling many a pretty nest; and if they cannot catch winged insects, fat larvæ and beetles do not come amiss; but after all, they are principally vegetarians, feeding mainly upon seeds, hard fruits, and berries. In the mountains where the Long-crested Jay lives, pine-seeds afford most of its fare. I have often watched the bird hammering away at a pine-cone, which he would sometimes wedge in a crotch, and sometimes hold under his feet. Though most at home in the pineries, where this particular source of supply is unfailing, he often strays into the adjoining oak openings, and into juniper patches, after acorns or berries, or to pick a quarrel with Woodhouse's Jay and frighten the Sparrows. Wherever he goes he has it pretty much his own way, hated and feared by the other birds, whom he silences with a scream and subdues by a show of authority. But who of his kind has not enemies? Cassin's Flycatcher, almost as noisy and andacious, has many a set-to with him, and even the nimble little Wood Pewees pester him sometimes. The Woodpeckers tease him persistently; they can scramble about faster than he can follow, and laugh at him from the other side of a bough, till he quite loses his temper. But after all our Jay has his good points, and I confess to a sneaking sort of regard for him. An elegant, dashing fellow, of good presence if not good manners; a tough, wiry, independent creature, with sense enough to take precious good care of himself, as any one who wants his skin will discover. As one approaches the tall pine where he is rollicking, his restless, bright brown eye marks the suspicious object. Now on the alert, he leaps like a squirrel from bough to bough, till he reaches
the top, when he is off with a scream that makes the woods echo his triumph and disdain. It is of no use to follow when he is thoroughly alarmed. But on some other occasion he may be inclined to take another peep, for his curiosity is great, and thus expose himself through a rift in the foliage.

"The egg of Steller's Jay is pale, dull bluish-green, more or less thickly, but usually quite uniformly, sprinkled all over with small olive-brown and clearer brown spots. Size, 1.25 by 0.85, to 1.35 by 0.90."

NAMES OF TYPE: Steller's Jay, Mountain Jay.


DESCRIPTION: "Head and neck all round, and forepart of breast, dark brownish-black. Back and lesser wing-coverts, blackish-brown, the scapulars glossed with blue. Under-parts, rump, tail-coverts, and wings, greenish-blue; exposed surfaces of lesser quills, dark indigo-blue; tertials and ends of tail-feathers, rather obsoletely banded with black. Feathers of the forehead, streaked with greenish-blue.

"Length, about 13.00 inches; wing, 5.85; tail, 5.85 inches." (B. B. & R. II, p. 277.)

The varieties vary more or less in color.

FLORIDA JAY.

Aphelocoma floridana Cabanis.

The Florida Jay is a bird of the scrub composed of dwarf and willow oaks. It is a bird quite local in distribution. Mr. C. J. Maynard found it common at Blue Springs, where it occupied a belt of country some forty-five miles wide. He also met with it on the east side of Indian River, as far south at least as Merritt's Island, "but the stronghold of these birds is in the high scrub lands of the western coast, where they fairly swarm."

This Jay breeds in communities in the scrub. They lay quite late in the season and at that time are very assiduous in guarding the locality which they have chosen as a home. At times they are said to become very familiar, approaching the houses on the edges of settlements in order to pick up bones, which are thrown about or will even venture to eat the meat hung close to the hunter's camp. The nest is a rather flat structure, composed of small dry sticks, leaves and rootlets, lined with moss and fibers and often with wool and feathers. The eggs, usually four to five in number, are of a light blue or greenish ground-color, speckled sparingly with rufous or black; the spots are most numerous on the larger end.

Like all its congeners the Florida Jay is a great robber and freebooter, diminishing the exceedingly poor avi-fauna of Florida by its robbery still more.

DESCRIPTION: "Above, blue, including scapulas; interscapular region and back, brownish-ash, the former lighter. Forehead and sides of crown, hoary white. Sides of head and neck, blue; the former tinged with blackish, the latter sending a streaked collar of the same entirely across the breast; region anterior to this collar, dirty white, streaked on the edges of the feathers with blue; rest of under-parts, dirty whitish-brown; under tail-coverts, blue, the tibia tinged with the same.

"Length, 11.00 inches; wing, 4.50; tail, 5.70 inches." (B. B. & R. II, p. 288.)
WOODHOUSE'S JAY.

*Aphelocoma woodhousei* Ridgway.

This species is distributed over the mountainous regions of the West, from New Mexico and Arizona north to Colorado, Utah, Nevada, Wyoming, Idaho, and eastern Arizona.

"It is very abundant in the upper parts of Arizona," writes Dr. Elliott Cones, "where I saw it almost daily for two years. It may be called the characteristic species of the subfamily in this region; for, although Maximilian's and Steller's Jays are equally abundant, Woodhouse's is the more widely and equally distributed in all sorts of places, with the exception, perhaps, of the recesses of pine woods, which are generally relinquished in favor of the crested species. Its preference, however, is for oak openings, rough, broken hill-sides, covered with patches of juniper, manzanita, and yuccas, brushy ravines and wooded creek-bottoms. The ordinary note is a harsh scream, indefinitely repeated with varying tone and measure; it is quite noticeably different from that of either Maximilian's or Steller's, having a sharp, wiry quality lacking in these. It is always uttered when the bird is angry or alarmed, and consequently is oftener heard by the naturalist; but there are several other notes. If the bird is dispersing with his fellows, or leisurely picking acorns, he has a variety of odd chuckling or chattering syllables, corresponding to the absurd talk of our Blue Jay under the same circumstances. Sometimes again, in the spring time, when snugly hidden in the heart of a cedar bush with his mate, whom he has coaxed to keep him company, he modulates his harsh voice with surprising softness to express his gallant intention; and if one is standing quite near, unobserved, he will hear the blandishments whispered and cooed almost as softly as a Dove's. The change, when the busy pair find they are discovered, to the ordinary scream, uttered by wooer and wooed together, is startling."

Mr. Aiken, who found the bird a common resident in south-eastern Wyoming, says: "Nest composed outwardly of dead twigs, then of fine roots, and lined with fine rootlets or horse hair. The eggs, four or five in number, are laid about May 1. They are of a light bluish-green color, and with the reddish-brown specks thickest at the large end."

**DESCRIPTION:** "Forehead and nasal tufts, bright blue like crown. Lower tail-coverts, bright blue, markedly different from color of belly. Back and scapulars, dull slaty-grayish, tinged with blue; breast, sides, and flanks, light ash-gray; blue of upper parts, etc., a light dull azure-blue.

"Length, 11.50 to 12.75 inches; wing, 5.02; tail, 5.68 inches." (Ridgway, "Manual," p. 355.)

CALIFORNIA JAY.

*Aphelocoma californica* Cabanis.

This Jay ranges from southern California to Oregon and western Nevada. Prof. Robert Ridgway speaks of it as the Valley Jay of California, having been observed by him in abundance only among the oaks of the Sacramento valley, the brushwood of the ravines, and the scattered pines of the foot-hills along the western base of the Sierra Nevada. It was quite common, in April, in the vicinity of Carson City, where he found it breeding. Its notes and manners, he adds, are very similar to those of Woodhouse's
Jay, belonging to the wooded regions of the interior, but the shrill cries of this species are even more piercing."

Nests and eggs are not different from those of the foregoing.

DESCRIPTION: "Lower tail-coverts, white, or else very slightly tinged with blue. Sides of head, blackish, with little, if any, blue tinge; breast, grayish-white or very pale grayish, like belly; back and scapulars, brownish-gray, without blue tinge. Sides of chest, bright blue, the middle portion streaked with blue; white superciliary stripe very distinct." (Ridgway, "Manual," p. 356.)

GREEN JAY.

Xanthoura luxuosa Bonaparte.

PLATE XXXII. FIG 5.

Like all its congeners, the Green Jay is an exceedingly cunning marauder, thief and murderer. It is an inhabitant of the lower Rio Grande region and thence southward to Vera Cruz and Puebla, Mexico. Mr. Geo. B. Sennett met with it abundantly near Hidalgo, Texas. "They are most frequently seen," he says, "during the breeding season in the densest woods and thickets, but at other times they are common visitors of the camp, the ranche, and the huts in the outskirts of towns, to the annoyance of all on account of their thieving propensities."

The first nest was found by Mr. Sennett on April 28, in a mesquit tree in a thicket not far from the river bank. It was placed in a fork about fifteen feet from the ground, and "was composed of sticks lined with fine stems, and a rather bulky affair." The bird is known by the Mexicans as the Pájaro verde. On April 30 he flushed a Red-billed Pigeon (Columba flavirostris) from its nest, and a Green Jay also flew from its nest. "The nest of the Jay was some nine feet from the ground on the outer branches of a small tree, and composed wholly of sticks and fine twigs. The sticks were so full of thorns that when they were crossed about among the lining branches more firmness was given to the nest than usual, and by cutting off the branches I could readily take it entire." The ground-color of the eggs is "light drab, tinged faintly with green.... The markings are brown," and sometimes the egg is "distinctly spotted or speckled or streaked, and sometimes quite indistinct and clouded. The larger end has generally the heaviest markings."


DESCRIPTION: "Above, green; beneath, yellow, glossed continuously with green; inside of wings and outer four tail-feathers, straw-yellow; rest of tail-feathers, green, glossed with blue. Sides of head, and beneath from the bill to the forepart of breast, velvet-black. Crown, nape, and a short maxillary stripe running up to the eye and involving the upper eyelid, brilliant blue; the nostril-feathers rather darker; the sides of the forehead, whitish. Bill, black; legs, lead-color.

"Length, 11.00 inches; wing, 4.75; tail, 5.40 inches." (B. B. & R. II, p. 295.)
CANADA JAY.
Perisoreus canadensis Bonaparte.

The Canada Jay is one of the most abundant birds of the Canadian and Hudsonian faunas. It is also known as Moose-bird and Whiskey Jack, the latter name not being derived "from any supposed predilection for that beverage, but probably, as Mr. Kennicott has suggested, from a corruption of the Indian name for these birds, Wis-ka-chon, which has been contorted into Whiskey John and thence into Whiskey Jack."

Its breeding range extends from northern New England, northern New York, and northern Wisconsin, northward to Arctic America, and in all the wooded portions of this territory, especially in the coniferous forests, it is exceedingly abundant. According to Richardson, it is a constant attendant at the fur-posts and fishing stations, and becomes so tame in the winter as to feed from the hand. Yet it is impatient to confinement, and soon pines away if deprived of its liberty. Its voice is plaintive and squeezing, though it occasionally makes a low chattering. It hoards berries, pieces of meat, etc., in hollow trees, or between layers of bark, by which it is enabled to feed its young while the ground is still covered with snow.

In northern Michigan and Wisconsin it is exceedingly numerous during winter near the lumbermen's camps, where it feeds on all kinds of refuse from the kitchen. It will always venture into close proximity of man. In the region of Lake Gogebic, Mich., it is a great annoyance to the hunter by its warning the game that the enemy approaches. Fish and all kinds of meat are certain to attract numbers of them, and it even eats the bait placed in the traps used for capturing fishers, otters, foxes, and other animals.

"While moose-hunting on December 6," writes Mr. Ernest E. Thompson, "we had crawled close to a herd, when suddenly the loud screaming of the Whiskey Jack was heard, and before we could get a glimpse of them the moose had sought safety in flight.

"During the numberless times that I have camped in the winter woods of the North-west, I have hardly ever failed to have the Wis-ka-chon for a companion. Sometimes I have been awakened in the morning by the melancholy wailing of the bird a few inches from my head. Many a time I have fed it with scraps placed in such situations that its courage would be sorely tried before it could secure the dainties. Once I laid a piece of meat on the snow between myself and my companion. After one or two approaches the bird rushed in and seized the morsel. Then I laid a piece between myself and the fire some six feet away; this also was taken. Finally I stuck a piece on the end of the pot-stick, which is a stout stick propped up so that it affords support to a kettle over the fire; and although by so doing the bird had to fly down within six inches of a hot clear fire, without hesitation it dashed in and secured the prize. Long experience has taught it that a camp is a sure place for a feast, and as soon as the ax is brought into play to prepare the fire-wood it is usual to hear the responsive tay tay of the Wis-ka-chon approaching from some distant part of the timber. This call-note of the species is much like the ordinary cry of the Blue Jay, but it has several others that are distinctively its own; this includes the melancholy sobs and wails which,
sounding so uncanny among the gloomy evergreens, have surrounded the bird with an atmosphere of mythic interest. According to Archbishop Taché, Wesakedjan is the name of the coot and of the fabulous being who takes part in all Indian legends. Almost the only musical sound that I have heard it utter is a metallic chuck chuck, not unlike that produced by the Robin. The unmusical notes are so numerous that one is almost safe to attribute to the Wis-ka-chon any unaccountable screams that may be heard within the presence of a spruce woods."

These birds prefer to place their nests in evergreens, from five to thirty feet from the ground. They are built of twigs, strips of bark, needles of the white pine, grasses, etc., and are lined with fine bark-strips and especially with feathers. In the Gogebic region they nest as early as March 20, but most of the nests are found in April. The eggs, four to five in number, are yellowish-gray, finely spotted and dotted with slate and dark brown and faint cloudings of lilac. The markings are most abundant on the largest end.


DESCRIPTION: "Head and neck and forepart of breast, white. A rather sooty plumbeous nuchal patch becoming darker behind, from the middle of the cap to the back, from which it is separated by an interrupted whitish collar. Rest of upper parts, dark ashy-plumbeous; the outer primaries margined, the secondaries, tertials, and tail-feathers obscurely tipped with white. Beneath, smoky-gray. Crissum, whitish. Bill and feet, black."

"Length, 10.70 inches; wing, 4.75; tail, 6.00 inches." (B. B. & R. II, p. 299.)

There are some very similar local forms:

The Rocky Mountain Jay, Perisoreus canadensis capitalis Ridgway, inhabits the mountain range which its name implies, especially Colorado and the northern part of New Mexico. In the breeding season it is found in the spruces and other conifers, from 8,000 feet up to timber line. It is said to be "as big a thief as ever wore feathers." This sub-species is also known as the White-headed Jay.

The Alaskan Jay, P. canadensis fumifrons Ridgw., is an inhabitant of Alaska, except the southern coast district.

The Labrador Jay, P. canadensis nigricapillus Ridgw., a third variety of the Canada Jay, is found in the coast district of Labrador, north to Ungava Bay.

The Oregon Jay, P. obscurus Sharpe, is a good species, inhabiting the coast region from Humboldt Bay, in California, north to British Columbia. According to Mr. A. W. Anthony this species is a common winter resident of Washington Co., Ore. In March it departs to the mountains to breed. He characterizes this Jay as a bird utterly devoid of fear. While dressing deer in the thick forest, he has been almost covered with these birds. They would alight on his back, head, and shoulders, and there tug and pull at each loose shred of his coat as if assisting him in all ways possible. A nest found by him March 31, 1884, was placed about eighty-five feet from the ground, in a fir, and was well concealed. It was placed close against the trunk, and was built of sticks, twigs, and moss, rather loosely put together, lined with cow-hair, wool, and one or two Goose feathers. The eggs were light blue, with a grayish cast, thickly covered with spots of brown and lilac, chiefly on the larger end.
LARKS.

*Alaudidæ.*

LARKS are characteristic birds of the old world. Only one species, the Shore Lark, divided up into a number of local forms, inhabits our territory. They are all attached to open cultivated lands, meadows, fields and the heather being their favorite haunts. Some of the species even haunt the deserts of Asia and Africa. Quite a number of them are celebrated for their exquisite song. The most celebrated of the family is the Sky Lark (*Alauda arvensis* L.) of Europe. Frequent attempts have been made to add this "bird of poetry" to our avi-fauna. It has been introduced into New York, New Jersey, Ohio, Missouri, etc., but it evidently does not readily accommodate itself to our changeable climate, as most of those introduced have perished. Only on Long Island the bird seems to have gained a foothold, and near Portland, Ore., where many European birds thrive in the mild and equable climate, the Sky Lark bids fair to become very numerous in a few years. The song is indeed enchantingly beautiful, but to my ear the rollicking and happy strain of our own Bobolink is more impressive and hilarious.

HORNED LARK.

*Otocoris alpestris* Bonaparte.

Speaking in a general way, the Horned Lark or Shore Lark is one of the most abundant birds of Wisconsin and Illinois, and I found it equally numerous in south-western Missouri and in many parts of Texas. In Wisconsin it was a rather rare bird forty years ago, but after the forests had been transformed into fields, it became
soon a familiar bird. On the dry western prairies it is everywhere met with, especially in winter. Being residents wherever they occur, the Shore Larks do not migrate like most other birds, but they move over a considerable territory in quest of food regardless of the condition of weather. Heavy snowfalls have the effect of driving them to regions where the ground can be searched for food, which consists mainly of all kinds of weed and grass seeds. Fields, pastures, and upland meadows are the favorite haunts of these Larks, but they are nowhere more abundant than on and near the country roads. In summer we may see them running along the wagon tracks or taking their dust baths, and in winter there is scarcely a better place to search for food than the much frequented country road. During winter they are seen in flocks of from ten to fifty and more, but during the breeding season they only live in pairs. When disturbed they run along in the road for quite a considerable distance, and then disappear suddenly among the grass and weeds on the road-side, or they perch on a fence. They are pre-eminently ground birds, scarcely ever alighting on trees or bushes.

Of all our smaller birds the Horned Lark is the first bird to breed. As early as April 4, when many places are still covered with snow and the ground is frozen hard, full complements of eggs have been found in Wisconsin, and by the middle of that month I have met young in northern Illinois able to leave the nest. In south-western Missouri they breed by the middle of March. The nest is always placed in a slight depression of the ground, usually under a tuft of grass. It is built of grasses and pieces of corn-leaves, and is often lined with hair and feathers. When a second or third brood follows later in the season, these warm materials are not employed so extensively in the construction of the domicile. The rim of the nest is usually flush with the surface of the ground. It is not an easy matter to find the nest, but it is often discovered accidentally while sauntering about in fields, meadows, pastures, and the prairie. The eggs, four to five in number, vary in their ground-color from pale olive or light greenish to dull oliv-buff, and are always thickly spotted and sprinkled with brown and drab. The eggs of six different varieties of Shore Larks in the “Goss Collection of North American Birds’ Eggs,” in the Public Museum of Milwaukee, are all more or less similar to each other. The young leave the nest long before they are able to use their wings, running along on the ground like small chickens just hatched.

The song is frequently uttered in May and June from early morning until evening, both on the ground and high up in the air. It sounds exceedingly sweet and would be very beautiful were it not so weak. It is scarcely audible in a distance of a hundred yards, and it always sounds very ventriloquous, so that it is difficult to say whether the bird is on the ground or in the air.

Those desirous to know more about the different varieties of these birds and their geographical distribution, I refer to Mr. Jonathan Dwight’s valuable paper on “The Horned Larks of North America” in “The Auk” for 1890 (p. 138—160).


The Pallid Horned Lark, *O. alpestris leucolæma* Stejn., inhabits the interior of British America and Alaska, and is found in the western United States in winter.
The Prairie Horned Lark, *O. alpestris praticola* Henshaw, occurs in the upper Mississippi valley, from Minnesota, Wisconsin, Michigan, and Ontario south to Kansas, Missouri, Illinois, Indiana to Vermont, etc. It winters south to South Carolina and Texas. This is the Horned Lark which I found breeding from Wisconsin to south-western Missouri.

The Desert Horned Lark, *O. alpestris arenicola* Henshaw, is a resident of the Great Plains and the Great Basin.

The Texas Horned Lark, *O. alpestris giraudi* Henshaw, is found in eastern and south-eastern Texas.

The Mexican Horned Lark, *O. alpestris chrysolaema* Stejn., represents the type in the coast district of California and in different parts of Mexico.

The Ruddy Horned Lark, *O. alpestris rubea* Henshaw, inhabits the Sacramento and San Joaquin valleys of California, while the Streaked Horned Lark, *O. alpestris strigata* Henshaw, is found in the coast regions of British Columbia, Washington, and Oregon, and the islands off the coast of southern California.

The Scorched Horned Lark, *O. alpestris adusta* Dwight, is distributed over southern Arizona and New Mexico, western Texas and southward into Mexico.

The Dusky Horned Lark, *O. alpestris merrilli* Dwight, is a bird of eastern Oregon, Washington, and British Columbia, between the Cascade and the Rocky Mountains.

The Sonoran Horned Lark, *O. alpestris pallida* Townsend, is a bird of Lower California and Sonora.

**DESCRIPTION** of the most common form, the Prairie Horned Lark: Above, ashy-drab, vaguely streaked with dusky brown; outer tail-feathers, black, outermost edged with white; throat and superciliary line, pale yellow; large black crescent on the breast and a smaller one under the eye; underneath, whitish. The lengthened feathers above the ear form two slight "horns."

Length, 7.12 inches; wing, 4.16; tail, 2.99 inches.
TYRANT FLYCATCHERS.

Tyrannidae.

Among our native birds there are few who play such an important part in the landscape as the Tyrant Flycatchers. Some of them belong to our most beautiful and familiar species. Few birds are more conspicuous in the neighborhood of man than the Scissor-tailed Flycatcher, the Kingbird, and Phoebe, and to some extent, at least, the Great-crested Flycatcher and the Wood Pewee. All these birds are of immense service to man, as they subsist entirely on all kinds of insects which are invariably captured in the air. The structure of the bill is admirably adapted for this purpose; "the broad and deeply fissured mandibles form a capacious mouth, while the long bristles are of service in entangling the creatures in a trap and restraining their struggles to escape. ... The shape of the wings and tail confers the power of rapid and varied aerial evolutions necessary for the successful pursuit of active flying insects. A little practice in field ornithology will enable one to recognize the Flycatchers from their habit of perching in wait for their prey upon some prominent outpost, in a peculiar attitude, with the wings and tail drooped and vibrating in readiness for instant action; and of dashing into the air, seizing the passing insect with a quick movement and a click of the bill, and then returning to their stand.... Depending entirely upon insect food, the Flycatchers are necessarily migratory in our latitudes; they appear with great regularity in spring, and depart on the approach of cold weather in the fall.... The voice, susceptible of little modulation, is usually harsh and strident, though some species have no unmusical whistle or twitter. The sexes are not ordinarily distinguishable, and the changes of plumage with age and season are not ordinarily great. The modes of nesting are too various to be collectively noted. The large kinds of Flycatchers are unmistakable, but several of the smaller species, of the genera Sayornis, Contopus, and especially Empidonax, look much alike, and their discrimination becomes a matter of much tact and diligence." (Dr. Elliott Coues, "Key to North American Birds.")
1. MILVULUS FORICATUS Swain.  — SCHEERENTYRANN.  — Scissor-tailed Flycatcher.
2. CARDELLINA RUBRIFRONS Selat.  — MASKENSÄNGER.  — Red-faced Warbler.
3. EMBERNAGRA RUFIVIRGATA Lawn.  — TEXASFINK.  — Texas Sparrow
4. AURIPARUS FLAVICEPS Bred.  — GOLDEISE.  — Verdin.
The family comprises the following genera:


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**SCISSOR-TAILED FLYCATCHER.**

*Milvulus forficatus Swainson.*

**PLATE XXXII. FIG. 1.**

The fourth of March, 1879, was the first of many delightful days spent in Lee Co., Texas. Although rather dry and often oppressively warm in summer, the climate of this locality is very beautiful in autumn and winter, and especially in spring. Words are not able to give a definite idea of the soft and mild air and of the exquisite carpet of showy flowers, which cover the ground of the prairies and post oak woods in March, April, and May. The topography is rather varied. The upland woods consist mostly of post oaks of medium size, while in the bottoms of creeks giant forest trees abound. These bottom woods, where the trees are densely festooned with Spanish moss, are the chosen home of the very numerous and beautiful Swallow-tailed Kite. In the post oak woods adjoining these bottom lands most of the trees are covered with "old man's beard" (*Usnea barbata*), a long light green lichen with fine hair-like filaments. In these lichens Parula Warblers breed abundantly, and Acadian Flycatchers are also found nesting in them. Forests alternate with rolling live-oak prairies, often edged and interrupted by a dense growth of small mesquit trees, which, like the live-oak bosquets, form quite a feature in the landscape. Thickets abound everywhere in the lowlands, along fences, and on the banks of the creeks, forming most congenial haunts for White-eyed Vireos and Chats, which I have nowhere found so abundant. Many of the smaller trees on the woodland border are densely covered with mustang grape-vines. On the edges of fields and in pastures the grotesque supple Jack1, smilax and other climbers, viburnums, buck-thorns2, persimmons, white-thorns, etc., form tangled masses of green difficult to penetrate. In spring and summer these thickets are the favorite haunts of Cardinals and other bush-loving species, and in winter they are excellent abiding places for Tow-

1 *Berchemia volubilis.* 2 *Bumelia lanuginosa.*
SCISSOR-TAILED FLYCATCHER.

hees, White-throated and White-crowned Sparrows, and other winter-sojourners. In rocky places mountain cedars (*Juniperus occidentalis*) form dense and often very extensive thickets. It is here where the rare Golden-cheeked Warbler and the Black-capped Vireo find their true home. The farm-houses are not situated on straight-lined roads, being promiscuously scattered over the prairies and woodlands, usually in places where the soil is particularly well fitted for tillage. Peach orchards are common near farm-houses. A few fig and pear trees and pomegranate bushes close the list of fruits. The China tree or "pride of India" is the most common shade tree. The mulberry, the honey-locust, armed on trunk and branches with terrible spines, and the paper mulberry are also planted for shade. Roses, the climbing Noisettes as well as the deliciously scented tea roses, and less often the hybrid perpetuals or June roses, are the most common ornamental shrubs. In some gardens we may find a few dense mountain cedars, several species of arborescent yuccas and cacti, a few Cape jasmines, crape myrtles (*Lagerstroemia Indica*), pittosporums, and privets.

In no part of our country have I found bird-life more abundant and beautiful than in Texas, and especially in the locality alluded to in the foregoing. In winter the thickets of the woodlands, the weeds and grass in the fields, and even the larger gardens swarm with northern birds, who find here a congenial winter home. Nowhere have I found so many interesting migrants, and nowhere the woodlands and gardens were so replete with songbirds. From January to July the loud and melodious *wee-do, wee-do* of the Cardinal is almost constantly heard. The far-famed Mockingbird, the "king of song," chants its inimitable notes day and night in the heyday of spring. The elegant Blue Grosbeak, the richly colored Painted Bunting, the cheerful Orchard Oriole, the amiable Bluebird, the playful and brave Martin, the ever active and gay Carolina and Bewick's Wren, the noisy Tufted Titmouse, the vocal Lark Sparrow are the chief performers in the spring concert of garden-loving species. The Kingbird, usually seen in some topmost bough of its favorite tree, the honey-locust, is acting as a guardian and sentinel. Woe to every robber who dares to enter its domain! Wherever the country house is surrounded by large oaks, we are sure to find also the Crested Flycatcher and Wood Pewee, the Brown-headed Nuthatch and quite a number of Woodpeckers.

The most interesting and conspicuous bird, however, the most graceful and attractive of all, is the SCISSOR-TAILED FLYCATCHER, an abundant summer sojourner in all parts of Texas, being particularly common in the region described. I found it everywhere abundant from Houston to New Braunfels and San Antonio, its favorite haunts being the mesquit prairies, live-oak bosquets, cultivated lands in the post-oak woods and even door-yards and peach orchards. It is a glorious bird of singular beauty. The deep impression this Flycatcher made on the mind of the rather rough and weather-beaten early settlers is signified by the names which they have bestowed upon it. They called it the "Texan Bird of Paradise," or simply the "Bird of Paradise," and sometimes we hear appellations like "Paradise Flycatcher," "Paradise Bee Martin," and "Paradise Forktail." All these names were given to it in consequence of its great beauty and graceful flight. And, indeed, it is one of the most characteristic and beautiful birds of Texas, many bird-lovers even asserting that it is not rivalled by any other North American bird in beauty, grace, and elegance. It is made especially conspicuous by its long, forked
tail, the external feathers of which are twice as long as its body. The prevailing color of its upper parts is a soft light ash, and the back is faintly streaked with brick-red. The under-parts are whitish, slightly tinged towards the tail with vermillion, which changes into rosy-red under the wings. The sides of the breast and the fore-arm are dark vermillion. The long rosy-white tail-feathers are broadly tipped with black. The effect of this peculiar coloration is increased by its great activity and its playful disposition, its gyrations and evolutions in the air. Moreover it is a very familiar and abundant bird, as bold and courageous as the Kingbird, and very confident, never seeking to hide, but always ready to display its full beauty.

The Scissor-tailed Flycatcher is one of the characteristic birds of Texas, but it is not confined to that State, being found northward to Oklahoma, the Indian Territory, and Kansas, and south through eastern Mexico to Costa Rica. In the northern part of its habitat it is not very numerous. It is said to occur also in south-western Missouri, but during a five years' residence in the Ozark region I have never observed it.

The Texan Bird of Paradise arrives in Lee County and at Houston rarely before the last week of March, and at Caddo, Indian Territory, Prof. W. W. Cooke observed its arrival on April 11. In 1879, when the season was rather late, I noticed the first one on the 2nd of April. It was a beautiful day, and the song of the Mockingbird and numerous Cardinals fell constantly on my ear while I was sauntering through a cotton-field. Everything was new to me and attracted my attention. While listening to a bird concert as never heard before, I saw a strange bird entirely new to me. It flew through the air and evidently carried a long straw or a bunch of grass. After the bird had flown a short distance, it descended head downward in a perpendicular way, and now I saw that it was its long tail which I had mistaken for nesting material. While flying down its long tail expanded and closed in a scissor-like shape. The bird alighted not far from me on a dry cotton-stalk and I was surprised by its unique beauty. It opened and closed its long tail constantly and uttered a few rather harsh twittering notes, not unlike those of the Kingbird. A few moments later a second one appeared, perhaps its mate, and perched on a dry cotton-stalk near by. Both uttered their chattering notes, and I could admire the great elegance and gracefulness of these charming birds at pleasure. After they had rested for a few minutes, the one took wing, whereupon the other followed immediately. Now they began such a beautiful play in the air as I never had seen before of any other bird. Evidently one was in pursuit of the other. They flew up and down, to and fro, and always the long tail played an important part in these eccentric gyrations. Both made the same motions, both were in the same happy mood, and both descended again almost to the ground, over which they glided in a rapid manner until they alighted on some dry cotton-stalks. This playing in the air and resting on dry branches or stalks is continued throughout the day from their arrival until they depart in fall. In beauty and conspicuousness they surpass all other birds found in Texas, but their superiority is not owing so much to the brilliancy of their plumage (for in this respect they are excelled by the Cardinal and Painted Bunting), but to the inimitable grace and charm of their flight. This flight always attracts our attention and arouses our enthusiasm. Often we see one fly, or rather float, in pursuit of insects, and then descending perpendicularly it alights on some object from which it has a good view in
all directions. The chattering notes are uttered when flying as well as when perched on some projecting dry branch. They are higher in pitch as the Kingbird's, and though not harmonious, they are not at all unpleasant. Such was my first acquaintance with the Scissor-tailed Flycatcher.

This strange and beautiful bird is a great charm of the landscape wherever it occurs. This holds true especially of the small mesquirt prairies alternating with post oak woods and of the cultivated lands where isolated trees are found promiscuously. In such localities it is an abundant inhabitant. I do not know another bird that imbues its haunts with such peculiar charm as the Scissor-tailed Flycatcher. Owing to its beauty, liveliness, elegance, and confidence in man it is one of the familiar birds of Texas and an especial favorite with the country people.

This Flycatcher likes to associate with members of its own species, and wherever one pair has chosen its haunts we may be sure to find others in the vicinity. Although the males are rather pugnacious on their arrival from the South, and are often seen chasing each other, they all live in good neighborly peace when they have paired. They never attack each other like many other birds do. Frequently we see two or three and four males chasing each other through the air, but this is done in a rather playful manner, the birds exhibiting at such times their greatest elegance and gracefulness. When descending they execute this performance very rapidly and in a perpendicular flight. Having almost reached the ground, they often circle around in wild flight. Sometimes they fly one above the other, and then again side by side, until alighting on dry cotton stalks or on the top of some isolated tree. While resting, the long tail-feathers, which play such an important and striking part in the life of this bird, are constantly in motion. At the same time the bird often cleans the feathers with its bill, especially under the wings, or it is on the alert for insects which are invariably captured while flying. Constantly the positions are changed, for the bird rarely sits long on one place, like its relative, the Kingbird, and it seldom returns to its old perch. We may observe the happy bird for hours as it plays in the air, or circles around near the ground, or rests and preens its feathers. I never became tired of the ever graceful, ever elegant and beautiful, and ever happy and playful Flycatcher, though I have often observed it for hours.

On the ground the motions of the Scissor-tailed Flycatcher are very awkward and slow, and it only ventures to alight on it when collecting nesting material. I never saw it drink or taking a bath, although I always placed a trough with water in my garden during the warm and dry summer months, so that the birds could quench their thirst. Most of the feathered garden inhabitants, and also those of the adjoining woodlands, came to drink and they also took their bath, but never the Scissor-tailed Flycatcher. Though an expert flyer, it avoids, if possible, to cross large treeless tracts. Evidently its flight is heavy and not very rapid when proceeding in a straight line. In the branches of trees it is not at home, extensive woods and thickets also being avoided. It preferably perches on dry cotton stalks, fence and telegraph posts, and on dry branches or in the tops of small trees.

About four weeks after their arrival the birds begin to build their nests. Near Houston (Tex.) I found it in the exterior branches of live-oaks and on isolated trees on
the prairie as well as on the borders of woods and in orchards and gardens. In this part of the State it is usually placed in trees densely festooned with Spanish moss, where it is almost impossible to discover. I also found it in broad evergreen magnolias and in honey-locusts planted for ornament near the houses of the country people. In some cases Orchard Orioles, Painted Buntings, and Mockingbirds had their nests in the same trees, and all lived in perfect harmony. In Lee County I found this bird much more numerous than farther east. How abundant these beautiful birds were in that locality, is shown by the fact that I discovered in one year fifty nests on an area not more than four miles in diameter. Preferably the nests are placed in middle size mesquit trees, which are thorny and not very densely leaved. The structure is, however, also found in honey-locusts and mulberry trees, and in orchards they often choose peach and pear trees for this purpose. All the nests were placed from six to twelve feet from the ground, but sometimes they are placed from twenty to thirty feet high. I found the birds as familiar and confident as the Kingbird at the North. Male and female are mutually employed in the construction of their domicile. In south-eastern Texas the soft, gray Spanish moss forms the main part of the structure, the cavity being lined with grasses and cotton. Farther west all the nests examined by me were built of a soft, wooly plant (Evax prolifera), which grows abundantly on the edges of the forest and on the dry prairie. This white, wooly material forms the foundation and gives the whole structure a firmness and substantiality not found in nests built of other material. The interior is made of fine plant-stems and grasses, and the lining consists of cotton, hair, or feathers, or sometimes of wool. The nest is never hidden, and I think the birds do not even make the attempt of concealing it. It is always easily discovered. The first nest was found by me early in May and the last set of fresh eggs as late as July 4. Two broods are raised annually by most pairs. The eggs, usually five, sometimes four and six in number, are creamy-white, marked with a few dark brown spots, and occasionally a purple dot, chiefly near the larger end. They reminded me, when I first saw them, of the eggs of the Kingbird.

The female hatches the eggs alone, the male keeping watch near by, playing in the air alone or with a neighbor, or securing food for his mate. Being as brave and bold as the Kingbird, he drives away every flying robber who approaches his domain. When I inspected the nest the old birds circled around, uttering rather anxious notes and showing great distress, but they never tried to attack me. The young are fed exclusively with flying insects, such as moths, all kinds of diptera, grasshoppers, beetles, and locusts, and these insects constitute the food of the old ones also. Bees, wasps, and bumble bees are rarely captured. Berries and small fruits are not eaten. A more beneficil bird than the Scissor-tailed Flycatcher is scarcely imaginable, and it therefore should find the protection of man always and everywhere.

After the young are able to shift for themselves they congregate into large flocks and are at that time until their departure by the middle of October mostly found in the cotton-fields, where they create a great havoc among the moths of the very destructive boll-worm (Heliothis armigera) and cotton caterpillar (Aletia argilliacea).

KINGBIRD.

Tyrannus tyrannus JORDAN.

Plate XXX. Fig. 3.

Our way leads us through the orange region of peninsular Florida. It is a beautiful April day. Near the borders of the lowlands the flowering magnolias are very conspicuous, and in marshy soil dense masses of andromedas are covered with their exquisite waxy-white, honey-scented blossoms. This region has been settled scarcely ten years ago, and most of the land is still covered with long-leaved pines, stunted oaks, and thickets of saw palmettos, gopher root¹, huckle-berry bushes, erythrinas, yuccas², etc. Where the pine and hardwood forest has been cleared, the golden orange glows among the dense dark green foliage. Bananas and pine-apples, cassava and guaves grow now, where once wild flowers of great beauty carpeted the white, sandy soil. Nothing, however, is likely to attract our attention more than the many large and small lakes found everywhere. Fed by subterranean springs, these lakes have neither an inlet nor an outlet. The water is clear and pure, and in the immediate vicinity of many of these lakes the vegetation is more luxuriant, owing to the better condition of the soil and the constant moisture. Sweet and red bays, live and water oaks, black and sweet gums, the holly and Dahoon, as well as magnolias and palmettos congregate in such places, constituting the so-called hammock woods. Many of the trees are covered on the trunks and larger boughs with air-plants³, orchids⁴, and ferns⁵. Climbers are common and very troublesome if we attempt to explore the interior of these woodlands. The cabbage palmettos⁶, growing singly or in groups, often show underneath their beautiful crown of leaves a wreath of parasitical ferns⁷. These palmettos impart a decidedly tropical aspect to the landscape. As yet we find most of the houses of the settlers enclosed with orange and pomelo trees. Of late years ornamental and shade trees have been planted extensively in some gardens. Magnificent palms of different species are swaying their enormous fan-like or plume-

¹ Chrysobalanus oblongifolius. ² Yucca filamentos. ³ Tillandsia bracteata, T. utriculata, T. juncea, T. Bartramii, T. capstone. ⁴ Epidendrum conopeum and E. venosum. ⁵ Polypodium leianum, Vittaria lineata. ⁶ Sabal palmetto. ⁷ Polypodium aureum.
shaped fronds in the air. Magnolias, cypresses, retinisporas, cedars, and araucarias, oleanders, grevilleas, banana shrubs, jacarandas, tecomas, allamandas, tea shrubs, camellias, and camphor trees have been planted largely, besides climbers and bamboos. A few years hence these trees and shrubs will make the gardens of this region the finest of the country. During the day crinums, spider-lilies, and hedychiums perfume the air, and at night the night jasmine (Cestrum Parqui) exhales a strong and delicious fragrance.

Birds are not found in this part of the country in such abundance as in Texas and farther north. The reason for this peculiar fact is not clear to me. The Mockingbird is a regular tenant of all the orange groves, and so is the Loggerhead Shrike. One of the most common birds near the houses in Florida is the Kingbird, also known as the Bee Martin and Tyrant Flycatcher. It is the sentinel and guardian of all the small birds and the poultry here as in the North and East, being as conspicuous in the orange trees and magnolias of the South as it is in the apple trees and locusts in the North. Though having observed this familiar bird since my earliest childhood in Wisconsin, and later in Illinois and thence southward to Texas, I have never noticed it display such a courage and pugnacity as in Florida. The audacious boldness with which it attacks birds of prey and other robbers far superior to it in strength, the pertinacity with which it continues its assaults, its reckless and unequalled bravery with which it maintains the unequal struggle, and its singular confidence in man, have always commanded the admiration of even the indolent and indifferent observer. I have often seen it attack Crows and Hawks in the North, but in Florida I noticed its struggles with the majestic and royal Bald Eagle, a very common bird in Florida, often committing great havoc among the poultry. Wherever the Kingbird has settled, no robber ventures to enter its domain. In boldness and bravery no other bird equals it. It is the hero, the king among birds, and its common name is therefore well founded. Cowardice is unknown to this characteristic bird. In its combats with the largest Eagle and the most furious Hawk it always returns victorious.

In order to assure us of the Kingbird's bravery and pugnacity, we shall watch more closely the pair breeding in the top of an orange tree near the house. There, on yonder top of a magnolia, or on a dry branch of a mulberry tree near by, the male is on his guard. His shrill twittering notes are almost constantly heard. The feathers of his crest stand erect. The sharp eye as well as his proud attitude convince us that the bird is ready to meet an enemy at any time. His rapid flight, his quivering and sailing from one tree top to another, and his sallying up and down in the air signifies his superiority on the wing. A few twittering notes are uttered, and the female is on his side. The bird trembles from excitement. Far in the distance, only noticeable as an obscure spot, a Bald Eagle approaches. Slowly he comes near and nearer. With exquisite majesty the "king among birds" overlooks his domain. Long before our eyes discover the robber the Kingbird has perceived him. The latter is perfectly silent, but we notice his excitement. In powerful flight the enemy circles through the air, soon coming within the range of the Kingbird, whose time has now come. He rushes out to meet the giant. In a few moments he is near him. Nothing can be more striking than the intrepidity with which he pounces down upon the Eagle. Mounting in the air high above, he pounces down upon his back and head, furiously pecking and striking
the exposed parts of the robber. The victim turns his head from one side to the other to escape the blows, he flies up and down in powerful motions in order to get rid of his little tormentor; he darts down like an arrow; but all in vain. The Kingbird only leaves him for a moment to descend again and again with the same unrelenting animosity. He often drives him for miles, and in these encounters always returns conqueror. With far-sounding, triumphant cries of victory, in proud and audacious attitude, and quivering incessantly with his wings, he returns to his old spot. The female also frequently takes part in these encounters.

The Kingbird is a valuable guardian of the farm-yard. None of the Hawks or other flying robbers dare to venture into the domain of this bird without being severely punished. Nothing in the air escapes its attention. The large birds of prey do not utter a sound when assaulted, but the Blue Jay screams in the most pitiable manner. The coward does not know where to seek refuge, and it scarcely has the courage to leave the safety of the thickets, when the Kingbird is near. The pilfering Crow also seems to be in great fright when attacked by a Kingbird. Being a very sagacious and bold robber, the Crow plunders the nests of the hens in the barn-yard and captures the young chickens, when unmolested by this guardian. The latter is really the sentinel and protector of the farm-yard, and its services are highly appreciated by the country people. Being always victorious in its combats and fights in the air, it is not well equipped to assault its enemies in dense trees or bushes. The injurious birds of prey are well distinguished from those of a harmless nature, the Turkey Buzzards, for instance, being never molested.

Writers of natural history have frequently accused the Kingbird of a quarrelsome disposition towards all other birds. It is a fact, however, that it is entirely harmless as far as our small songbirds are concerned. Although by no means a large bird, it is gifted with a degree of courage that would do justice to the largest of our feathered tribes. Being remarkably quick upon the wing, it becomes a formidable enemy to such of its neighbors as have the temerity to encroach upon its domain. During the nesting time its jealous disposition is most apparent. While the female is occupied with her domestic affairs, the male is ever watchful for the appearance of intruders and robbers, and any attempt by birds of the latter group to enter his nesting range, is repelled with much bitterness. In all cases, however, robbers and thieves are the only objects of his animosity. Whenever they make their appearance, he sallies forth to give them battle. Small and harmless birds are never harassed and therefore his names Tyrant and Tyrant Flycatcher are very unjust. I have repeatedly found other birds nesting in the same tree with the Kingbird, and all were in perfect harmony. Near my house in south-western Missouri a pair of Kingbirds nested in the top of a small black jack oak. A Robin had its nest in the same tree, and scarcely six feet from the Kingbird's nest the cozy cradle of the Orchard Oriole was suspended. The twittering of the Kingbird was heard all day long in fine weather, and in delightful excitement the male was flying in a quivering way from one tree-top to another. Catbirds, Thrashers, and Bluebirds nested near by and even a colony of Martins was present, though it is said that with them the Kingbirds are usually not on good terms. In this case all were evidently united by amity and mutual good-will. All seemed to have the feeling
KINGBIRD.

of perfect safety under the special guardianship of the Kingbird. In northern Illinois I found the nests of the Robin and the Baltimore Oriole, and in another case that of the Red-eyed Vireo and the Yellow Warbler on the same tree which had been selected by the Kingbird as its nesting quarters.

The Kingbird arrives in northern Illinois and Wisconsin rarely before May 10. In south-western Missouri I noticed its appearance from the 15th to 20th of April, and in south-eastern Texas usually by the end of March or the beginning of April. During the first few days after its arrival it is silent, but as soon as it has become accustomed to its old haunts its twittering is heard on all sides. Subsisting on flying insects almost exclusively, it does not appear until the weather has become warm. Its range of distribution is very large, being found as a summer sojourner from Texas and Florida north to the Saskatchewan, and from the Atlantic to the Rocky Mountains, and even, though rather sparingly, to the Salt Lake Basin, the Truckee, and Puget Sound. In winter it is found in Cuba, Guatemala, Honduras, Panama, and in South America.

Owing to its abundance and to its confidence in man it is everywhere in our rural districts a familiar bird. One of our characteristic garden birds, a typical American, as it has no family relations elsewhere, it is as common in the North and East as it is in the South. Its favorite haunts are always gardens and orchards, but it may also be found in isolated trees, in fields and pastures and in Osage orange hedges. In the interior of the woods it is never found, and on the prairies it has only settled since orchards and shade trees have been planted. In the North the common locust (Robinia pseudacacia) is given preference as a nesting site, but we may also find the structure in oaks, sugar maples, Lombardy poplars, apple and pear trees, etc.; farther south the honey locust and the Osage orange are favorite nesting sites. In Florida the orange trees afford excellent opportunities to build the nest, and it is sometimes even found in the top of a palm, the upper fronds of which are excellently adapted to watch for enemies and insects. The structure is composed of various materials, grasses, and slender plant-stems, intermixed with wool, plant-down, moss, bits of old leaves forming the foundation, while the interior is lined with cotton, horse-hair, feathers, etc. In Texas a woolly, gnaphalium-like plant enters largely into the composition of the structure, also Spanish moss and cotton. The eggs, usually five in number, are creamy-white, sparingly marked with large spots of rich madder-brown or chestnut, and lilac-gray. At the North only one brood is reared annually, but farther south two broods are often made.

The Kingbird feeds almost exclusively upon winged insects, such as moths, butterflies, beetles, crickets, grasshoppers, etc. Smaller insects are swallowed at once, beetles and grasshoppers are pounded by a few strokes against its perch. The Kingbird is accused by many of feeding to some extent on bees, hence the name of Bee Martin or Bee-bird has been applied to it. Close observers, however, deny the justice of this accusation. I am not able to vouch for the Kingbird's harmlessness in this respect, but having kept bees myself I am prepared to say that the injuries done in this line cannot be large. I have never seen the bird near the bee hives. A boyhood friend of mine, a close observer, who makes bee-keeping his specialty, wrote me that he has always Kingbirds around his home, but that he never noticed any injury done by them. He asserts that only drones are captured and that the workers, provided with a formidable
GRAY KINGBIRD.

weapon, are not molested. This assertion may prove true after all. The Kingbird's alleged injuries in this respect can certainly not be regarded as serious, especially when we consider the fact, that it destroys daily a vast number of noxious insects. Almost all its prey is caught in the air. A dry branch or the top of a scantily foliaged tree are selected as a watch-post. With a jerk it flies up or down, or it dives about with great rapidity. Often it flies slowly from one tree to another with rapid vibrations of the wings, or it soars in a floating way over the orchard trees in pursuit of insects. According to all observers the Kingbirds render a most important service to man by driving away the predatory birds, and moreover by destroying countless numbers of noxious insects. They are said to feed also on various wild fruits, such as blackberries, raspberries, and pokeberries, and those of the cedar, dogwood, sassafras, etc.

Few observers make mention of the concealed, beautifully orange-colored spot on the top of the head. When the feathers of the crest are erected, this color becomes exceedingly vivid and striking, and the whole appears like a showy flower. The purpose of this peculiar color-mark seems clear. Doubtless many insects mistake it for a flower, and are captured by the bird while coming near. A large number of butterflies and the small diptera and other insects looking for sweet nectar of flowers are the victims. I have often observed a Hummingbird buzzing around the head of the Kingbird, whether in a quarrelsome disposition or whether mistaking the showy crown-spot for a flower I am not able to say.

The migration to the South takes place early in September. By the fifth or sixth of that month all have left Wisconsin. By the beginning of October they have left southern Missouri. As the birds are very silent after August 15, it is not an easy matter to notice their southward journey. They move in loose flocks consisting of from ten to twenty-five individuals.

The Kingbird is easily kept in the cage if attended with care. Its main food should consist of a diet of Mockingbird-food and crated carrot, hard-boiled egg cut in small pieces, meal-worms, grass-hoppers, ant's-eggs, etc.

NAMES: KINGBIRD, Tyrant, Tyrant Flycatcher, Bee-bird, Bee Martin.—Königsvogel, Königstyrann (German).


DESCRIPTION: Tail, slightly rounded, bordered white. A concealed spot on the crown, orange or vermilion-red. Upper parts, dark bluish-ash. Lower parts, pure white, tinged on the sides of the throat and across the breast with bluish-ash. Wings, dark brown; the greater coverts and quills edged with pale rusty. Upper tail-coverts and upper surface of tail, as well as upper part of head, glossy-black.

Length, 8.50 inches; wings, 3.70; tail, 3.70 inches.

GRAY KINGBIRD.

Tyrannus dominicensis Richardson.

This species is especially common in the West Indies, but it also occurs in Florida, where it inhabits preferably the mangroves of the coast region. According to Mr. W. E. D. Scott it arrives at Tarpon Springs, Fla., April 23, and the birds are common until late in September. It breeds in great numbers on the Keys off the coast, choosing particularly localities covered with mangrove.
On May 28, 1885, Mr. Arthur T. Wayne found a nest of this species near Fort Moultrie, Sullivan's Island, S. C. It was built in a silver-leaf poplar, only a few feet from a dwelling house. On May 30, 1894, Mr. Wayne succeeded in finding another nest in the same locality. It was built in the top of a small live oak about twenty feet high. The frail structure was composed of sticks, jasmine vines, and was lined apparently with oleander roots. One article in its composition which is quite curious was a long piece of fishing cord. The nest contained two eggs. All specimens observed in South Carolina were found on this famous island—a favorite summer resort for the people of Charleston.

This is the Gray Petchary described so vividly in Mr. Philipp Gosse's "Birds of Jamaica." In the West Indies it seems to have a predilection for large palms near dwellings. Probably it will become more abundant in the gardens of Florida, when the many palms planted for ornament have attained larger size. In all its habits it closely resembles the common Kingbird.

**DESCRIPTION:** The upper parts of this Kingbird, including the top of the head, plumbeous-gray; wing-coverts and upper tail-coverts without rusty or buffy margins.

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**ARKANSAS KINGBIRD.**

_Tyrannus verticillat_ Say.

According to the observations of Mrs. Sophia Zimmermann, this Kingbird is the exact counterpart of the eastern species, which it represents in California. It is a very common inhabitant of orchards and ornamental plantations, and is as familiar in that State as is the common Kingbird in the East. Its notes are more varied and noisy, the bird uttering them almost constantly when flying and fighting.

Prof. R. Ridgway narrates that these Kingbirds are among the most common and familiar birds of the Sacramento valley and the fertile portions of the Great Basin. They show an excessively quarrelsome disposition, which far exceeds that of the eastern species, for fighting among themselves seems to be their chief amusement. Half a dozen of these birds were sometimes noticed pitching at one another promiscuously, in their playful combats; and when a nest was disturbed, the cries of the parents invariably brought to the vicinity all the birds of this species in the neighborhood, which, as soon as gathered together, began their aerial battles by attacking each other apparently without regard to individuals, accompanying the fight by a shrill twitter, very different from the loud rattling notes of the Eastern Kingbird. The nesting habits, the construction of the nest, and appearance of eggs, are, however, almost perfectly identical.

**DESCRIPTION:** Head, neck, and breast, light ashy-gray, paler on chin and throat; wings, dusky, with indistinct paler border; tail, deep black.

_Cassian’s Kingbird, Tyrannus vociferans Swainson_, inhabits Mexico, being common north to Los Angeles, Cal. According to Dr. Elliott Coues it is an abundant summer resident in Arizona, having also been found on the Pecos, in Texas. It is said to be a constant resident in southern California as far north as Los Angeles, and to be more noisy than its congeners. It does not differ materially in habits and nesting from the
common species. This can be said also of Couch's Kingbird, *Tyrannus melancholicus couchi* Coues, which has been found by Major Chas. Bendire near Tucson, Ariz., and by Mr. Geo. B. Sennett on the lower Rio Grande, in Texas.

The Derby Flycatcher, *Pitangus derbianus* Sclater, is a bird of Mexico, crossing our border on the lower Rio Grande, where it has been observed by Mr. Geo. B. Sennett. This beautiful and interesting bird in flight resembles the Kingfisher. The nest is very bulky, dome or oven-shaped, with the entrance on the side. It is composed of coarse straws, lichens, etc., lined with finer materials, and is placed in thorny trees. The eggs are buffy-white, speckled and spotted, chiefly on the larger end, with madder-brown and purplish-gray.

Giraud's Flycatcher, *Myiozetetes texensis* Sclat., a bird of Central America south to Colombia, and north to northern Mexico, is said to occur sometimes in southern Texas.

The Sulphur-bellied Flycatcher, *Myiodynastes luteiventris* Sclater, is a rare bird of southern Arizona, its real home being Mexico, south to Panama.

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**CRESTED FLYCATCHER.**

*Myiarchus crinitus* Cabanis.

Plate XXXIII. Fig. 1.

The post oak woods of Texas cannot compare in beauty with the forests of Wisconsin and Michigan. Consisting almost exclusively of medium-sized post oaks, they show a rather monotonous appearance. Gurgling springs and rippling brooks are nowhere found. The character of these woodlands is open, and the soil is not very productive. These localities, however, have one advantage over those of more northern regions. They display a wonderful variety of showy flowers in spring and summer. Indeed, the ground often seems to be transformed into a veritable flower garden. Many of the high-prized flowers of the present day, adorning the gardens of all civilized nations, have originally been found wild in the post oak woods. The most striking of them all is the common phlox (*Phlox Drummondii*), which covers in spring large tracts of land. It is a sight ever to be remembered when you see hundreds of acres covered with these gorgeous red flowers. This phlox grows most luxuriantly and flowers most profusely where the ground is of a sandy nature. In places where the soil is of a deeper black color and moister, we may find the less showy, though very beautiful common coreopsis (*Coreopsis tinctoria*). The graceful *Gaura Lindheimeri*, another garden favorite, with its slender arching wands scattered over with light airy blush or white blossoms, also grows luxuriantly in these woods. The standing cypress (*Gilia coronopifolia*), a flower of striking beauty, grows often together in groups. The plant attains a height of from two to four feet, its plume-like stem closely beset with delicate fringe-like leaves, and bearing at the
CRESTED FLYCATCHER.

The wood is enamelled with flowers, and though most of them are not so well known as the foregoing, they are no less beautiful. A dwarf spiderwort, with tuberous roots and rosy-red flowers, exhaling the fragrance of the heliotrope, grows abundantly in the sandy soil. The yellow zephyr flower and several species of "rain flowers" spring up as if by magic after a heavy rain. Cacti of different species are common plants of the post oak region.

Bird-life is more conspicuous and abundant in these woodlands than farther north. The neighborhood of my cabin, near West Yegua Creek, was fairly swarming with birds, and I shall never forget the inimitable bird concerts heard day and night in the beautiful days of spring, in 1881 and 1882. It would be a long list should I attempt to mention the names of the different performers. All the birds seemed to strike happy chords, save the Wood Pewee, whose plaintive call-note never ceased, and the still more characteristic CRESTED FLYCATCHER, an exceedingly melancholic member of the woodland choir. Nowhere have I found this bird more numerous than in the post oak region of Texas. Being naturally a shy and suspicious bird, it appeared to look upon me as a protector, coming fearlessly near my cabin and accepting trustfully one of the bird-boxes placed in an oak.

Its occurrence, however, is not confined to the post oak woods of Texas, being found as far north as the 40° of latitude. It is rare in the North. In Wisconsin as well as in the northern parts of Illinois I have observed it only now and then, and according to our leading ornithologists it is by no means numerous in New England. In southwestern Missouri it is rather common, though exceedingly retired in its habits. Near the Chattahoochee, in Florida, I noticed the Crested Flycatcher to be almost as abundant as in Texas. It ranges from the Atlantic west to Kansas and the Indian Territory. In Lee Co., Texas, I have never seen it before April 1. At Freistatt, Mo., I observed its arrival May 2 in 1883; April 28 in 1884; May 2 in 1885, and April 29 in 1886. In Sheboygan Co., Wis., it scarcely ever arrives before May 20. Wherever the bird occurs it cannot be overlooked by those acquainted with our feathered friends, as its unique plaintive whistling call-note sounds loudly through the forest. Whoever has once become acquainted with these notes, can never forget them. They are as peculiar to this Flycatcher as the mewing sounds to the Catbird, the bob-white to the Quail, and the djay to the Blue Jay. These conspicuous notes sound through the forest throughout the day when the weather is fair. Were it not for its call-notes, the shy and retired bird would scarcely attract our attention, but its loud, long-drawn, and plaintive whistle, sounding like hay-heed, hay-heed, soon betrays its whereabouts. None of our birds utters similar sounds, and therefore they are not likely to be mistaken for any other. Often we hear another whistling call, not quite as plaintive as those described above, reminding us of the Bob-white's familiar sound. Though these notes resound so frequently, we rarely have an opportunity of seeing the bird. It is almost everywhere a shy woodland inhabitant, understanding perfectly well to escape observation, its brownish neutral color being of great advantage in this respect. When perched on a dry branch near dry leaves, it is not readily detected. When approached too closely, it takes wing and swiftly disappears. In this respect it is quite different from the Scissor-tailed

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1 Tradescantia rosea (?). 2 Zephyranthes texensis. 3 Cooperia Drummondii and C. pedunculata.
Flycatcher, the Kingbird, Phoebe, and Wood Pewee, who are all familiar birds and very conspicuous near the abodes of man. In the North I never found this Flycatcher near dwellings, but in the South it gradually loses its shyness, and though not yet seeking man's society, it neither shuns it. I have already mentioned a pair breeding in a nesting box near my cabin in Texas. Others had selected abandoned Woodpeckers' holes in the vicinity. I found not less than five pairs nesting in the neighborhood of my house in spring 1882. In south-western Missouri, where among the black jack oaks few cavities were found, they soon made use of the nesting boxes provided for them. Here the birds were at first exceedingly wild and suspicious. Courage, however, soon gave place to timidity, and confidence to distrust. I am convinced from the facts above stated that these exceedingly useful birds would soon seek man's society if they were protected, and especially if convenient nesting boxes were provided. I never have seen the Crested Flycatcher out of their native forests in orchards and ornamental trees, and I doubt whether the bird ever will exchange the former for the latter.

The Crested Flycatcher makes the impression of being a very melancholic bird. In its notes as well as in its ways and habits this peculiarly sad trait is apparent. Rarely the pair flies in a playful manner through the air. Never does it associate with its kindred. Its mood seems to be distinctly gloomy and lonesome, as if constantly living under a shadow of sorrow. During most of the time each individual leads a very solitary life, having no interest or sympathy with others of the same species. When paired, however, they are very attentive and considerate, and are very devoted to their young. In his haunts, however limited they may be, the male predominates, and no other individual of his own species dares to encroach upon his domain. Other birds are not molested, unless they are reputed robbers, and then they are driven away mercilessly.

Its flight is elegant and swift, being often somewhat prolonged when in pursuit of insects. In this respect it is scarcely surpassed by any other member of the family. When its prey happens to be a large insect, it returns to its perch and beats it against the limb. This I have frequently seen when large moths, butterflies, grasshoppers, and locusts had been captured. While waiting for passing insects, its crown-feathers are kept in an erect position and its notes are often repeated. The elegance of its attitude and the swiftness of its motions, while darting for an insect, are really remarkable.

The food of the Crested Flycatcher consists chiefly of insects of many kinds, which are caught in the air with great facility, skill, and assiduity. It is said that it also consumes berries of various kinds of shrubs and plants, among which those of the poke-weed and the huckle-berry are especially mentioned. In damp and cool weather, when the insects are hidden among and beneath the leaves, it often makes the attempt to force them to leave their hiding-places by touching the branches in their rapid flight.

The nesting habits of this species are very interesting. Being a hole breeder, it usually selects for the construction of its nest old abandoned Woodpeckers' cavities, especially those of the Flicker, the Red-headed and Pileated Woodpecker. In the post oak woods there is no want of such holes. As mentioned already, it also accepts convenient nesting boxes if fastened to forest trees. Near my house in Texas as well as in Missouri I had an excellent opportunity to observe the nesting habits of this peculiar
bird. Male and female, both engage in the work of nest-building. Feathers, a few grasses and bark-strips form the foundation of the structure. The main material, however, which enters into the composition of the nest, is snake-skin. I have examined many nests, but this peculiar substance was always present. Sometimes only a few pieces are found, and in such cases they are mixed with the other material. Sometimes a whole skin is arranged in a circular way around the rim. When the whole skin has been used, few other substances are employed. The birds are very intent upon this material. One morning I found a small snake in one of my Canary cages. The hideous reptile had swallowed both inmates, but after its meal there was no possibility to escape through the wires. The next morning I found the snake coiled up in one corner. It was easily killed, and I threw it a short distance from the house in the garden. Ants soon began their work, and in a few hours nothing was left but the skin and skeleton. Several Crested Flycatchers were anxiously waiting for the skin. They often flew down, trying to carry the snake away; then they alighted on the fence until the ants had finished their work, when they carried off the whole skin. Other ornithologists also have found this material in the nests of the Crested Flycatcher. Probably the skin is used as a protection against the depredations of snakes, who are only too apt to plunder birds' nests within their reach. I have never observed that snakes enter the nests of the Crested Flycatcher, while they destroy those of other birds, where such substances are not employed. The eggs, usually four or five, show a very peculiar coloration. Their ground-color is creamy-white or light buff, "over which are waving lines, marblings, markings, and dots of a brilliant purple, and others of more obscure shading. The lines are variously distributed, generally running from one pole of the egg to the other with striking effect, as if laid on with the delicate brush of an artist. In some eggs the whole surface is so closely covered with these intercrossing and waving lines, blending with the obscure cloudings of lilac, as nearly to conceal the ground. Usually the buff color is conspicuously apparent, and sets off the purple lines with great effect." (Brewer.)

These birds evince great uneasiness if their nest is examined, especially after the young are hatched. The latter are fed with all kinds of flying insects, and they leave the nest when they are about two weeks old. They have a very peculiar and rather unpleasant smell. In early September these birds are seen in large numbers on the edges of woods, especially near cotton-fields, where they are all busily engaged in capturing the moths of the injurious cotton and boll-worms. In Texas they leave late in September or early in October, and in the North none are seen after the first week of September. They always migrate singly, and never assemble into flocks. Their winter home is found in Central America, the West Indies, and, probably, the northern parts of South America.

NAMES: Crested Flycatcher, Great-crested Flycatcher.—Haunbeytrenn (German).


DESCRIPTION: Above, dull grayish-olive; beneath on throat and chest, deep ashy-gray; belly, bright sulphur-yellow. Tail-feathers, mostly chestnut; primaries, edged with the same; outer tail-feathers, edged with yellow; crown-feathers, erectile, often forming a loose crest.

Length, 8.75 inches; wing, 4.15; tail, 3.85 inches.

The Mexican Crested Flycatcher, Myiarchus mexicanus Lawr., is the true counterpart of the foregoing species. It is common in the valley of the lower Rio Grande.
and thence southward to Guatemala. A somewhat larger variety, *M. mexicanus magister* Ridg., is a summer sojourner of southern Arizona. Another species, the **Ash-throated Flycatcher**, *M. cinerascens* Lawr., is found from the eastern base of the Rocky Mountains west to California, south to the highlands of Mexico. It does not differ in its habits from the common eastern species. **Lawrence's Flycatcher**, *M. lawrencei* Baird, is found in the lower Rio Grande valley, south to Guatemala, and a variety, *M. lawrencei olivascens* Ridg., in southern Arizona. This genus is particularly abundant in tropical America; in Mexico alone six or seven species are found.

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**PHŒBE.**
*Sayornis phœbe* Stejneger.

- PLATE V. FIG. 3.

Hark, near by a bird is singing;  
Look, a flower is in bloom;  
New hope in my heart is ringing;  
Spring will soon break winter's gloom.  
Can it be that spring is coming  
Owing to the bird's sweet lay?  
Does a single flower blooming  
Haste the snow and ice away?  

Winter's fetters are unbroken,  
Chill the air and sunbeams few;  
Yet the flower is a token  
And the bird a herald true.  

From the German of Fr. Rückert, translated by Frank Siller.

Most of our familiar northern birds are exceedingly shy and retired in their southern winter home. Robin, Bluebird, and Goldfinch rarely visit gardens, and the Catbird, Thrasher, House Wren, and Song Sparrow do not leave the underwood of the forest without urgent cause. The friend of Nature, who for the first time spends the winter in Florida, is surprised to find his favorites from the North so timid and retired. They scarcely dare to show themselves, being always very suspicious. Although the dense thickets swarm with northern birds, most of them avoid the immediate vicinity of man. There is only one of the familiar northern birds, who does not lose its confidence in man. This is the Phœbe, also known as the Pewee, Pewit, Pewee Flycatcher, Phœbe-bird, and Bridge-bird, a very abundant visitor of the gardens of the Gulf region.

The breeding range of this Flycatcher extends over the eastern part of North America, west to the Rocky Mountains, and from South Carolina northward to the British Provinces. It is much more frequent and conspicuous, however, in the gardens of the Gulf region in winter, than it is in its northern home during summer. While in its breeding range one pair is confined to a certain locality, quite a number of individuals may be found in one garden in winter. Being very unsuspicious and uttering its peculiar notes for hours, it can scarcely be overlooked by even the casual observer. This holds true especially of the semi-tropical gardens of Florida and south-eastern Texas, where the Phœbes make their appearance late in October or early in November, remaining until the first days of March, when they depart again for their northern home. No other inhabitant of these localities makes itself so conspicuous by its notes as this
Pewee. I have never found it in the forest during my stay in Texas and Florida. It always shows a predilection for large gardens, in which palms and broad-leaved evergreens abound. I have in view a special garden in Florida where these birds were exceedingly frequent winter-sojourners. Glorious evergreen trees and shrubs of the native flora predominate. The Magnolia grandiflora, unrivalled by any other tree, its congener, the sweet bay, the loblolly bay, the red bay, the holly, laurel cherry, American olive, different species of andromedas, live and water oaks, saw and cabbage palmettos, climbing smilax, Carolina jasmine, and other treasures of the native flora convince us that charming ornamental plantations can be formed without the aid of exotic material. In addition to the above named native trees and shrubs the flora of China and Japan is particularly well represented in this garden. Camellias, the common species as well as the fragrant and more graceful sasanqua, the noble banana shrub, exquisite evergreen viburnums, fragrant cleyeras, ternstroemia, sweet and holly-leaved olives, Damnacanthus Indicus, Daphniphyllum glaucescens, Enkianthus quinqueflorus, nandinas, camphor trees, charming specimens of the fragrant Chinese daphne, large specimens of Cape jasmines, pittosporums, Japanese euonymus, rhaphiolepis, euryas, otheras, Japanese evergreen oaks of great beauty, tea shrubs, and many others impart these southern gardens with a charm peculiarly their own. Being very dense, of fine form, and often adorned with deliciously scented flowers and beautiful foliage, they are a wonder to the northern traveller, and a revelation to the friend of Nature. Bamboos and sago palms as well as loquat trees form quite a feature in these ornamental plantations. Palms are the crowning glory of this particular garden. They are represented in many species and in magnificent specimens. Pampas grass forms gigantic clumps, and tree-like oleanders, dense myrtles, and spicy laurels, often of a large size, are beautiful objects. At all times of the year many strictly tropical plants embellish this garden. I can only mention a few, the allamandas, tecomas, pleromas, yellow "oleanders" meyanias, hibiscus, royal poincianas, jacarandas, passion flowers, and bignonias are the most common, but liable to be cut down by a strong frost.

In this garden the Phoebe is a common and familiar bird from the last days of October to the first days in March. It always seems to prefer poetical spots, in the North as well as in the South. Its primitive haunts, before the country was settled, were rocks and cliffs near a creek or spring, and even now we may find it in such places in the wilds of the mountain regions. In Wisconsin I have always met with it near the habitations of man, and while it originally prefers to build its nest on overhanging, moss-covered cliffs, near the abodes of man it selects old bridges, picturesque block-houses, barns and sheds, verandas and piazzas for this purpose. Everywhere it is a familiar and well-known bird, dear to all lovers of Nature. If usefulness, a cheerful disposition, familiarity, and charm of manners deserve our regard, few birds are better entitled to man's friendship. Scarcely any other bird is more familiar than the Phoebe,
who often builds its nest in our out-houses, under verandas and porticos, etc., returning year after year to the same old spot, announcing as one of the first harbingers of spring the arrival of the vernal season. In the days of my youth it was always one of the first birds, who cheered my heart at the approach of spring, its characteristic plaintive notes sounding through the lifeless landscape long before the last traces of winter had vanished. These sweet and rather melancholic sounds are a sure sign of the approach of the most hilarious and charming season of the year. In my native State I have always noticed the arrival of the Phœbe shortly after Robin, Bluebird, and Song Sparrow had returned from the South, usually in the last days of March or early in April. Cold weather and heavy snowfalls are not infrequent at this time of the year. Being almost exclusively an insectivorous bird, it often suffers severely during continuous cold and wintry weather.

Soon after its arrival we observe the bird perched on the top of a barn or stable, on a telegraph or fence post or on a dry projecting branch, uttering at short intervals almost incessantly its rather loud and peculiar notes. The common note, rather loud and plaintive and sounding like phèbé, phèbé, or peewee, peewee, sometimes more plaintive like pe-wait, pe-wait, is most frequently heard. These sounds vary not unfrequently and are often less energetic, being soft and twittering and, though very pleasant, have a slightly melancholy touch. We may often hear a somewhat subdued pe-way-ee, and a song-like phe-be, phe-bee-ee. All these notes are very impressive, and once heard, cannot be forgotten. They are uttered with more force and frequency in early spring, though they are heard throughout the bird’s residence north. It usually has a favorite perch, often the top of a barn, “in which it remains all morning, watching for insects and continually repeating its simple song.” As it sits, it occasionally flirts its tail, and darts out after each passing insect, always returning to the same projecting branch or post. When the young are hatched, the Phœbes become more silent, as they rarely find time to repeat their own names, and later, in the time of moulting, they are almost perfectly songless. While spending the winter in the southern gardens, their plaintive phe-be and pe-wait is almost constantly heard during fine weather. They prefer to perch in the top of a magnolia or a large bush, and often in the arching frond of a palm, where they are watching for insects.

Originally breeding on faces of perpendicular rocks, the Phœbe has changed its mode of nesting entirely in regions where the land has been settled. We rarely find it at present far from human habitations. The social and familiar habits of this plainly colored, modest, and gentle little bird, as well as its confiding trust in man must ever secure for it our affections, and entitle it and its beautiful little nest to our earnest and jealous protection. This bird is always found where flying insects abound. We therefore find it either near water or in the vicinity of man. It preferably selects its haunts near or in the barn-yard, where in the neighborhood of cattle there is always an abundant supply of flying insects.

The beautiful moss-covered nest of the Phœbe is familiar to me since my early boyhood. The first one I found under a bridge in the country road. Ever since that time I have been a friend and admirer of this common and half-domesticated bird. Other nests were found in old block-houses and barns, in stables, under piazzas and
verandas, etc. Sometimes it builds under the roofs in barns in the same way as the Barn Swallows do. Dr. Brewer has known these birds to build on a small shelf in the porch of a dwelling; against the wall of a railroad station within reach of the passengers, and under a projecting window-sill, in full view of the family, entirely unmoved by the presence of the latter at meal-time. From its habit of building under old wooden bridges it has been called "Bridge-bird." In unsettled places its nest has been found in the roots of upturned trees, in caves, and on the face of moss-covered upright rocks. Though not of a pugnacious disposition, the Phœbe does not allow another pair of the same species to locate in its immediate vicinity. With other birds it rarely quarrels, but resists all attempts to encroach upon its domain. Only towards one bird all its courage and bravery proves in vain. This is the plebejan English Sparrow, who has a special fondness for its beautiful mossy nest. Where numerous enough, these tramps drive the rightful owner away, and take possession of its domicile.

The nest, if built on a flat surface, like a beam or pillar, is constructed of a few pellets of mud, intermixed with grasses, bark-strips, the lining consisting almost entirely of fine bark-strips. The whole structure is covered with soft green moss (Hypnum), gathered from the bark of trees. This moss imparts the nest with a striking appearance. When built on a perpendicular surface, it is constructed of small pellets of mud, placed in layers and mixed with flexible fibers and grasses. These layers are placed one above the other, in a semi-circular form, and the outside is covered with moss. The lining consists of fine straws, bark-strips, horse-hair, and sometimes a few feathers. On flat surfaces the nest is circular in form and mud is often not made use of. The eggs, four to five in number, are pure white and generally unspotted. Sometimes a set, sparsely speckled with a dark brownish color, is found. The young are exclusively fed with insects. In many cases two broods annually seem to be reared.

During the last week of September most of the Phœbes leave Wisconsin, moving slowly southward. By the 10th of October I saw them already in south-western Missouri, and by the end of the same month they have reached south-eastern Texas. I conclude this life-history with the following beautiful words of Prof. Robert Ridgway:

"The Pewee or Phœbe is one of that charming coterie of the feathered tribe who cheer the abode of man with their presence. Less numerous than the Chipping Sparrow, the Catbird, the Barn Swallow, or even the Bluebird, there are still few farm-yards without a pair of Pewees, who do the farmer much service by lessening the number of flies about the barn, and by calling him to his work in the morning with their cheery notes."

**NAMES:** Phœbe, Pewee, Common Pewee, Pewit, Pewee Flycatcher, Phœbe-bird, Bridge-bird, Bridge Pewee, Barn Pewee.—Hauspiwi (Germ.).


**Description:** Sexes, alike. "Sides of breast and upper parts, dull olive-brown, fading slightly towards the tail. Top and sides of head, dark brown. A few dull white feathers on the eyelids. Lower parts, dull yellowish-white, mixed with brown on the chin, and in some individuals across the breast. Quills, brown, the outer primaries, secondaries, and tertials, edged with dull white. In some individuals the greater coverts faintly edged with dull white. Tail, brown; outer edge of lateral feathers, dull white; outer edges of the rest, like the back. Tibiae, brown. Bill and feet, black. Bill, slender, edges nearly straight. Tail, rather broad and slightly forked..."

"Length, 7.00 inches; wing, 3.42; tail, 3.30 inches." (R. Ridgway, "Ornithology of Illinois.")
WOOD PEWEE.

Say's Phoebe, Sayornis saya Baird. This is a bird of the western part of the country, from the Great Plains to the Pacific, and from the Saskatchewan south into Mexico. Being the exact counterpart of the eastern Phoebe, I shall only say a few words about it. It was met with by Mr. Robert Ridgway in the arid portions of the Great Basin. In its natural state it prefers rocky shores of lakes and rivers, or similar places in the canions of the mountains, where it attaches its bulky, down-lined nests to the inside of small caves or recesses in the rocks, usually building them upon a small projecting shelf. Wherever man has erected a building in those desert wastes,—as on the stage-stations along the road, or in the mining towns,—it immediately assumes the familiarity of our eastern Phoebe, at once taking possession of any out-building or any abandoned dwelling. Its notes are said to differ widely from those of the eastern species, the common one consisting of a wailing peer, varied by a tremulous twitter, and more resembling certain tones of the Wood Pewee.—Dr. Elliott Coues found this Flycatcher common throughout Arizona, and Dr. Heermann mentions it as abundant in southern California. Dr. P. R. Hoy detected a specimen near Racine, Wis.

DESCRIPTION: The color of the belly of this species is light cinnamon; above, brownish-gray; tail, black. Length, about 8.00 inches.

Black Phoebe, Sayornis nigricans Bonap. This is an inhabitant of Mexico, northward along Pacific coast to Oregon.

DESCRIPTION: Color above, slate-black; belly and lower tail-coverts, white.

Olive-sided Flycatcher, Contopus borealis Baird. This rather rare species inhabits the higher mountain regions of our country, and coniferous forests of the lowlands from the northern border of the United States northward, and south through higher mountains to Colombia, South America. Nests have been found repeatedly in Massachusetts, and it is said to breed in northern Wisconsin. Mr. Brewster found five or six nests in the neighborhood of Cambridge, Mass., all of which were placed in the extremity of some long horizontal branch, usually that of a pitch pine, but on one occasion in that of an apple tree.

DESCRIPTION: The bird resembles the Wood Pewee, but on each side of the rump, generally concealed by the wings, is an elongated bunch of white, silky feathers.

Coues' Flycatcher, Contopus pertinax Cab., inhabits the highlands of Guatemala and Mexico, north to southern Arizona.

WOOD PEWEE.

Contopus virens Cabanis.

Plate XXXIII. Fig. 5.

Opposite my house in this city the grounds of the Milwaukee Hospital extend to the westward. The building stands on a slightly sloping hill, and the ground in front of my house had to be excavated in order to make a level street. The latter lies about eight feet lower than my house, and the hospital grounds on the other side
1. MYIARCHUS CRINITUS Licht. - HAUBENTYRANN - Crested Flycatcher
2. CERYLE ALCYON Bonap - KÖNIGSFISCHER - Belted Kingfisher.
3. CHORDEILES VIRGINIANUS Swains. - NACHTSCHWALBE - Nighthawk.
4. COCCYZUS AMERICANUS Bonap. - REGENKUKUK - Yellow-billed Cuckoo.
5. CONTOPUS VIRENS Cab. - WALDPWI - Wood Pewee.
7. ANTROSTOMUS VOCIFERUS Bonap. - WHIPPOORWILL - Whip-poor-will.
show a steep slope from six to twenty-five feet in height. This slope is covered almost to the level of the street with thickets of the common locust, large trees of which crest the hill above. There are also other trees of medium size and quite a number of ornamental shrubs. Apple trees of rather large size occupy the ground where it fronts to the south-east. Several Lombardy poplars are also present. This comparatively quiet place forms an oasis in the centre of the crowded city for many birds. Goldfinches nest in the apple trees and Baltimore Orioles in the Lombardy poplars or in a noble elm behind my house. Yellow Warblers, Chipping Sparrows, and Indigo Buntings find the dense upright honey-suckles and mock-orange bushes excellent places in which to build their nests. In the large locust trees the beautiful Red-headed Woodpecker has taken up its abode. Its characteristic notes, really poetical in the sweet and flowery days of late spring and early summer, are frequently heard. They sound like hurr-r - r, hurr-r - r, and are unmistakable. In the maple trees the Warbling Vireo chants its peculiarly sweet lay. When the apple trees are in full bloom, there is hardly a more beautiful and lively spot in the city, and the view from the open window of my study, with all this glory of blossoms and birds before my eyes, is truly magnificent. The sprightly ditty of numerous Wood Warblers on their way to the North, and now busily engaged in capturing insects among this wealth of blossoms, falls constantly on my ear. The loud and mellow whistle of the Baltimore Oriole, the charming song of the Rose-breasted Grosbeak, the proud and flute-like carol of the Scarlet Tanager, the happy strain of the Robin, as well as the far-sounding hurr-r - r of the Red-headed Woodpecker, combine to make this May day of mild air and sweet blossoms an especially beautiful one to the friend of Nature. Higher emotions inspire us. We rise early in the morning in order to enjoy all the pleasure now in store for us. In the second week of May the bird-concert in the early morning hours, before sunrise, is so enchanting beautiful that only the early riser can imagine and appreciate its entrancing power on the mind of the listener. Almost all the birds have returned from their winter-quarters, as insect-food now is abundant. In the third week of May even the most delicate summer sojourners make their appearance.

One morning in the third week of May, while standing at the open window of my room, absorbed in listening to the many-voiced spring concert that falls on my ear from across the street, I hear the sweet and plaintive notes of the Wood Pewee. These sounds are so characteristic that they are distinctly heard among the other voices. The burden of sorrow which seems to be never lifted from this ever-lamenting bird, is again brought back from the tropics as in all the former years. Although exceedingly sad and sorrowful, these notes have to me a very pleasing and home-like effect, and I should consider it a great loss should I fail to hear this bird in the concert of the warbling minstrels of the grove. I have listened to the sweet pe-ay, pay-ee, and pe-u-ee in the primeval forest of Wisconsin since my earliest childhood. Later these sounds were heard frequently in the oak-woods of northern Illinois. When I roamed about among the magnolias, laurel and live-oaks, loblolly bays and sweet gums of the coast region of Texas and in southern Louisiana, the familiar Wood Pewee everywhere greeted me as an old acquaintance, and when I took up my abode in the post-oak woods of Texas, this bird was my constant neighbor for at least five months of the year. In the
mountain woods of the Ozarks and southern Alleghanies, in the gloomy forests on the banks of the Chattahoochee and Suwanee, I always heard the Wood Pewee's sorrowful strain. In the dense shade trees and apple orchards of Milwaukee the odd and pleasant notes of this Flycatcher are familiar to all who are accustomed to listen to the song of birds. Its voice is one of the most characteristic and unique that we can hear in the realms of Nature, and once heard it is always remembered.

In the above described grounds, opposite my house, the Wood Pewee is a regular summer sojourner. Its notes have been heard during five successive seasons. In this part of Wisconsin it rarely arrives before May 20, and in south-western Missouri not before May 15. In Lee County, Texas, it usually appears during the last week of April. This late arrival is a sure sign that warm weather will follow, and it also shows that the Wood Pewee is one of our most delicate birds. When in early September the Virginia creeper and the sugar maple begin to assume their bright autumn hues, this Flycatcher leaves Wisconsin for the South, and after October 1 I have seen none in Texas. It winters in southern Mexico, Guatemala, and other parts of Central America.

Its breeding range is a large one, extending from Texas, and probably from Florida, northward to southern Canada, and from the Atlantic to the great central Plains. It takes up its abode preferably in gloomy forests, but it is also found in more open woods, in old apple orchards and shade trees near houses, even in large cities. Woodlands covered with a dense undergrowth of bushes and small trees are avoided. The bird is of solitary habits, and is usually seen on some dry projecting bough in the deep shadow of overhanging branches. Its perch is usually twenty to thirty feet from the ground, but in orchards it sits much lower. The semi-darkness of the woods it is particularly fond of. It is constantly on the alert for flying insects, and we see it frequently sweep at intervals amidst the shade, and hear the occasional snapping or clicking of the bill, which announces the success of its flight. Though it is often on the wing, flying in zigzag lines up and down, to and fro, it is not easily observed in the gloom of the forest, and when it returns to its perch, its sombre and plain color fully protects it from view. The plaintive pe-ay, pe-u-ee, which is constantly heard from early morning till late in the evening, soon betrays its whereabouts, however, and the close observer has not much trouble in studying its habits. I have heard the notes in the darkest woods, as well as in orchards very early in the morning and late in the evening, when it was quite dark. This shows that the Wood Pewee is capable of capturing insects in the feeblest light. In the dimness of the morning and evening hours and in the gloom of the forest many insects, especially all kinds of moths, its favorite food, are very abundant. Its eye is sharp and glaring, perceiving the smallest insect at a considerable distance, and its motions in the air are exceedingly dexterous. While watching for its insect prey, its eyes appear almost as wild as those of the rapacious birds. It only seizes flying insects. I quote the following interesting notes from the writings of Mr. Thomas Nuttall:

"The Pewee is a very expert and cautious Flycatcher, and, as if aware of the drowsiness of insects in the absence of the sun's broad light, he is on the alert at day-dawn after his prey. At this early period, and often in the dusk of evening, for the most part of summer till the middle of August, he serenades the neighborhood of his mansion from three to four or five o'clock in the morning, with an almost uninterrupted
chanting ditty, sweet, but monotonous, like *pé-ay păy-wēe*, *pé-ay păy-wēe*, then in a little higher and less sing-song tone, his usual and more serious *pee-ă-wee*. On dark and damp mornings, this curious warble is sometimes continued nearly to eight o'clock; and the effect of this tender, fulling lay, in the gray dawn, before the awakening of other birds, and their mingling chorus, is singular, and peculiarly pleasing. It is a gratulatory feeling of unmixed and placid delight, concomitant with the mild reviving light of the opening day, and the perfect joy of the mated male, satisfied in every reasonable desire; in short, a hymn of praise to the benevolent Author and Supporter of existence!"

"This species," says Dr. T. M. Brewer, "like all its family, is a very expert catcher of insects, even the most minute, and has a wonderfully quick perception of their near presence, even when the light of day has nearly gone and in the deep gloom of thick woods. It takes its station on the end of a low dead limb, from which it darts out in quest of insects, sometimes for a single individual, which it seizes with a peculiar snap of its bill; and, frequently meeting insect after insect, it keeps up a constant snapping sound as it passes on, and finally returns to its post to resume its watch. During this watch it occasionally is heard to utter a low twitter, with a quivering movement of the wings and tail, and more rarely to enunciate a louder but still feeble call-note, sounding like *pēē-ĕ*. These notes are continued until dark, and are also uttered throughout the season."

In Wisconsin and Illinois as well as in Missouri and Texas I have found the Wood Pewee a very numerous bird. It may be found at present in any open woods or large orchard of old spreading apple trees, often very near a dwelling. The peculiar notes are heard from morn till night, but being not an ostensible bird, it is much oftener heard than seen; and yet it is not difficult to observe, as it remains almost for hours at the same spot, repeating at intervals its sigh. When approached it does not take wing at once, like many other birds, when their foe is near.

"There is a delicious sadness in these notes of the Pewee," says Mr. H. E. Parkhurst, "like a minor chord interposed in the predominating jubilant major strains of the forest choir. It voices the spirit of silent and gloomy woods. A plaintive effect is very rare among the songbirds, which are so generally keyed to merriment. The Goldfinch has an evident touch of it, recurring now and then in a song that is otherwise joyous and like a rippling laughter. One of the charms of the Fox Sparrow, too, is a subtle quality of mournfulness tingeing a melody that is cheerful, if not joyous. But the Pewee's note is like a faint, despairing cry, not so desperate as to agonize the listener, and yet appealing strongly to his sympathies. It appears to be the most disconsolate of all the family, the victim of chronic melancholia. What a contrast to the hilarious disposition of the Ruby-crowned Kinglet," and the House Wren, that bubbles over with songful laughter.

The nest of the Wood Pewee is a model of bird-architecture. It is always built or rather "saddled" on a stout lichen-covered, dry limb, and resembles a mossy protuberance or knot. If not actually betrayed by the birds themselves, it is rarely discovered, and, indeed, with the exception of the ornithologist, few are acquainted with it. It is an elegant structure, rather flat and saucer-shaped, with thick walls, made of bark-strips and grasses and lined with the same material. The exterior is a beau-
tiful mosaic of gray, green, and glaucous crustaceous lichens, so common on the trunks of old trees and fence-rails. Usually the branch to which it is securely attached is also covered with the same kinds of lichens, so that scarcely the trained eye of the close observer can detect it from below. It is three inches in diameter, and one and a half inches high. The cavity is two and a half inches wide and one inch deep. “The eggs themselves are extremely handsome, having a rich but delicate cream-colored ground, and ornamented by a wreath round the larger end of rich madder-brown, purple, and lilac spots.” (Ridgway.) The nest is usually placed from fifteen to twenty feet from the ground, but I have found one scarcely higher than six feet. Many are placed as high as forty and fifty feet. All the nests found by me were built on horizontal limbs, but a few were “saddled” on green boughs of apple trees. Often the domicile is placed in a tree very near a dwelling, but it is rarely discovered by those that are passing to and fro underneath the tree.

NAMES: Wood Pewee, Pewee, Pewee Flycatcher.


DESCRIPTION: “Upper parts, sides of head, neck and breast, dark olivaceous-brown, the latter rather paler, the head darker. A narrow white ring round the eye. The lower parts, pale yellowish, deepest on the abdomen; across the breast tinged with ash. This pale ash sometimes occupies the whole of the breast, and even occasionally extends up to the chin. It is also sometimes glossed with olivaceous. The wings and tail, dark brown; generally deeper than in Sayornis phoebe. Two narrow bands across the wings, the outer edge of first primary and of the secondaries and tertials, dull white. The edges of the tail-feathers like the back; the outer one scarcely lighter. Upper mandible, black; the lower, yellow, but brown at the tip.—Length, 6.15 inches; wing, 3.50; tail, 3.05.” (B. B. & R., II, p. 357.)

WESTERN WOOD PEEWEE, Contopus richardsonii BAIRD. This species is numerous in Arizona and other western States, being found from the Plains to the Pacific coast and north to the Saskatchewan. “Though generally distinguishable from the Eastern Wood Pewee,” says Dr. J. A. Allen, “on comparison of dried skins, it is more easily recognized by the difference in its notes and breeding habits. The nest is built in the forks of a small branch, instead of being ‘saddled’ on a horizontal limb, like that of the eastern bird. It is neat and compact, resembling both in position and general form, that of the Least Flycatcher of the Atlantic States. Its notes are harsh and less varied than those of its eastern relative, lacking almost entirely the plaintive character so distinctive of the latter.”

GREEN-CRESTED FLYCATCHER.

Empidonax virescens Brewster.

PLATE XXXIII. FIG. 6.*

THE small Flycatchers or Empidonaces of this country are exceedingly difficult to distinguish, and even the expert ornithologist is sometimes puzzled while examining a large series of dry skins. Wilson, Audubon, and Nuttall, the founders of American ornithology, were not aware of the existence of four different species in the Eastern

* This bird was formerly known as Empidonax acadicus.
States, and even now these birds are often confounded one with the other by experienced observers. Their size, coloration, and the habit of seizing insects is very much alike, but each species has a very distinct note which is alone sufficient to discriminate among the four species. In their mode of nesting as well as in the selection of their haunts they also show characteristic features. The Yellow-bellied and the Least Flycatcher inhabit the northern part of the country, the first named the swampy dark forest, the latter species the border of these forests and gardens. The Green-crested and Traill’s Flycatcher are mainly found in the central region of eastern North America, the former being an inhabitant of the forest region, the latter selecting particularly the borders of prairie woodlands as well as parks, gardens, and orchards, even in the centre of crowded cities. The two last species are so similar that they can only be distinguished by their very characteristic call-notes and nesting habits.

No other birds have puzzled me more than these Flycatchers. One day late in April, while observing numerous migrating birds in a broad Magnolia grandiflora in full blossom in the city of Houston, Tex., I also saw quite a number of small Flycatchers entirely unfamiliar to me. Although similar in coloration, they uttered very different notes, which convinced me that at least two or three species were represented among the waxy fragrant blossoms and beautiful foliage of the magnolia. A closer examination of a number of birds in the hand did not reveal much light, and when looking over the scientific descriptions at home, I was still more undecided. A few weeks later, while sauntering about in the post oak woods near the West Yegua Creek (Lee Co., Tex.), I came into a piece of woodland where all the trees were densely festooned with hanging lichens (Usnea barbata). Hackberry trees and elms grew near the border, but these trees had only a few bunches of the long, beard-like moss on their branches. Here I met again with these birds. There were certainly five or six pairs in this piece of woodland, which occupied an area of about ten acres. They constantly uttered notes sounding like a short e-thë-ah or e-chee-ah, rather loud, quick, and emphatic. These sounds are so very peculiar, and peculiar only to this bird, that they can never be confounded with those of any other species. A few days later I discovered a nest in the extremity of a horizontal branch of an elm which was constructed entirely of Usnea lichens. It was an exquisite piece of bird-architecture, shallow, but very soft. It contained three eggs. I was at once convinced that I had discovered the domicile of the Green-crested Flycatcher, better known, however, as the Acadian Flycatcher. Other nests, all similar to this one, were discovered from that time until the last day of May. They were always placed in the extremity of slender horizontal branches, from six to twenty-five feet from the ground and far from the trunk. No snake or squirrel could reach them. All the nests contained three eggs, and only one four. The ground-color was a light buff or cream-color, and the markings, which were mostly grouped round the larger end, were of a light rusty-brown or chestnut. They are not distinguishable from those of Traill’s Flycatcher. Nests, also built of Usnea lichens, found by Mr. C. J. Maynard at Williamsport, Penn., agree in every particular with those examined by me in Texas.

At Freistatt, Mo., where the Acadian Flycatchers were common in the extensive forest behind my house, their nests were usually found along an old shady wagon-track leading through the woods. They were built also in the extremity of slender horizontal
branches, but were constructed invariably of the flower catkins of oaks and hickory trees, and fastened to the branches with spider-webs. Some of the catkins always hang down on the sides of the nest in a fringe-like manner. Such a nest is a pretty, but rather shallow and thin structure, so thin that the light can be seen shining through. It is easily distinguished from the thick-walled cup-shaped nest of Traill’s Flycatcher, which is always placed in an upright crotch. The nest of the Acadian is always saucer-shaped.

I have yet to see a nest that was not constructed either of Usnea lichens or of the flower catkins of oaks and hickories. The birds always love to penetrate the shadowy depths of the forest, delighting to sing and to rear their young in the most quiet and gloomy spots. From above the nest is always protected by overhanging branches. The birds rarely betray their domicile, as they are exceedingly cautious while near it, trying to mislead the observer in flying to and fro. Having thus tired their enemy, the female suddenly flies from below directly into the nest.

Mr. Otto Widmann, to whom I am obliged for a valuable contribution* regarding the small Flycatchers, has studied the life-histories of these birds in and around St. Louis, Mo., with great care. He found the Acadian Flycatcher in the forest only, and there very abundant,—that is to say, one pair to every few acres. The nests which he found were also built of the flower catkins of hickories.

This species is always a tenant of the forest, where large trees commingle with bushes, smaller trees, tangled thickets of vines, weeds, etc. In these quiet retreats the observer is often startled by the bird’s notes, which sound like e-chee-ah. Usually the notes are uttered while the bird is perched in a shady place watching for flying insects, its main food.

This Flycatcher is distributed in summer from Texas and Florida northward to Long Island and southern Michigan and west to the Plains. In its northern habitat it is rare. In the valley of the Ohio, in southern Illinois, Indiana, and in Missouri this southern species is a common summer resident.

NAMES: Green-crested Flycatcher, Acadian Flycatcher.

Empidonax acadicus Baird (1858).

DESCRIPTION: Above, varying from greenish-gray to olive-green; the top of the head, similar to back; wing-bands, buff; lower parts, white, more or less strongly tinged with sulphur-yellow laterally and posteriorly, and shaded across breast with olive or grayish.—Length, about 6.00 inches; wing, 2.83; tail, 2.49.

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## TRAILL’S FLYCATCHER.

Empidonax traillii Baird.

Traill’s Flycatcher is an abundant inhabitant of the Mississippi valley, being especially common in Missouri, southern Illinois, Indiana, and Ohio. It is found northward to the Fur Countries and west to the Pacific Ocean. Mr. Otto Widmann has observed this species for many years in St. Louis and vicinity, where it abounds

on the borders of woodlands, in orchards and gardens, and in the parks. In that locality it arrives usually in the first week of May, and is easily observed, as it is not at all timid and retiring in its habits, like its congener, the Acadian Flycatcher. Very similar to the latter in coloration, there is a great difference between the two species in the call-notes and nesting habits. The notes of Traill's Flycatcher are very characteristic, but difficult to describe. According to Mr. Widmann they sound like wit-tit-che, wit-ti-gō, and are uttered when the bird is perched in the top of a shrub or low tree, on a telegraph post or on a fence stake. It is such a loud and conspicuous sound that it can be heard at a distance of a quarter of a mile. At present this Flycatcher is one of the most abundant birds in the parks of St. Louis. In Ohio it breeds in large numbers in the elder thickets fringing creeks and streams. It has also been found nesting in sumach bushes.

The nest is always placed in an upright crotch of a bush or tree, usually from four to ten and often twenty to twenty-five feet from the ground. Nests found by myself in Wisconsin agree in size and shape with those found by Mr. Widmann in St. Louis. All were placed in upright crotches formed by several twigs springing up from the main stem, and all are compactly built, thick-walled, and deeply cupped structures, let firmly down into the crotch, the twigs either grooving the walls or imbedded in the substance of the nest. The outside diameter is about 3.00 inches, depth also about 3.00 inches. The cavity is about 2.00 inches in diameter, and from 1.50 to 2.00 inches deep. The opening is often a little contracted, so that it is well-nigh impossible that the eggs can roll out. A nest found in this vicinity June 20 was built in a shrub about six feet above the ground, near the border of the woods. It is very similar to the domicile of the Redstart, but it is larger and more deeply cupped. Being mainly built of silvery-gray fibers of asclepias, a few slender grasses and horse hair also enter into the composition. The lining consists of soft bark-strips, fine grasses, and a few horse hairs. Nests found in St. Louis are of the same shape, but constructed of coarser material, consisting of slender grasses, rootlets, hemp-like fibers, bits of twine, feathers, etc., the lining being made of fine grasses and bark-strips. The walls are always thick and compact, the brim is firm, and the lining smooth.

The eggs, usually four in number, show a creamy-white or buff ground-color. They are marked, chiefly at the larger end, with spots of reddish-brown. Some of the eggs are often so slightly marked that they appear almost immaculate. The difference between these eggs and those of the Green-crested Flycatcher is so slight that no one can distinguish them with certainty. Wherever found Traill's Flycatcher is more abundant than is generally supposed, but only the close observer, who is familiar with its call-note, can easily find the bird. Its food consists almost exclusively of flying insects. Late in August and early in September these Flycatchers leave for the South.

The Alder Flycatcher, Empidonax traillii alnorum Brewster, inhabits eastern North America, from New England westward at least to northern Michigan, etc., breeding from the southern edge of the Canadian Fauna northward. Its favorite haunts appear to be alder thickets near water.

NAMES: Traill's Flycatcher, "Widmann's Flycatcher."
LEAST FLYCATCHER.

**Empidonax pusillus** Baird (1858).

**DESCRIPTION:** Sexes, alike. "Above, olive, usually decidedly grayer on head; wing-bands varying from dull brownish-gray, or grayish-brown to nearly white; lower parts, white, tinged more or less with sulphur-yellow posteriorly, and shaded with olive-grayish on sides of breast; under wing-coverts very pale buffy-yellow.

"Length, 6.00 inches; wing, 2.75; tail, 2.51 inches." (Ridgway.)

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LEAST FLYCATCHER.

**Empidonax minimus** Baird.

This is the most common species of the small Flycatchers, inhabiting the Northern States and New England, breeding from the 40° of latitude northward, west to eastern Colorado and central Montana. It is an abundant summer resident in Manitoba. I noticed the first arrivals in central Wisconsin usually in the first week of May, the van making their appearance during the second week of the month. Their call-note is unmistakable, sounding very distinctly like che-bec. Hence its common name "Chebec." Dr. T. M. Brewer gives the following interesting account of this species:

"In Massachusetts this Flycatcher is one of the most abundant and familiar species, arriving from about the 20th of April to the 1st of May. It is found most frequently in orchards, gardens, and open grounds, and very largely on the edges of woods, remaining until October. They are much addicted to particular localities, and return to the same spot year after year, if undisturbed. A pair that had established their hunting-grounds in an open area north of a dwelling in Roxbury returned to the same spot for several successive years, and would come regularly to the piazza of the house, where bits of cotton were exposed for the benefit of such of the whole feathered tribe as chose to avail themselves of it. Each year they drew nearer and nearer the house, until at last the nest was made in a clump of honey-suckle on the corner of the piazza, from which they would sally forth in quest of insects, entirely unmindful of the near presence of the family."

In Wisconsin it is a rather common bird. In the time of my boyhood I observed it in tamarack and white-cedar swamps, where it nested in slender trees, usually tamaracks, twenty to twenty-five feet above the ground. Since that time the species "has been gradually undergoing certain modifications of habits and manners in consequence of its contact with civilization, and is now becoming familiarized to the society of man."

The nest is usually placed in an upright crotch of a large shrub or small tree. It is rather small and thin-walled when compared with the domicile of Traill's Flycatcher, being felted of fine bark-strips, hempen fibers, feathers and horse hair, fragments of cocoons and spider nests, etc.; the lining consists of grasses, shreds of bark, and a few feathers. In swamps the nest is usually made of asclepias fibers, bark-strips, fine grasses, and vegetable wool, and the lining consists of black rootlets, plant-down, and feathers. The eggs are white, unspotted. Their number varies from three to four.

**NAMES:** Least Flycatcher, Chebec.


**DESCRIPTION:** Sexes, alike. Hardly distinguishable in color from *E. traillii*. Wing-bands, usually whiter.
YELLOW-BELLIED FLYCATCHER.

*Empidonax flaviventris* Baird.

This is not at all a scarce bird in the Northern and New England States, being found from the Atlantic to the Plains and breeding from the Northern States northward. It is the most easily distinguished of all the small Flycatchers, by its decidedly yellow color on the underside. Its call-note also betrays its presence, being often uttered and very distinct, sounding like a soft and melodious *pe-uh, pre-péah*. In the Sheboygan Marsh, in Wisconsin, it is not uncommon, selecting for its haunts places where the ground is covered with white-cedar, tamarack, *Ledum palustre*, pitcher plants, cranberry bushes, ladies' slippers, wintergreen (*Gaultheria procumbens*), and dense mats of sphagnum moss.

Nests of this species have been found by Mr. H. A. Purdy, Mr. R. Deane, S. D. Osborne, etc., in Maine and other parts of New England. Two nests were found by Mr. Chas. F. Batchelder and Jonathan Dwight, Jr., at Fort Fairfield, Maine. Mr. Batchelder writes about his finds:

"My first nest, containing four fresh eggs, which was taken on June 14, I found in rather wet mixed woods of small spruces and arbor-vitae, with a few larger hemlocks, —also a few yellow birches and maples: It was on the edge of a bank formed by a decayed tree trunk, and over a pool in a small brook that was flowing beneath the moss-covered trunks of fallen trees. The nest was protected above and hidden from sight by some green moss growing upon a projecting root. A small vine (*Ribes lacustre*) growing past the entrance of the nest gave additional concealment. The bird flew from the nest when I was within a few feet of it. After a short time she returned to the nest, and I again flushed her . . . ."

"The nest, which was partly sunk in the surrounding moss, is made of fine brown roots, bits of rotten wood, and the scaly coverings of buds, apparently of the arbor-vitae, together with a few sticks and withered leaves, and one or two bits of arbor-vitae and green moss. It is scantly lined with very fine black roots and stalks of withered grass, the latter contrasting strongly in color with the rest of the nest. Its external diameter is four inches, its depth two and a quarter inches; internally its diameter is two and three eights inches, its depth one and a quarter inches. The ground-color of the eggs is white, with a slight creamy tinge. They are spotted and blotched with two shades of light reddish-brown, mostly about the larger end. Two of the eggs have also a few fine dashes and specks of black over the other markings.

"I did not find the second set until June 27. It was in a small piece of damp woods, consisting of scattered arbor-vitae and hemlocks growing in the valley of a small brook. The nest was not far from a clearing, and was among a tangled mass of fallen trees. It was situated about two feet from the ground, on the side of the moss-covered stump of a fallen tree. It was deeply sunk in the soft green moss, which covered and protected it above, though the eggs could be seen from the outside . . . ."

"The nest, which is very bulky for the size of the bird, is a compact mass of the soft green moss that is so abundant in such places, with a few bits of arbor-vitae and one or two sticks. It is thinly lined with slender stalks of grass and a few very fine roots . . . ."
NAMES: **Yellow-bellied Flycatcher**.


**DESCRIPTION:** Sexes, alike. "Above, dull olive-green, the wing-bands pale olive-yellowish; beneath, pale dull sulphur-yellow, shaded with olive across the breast." (Ridgway).

Length, 5.15 inches; wing, 2.83; tail, 2.45 inches.

**Western Flycatcher,** *Empidonax difficilis* Baird. This species inhabits the western part of the country from the Plains to the Pacific, being especially abundant and a familiar bird in California. Reminding the observer of the foregoing species in its habits, mode of nesting, and coloration of eggs, it is a much more familiar species. According to Mr. Emerson of Haywards, Cal., it nests in hollows in banks and along creeks, in natural cavities of trees and among the roots of fallen ones. In tall Australian gum trees (*Eucalyptus*) and in corners of rail-fences it has also been found nesting. The structure is composed of rootlets, dead leaves, bits of grasses, etc., and the lining consists of finer grasses and a few feathers. The eggs resemble those of the Yellow-bellied Flycatcher closely, being creamy-white, finely spotted and speckled with cinnamon or reddish-brown, these markings often forming a wreath around the larger end.

**Description:** Upper parts of this species, greenish-olive or greenish-gray; underneath, yellowish.

**Hammond's Flycatcher,** *Empidonax hammondi* Baird, also called the Dirty Little Flycatcher, is the western representative of the Least Flycatcher, occurring from the Plains to the Pacific and thence northward to the Lesser Slave Lake and Alaska.

**Wright's Flycatcher,** *Empidonax wrightii* Baird, inhabits the western United States north to Oregon and Montana, south to southern Mexico. Dr. J. C. Merrill found its nest about Fort Klamath, Oregon. The nests, resembling those of the Yellow Warbler, were frequently built in young aspens. They were built against the main trunk, while all the Warblers' were placed in upright branches, generally higher from the ground. The Flycatcher's nest was constructed of light gray bark-strips and the lining was sometimes a smooth-felted mass of fur and horse hairs, in others feathers were used and the nest was deeply cupped. The eggs were dull, buffy-white.

The Gray Flycatcher, *E. griseus* Brewster, and the St. Lucas Flycatcher, *E. cineritius* Brewster, inhabit Lower California, while the Buff-breasted Flycatcher, *E. fulvifrons pygmaeus* Ridg., has been observed in southern Arizona and western New Mexico, south into western Texas.

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**VERMILION FLYCATCHER.**

*Pyrocephalus rubineus mexicanus* Coues.

Plate XXXI. Fig. 4.

One of the most striking birds of our southern border, from the lower Rio Grande to southern California, is the beautiful Vermilion Flycatcher, its brilliant plumage and flaring crest being seen at quite a distance among the green foliage of the trees and bushes. It is particularly abundant in southern and central Arizona, but has
also been found in south-western Utah and in California as far north as Ventura County.

Dr. J. C. Merrill found this exquisite bird breeding in the vicinity of Fort Brown, on the lower Rio Grande of Texas. He writes as follows: "Resident, but more abundant in summer than in winter. During the breeding season, the male frequently utters a peculiar twittering song while poised in the air about thirty feet from the ground. During the song it frequently snaps its bill as if catching insects. Its note of anger and alarm is a mew. Except during the breeding season, the birds are decidedly shy. The nests are usually placed upon horizontal forks of ratama-trees, growing upon the edge of the prairie, and rarely more than six feet from the ground. They bear considerable resemblance to nests of the Wood Pewee in appearance and in the manner in which they are saddled to the limb; the bottoms are made of small twigs, over which are various soft materials felted together; a few hairs or a little wool form the lining; the rims are covered with lichens; the cavity is slight, varying from .8 to 1.25 inch in depth by 2.00 in width, and the whole structure is easily overlooked. The usual number of eggs is three; the ground-color is a rich creamy-white, with a ring of large brown and lilac blotches at the larger end. . . ." The birds nest usually in May. In southern Arizona, near Tucson, a nest was found by Mr. F. Stephens on April 25. It was placed in the horizontal fork of a stout mesquit branch, to which it was attached in such a manner that its upper surface was flush with that of the embracing supports. It was composed outwardly of small twigs, lined with horse and cow hair and a few feathers. It entirely lacks the exterior coating of lichens, spoken of by Dr. Merrill, but in other respects it agrees well with his description given above. Mr. Stephens found other nests, similar in construction to the one described. He considers three eggs the full complement.

Mr. H. P. Attwater found this bird nesting in a locality ten miles south and south-west of San Antonio, Tex., but noticed it nowhere else in the surrounding country. They were observed as early as the first week of February, and a nest was found by this collector on April 15, 1889. It was placed on a horizontal limb of a mesquit tree, seven feet from the ground, and was similar in appearance to the nest of the Wood Pewee.

The Vermilion Flycatcher is found south to Guatemala.

NAMES: VERMILION FLYCATCHER, Red Flycatcher, Ruby Flycatcher.


DESCRIPTION: "Head with a full rounded or globular crest. Tail, even. Crown and whole under-parts, bright carmine-red; rest of upper parts, including the cheeks as far as the bill, and the lining of the wing, dull grayish-brown; the upper tail-coverts, darker; the tail almost black; greater and middle wing-coverts and edges of secondaries and tertials, dull white towards the edges. Female, similar, without the crest; the crown, brown, like the back; under-parts, whitish anteriorly, streaked with brown; behind, white, tinged with red or ochraceous.


The Beardless Flycatcher, Ornithion imberbe Lawr., was detected by Mr. Geo. B. Sennett at Lomita, Tex., but this little bird seems to be very rare in that locality.

A variety, Ridgway's Flycatcher, Ornithion imberbe ridgwayi Brewster, was discovered by Mr. Stephens near Tucson, Ariz.
FLOWERS and gems cannot be compared in beauty with the Hummingbirds. Since the discovery of America these brilliant creatures have been a source of admiration and wonder to the man of science as well as to the simple tiller of the soil. In allusion to their exquisite beauty, and their constant connection with gorgeous flowers they have been called Honey-birds, Flower Nymphs, Flower Fairies, and Flower Elfs. The Brazilians have given them the name Flower Kissers (Beija Flores). They are the most admirable, the most gorgeously colored, the loveliest and most graceful, and the smallest and most delicate of all birds. They are so unique that no other birds can bear comparison. They are the true birds of paradise, as all the colors of the rainbow, the lustre of the flowers, the glow of the setting sun, the hues of the early morning sky, the silvery light of the moon, the sparkle of the stars, the glitter of gold and silver appears to reflect from their exquisite plumage. All the poetry of Nature is combined in these fairies flitting from flower to flower. Buffon considers the Hummingbird "of all animated beings the most elegant in form and most splendid in coloring. Precious stones and metals artificially polished, can never be compared to this jewel of Nature, which has placed it in the order of birds at the bottom of the scale of magnitude—maximè miranda in minimis—while all the gifts which are only shared among others—nimbleness, rapidity, sprightliness, grace, and rich decoration—have been profusely bestowed upon this little favorite. The emerald, the ruby, the topaz, sparkle in its plumage, which is never soiled by the dust of the ground, for its whole life being aerial, it rarely lights on the turf. It dwells in the air, and flitting from flower to flower, it seems to be itself a flower in freshness and splendor; it feeds on their nectar, and resides in climates where they glow in perpetual succession; for the few which migrate out of the tropics during the summer make but a transitory
stay in the temperate zones. They follow the course of the sun, advancing or retreating with him, and flying on the wings of the zephyrs, wanton in eternal spring.

This characterization, however, is somewhat overdrawn, as my friend Prof. Robert Ridgway, in his excellent little work, “The Hummingbirds,” correctly states, “since Nature has not endowed Hummingbirds ‘with all the gifts of which she has only given other birds a share,’ the absence of melodious voice being, as a rule, a conspicuous deficiency of the tribe, while the statement, that they are ‘always in the air,’ is very inaccurate, Hummingbirds requiring the same repose which other kinds find necessary.”

Audubon calls the Hummingbird “a glittering fragment of the rainbow,” and asks: “Who, on seeing this lovely little creature moving on humming winglets through the air, suspended as if by magic in it, flitting from one flower to another, with motions as graceful as they are light and airy, pursuing its course and yielding new delights wherever seen .... would not pause, admire, and turn his mind with reverence toward the Almighty Creator, the wonders of whose hand we at every step discover, and of whose sublime conception we everywhere observe the manifestations in his admirable system of creation?”

“The Hummingbirds,” says Mr. Robert Ridgway, “more than any other family, constitute the most remarkable feature of the New World bird-life. They have absolutely no representatives in any other part of the world.... Of all the many families of birds which are entirely peculiar to the rich bird-fauna of America, the Hummingbirds probably constitute the most numerous assemblage, about five hundred distinct species being now known. They abound most in mountainous countries, where the configuration of the surface and productions of the soil are most diversified within small areas. Their centre of abundance is among the northern Andes, between the parallels of ten degrees north and south of the equator, from which region they gradually diminish in numbers both to the northward and southward, but much more rapidly toward the extensive lowlands of the eastern portion of the continent.”

They are found from Alaska to Patagonia, and from Ocean to Ocean.

Of the five hundred known species of Hummingbirds about seventeen species occur in the United States, of which all but eight barely come across the boundary from Mexico, and therefore should hardly be counted. Only one species, the Ruby-throated Hummingbird, abounds in the eastern part of our country, while all the rest inhabit the West. The Hummingbirds found in our territory are divided into the following genera:

1, Eugenes Gould. One species.
2, Caligena Lesson. One species.
3, Trochilus Linnaeus. Three species.
4, Calypte Gould. Two species.
5, Salaspilus Swainson. Four species.
6, Stellula Gould. One species.
7, Calothorax Gray. One species.
8, Amazilia Reichenbach. One species.
9, Basilinna Boie. Two species.
10, Iashe Elliot. One species.
RIVOLI HUMMINGBIRD, *Eugenes fulgens* Gould. This is decidedly the most beautiful species of all the Hummingbirds occurring within the limits of the United States. It is an inhabitant of the table lands of Mexico, south to Nicaragua, but is found also in southern Arizona. About six inches long, "the male has the top of the head rich metallic-violet, the throat brilliant emerald-green, contrasted very abruptly with the deep black of the breast, while the upper parts are dark bronzey-green. These various hues are so arranged or contrasted that only one of them can be seen at once, every change in the bird's position bringing a different color in view."

Mr. H. W. Henshaw found this species a summer inhabitant of the mountain districts of southern Arizona. "A very beautiful nest," Mr. Henshaw writes, "was discovered, which save its large size resembles in its construction the best efforts of the little eastern Ruby Throat. It is composed of mosses nicely woven into an almost circular cup, the interior possessing a lining of the softest and downiest feathers, while the exterior is elaborately covered with lichens, which are securely bound on by a network of the finest silk from spiders' webs. It was saddled on a horizontal limb of an alder, about twenty feet above the bed of a running mountain stream, in a glen which was overarched and shadowed by several huge spruces, making it one of the most shady and retired nooks that could be imagined. . . . The dimensions of the nest are as follows: Depth, externally, 1.50; internally, 0.75; greatest external diameter, 2.25; internal diameter, 1.15."

BLUE-THROATED HUMMINGBIRD, *Coeligena clemencia* Less., a bird of the table lands of Mexico to Guerrero and Oaxaca, has been detected also in southern Arizona, by Mr. F. Stephens.

RUBY-THROATED HUMMINGBIRD.

*Trochilus colubris* Linne.

**Plate XXVI. Fig. 1 and 2.**

When morning dawns, and the bless'd sun again
Lifts his red glories from the eastern main,
Then round our woodlands, wet with glittering dews,
The flower-fed Hummingbird his round pursues;
Sips with inserted tube the honeyed blooms,
And chirps his gratitude as round he roams;
While richest roses, though in crimson dress'd,
Shrink from the splendor of his gorgeous breast.

The purple amethyst, the emerald's green,
Contrasted mingle with the ruby's sheen,
While over all a tissue is put on
Of golden guaze, by fairy fingers spun.
What heavenly tints in mingled radiance fly!
Each rapid movement gives a different dye;
Like scales of burnish'd gold they dazzling show,
Now sink to shade, now like a furnace glow.

ALEXANDER WILSON.

ONE of all our feathered summer sojourners have excited so much admiration as the Hummingbirds. They are the "fairies and jewels of ornithology," and have animated Europeans who first saw them flitting from flower to flower, with a feeling of bewilderment enchantment. "During the first twenty years of my acquaintance with these wonderful works of creation," says Mr. John Gould, the celebrated author of the most magnificent books on birds in existence, "my thoughts were often directed
to them in the day, and my night dreams have not unfrequently carried me to their native forests in the distant country of America." Their diminutive size, the dazzling splendor of their plumage, their unique and enchantingly beautiful flight, and their constant encompassment by the most strikingly colored flowers cannot fail to excite the admiration of all who see these "fairy flower birds." Being a very common summer sojourner wherever flowers abound, on the woodland border and in the meadow as well as in the garden, the RUBY-THROATED HUMMINGBIRD is familiar everywhere.

Like all the birds of its family, it unites the beauty and delicacy of a resplendent insect with the organization and intelligence of a bird. None of our feathered favorites will compare with it in the smallness of its size, and in the peculiarity and rapidity of its flight. The dazzling beauty and variety of its color, and especially the changeableness of its hues when flying from flower to flower, are no less striking and admirable than its small size. The golden-green back and ruby-colored throat of the male surpass the hues of the most beautiful gems. A brilliant metallic lustre greatly enhances the splendor of the colors. As in the other species, only one color is seen at a time, but every change in the bird's position brings a different hue of the ruby-colored throat in view. It is really a bird of sunshine and flowers. In dark weather the colors are not very refulgent; only when the beams of the sun strike them, they show their indescribable brilliancy.

The Ruby-throated Hummingbird is the only representative of this large family in eastern North America, being found from Florida and Texas northward to the 57th degree of latitude, and from the Atlantic Ocean west to the Plains. In this immense territory it is everywhere a well-known and in many places an abundant bird. It does not arrive in its summer quarters until the season is well advanced and flowers are abundant. In south-eastern Texas it is common by the middle of April; at Freistatt, south-western Missouri, it rarely appears before May 2. By May 15 it is first seen at Milwaukee, Wis., usually becoming abundant when the horse chestnut trees are in full bloom. When this fairy among our birds arrives, the days are always mild and sunny; gardens, woodlands, and meadows are adorned with numberless flowers, the air swarms with insects, and bird song resounds on all sides. At this time we usually see it first among thearbors of honey-suckles and beds of flowers, poising itself in the air for several seconds, with a humming noise made by the rapid motion of the wings, thrusting its bill and long tongue into the flowers in search of food, and then suddenly darting off with a rapidity so great that the eye can not follow it.

Only those perfectly familiar with this lovely creature can form an adequate idea of its surpassing loveliness. Yet all its beauty cannot arrest our attention in such a degree as its incomparable flight, a flight that is in every respect different from that of any other bird. It has a slight resemblance to the flight of the hawk-moths or sphinxes, and it is often confounded by the superficial observer with these insects. As these moths are of a crepuscular habit, only searching the flowers in the twilight of evening, while the Hummingbird is a child of the sun, rarely being seen after sunset, it is easily distinguished from these insects. While soaring from flower to flower, the tremulous motions of the wings are so rapid that the eye is unable to follow them. This rapid vibration produces a humming sound, like the spinning of a top, and has given these birds the name by which they are designated. The bird flies forward and
backward and to the side with equal ease and dexterity. It "may be said to live in
the air—an element in which it performs every kind of evolution with the utmost ease,
frequently rising perpendicularly, flying backward, pirouetting or dancing off, as it
were." This backward motion of flying, to which the words of Mr. Gould, just cited,
refer, is peculiar to the Hummingbirds.

Prof. Robert Ridgway has noticed "that the backward motion is greatly assisted
by a forward flirt of the expanded tail as the bird shifts from place to place, or from
one part of a tree to another, sometimes descending, at others ascending. It often
towers up above the trees, and then shoots off like a little meteor at a right angle; at
other times it quietly buzzes away among the flowers near the ground; at one moment
it is poised over a diminutive weed, at the next it is seen at a distance of forty yards,
whither it has vanished with the quickness of thought. During the heat of the day the
shady retreats beneath the trees are frequently visited; in the morning and evening
the sunny banks, the verandas, and other exposed situations are more frequently resorted to."

Dr. T. M. Brewer gives the following excellent account of its motions on the
wing: "The Hummingbird is entirely aerial. They pass with the rapidity of an
arrow, stop, rest for a few seconds on some small branch, and then suddenly depart
with so much rapidity that we cannot trace its flight. They disappear as if by
enchantment. Their life is one of feverish excitement. They seem to live more intensely
than any other being on our globe. From morning to night they traverse the air in
quest of honeyed flowers. They come like a flash of light, assume a vertical position
without any support, throw their tail forward, expanding it like a fan, vibrating their
wings with such rapidity that they become absolutely invisible, plunging, at the same
time, their thread-like tongues to the bottom of some long corolla, and then they have
gone as suddenly as they came. They are never known to rest on a branch in order
more at their leisure to plunge their tongue into the flower. Their life is too short for
this delay; they are in too great haste; they can only stop long enough to beat their
wings before each flower for a few seconds, but long enough to reach its bottom and
to devour its inhabitants. When we take into consideration how entirely aerial is their
life, and the prodigious relative force requisite to enable them to keep suspended in the
air during the entire day, almost incessantly, either in rapid motion or accomplishing
the most violent vibrations, we can but be amazed at the extraordinary powers of
flight and endurance they manifest."

The Ruby-throat does not remain long on the wing at a time, taking frequently
a short rest, choosing for this purpose usually a small twig at the extremity of a tree
or shrub. I have also noticed it perched on a wash-line, and on flower stalks. At such
times it is busily engaged in trimming its plumage, or it cleans its long bill and stretches
and preens the feathers of its long wings. The bird thus affords a variety of graceful
attitudes, displaying particular parts of its plumage to advantage.

Although the Hummingbird explores a great variety of flowers for diminutive
insects and sweet nectar, those with tubular blossoms are particularly its favorites.
Thus twining honey-suckles, the vase-like flowers of the red clematis (Clematis coccinea),
the pretty flowers of the pentstemons, various Labiatae (such as Monarda, Salvia, etc.),
and especially the gorgeous flower-trusses of the trumpet-creeper (Tecoma radicans) are
especially sought for. In the South the latter plant is often called Hummingbird-vine in consideration of the fact that its flowers are constantly visited by numbers of these birds. In Audubon's unrivalled work, "Birds of America," this feathered gem is portrayed in the position of feeding among these flowers. I have found Hummingbirds nowhere more abundant than at places where the trumpet creeper grows most luxuriantly, as for instance in southern Illinois and adjacent parts of Missouri, where it is seen in its greatest beauty in the alluvial soils along rivers and creeks, and along fences and woodland borders. Often it forms almost tropical scenes, its garlands of gay blossoms festooning trees and shrubs, and swinging from the loftiest heights from tree to tree. In such places the Ruby-throats are exceedingly numerous.

In my garden in Milwaukee these jewelled bands are most abundant in August when the gladiolus and canna beds are in full bloom. Often five or six are noticed at a time. In my garden in Orange County, Florida, I noticed them in large numbers early in November. The large bushes of the yellow elder or bush tecoma (Tecoma stans and T. velutina), covered with magnificent trusses of fragrant yellow flowers, were fairly swarming with these birds. They also searched the glorious bush allamandas (Allamanda cathartica and A. Williamsii), the beautiful datura (Brugmansia suaveolens) with its masses of pendent large fragrant flowers, and the petunia beds. Many of them remain in this locality until the first days of December, by which time even the last has departed for more southern regions. When flying they skim over the bushes and waste grounds, rifle the flowers, and are always mingling with the insects, such as butterflies, bees, wasps, bumble bees, etc., so common where blossoms are found in abundance. During their stay with us they may be found regularly at a certain place at a certain time each day. In some seasons the gardens and the festoons of trumpet flowers seem to be wholly alive with them, while in other years they are much rarer. They always haunt open flowery fields and meadows and especially gardens, delighting to glitter in the sun's rays. Rarely, if ever, they enter shady woods or localities poor in flowers.

The food of the Hummingbird consists chiefly of minute insects which are captured in the tube of the flower with its long, thread-like tongue. While this is at present a well-known and well-established fact, it is equally true that all the Hummingbirds are very fond of the sweet nectar of the flowers, and that this, to a certain extent, constitutes their nourishment. They are able to live for weeks on this substance alone. My friend, Dr. Sigmund Graenicher of this city, an enthusiastic friend of Nature and a distinguished scientist, kept a Hummingbird for several weeks in his room. During some cold and rainy days in September the bird had been captured, and my friend did everything to keep it alive. It searched the flower bouquets on the table and rested invariably on a leave stalk of a Cyperus alternifolius, kept in the corner of the room. When the Doctor entered the room with honey in a tea-spoon or on his fingers, the bird came at once at a certain call and sipped it with its long tongue. This was always done in the usual flying position, and the hum of its vibrating wings could be distinctly heard. The bird was exceedingly tame and fearless. After having satisfied its appetite, it returned to its perch, where it at once began to trim its plumage and to clean its bill by rubbing it against its perch. As soon as the weather became again warmer, early in October, the bird was set free. As a rule, however, these birds are not able to subsist on nectar
alone for any length of time. They all die soon, and even the more robust species which were brought over successfully to Europe, died shortly after their arrival.

The Hummingbird has a charming confidence in man and can easily be observed. "In their disposition," writes my friend, Prof. Robert Ridgway, "Hummingbirds are not only very tame, but highly curious or inquisitive, and exhibit a special propensity to closely inspect a human intruder to their domains. One of these little feathered fairies will at such times approach like a flash and poise directly before one's face, its wings vibrating so rapidly as to appear as a mere haze on each side of its body, which itself remains so stationary that the inquiring expression of its bright black eyes and the outline of nearly every feather of its compact little figure can be seen; then it shifts rapidly to one side, then to the other, and approaches so near as to be easily within reach of the hand; but the slightest demonstration causes it to vanish so swiftly that the eye can scarcely trace the line of its flight."

The nidification of these feathered flower fairies is another very interesting point. The nest is invariably built on a horizontal branch usually covered with crustaceous lichens. Those found by me in Texas were firmly saddled on the horizontal branches of the magnolia and on different oaks. The limbs on which they were placed were of the thickness of a finger, and the nests were saddled on the bare branch, with no smaller twigs in the walls or near the structure. Other nests, found in Wisconsin and Illinois, were placed on larger sized limbs, and the nests were also larger. The domicile is very frequently placed in an old and rather dense apple tree, but in such a position where the sun's rays can strike it. Sometimes a nest is discovered on a limb that is slightly slanting, and the structure rests in a small fork. Such a nest has been figured by Mr. Ridgway in his interesting little work, "The Hummingbirds." (Plate XXXVII.) The beautiful nest of the Ruby-throated Hummingbird is a miniature of the Blue-gray Gnatcatcher's. It is exceedingly difficult to find, being so very small and looking like a moss-covered knot or protuberance. It is usually placed from eight to twelve feet above the ground, but sometimes it is as low as four or five feet, and sometimes as high as twenty to twenty-five feet from the ground. Usually the nests found in Texas were scarcely larger than a large black walnut, measuring from 1.65 to 1.75 in external diameter by 1.50 to 1.60 in height. The cavity is about 1.00 inch deep, and 1.25 inch wide. It is cup-like in shape, and of very homogeneous construction. It is made of various kinds of vegetable wool, especially the down of the mullein and ferns. The whole is strengthened on the outside by a few plant fibers. All the external portion of the small domicile is covered with flat crustaceous lichens of a greenish or glaucous color, mostly a species of Parmelia. These bluish-gray lichens, which show the color of the branch on which the nest is saddled, appear to be agglutinated by the saliva of the bird. The cavity is warmly lined with fern down and in other cases with very soft plant wool. The two eggs are rather elliptical than oval, and of a pure white color. If we happen to approach the nest too closely, the birds dart around us, often almost touching our face. Birds and mammals approaching the nest are often furiously attacked and driven away.

"Notwithstanding its small size," writes Miss Hedwig Schlichting, "our little Ruby-throat is a very aggressive fellow, attacking with great fury everything that excites its animosity. How often have I observed these midgets driving away such large birds as
Robins are, but they are among themselves by no means peaceful and gentle creatures. On the contrary, they are always fighting if one encroaches upon the domain of the other. They resent every such attempt with a furious assault. In the fall, when the young are able to fly and a number of Hummingbirds often sojourn in a locality rich in flowers, they are constantly quarreling. One cold and gloomy Sunday afternoon, Sept. 9, 1894, while my sister and myself were sitting at the window engaged in reading and observing numerous migrating birds in the garden, two Hummingbirds were noticed on a Clematis coccinea growing on a veranda scarcely twenty feet away. They frequently perched on overhanging shoots, stretching their long wings and trimming their feathers.

The one was engaged near the top of the clematis, often taking a rest of ten to fifteen minutes before it resumed its soaring from flower to flower. The other began to search for insects near the ground. Often it perched near a flower or hung on one, without using its wings, thrusting its long bill into the vase-like tube. Then again it resumed its search in the usual manner. When it came too near its comrade sitting and searching near the top of the vine, a fierce fight always began, so that both repeatedly tumbled down into the grass. Finally the intruder always had to leave, but it returned again and again, and again and again the encounter was repeated. This I observed the whole afternoon. When I at last approached the bird that rested in the top of the clematis, it turned its head to me, but it did not fly away until I touched the vine. Then it took wing and I did not see another Hummingbird during that year.”

By the middle of September most of these birds have left southern Wisconsin, even those coming from the Fur Countries in the far North have passed south. These lovely and diminutive creatures traverse a distance in their migrations which appears almost impossible to birds of such smallness and delicacy, many individuals moving as far south as Veragua, U. S. of Colombia, immediately north of the Isthmus of Panama. A considerable number pass the winter as far north as southern Florida. “It is thus evident,” says Prof. Ridgway, “that, notwithstanding their diminutive size, some individuals of this species perform an annual migration of at least twenty-eight degrees of latitude, equivalent to nearly 2,000 statute miles.”

NAMES: Ruby-throated Hummingbird, Flower-bird.—Rubiakolibri (German).

Scientific Names: Trochilus colubris Linne (1758).

Description: “Tail in the male deeply forked; the feathers all narrow lanceolate-acute. In the female slightly rounded and emarginate; the feathers broader, though pointed. Male, uniform metallic-green above; a ruby-red gorget (blackish near the bill) with no conspicuous ruff; a white color on the jugulum; sides of body, greenish; tail-feathers, uniformly brownish-violet. Female, without the red on the throat; the tail rounded and emarginate; the inner feathers shorter than the outer; the tail-feathers banded with black; the outer tipped with white; no rufous or cinnamon on the tail in either sex.

“Length, 3.25 inches; wing, 1.60; tail, 1.25; bill,.65 inches.” (B. B. & R., II, p. 448.)
BLACK-CHINNED HUMMINGBIRD.

Trochilus alexandri Bourcier & Mulsant.

My friend, Mr. T. B. Gault, has sent me the following excellent account of the Black-chinned Hummingbird.

"To the ornithologist who may be so fortunate as to visit southern California in the spring, when Nature has put on her holiday attire, and everything appears at its best, our friends, the feathered midgets, will contribute not a little to the pleasure of his stay.

"In no other section of our country, perhaps, can we boast of having such numbers, if not species, of that interesting family Trochilidae. Although not as plentiful as we might expect to find them in the more favored climes of South and Central America, where they are said to be found in the greatest abundance, both as regards individuals and species represented, nor "as thick as flies," as the writer was informed on the train going west, they are sufficiently numerous enough, however, to make themselves interesting, even to the casual observer, forming, as they do, one of the characteristic features of bird-life wherever flowers are to be found; for every 'cactus-patch,' orange orchard and flowered mesa may justly lay claim to numbers of these beautiful and dainty creatures. They are, in fact, almost everywhere, and my experience, was that I met with them in the most unlooked for and out-of-the-way places. The entrances to some of the small ravines, or cañons, running back into the foot-hills, seemed to offer favorite retreats, as flowers were usually abundant in such localities; and, later on, when the time for nest-building had arrived, several pairs would take up their residence, for the time being, in the trees and bushes found farther up the cañon, but more often in the case of running-water, however, as in selecting their nesting-sites they appear to have a preference for mountain brooks and therefore entertain a peculiar hobby in the construction of their nests on shrubbery overhanging the water.

"But without treating further the subject in a general way, it may be better, perhaps, to go more into details and deal with each species separately, with the view of presenting my observations in a way that is more methodical.

"As these notes relate principally to the breeding habits of the birds in question, all others can be regarded as merely incidental.

"Next to the Anna, the Black-chinned Hummer is the most conspicuous species in southern California. It frequents the orange groves in greatly augmented numbers, especially at twilight, when the shadows begin to creep up the mountain-sides, and other birds are commencing to retire for the night. Flitting in and out among the fragrant blossoms, and golden fruit, they seem the embodiment of all that is bright, energetic and industrious; for very often three or four may be seen at once around the same tree, and should two males chance to meet, a combat is sure to follow, and, although no serious damage may result to either, one or other looses courage and darts off like an arrow with the other in hot pursuit, scolding him in a manner more excitable..."
than dangerous.—About the last week in April the males appear to become cognizant of the fact that the mating season is near at hand, and commence to look about them with the ultimate view of securing a help-meet with whom they may share the labors of the most important period.

"Between the seventh and tenth of May nest-building has begun in good earnest, but not until they have become fully convinced that the location selected for their domicile is all that could be desired, which fact very often requires no small amount of argument on the part of males to satisfy their more willful better halves. And if we look carefully among the outermost branches of the lemon, pear, and English walnut trees in the orchard, we may see some evidences of their intentions in the shape of small bits of woven webs and down saddled upon or placed in the forks of a small spray. But this is a very tedious undertaking and one that is apt to exhaust one's patience. A better way to do is to surprise the birds while at work, an occupation that both take part in cheerfully; besides, they are fearless and confiding little fellows and, should you keep quiet, will give you an opportunity to observe them. By the 10th of May the nest is completed and ready for the eggs, which are deposited by the 14th; in some cases incubation begins a week earlier. These nests are of a light buff in color, bearing a close resemblance to sponge in their consistency, and are composed almost wholly of the down of a certain willow that grows along the water-courses. This cotton, or catkin down, is woven together with a silky substance resembling the silk of cocoons. Their average measurements are: 1.40 inches, external diameter; .95 inches, internal diameter; and .50 inches deep, inside measurement. Nests from several localities have a general resemblance to each other. Two from the Sweetwater valley, San Diego County, are of a lighter buff color than those found at Craft's Ranch, San Bernardino County.

"A nest found at the latter place, May 15, 1883, was built on a lemon tree about five feet from the ground, the measurements being: 1.25 inches, external diameter; .95 inches, internal diameter; and .45 inches, inside depth. Several dried leaves were interwoven into the main body of the nest, thus serving as braces to support it more firmly; it was saddled upon a branch. Small bits of leaf-bud scales and remains of insects (Icerya, or cotton-cushion scale) embellish the exterior. Another nest of this bird, found May 19, 1883, near National City, San Diego Co., was situated on one of the lower outer branches of a willow. This nest was built, as were several others of the same kind also, over the dry bed of the Sweetwater river and about seven feet above the sand. In this connection it may be of interest to relate a pleasant experience that happened to the writer while visiting that locality. I had discovered a nest of the Black-chinned Hummingbird and was obliged to cut the branch upon which it was placed, before inspecting its contents owing to its very peculiar situation. Examination proved that the eggs were so far advanced they would have hatched in a day or two, and what to do with them was a perplexity, as for cabinet display they were beyond redemption, and yet the nest was worthy of preservation. Putting them into the box, which I had brought with me for that purpose, I sauntered along, keeping watch for any additional Hummer's nests. The next nest found contained but one egg. Shortly afterwards another nest of this species, containing two fresh eggs, was discovered upon a willow about three feet from the ground. It was nicely situated, in order that one could easily
examine its contents without necessarily disturbing the branch upon which it was placed. A happy thought then and there occurred to me, and that was to exchange these for the incubated eggs taken from the first nest. This was done, the female watching the operation from a little branch about a foot above my head with all the composure possible, and more, perhaps, than most birds would have submitted to under the circumstances. However, as it was done more in the light of an experiment—having carried the eggs with me for more than a half hour—that they would hatch seemed to be contrary to reason. But a surprise was in store for me, for when going to the nest, just five days later, I found in it two little naked black things, which upon first inspection bore a strong resemblance to worms; these were the young and nicely they were doing, judging from their actions.

"The old bird seemed to be well pleased too as she watched me from a neighboring branch, while arranging her feathers, evidently wondering why I should take such a deep interest in her treasures. And well she might have been pleased; for incubation had been robbed of all its tediousness in this case and the pair acting upon this assumption undoubtedly hatched another brood, but not in such haste I ventures to say.

"In size and shape the eggs of this species resemble those of our eastern Hummingbird, but, in color, they are more of a yellowish-white."

This species ranges from Mexico to British Columbia, east to Utah and Arizona, being especially common in the coast region of California.

NAMES: **Black-chinned Hummingbird**, Black-chinned Hummer.

SCIENTIFIC NAMES: **TROCHILUS ALEXANDRI** Boucier & Mulsant (1846).

DESCRIPTION: Very similar to *T. calabris*. "Chin and upper part of throat, opaque velvety-black, without metallic reflections, which are confined to the posterior border of the gorget, and are violet, sometimes changing to steel-blue or green, instead of coppery-red. Female without the metallic scales; the tail-feathers tipped with white; the tail, graduated, not emarginated; the innermost feather among the longest.—Length of male, 3.30 inches; wing, 1.70; tail, 1.26; bill, .75." (B. & R., II, p. 450.)

The Violet-throated Hummingbird, *Trochilus violajugulum* Jeffries, is only known from the type specimen, taken in 1883 in Santa Barbara, Cal., by Mr. J. A. Jeffries.

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**COSTA’S HUMMINGBIRD.**

*Calypte costae* Gould.

This species is an inhabitant of southern California, southern Nevada and Arizona, Lower California and Mexico. The beautiful bird was named by Bourcier in honor of the Marquis Costa de Beauregard. Mr. T. B. Gault, of Glen Ellyn, Ill., sends me the following very interesting communication on Costa’s Hummingbird:

"Arrow-head Hot Springs are distant about five miles from the city of San Bernardino and situated a mile or more up the side of the San Bernardino Mountains. The springs have acquired considerable notoriety from their medicinal properties.
Formerly a complete arrow-head appeared on the side of the mountain, a little above where the springs are located, which was formed by the sage brush growing between two ravines that converge towards a certain point; these, with the rocks at the base of the brush, form the outline of a perfect ‘arrow-head,’ and of a shape such as we often find among the flint implements of a former age. The sage brush, being lighter in color than the surrounding vegetation, makes it visible for miles around. Whence the springs derive their name; but its shape was somewhat obliterated at the time of our visit, caused by portions of the sage being burnt. In the neighborhood of these springs, and running back into the mountains, are several small caños, among them one that is designated by the name of ‘Cold Water Cañon,’ called so, no doubt, by the presence of a beautiful stream of ice cold water, which wound its way down between the almost perpendicular sides and over the mighty boulders. The locality was extremely picturesque. There are other caños which were said to be equally interesting, but this was the only one explored by us. In company with Mr. W. A. Caldwell, of Crafton, I visited this locality, May 15, 1883, but more out of a curiosity to see the springs than for what observations I might make concerning its bird-life. But, even from an ornithological standpoint, I have never regretted that we made that trip. Although we found the sides of the cañon usually very abrupt and perpendicular, there were places where a few trees and bushes managed to make a foothold, the most conspicuous trees among them being alder, sycamore, and mountain-laurel. Among these the Black-chinned Hummer, as well as the Costa, were breeding quite abundantly; these Hummers constituted about all of the bird-life of the cañon. Three nests of the latter bird were discovered; but unfortunately but one set of eggs was secured. One set was accidentally shaken from the nest, and the other nest was out of reach. Most of the nests found were on trees and bushes overhanging the water.

On looking over my notes for that day I find the following entry, viz: ‘We had been noting how persistent the females were in occupying their nests, even after they had been frightened away from them several times. In one case I held my hand about a foot from one while she was on the nest, without any fear being evinced on her part, until an attempt was made to catch her. This manoeuvre was repeated a number of times, when she would always return to the nest and sit there as unconcernedly as possible. Finally my companion struck at her with his hat and hit her, at the same time striking the bough that the nest was on, precipitating her and the eggs into the stream below.’ A most tragic end, indeed, to such a peaceful existence! Incubation was very far advanced in this set, as was proven by one of the eggs dropping upon a flat stone near the water’s edge, on which a well-formed chick was deposited, which would have hatched in a day or two. And as the other set, preserved, was quite well along in the stages of incubation, it would seem that Costa’s Hummer deposits its eggs somewhat earlier than the Black-chinned. The nest of this bird, which is now before me, measures 1.60 inches in diameter, outside; 1.00 inch in diameter, inside, and .60 inches in depth on the inside. It is altogether different in make-up from any of the preceding nests described, having the appearance of a mass of spider’s webs, small bits of dried leaves and leaf-bud scales, interwoven in a compact mass. By examination I also find that the birds have utilized the remains of an old nest in forming the founda-
tion for this one, which was built partly in the fork of one of the lower branches of an alder tree, and situated between five and six feet from the ground. A few feathers line its interior. The eggs, as I have previously stated, were somewhat advanced. They are a trifle smaller than those of T. alexandri. As the male bird was not observed in the neighborhood of the nest, and in order to dispel any doubt that may arise in respecting this find, I will say that the female was taken and afterwards identified, through the kindness of Mr. Ridgway.'

A nest in the B. F. Goss Collection, now in the Public Museum of Milwaukee, found May 29, 1883, in San Diego Co., Cal., was placed in a sage bush overhanging a gulch. It agrees with the description Mr. Gault has given in the foregoing. Compared with the domiciles of Anna's and the Black-chinned Kingbird the nest is very small.

NAMES: COSTA'S HUMMINGBIRD, Costa's Calypce (Gould), Costa's Hummer.


DESCRIPTION: "Tail very slightly emarginated and rounded; exterior feathers very narrow, and linear. A very long ruff on each side of the throat. Head above and below, with the ruff, covered with metallic-red, purple and violet (sometimes steel-green). Remaining upper parts and sides of the body, green. Throat under and between the ruffs, side of head behind the eye, anal region, and under tail-coverts, whitish. Female with the tail rounded, scarcely emarginate; barred with black, and tipped with white. The metallic colors of the head wanting.

"Length, 3.20 inches; wing, 1.75; tail, 1.10; bill, .68." (B. B. & R., II, p. 457.)

ANNA'S HUMMINGBIRD.

Calyphe anna Gould.

Plate XXXIV.

The mountains of California exhibit a grand display of beautiful flowers almost throughout the year. Different species of lilies, attaining in the pure mountain air gigantic proportions, are found in great numbers along creeks and springs. The wealth of cassiope, manzanita, ceanothus, adenostoma, etc., must be seen in order to obtain an idea of the charming beauty of the mountain flora. In the sheltered and mild valleys some flowers are found all the year round. Numerous bubbling brooks intersect the magnificent forests with moss-covered stones and fern-clad nooks. Anna's Hummingbird is a characteristic feature of these flowery wilds. Like an arrow it darts along among the lilies and other flowers, poised on wings moving with almost invisible velocity, clothed in purple, silvery, or emerald glory. With startled look it is seen gazing at the intruder, then with a sudden jerk, turning round first one eye, then the other, disappears like a flash of light.

This species is perhaps the most beautiful of all our North American Hummingbirds. It was named by Lesson after Anna, Duchesse de Rivoli, and is one of the most abundant of the Hummingbirds occurring in California, where it remains throughout
TROCHILUS ANNA JARD.
SILBERCOLIBRI.
Anna's Hummingbird.
the year. "Its distribution within that State," says Prof. Ridgway, "is pretty general, though it is said to be much less frequent in the low valleys than in the mountains in summer, probably on account of the comparative scarcity of flowers. At San Diego it is said to be more numerous in winter than in summer, as is probably the case in other parts of southern California." The bird also occurs in Arizona and in Mexico.

The beautiful little nest is built preferably in low horizontal branches of the California live-oak (*Quercus agrifolia*), and such a domicile has been beautifully portrayed by the masterhand of my friend, Mr. Robert Ridgway. It also builds in the branches of the photinia or tollon (*Heteromeles arbutifolia*), one of the most beautiful evergreen trees of this country. A typical nest now before me was constructed in the same manner as the one figured by Mr. Ridgway. Placed on a horizontal branch of *Quercus agrifolia*, it is made of a commingling of mosses and plant-down, covered externally with a lace-like yellow lichen (*Ramalina Menziesii*). It is about two inches in diameter and one inch high.

Mr. W. Otto Emerson describes a nest that was found near San Francisco, Cal., on Feb. 22. It was built in the top of a branch of a cypress tree in a church yard, seven feet above the ground, and was made of "bits of bark, moss, and stamens from the blue gum tree blossoms, with bits of lichens fastened on with spider's webs; inside of thistle-down with a few bird feathers. It measures across the top 1.75 inches; depth inside .75; outside 1.90 inches; across the bottom, 1.25 inches." Another nest of which Mr. Emerson speaks, was found March 24.

Mr. H. R. Taylor of Alameda, Cal., gives the following interesting description of the nidification of this species: "Anna's Hummingbird is not very particular as to location when it begins to think of a home for its young. I have found their nests in orchards, in cactus and in fine cypress, eucalyptus, and many other trees. I have seen them forty feet from the ground, and again so low that the cozy structure was discovered by the angry buzzing of the female, as she flew from her eggs close by my head. I once saw a nest in a rather odd situation; it was in a locust tree where there were only bare limbs and twigs. Another example of a bird's idiosyncrasy was a nest built about fifteen feet up in a eucalyptus. A dry twig had fallen among some green leaves and shoots next the trunk of the big tree, and on this precarious foundation the Hummingbird had built its nest.—Anna's Hummingbird doubtless raises several broods yearly, for nests are found early and late in the season. My earliest date is February 13, incubation far advanced. Mr. A. M. Ingersoll found a nest with eggs nearly hatched on January 14.

"It is not the easiest thing to find a Hummingbird's nest, the birds are such deceivers. Often I have twisted my head about in a surprising manner to follow a swift-speeding Hummer which stopped a moment about some tree to buzz and then suddenly darted down to settle on the nest. Sometimes they appear to fly directly past the tree containing the nest, but turn in the air with wonderful rapidity and go like a flash to cover their eggs. In size and construction the nest of Anna's Hummingbird varies greatly. Very often they are quite large for the size of the bird and decked with beautiful lichens and moss, and I remember one which was exceedingly shallow and built of nothing but willow cotton."
BROAD-TAILED HUMMINGBIRD.


DESCRIPTION: One of the largest of our Hummingbirds. "Tail, deeply forked; external feather narrow, linear. Top of head, throat, and a moderate ruff, metallic crimson-red, with purple reflections. Rest of upper parts and a band across the breast, green. Tail-feathers, purplish-brown, darkest centrally. In the female the tail is slightly rounded, not emarginate; the scales of the head and throat are wanting. Tail, barred with black, and tipped with white. "Length about 3.60 inches; wing, 2.00; tail, 1.45 inches." (B. B. & R., II, p. 454.)

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BROAD-TAILED HUMMINGBIRD.

_Selasphorus platy cercus_ Bonaparte.

The Broad-tailed Hummingbird is the most common, or at least most conspicuous, species of the family in the Rocky Mountain district, although it seems to be more particularly characteristic of the eastern portions, gradually diminishing in numbers, or at least in the continuity of the areas which it inhabits, to the westward. I am unable to find any authentic record of its occurrence west of the one hundred and sixty-first meridian, where in the East Humboldt Mountains, Nevada, I found it fairly common in August, 1868.

"In the Rocky Mountain district proper, as in Colorado, for example, it breeds at an elevation of from 4,000 to 11,000 feet, and I found it having about the same vertical range in the East Humboldt Mountains. In the San Francisco Mountains, Arizona, according to Dr. Mearns, it is an abundant summer resident of the spruce belt. At Fort Garland, Colorado, Mr. Henshaw found it most numerous along the mountain streams, at an altitude of about 7,000 feet. It breeds abundantly in the mountains of northern New Mexico, but in those of southern Arizona it is said to be comparatively rare during the breeding season. On the Upper Pecos River, New Mexico, Mr. Henshaw found the Broad-tailed Hummingbirds 'extremely numerous'; young birds were noticed August 1, and by the 10th they became common. By August 1, the males of this species began to get less numerous, and by the 10th there were none; in fact, I saw very few after that date. This is an extremely interesting fact. Wherever I have been in the West, and for that matter in the East also, I have always been led to wonder at the apparent absence of males early in fall in localities where the females and young were very numerous. The observations I was able to make here solved the problem to my satisfaction. The truth appears to be that immediately upon the young leaving the nest the males abandon their summer limits and at once set out for their winter-quarters, leaving the females and young to follow at their convenience.

"In this locality at least there is an evident reason for this. Just about this date the _Scrophularia_, which is the favorite food plant of the Hummers, begins to lose its blossoms, and in a comparatively short time the flowers give place to the seed pods.
Though there are other flowers which are resorted to by the Hummers, particularly several species of *Pentstemon*, they by no means afford the luxurious living the former plant does. It seems evident, therefore, that the moment its progeny is on the wing, and its home ties severed, warned of the approach of fall alike by the frosty nights and the decreasing supply of food, off go the males to their inviting winter haunts, to be followed not long after by the females and young. The latter—probably because they have less strength—linger last, and may be seen even after every adult bird has departed.

"In the San Francisco Mountains, Arizona, Dr. Merriam found them 'very abundant in the balsam belt and the upper part of the pine belt. A nest containing two nearly fledged young was found on the limb of a Douglas fir, about four feet from the ground, July 31. The principal food plant of this Hummingbird is the beautiful scarlet trumpet flower of *Pentstemon barbatus Torreyi*. During the latter part of August and early September, after it had ceased flowering, these birds were most often seen in the beds of the large blue larkspur (*Delphinium scopulorum*). They wake up very early in the morning and go to water at daylight, no matter how cold the weather is. During the month of August, and particularly the first half of the month, when the mornings were often frosty, hundreds of them came to the spring to drink and bathe at break of day. They were like a swarm of bees, buzzing about one's head and darting to and fro in every direction. The air was full of them. They would drop down to the water, dip their feet and bellies, and rise and shoot away as if propelled by an unseen power. They would often dart at the face of an intruder as if bent on piercing the eye with their needle-like bill, and then poise for a moment almost within reach before turning, when they were again lost in the busy throng. Whether this act was prompted by curiosity or resentment I was not able to ascertain. Several were seen at the summit of the mountain during the latter part of August. They were found also at the Grand Cañon of the Colorado, September 12 to 15. They began to leave the mountain during the first week in September, and none were seen after the middle of the month.

"Mr. Henshaw mentions the marked hostility existing between this Hummingbird and the Rufous-backed species, but adds that, 'in the fall, when migrating, they are brought by the similarity of tastes and habits into the same localities, and their combined numbers are in some favored spots in Arizona simply surprising. The beds of bright flowers about Willow Spring, in the White Mountains, Arizona, were alive with them in August, and as they moved swiftly to and fro, now surfeiting themselves on the sweets they here found so abundant, now fighting with each other for possession of some such tempting prize as a cluster of flowers, their rapid motions, and the beauty of their colors, intensified by the bright sunlight—the gorges of gold and purple contrasting against their emerald and bright-red bodies—conspired to an effect not soon to be forgotten.'"

The foregoing I have quoted from Prof. Robert Ridgway's excellent work, "The Hummingbirds" (Report of the National Museum for 1890).

This species is said to be the noisiest of all our Hummingbirds, uttering in its flight almost constantly a sharp screeching or chattering note. It nests in large numbers in thickets of dwarf willows along streams. Like almost all the nests of these flower fairies, the domicile of this species is very beautiful, being composed of soft plant-down,
and covered externally with lichens and bark-fiber, resembling the twigs to which it is attached. It is usually placed from three to ten feet from the ground. A nest in the B. F. Goss Collection in the Public Museum of Milwaukee is almost entirely made of buff-colored plant-down, and the whole looks much like a sponge.

NAMES: **BROAD-TAILED HUMMINGBIRD**.

**SCIENTIFIC NAMES:** *Trochilus platycercus* Swain. (1827). *Selasphorus platycercus* Bonap. (1850).

**DESCRIPTION:** "Male above and on the sides, metallic-green; chin and throat, light reddish-purple; behind which, and along the belly to the tail is a good deal of white. Wings and tail, dusky purplish; the tail-feathers, excepting the internal and external ones, edged towards the base with light cinnamon. Female without the metallic gorget; the throat-feathers with dusky centres. The tail somewhat cuneate, as in the male, etc., etc.

"Length, 3.50 inches; wing, 1.92; tail, 1.40; bill, .80." (B. B. R., II, p. 462.)

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**RUFOUS HUMMINGBIRD.**

*Selasphorus rufus* Swainson.

**Plate XXXV.**

Minutest of the feathered kind,
Possessing every charm combin'd,
Nature, in forming thee, design'd
That thou shouldst be

A proof within how little space
She can comprise such perfect grace,
Rendering thy lovely fairy race
Beauty's epitome.

Thou burnish'd colors to bestow,
Her pencil in the heavenly bow
She dipp'd, and made thy plumes to glow
With every hue.

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**FALL** of all our western Hummingbirds," says Prof. R. Ridgway, "the ROUFOS-BACKED has the widest distribution, its breeding range extending from the mountains of Arizona to latitude 61° on the coast of Alaska, and from the Pacific coast to New Mexico and Colorado. It must not be inferred from this general statement, however, that the species breeds everywhere within the wide extent of territory thus defined, for, on the contrary, certain conditions of climate and vegetation, dependent on altitude as well as latitude, are necessary for its existence. In Colorado, for example, it is said to breed only above an elevation of 6,500 feet, ranging thence up to 10,500 feet, although in the Santa Catalina Mountains of southern Arizona, so much farther south, its breeding range is said to be between 4,000 and 6,000 feet elevation.

"In Ventura County, California, it is said to be the most abundant species of the family during summer; but Mr. Belding says that in the Sierra Nevada it is a rare summer resident above 4,000 feet. It seems not to occur at all in Lower California, except possibly as a casual visitant or straggler, since Mr. Belding never met with it during his several explorations of that peninsula."
TROCHILUS RUFUS GMEL.
GOLDCOLIBRI
Rufous Hummingbird.
Mr. H. W. Henshaw, who observed this Hummingbird in great abundance on the upper Pecos River, New Mexico, gives the following interesting account:

"The number of representatives of this and the preceding species that make their summer homes in these mountains is simply beyond calculation. No one whose experience is limited to the Eastern United States can form any adequate idea of their abundance. They occur from an altitude of about 7,500 feet far up on the mountain sides, as high up, in fact, as suitable flowers afford them the means of subsistence. They are most numerous at an altitude of from 8,000 to 9,000 feet. During the entire summer they frequent almost exclusively a species of Scrophularia which grows in clumps in the sunnier spots of the valleys. From early dawn till dusk the Hummingbirds throng around these plants, intent in surfeiting themselves on honey and the minute insects that the honey attracts. The scene presented in one of these flowering areas is a most attractive one. Males and females, all flock to the common feeding ground, and as the Hummers, especially of the Rufous-backed species, are pugnacious and hot tempered in the extreme, the field becomes a constant battle-ground whereon favorite flowers and favorite perching grounds are contested for with all the ardor that attaches to more important conquests. The fiery red throat of the Rufous-backed Hummer is an index of its impetuous, aggressive disposition, and when brought into conflict with the other species, it invariably asserts its supremacy and drives its rival in utter rout from the fields. Nor do the males of this species confine their warfare to their own sex. Gallantry has no place apparently in their breasts, and when conquest has put them in possession of a perch near a clump of flowers, they wage war on all comers, females as well as males.

"Nor is the pugnacity of this Hummingbird limited to attacks on other species. The presence of a male of its own kind is sufficient to arouse it to the highest pitch of fury, and should the contestants be equally matched, they will seize each other by the bill and, using their wings as offensive weapons, fall to the ground, roll over and over in fierce strife until exhausted, or until one is worsted, when he is off like a bullet for less dangerous hunting grounds, followed by the exulting victor, who, however, soon gives over pursuit and returns to the perch he has so well won, to preen his disordered plumage and make ready for a fresh contest.

"When the attack is urged against the males of the Broad-tailed species, the contest is less fierce, the latter species usually abandoning the ground in hot haste. The latter result always follows the assault of a male upon the females who, if less valiant in battle, are scarcely less backward when it comes to the assertion of their rights against intruders of their own sex. The rivalry the females display is not less marked if the battles it prompts are less fierce than when the males are engaged; occasionally the females will fight with all the ardor displayed by the males. The mimic contests thus hinted at rather than described—for the fury and spirit displayed in their battles must be seen to be appreciated—are continued all day long, and were the strength of the combatants at all proportionate to their fury, the problem of Hummingbird life would simply resolve itself down to a question of the survival of the strongest. But the tiny strength of these pygmies, though backed by never so much warlike spirit, is scarcely sufficient to detach a feather from each other's gleaming bodies; and even at
the close of the season the male birds show little wear and tear, and are in prime condition as regards their plumage.

"If they have occasion to fear each other—and sometimes I have thought they fight merely for the pure fun of it—they fear nothing else. About our camp, where were a few clumps of the Scrophularia, they were especially fearless, and provided one remained reasonably quiet, they would approach within two or three feet. When in such proximity, their sharp eyes were constantly on the watch, and a hostile movement sent them away like streaks of flame. By gradual approach, however, I was able on several occasions to strike one down with my hat and secure it uninjured before it recovered either presence of mind or strength to get on wing.

"Some idea of the number of Hummingbirds in this locality—and in this respect this whole mountain area is alike—may be gained from the statement that in a single clump of the Scrophularia I have counted eighteen Hummers, all within reach of an ordinary fishing rod. There was scarcely a moment in the day when upwards of fifty could not be counted within the area of a few yards in any of the patches of this common plant.

"As to their nesting, it is a curious and almost unaccountable fact that, notwithstanding their great numbers, we found but a single nest, and this after it was deserted. Inquiry among the settlers showed that they had never chanced upon their nests, and I judge that the greater part nest, as I found to be the case in Arizona, in the upper limbs of the pines; occasionally they nest lower. The one I found was on a dead aspen, not more than ten feet from the ground. At the time when they are building, their nests may be readily found. One has only to follow the birds straight to their nesting-sites as they bear away material in the shape of conspicuous tufts of cottony down from the willows."

The favorite nesting site of the Rufous Hummingbird is along the banks of creeks and mountain streams, on the overhanging branches of trees and bushes. Mr. A. W. Anthony, who found the bird very numerous in Washington Co., Oregon, found nests in ferns, in bushes and trees, and in vines overhanging embankments. The latter, he says, seems to be the favorite locality, as he found six nests in an old railroad cut, in May and June. The materials used are willow-floss and soft plant-down. Almost all the nests are covered with lichens, which resemble the small branches of moss in the trees where they are built. Mr. Ridgway's portrait on Plate XXXV of the nest is an excellent reproduction, and gives a good idea of the typical structure.

**NAMES:** Rufous Hummingbird, Nootka Sound Hummingbird, Ruff-necked Hummingbird, Cinnamon, or Nootka Hummingbird, Rufous-backed Hummingbird, Rufous Flame-bearer (Gould).


**DESCRIPTION:** "Tail, strongly cuneate and wedge-shaped. Upper parts, lower tail-coverts, and breast, cinnamon. A trace of metallic-green on the crown, which sometimes extends over the back, never on the belly. Throat, coppery-red, with a well-developed ruff of the same; below this a white collar. Tail-feathers, cinnamon, edged or streaked with purplish-brown. Female with the Rufous of the back covered or replaced with green; less cinnamon on the breast. Traces only of metallic feathers on the throat. Tail, Rufous, banded with black and tipped with white; middle feathers glossed with green at the end. Tail still cuneate.

"Length of male, 3.50 inches; wing, 1.55; tail, 1.30 inches." (B. B. & R., II, p. 450.)
ALLEN'S HUMMINGBIRD.

_Selasphorus alleni_ Henshaw.

This species so closely resembles the Rufous Hummingbird in general appearance that only the observer, well acquainted with both birds, can distinguish them. Its range is far more restricted than that of its congener, being essentially confined to the coast districts of California, but occurs as far north as British Columbia. It arrives at San Diego, Cal., at the same time when the Rufous Hummingbird makes its appearance. In Nicasio County, Cal., it seems to be most abundant, it having been discovered there by Mr. C. A. Allen, of Nicasio. The latter observer reports that the “Greenbacks,” as he calls them, “are much the livelier and more active of the two, keeping constantly in the open and always perching on the most prominent dead twigs they can find. Their extreme shyness, as contrasted with the unsuspicious nature of the Rufous-backs, is quite remarkable. They seem to possess a larger share than usual of the courage and pugnacity which is constantly displayed in birds of this family.” He has often seen the little fellows in hot chase after the Sparrow Hawks, who only seemed to care to get out of the way as soon as possible of foes so determined.

Mr. W. Otto Emerson, of Haywards, Cal., speaks of a pair building their nest in a climbing rose under his porch. It was made of the cotton of willows and the flower stamens of the Australian gum trees. A nest found on May 2, 1883, by Mr. A. M. Ingersoll at Santa Cruz, Cal., and now in the B. F. Goss Collection, was built in a blackberry bush, two and a half feet from the ground. Externally it is made of pieces of lichens, moss, flower-stamens and bits of leaves, and the cavity is lined with fine plant down.

NAMES: ALLEN'S HUMMINGBIRD, Green-backed Hummingbird, Green-back.

SCIENTIFIC NAMES: _SELASPHORUS ALLENI_ Henshaw (1877).

DESCRIPTION: “Adult male with top of head, bind neck, back, scapulurs and wing-coverts, metallic-green; rump, upper tail-coverts, tail, lores, orbital region, ear-coverts, sides, and flanks, cinnamon-rufous; gorget, intensely brilliant metallic-scarlet (exactly as in _S. rufus_); chest, white; tail-feathers, next to middle pair, tapering gradually etc.

“Length, 3.40 inches; wing, 1.50; tail, 1.15 inches.” (R. Ridgway.)

Floresi's HUMMINGBIRD, _Selasphorus floresii_ Gould, a native of Mexico, has been detected in one specimen by Mr. Bryant at San Francisco.

CALLIOPE HUMMINGBIRD.

_Stellula calliope_ Gould.

“This is the smallest of our North American Hummingbirds,” says Prof. R. Ridgway, “but, notwithstanding its diminutive size, has a very extensive distribution, ranging farther north than any other of the western species except _Selasphorus rufus_, and extending from the Pacific coast nearly, if not quite, to the main chain of the Rocky Mountains. Like the Rufous Hummingbird, however, it does not inhabit every portion of the extensive region indicated, but only such parts as are suited to it by topographical or climatic conditions. In California, according to Mr. Stephens, it breeds as far south as the San Bernardino Mountains, where it inhabits the pine region, but in
most parts of that State it is, according to Mr. Belding, rare and chiefly a migrant, though breeding in the Sierra Nevada above 4,000 feet. Mr. Townsend found it breeding abundantly on the McCloud River, in the northern part of the State, as did Dr. Merrill at Fort Klamath, Oregon. Dr. Merriam obtained a female on the 3rd of July at Fort Ellis, Montana, where the species was doubtless breeding, and Mr. John Fannin records it as a common summer resident at Buzzard Inlet, British Columbia. It has not yet been taken in Colorado; but it may be expected to occur in the western portion of that State, since the present writer found it to be not uncommon in the Wasatch Mountains of Utah, where in fact it was almost as numerous as was Selasphorus platycercus. Mr. Henshaw found it rather numerous in summer along the Upper Pecos River, in New Mexico."

Some points in the breeding habits of the Calliope Hummingbird are thus described by Dr. J. C. Merrill, the locality being Fort Klamath, Oregon:

"First taken May 17. A few Hummers, apparently of this species, had been seen for ten days before this date, but they were not abundant until the 16th, after which the males were common about the blossoms of wild currant and gooseberry bushes. During the breeding season they are generally distributed, and are to be found in deep pine woods as well as in more open places, the constant sharp, shrill notes of the males indicating their presence and abundance. When pairing soon after their arrival, and with less frequency during the period of incubation, the males have a habit of poising themselves for some seconds at a height of thirty or forty feet above the ground, and then dashing down nearly to the earth, rising as quickly to poise again, and repeating the manoeuvre often; at such times their notes are particularly loud and attract attention from a considerable distance.

"A nest brought to me about the middle of July, and which the young had just left, was placed upon a dead flattened cone of Pinus contorta. It was composed of thin strips of gray bark, with a few spiders' webs on the outside; the lining was similar, but with a few small tufts of a cottony blossom from some tree; the nest was just the color of the cone and was admirably adapted to escape notice. Another nest containing two nearly fledged young was found at about the same time, but was quite unlike the one just described in construction and situation, being of the common Hummingbird type and saddled upon a dead willow twig. One of the young birds lived for about a week, becoming very tame and feeding greedily upon sirup."

NAMES: Calliope Hummingbird, Mexican Satellite, Star-throated Hummingbird, Satellite Hummingbird.

Scientific Names: Trochilus (Calothorax) calliope Gould (1847). STELLULA CALLIOPE GOULD (1861).

Description: "Adult male with the narrow and distinctly outlined feathers of the gorget, pure white basally, metallic reddish-purple terminally; middle tail-feathers somewhat spatulate, purplish back, edged with rufous toward base and broadly tipped with dull brownish-gray, etc. Under-parts, white, the sides and flanks, metallic-green, mixed or washed with pale rusty. Adult female, metallic bronze-green above; under-parts, white; the sides, flanks, and under tail-coverts, pale rusty or cinnamon-buff, the throat more or less spotted with brownish." (R. Ridgway.)

Lucifer Hummingbird, Calothorax lucifer Gray. This beautiful species has been added to our avifauna by Mr. H. W. Henshaw, who found a specimen near Camp Bowie, Arizona. It is a numerous bird in Mexico. A nest in the B. F. Goss Collection, said to be
collected in southern Arizona, is made entirely of a mixture of plant-down, spiders' webs, and covers of leaf and flower buds. It is a beautiful, firmly felted domicile. This species is also known as the Mexican Star.

DESCRIPTION: "Adult male with gorget rich metallic-violet, varying to purplish-blue; upper parts, metallic bronze-green, the three outer tail-feathers, purplish-black; chest, buffy-white, belly and under tail-coverts, purer white; sides and flanks, dull greenish-bronze, tinged with rusty."

**Rieffer's Hummingbird, Amazilia fuscicaudata Ridgeway.** Like the allied Buff-bellied Hummingbird, this species was discovered by Dr. J. C. Merrill at Fort Brown, Texas. The specimen was brought alive to him by a soldier, but subsequently escaped. It is an inhabitant of a large territory, ranging from the lower Rio Grande, south through eastern Mexico to Central America and northern South America.

**Buff-bellied Hummingbird, Amazilia cerviniventris Gould.** This is the plainest species of all the Hummingbirds occurring in the United States. It was first obtained within our border by Dr. J. C. Merrill, U. S. Army, at Fort Brown, Texas, in 1876. It was there an abundant summer visitor, being particularly numerous on the military reservation. It seemed to be perfectly at home among the dense tangled thickets, darting rapidly among the bushes and creeping vines. It was rather a noisy bird, its shrill cries usually first attracting attention to its presence.

A nest in the B. F. Goss Collection in the Public Museum of Milwaukee, obtained on May 12, 1891, near Brownsville, Tex., "in the thick woods," is made of fine hemp-like fibers, plant-wool, and spiders' webs, and the exterior is decorated only with a few lichens. The lining consists of plant down. According to Mr. Geo. K. Cherrie this is the most abundant species about San José, Costa Rica. He believes that it nests there in every month of the year. Nests are usually placed about fifteen feet from the ground either in orange or lemon trees.

DESCRIPTION: "Above, metallic-green, tinged with bronze, the top of the head much duller; upper tail-coverts, bronze-green; tail, clear chestnut; sides of head, metallic-green; chin, throat, and chest, brilliant metallic Paris-green; breast, metallic bronze-green; belly and flanks, light buffy-cinnamon; downy femoral tufts, white, etc.

"Length, 4.00 inches; wing, 2.25; tail, 1.50; bill, 0.80." Female, similar. (After R. Ridgway.)

**Xantus' Hummingbird, Basilinna xantusi Elliot.** This species inhabits Lower California north to latitude 29°. Its congener, the White-eared Hummingbird, Basilinna leucotis Boie, has been found from Nicaragua and Mexico north to the Chiricahua Mountains, Arizona.

**Broad-billed Hummingbird, Iache latirostris Elliot.** This species, which is also called Circe Hummingbird and Circe, appears to be rather numerous in southern Arizona. From here it is abundant south to the valley of Mexico. A nest in the B. F. Goss Collection was found May 19, 1890, in the Huachucha Mountains, at an elevation of 7,500 feet. It was placed in a maple tree, seven feet from the ground, and is constructed of buff plant-down and spiders' nests, well felted; the exterior is decorated with a few pieces of leaves. It is a deeply cupped structure.

DESCRIPTION: "The color of this species is above metallic grass-green, some feathers tinged with bluish-green in certain lights, the fore-head much duller; tail, glossy blue-black; chin and throat, rich metallic cobalt-blue, gradually changing posteriorly to metallic bluish grass-green, which color covers uniformly the chest, breast, belly, sides, and flanks; thigh-tufts, pure white.

"Length, about 3.50 inches; wing, 2.05; bill, 1.30 inches." (After Ridgway.)
SWIFTS.

Micropodidae.

N VIEW of their external appearance the Swifts have been called Swallows from times immemorial, and even to-day they are regarded as such by the people. There is, however, a great difference between the Swallows and the Swifts. In their internal structure and in their habits they are so dissimilar that they must at once be recognized by close observers, as quite different birds. The Swifts show nothing of the happy congenial nature of the Swallows. They are entirely songless, and in their ways they appear rather mysterious.

The family is found all over the globe, except in the extreme cold regions and in New Zealand, being most abundant in the tropics. The Swifts are represented in this country by the following genera:


Black Swift, Cypseloides niger Sclat. This graceful Swift is an inhabitant of the Rocky Mountain Region, north to British Columbia and west to the Pacific coast. It is found south to Lower California, Mexico, Costa Rica, and the West Indies.

Though the Black Swift seems to be a rather scarce bird in the various regions, above mentioned, Mr. M. H. Gormley reports in "The Auk," that it is somewhat abundant at Seattle, Wash., where he found it nesting in the cornices of buildings near the water front, in the business part of the city. The nests are usually placed in galvanized iron cornices, where they are safe from all kinds of depredations. A nest found June 6, 1888, Mr. Gormley describes more in detail. It was built in the interior of a cornice of a small frame building. The entrance to the nest was at one end of the cornice. The deck or top was sprung up so as to leave an opening. The compartment was about twenty inches square. The structure was composed of leaves, which were yet green, bits of paper, chips from a planing mill near by, a few horse hairs, and straw, and was surrounded by a large quantity of loose straw. The leaves and paper formed the lining of the nest. The eggs were pure white. Another set of four eggs was found on June 28.

DESCRIPTION: "Uniform dusky or blackish, becoming more sooty-grayish on head and neck, the forehead more hoary." (Ridgway.)—Length about 7.25 inches; wing, 7.00; tail, 2.65 inches.
CHIMNEY SWIFT.

*Chætura pelagica* Stephens.

Plate XVIII. Fig. 5.

The Chimney Swift, or, as it is often erroneously called, the Chimney Swallow, is one of our most familiar birds during the breeding season, occurring from Florida and Texas northward to Labrador and the Fur Countries, and from the Atlantic to the Plains. It is supposed to winter in such places in the tropics, where flying insects are most abundant.

In Wisconsin the Chimney Swifts usually arrive between May 9, and May 15; in south-western Missouri I have noticed them rarely before April 15. In Orange Co., Fla., I observed them in the first week of April, and in south-eastern Texas they appeared in large numbers in the last days of March. The swift-flying, sooty little bird, with its long pointed wings and short tail, is seen constantly skimming over the fields and meadows, now high up in the air during fine weather, and now low down when the atmosphere is warm and damp, or early in the morning and after sunset. It is often seen in company with the Swallows, hunting for small flying insects, its only food. Being rather crepuscular in its habits, it prefers to hunt for its insect prey in cloudy weather, or very early in the morning, shortly after dawn, and in the dusk of evening. "In this it is probably influenced by the abundance or scarcity of insects, as it is not unfrequently to be seen hawking for insects in the bright glare of noon. When they have young, they often continue to feed them until quite late at night." (Brewer.)

In its habits the Chimney Swift presents many remarkable differences from most other species, especially those of Europe. "While the latter," according to Dr. T. M. Brewer, "are shy and retiring, shunning the places frequented by man, and breeding chiefly in caves or ruined and deserted habitations, their representatives in eastern North America, like all the Swallow family here, have, immediately upon erection of the dwellings of civilized life, manifested their appreciation of the protection they afford, by an entire change in their habits in regard to the location of their nests. When the country was first settled, these birds were known to breed only in the hollow trunks of forest trees. The chimneys of the dwellings of civilized communities presented sufficient inducements, in their greater convenience, to tempt these birds to forsake their primitive breeding places. The change in this respect has been nearly complete. And now, in the older portions of the country, they are not known to resort to hollow trees for any other purpose than as an occasional roosting place."

In Wisconsin, Illinois, and Missouri I have always found the nests of these birds in buildings. Even in Milwaukee and Chicago they are known to nest numerously in chimneys. The first nest of the Chimney Swift which I ever saw, was glued to the rough boards in the inner gable of our barn. This was in the days of my boyhood. For several successive years the pair glued their nest to the rough boards. It was a very peculiar structure, quite different from all other birds' nests, semi-circular, saucer-shaped, flat, made of small sticks which were firmly glued together, and there was no
lining. Although the Swifts are exceedingly gregarious, they do not show this trait during the breeding season, as usually only one pair is found nesting in one chimney. The usual site of the nest is a chimney not in use. They exercise superior care and foresight in the selection of the chimney. The nest is usually placed far down and is always glued to the walls by means of a gummy saliva which the birds secrete. The small sticks, of which it is composed, are of a uniform size, wrought and interwoven into a neat semi-circular basket. All the twigs are glued together. "In selecting the twigs, with which they are to construct their nests," says Dr. Brewer, "the Swifts break from the tree the ends of living branches, which they gather with great skill and adroitness while on the wing.... This is a well attested fact, familiar to all who have ever watched these birds in the early morning as they are at work constructing their nests."

My friend, Mr. Otto Widmann, of Old Orchard, Mo., constructed an artificial chimney of boards, which he placed on his house, in order to induce the Chimney Swifts to nest in his place. A pair of these birds select it year after year for their nesting site. In Texas, where no chimneys are found on the country houses, these birds still nest in hollow trees in the bottom woods. They invariably select such trees of which the tops have been broken off by a heavy storm. Such hollow stumps of considerable height are frequent, and they also harbor great numbers of Swifts during the nights after and before the breeding season. The eggs, four to six in number, are pure white.

About the roosting of the Chimney Swift, Mr. Otto Widmann sends me the following account:

"Though each pair choose their own chimney for nesting purposes, they prefer to remain together as long as possible before nesting time, and to congregate again as soon as possible after the breeding season. When the young are able to fly, all the Swifts of one locality assemble in the evening near their mutual roosting place, enlivening for a short time the whole neighborhood in a very pleasant manner. When the time of their southward migration approaches, small communities congregate with other assemblages, flying often very far in order to reach their common roost, a large and wide chimney of a large building. Such a place often harbors thousands of these birds. To the friend of Nature it is an imposing and impressive sight to observe the assembling of these wonderful birds in the evening near the chimney in which they all take up their abode during the night. In fine weather, when food is abundant, the first Swifts make their appearance at sunset. At first only a few are to be seen. They are skimming through the air in all directions, disappearing for a few moments to re-appear accompanied by other birds. Shortly their numbers increase, but they are scattered over a large territory. It grows dusky. The swarm is now very large, coming nearer and nearer, and forming a ring of chattering and apparently very excited birds, which fly now higher, now lower over the building, all moving in one direction. New arrivals are at once drawn into the whirl. In the meantime several have approached the opening of the chimney, but they stop in a loitering way, apparently examining if it is safe to enter. About a hundred times they have circled round the chimney, before one enters in a perpendicular position, and unsteadily flying from one side to the other. Several others follow. Then a few seconds, often minutes, elapse, until, after a thorough examination of the chimney, others conclude to follow. Now it has become quite dusky.
Suddenly the entire mass begins to dive down into the chimney, as quick and as close together as possible, and soon almost all have disappeared. A small number continues to circle around and to chatter, and after a few minutes have passed, another swarm has formed, almost as large, as wild, and as noisy as the first one, which finally also disappears in the opening of the chimney. Now only a few are circling around, but still small companies (or, in spring, single pairs) are arriving in great hurry. They all circle around first before they venture to dive down. Soon darkness sets in. Only a few fly around like ‘will o’the whisps,’ finally also going to roost, and over the locality so noisy a short time ago, now reigns the quietness of the night. When leaving the chimney in the morning, they at once scatter over the whole region and in all directions, provided the weather is fair. On windy and cool mornings they fly around rather undecidedly, and one after the other again seeks the protection of the chimney.”

In Milwaukee I have seen them by the thousands roosting in a huge and high chimney of a brewery. This roost I have visited several times in the evening as well as early in the morning. In the evening they acted in the same way as Mr. Widmann so vividly describes, but in the morning they left the chimney in a somewhat different manner. As soon as the day dawned a few left their roost and circled around for a few minutes, then they returned. In cold and rainy weather none were to be seen before sunrise, but in warm and fine weather the whole swarm poured out over the opening of the chimney like a cataract, flying down for a distance, and then all dispersed. This always happened before the first few, who evidently examined the condition of the weather, had returned from their excursion in the air. This chimney formed the roosting place for many thousands.

In Wisconsin their fall migration begins early in September. I have seen none after Sept. 15 in Milwaukee, while Mr. Otto Widmann has observed the last, in St. Louis, Oct. 17. In Texas I have seen them throughout the month of October, and many were observed by me in Orange Co., Fla., until Nov. 20.

NAMES: Chimney Swift, Chimney Swallow, Common Swift, Swift.


Description: “Tail, slightly rounded. Sooty-brown all over, except on the throat, which becomes considerably lighter from the breast to the bill. Above with a greenish tinge; the rump a little paler.

Length, 5.25 inches; wing, 5.10; tail, 2.15 inches.” (B. B. & R., II, p. 432.)

Vaux’s Swift, Chaetura vauxii DeKay, represents the common Swift in the Pacific coast, north to British Columbia. It is said to nest in hollow trees and to form a nest in similar manner as its congener.

White-throated Swift, Aëronautes melanoleucus Hartert. This species inhabits the mountain regions of the West, from the Black Hills, northern Wyoming, and southern Montana to the Pacific. Winters south to Guatemala. It seems to breed in the fissures of high perpendicular rocks.
RIGHTHAWKS, Whip-poor-wills, etc., form the very interesting family of Goatsuckers. They are nocturnal birds, playing, like the Owls, a great rôle in the superstitions of all human races, be they black or white, yellow or red. They always have been in disgrace with man. It has been handed down from generation to generation, that these nocturnal birds subsist by milking the cows and goats. "Poor injured little bird of night," says Waterton, "how sadly hast thou suffered, and how foul a stain has inattention to facts put upon thy character! Thou hast never robbed man of any part of his property, nor deprived the kid of a drop of milk. When the moon shines bright you may have a fair opportunity of examining the Goatsucker. You will see it close by the cows, goats, and sheep, jumping up every now and then under their bellies. Approach a little nearer. See how the nocturnal flies are tormenting the herd, and with what dexterity he springs up and catches them as fast as they alight on the bellies, legs, and udders of the animals. Were you to dissect him and inspect his stomach, you would find no milk there. It is full of flies which have been annoying the herd."

"The plumage of all these birds is soft and lax, much as in the Owls; the birds have the same noiseless flight, as well as, in most cases, nocturnal or crepuscular habits; and some of them bear an odd resemblance to Owls. Besides this fluffiness and laxity of the plumage, the skin is very thin and tender; it is difficult to make good specimens of the Whippoorwills, and the curiously variegated blended shades, of exquisite beauty, like the powdery coloration of a moth's wings, are at best not easy to describe. An evident design of the capacious mouth is the capture of insects; the active birds quarter the air with wide open mouth, and their minute prey is readily taken in. But they also
secure larger insects in other ways; and to this end the rictus is frequently strongly bristled, as in the *Tyraunidae*. . . . The feet are so extremely short that the birds cannot perch in the usual way, but sit lengthwise on a large branch, or crouch on the ground. They lay two lengthened, white or thickly spotted eggs, on or near the ground, in stumps, etc. The sexes are distinguishable, but nearly alike. The voice is peculiar, and has given several of the species their fanciful onomatopoetic names.

The family is represented in North America by the following genera:


WHIPPOORWILL.

**Antrostomus vociferus** Bonaparte.

**PLATE XXXIII. FIG. 7.**

The last dim rays of sunset slowly die,
And creeping shadows hide the grassy hill.
As fades the light the bird-songs cease to trill
As vesper-bats through the dim twilight fly.

Pale stars begin to twinkle in the sky,
While, like a spirit voice, the hidden rill
Speaks to the night; and all things else are still.
Then sudden through the dark, afar or nigh,
I know not, come the sweet notes *whip-poor-will*,
Voicing sad feelings that I deemed forgot:
And ever from the forest dark and chill
Comes the soft song that stirs old memories, till
I see again the wood, the field, the cot
Where youth was spent; brought back by *whip-poor-will*.

On the dark canvas of the quiet night
Memory paints pictures of the long past days,
Showing again to my delighted gaze
Scenes long forgotten. Time stops in his flight
And brings once more my golden youth to sight.
I look far backward through the year's soft haze,
When pain itself was spanned by rainbow rays,
And every cloud shone with a mystic light.
Young life returns. I feel my pulses thrill
To the strong rythm of youth unworn and sweet;
I tread again old paths with bounding feet,
And life and joy and love my being fill.
What magic brings these scenes my heart to greet?
And from the wood comes answer *whip-poor-will*!

B. J. Loomis.

INDESCRIBABLY sweet memories are called to my mind when I hear the name of WHIPPOORWILL. I think of my old Wisconsin home, of the happiness and hardships of the first settlers, of the glorious primeval forests, of the browsing half wild cattle in the woods, of the millions of Passenger Pigeons moving in immense swarms over fields and forests, and of the spring time when new life pervaded all Nature. How many hours have I spent in the woods when I was sent for the cattle to drive them home, and how often have I listened to the charming night concerts of nocturnal songsters! Time and again have I sauntered through the budding and flowering forest in spring and early summer! None could tell me the names of the pretty flowers which I brought home, and no one was able to give me the desired information about the birds, whose voices I had heard and whose beauty and brilliancy I had admired. I frequently roamed about in the woods, until the notes of the Whippoorwill reminded me that it was time to return home.

The time after sunset late in May, in June, and July in a Wisconsin forest of white
WHIPPOORWILL.

pines, hemlocks, and a great variety of deciduous trees and shrubs is the most charming period of the day. The fragrance of flowering shrubs and the aromatic and strengthening odor of the white pines fill the air. Not far distant the low murmur of a cool spring hurrying to the nearest brook is heard. We see the glowing red and purple, yellow and orange of the setting sun shining through the trees. The diversified tinkling of cow-bells falls on our ear. The twilight of evening is of considerable duration in this northern latitude. The birds which in the late afternoon were all very lively and in full song, become silent. Most of them retire to their roosting places. The Towhee bids farewell to the parting day with a subdued and prolonged che-we-wink-wink. With the beginning of dusk a deep silence seems predominant everywhere. This stillness, however, is not of long duration. From a densely wooded glen the enchantingly sweet and mellow song of the Veery begins to resound, at first in a low and persuasive tone, then gradually louder, fuller, and more reverberating until the whole woodland re-echos with the sweetest music. The somewhat plaintive and yet so melodious and charming strain of the Rose-breasted Grosbeak also resounds from far and near. Resting on a soft carpet of moss and lycopodium (Lycopodium dendroides), or of wintergreen (Gaultheria procumbens), and partridge-berry (Mitchella repens), we listen and listen until darkness overtakes us. Although in swampy localities the discordant croaking or bellowing sounds of the bull-frog, and the hooting cries of the Owls somewhat mar the serenity and glory of these night-concerts, on the other hand, their beauty and effectiveness is enhanced by the call of the Whippoorwill. Suddenly, quite near our resting place, the strange and yet so poetical sounds of this bird are uttered. Incessantly they are poured forth, being now heard quite at a distance, and then again in our immediate neighborhood. Whip-poor-will, whip-poor-will, whip-poor-will, whip-poor-will is called four and even six times quickly in succession. Loudly these intonations sound through the dark forest, blending admirably with the notes of the Veery and the Rose-breasted Grosbeak. To the superstitious among the early settlers these nocturnal calls had something mystical, dismal, and frightful. Having heard them from earliest childhood, they were to me always exceedingly poetical and home-like, and had an extremely soothing effect. In my fancy these sounds are the true accompaniment of beautiful days, warm evenings, delicate and rare flowers, in a word, of spring in all its glory. Indeed, the Whippoorwill is one of our most characteristic and familiar birds, and many of our poets have sung its praise. Where it occurs it cannot be overlooked, and its voice cannot be missed in the concert of Nature. If we observe closely in a bright moonlight night, we will see it circle around constantly, flying up and down and from one tree to another, alighting now and then on the ground or on a fallen forest giant.

The woodlands in which I have observed the Whippoorwill since my earliest boyhood, are to be considered its favorite haunts. Small lakes abound everywhere. Tamarack and white cedar swamps, often of large size, make an agreeable change in the landscape. Murmuring springs and rapid brooks flow into the lakes. Shady glens and dreamy glades are frequently met with. Scarcely anywhere the variety of trees and shrubs is greater. Birches and beeches, lindens and larches, maples and moose-wood, ashes and oaks, white-pines and hemlocks, white-cedars and junipers, iron and hop trees, etc., are the most common trees. On the ground old forest giants are found in all states of
decomposition. A carpet of ferns, terrestrial orchids, lycopodiums, trilliums, trailing arbutus, wintergreen, partridge-berry, blood-root, hepaticas, dog's tooth violets, and many others, cover the floor of the forest.

The Whippoorwill is a true forest bird. In many places, where the land has been cleared and only few remnants of poor woodlands are left, the bird has become scarce. It has vanished with the Indians and the primeval forest. Near Milwaukee the sounds of the Whippoorwill are at present seldom heard. In this era of forest destruction we have, even in the more northern parts of the State, often to wander far before we hear its call-notes. But whenever we hear the song of the Veery and the drumming of the Ruffed Grouse, we may be sure also to meet the Whippoorwill. Where farm-yards are closely connected with woods, these birds often are seen around cattle in pursuit of flying insects.

In the above mentioned locality I do not remember to have heard the Whippoorwill before the third week of May. Though of rather large size, it is an exceedingly delicate bird, arriving always when the woods are perfectly green, when the air is mild and insects, especially moths, its main food, abundant. A few may come five or even ten days earlier, but the bulk never arrives in Sheboygan Co., Wis., before the 20th of May. At Freistatt, Lawrence Co., Mo., where it is a rather numerous summer sojourner, I have heard its first call-notes in the last week of April and the first week of May. It has quite a large range of distribution, being found during the breeding season over all the eastern parts of the Union west to the Plains, and from the southern Alleghanies and the Ozark region north to Manitoba and Nova Scotia. When the first Whippoorwill is heard, its tones seem like the voice of an old friend, who has again returned from a long journey. They are listened to by young and old with great pleasure and as a sure sign of warm and beautiful spring weather. Though the notes of the bird are so well known, few people are really acquainted with the Whippoorwill, confounding it with the very different Nighthawk. On Plate XXXIII the differences in their external appearance are well pointed out. There is also a great diversity in flight. The Whippoorwill is an inhabitant of sylvan retreats, and never skims around in such a continuous way as the Nighthawk, its flight being, on the contrary, rather short and low, without any perceptible sailing, and more in the manner of Flycatchers. It is a shy bird, and easily startled if approached. "At night," says Dr. T. M. Brewer, "as soon as the twilight disappears, these birds issue from their retreats, and fly out into more open spaces in quest of their favorite food. As many of the nocturnal insects, moths, beetles, and others, are attracted about dwellings by lights, the Whippoorwill is frequently enticed, in pursuit, in the same vicinity. For several successive seasons these birds have appeared nearly every summer evening within my grounds, often within a few feet of the house. They never suffer a very near approach, but fly as soon as they notice any movement."

Like the Chuck-will's-widow, the Whippoorwill constructs no nest. The eggs are laid on the bare ground in the thickest and most shady portion of the woods. Usually a few old leaves, in a slight depression of the ground, form the foundation. The eggs, two in number, are always found on high ground, never in low and marshy places. They have a creamy-white ground-color, and are irregularly spotted, marbled, and clouded with purplish-lavender and brown. "The former are fainter and as if partially
obscured, the brown usually much more distinct." Like the Chuck-will's-widow, this species also carries away its eggs and young in its capacious mouth, when the approach of danger is anticipated.

With the American people the Whippoorwill, who has also received its common name from its very distinct nocturnal call-note, is a great favorite, a very familiar and popular bird. Its notes, having a wild, romantic, and mysterious touch like its forest haunts, belong to the woodland scenery. In a prairie they would be out of place. That even other birds are inspired by the Whippoorwill's call-note, is proven by the Mockingbird and Catbird. Both frequently imitate these nocturnal sounds, blending, them so charmingly with their own exquisite song, that the whole forms a striking and unique piece of musical performance.

**Stephen's Whippoorwill,** *A. vociferus macromystax* A. O. U., inhabits Arizona, New Mexico, and the table lands of Mexico south to Guatemala.

**Names:** Whippoorwill.


**Description:** "Bristles without lateral filaments. Wing about 6.50 inches long. Top of head, ashy-brown, longitudinally streaked with black. Terminal half of the tail-feathers (except the four central), dirty white on both outer and inner webs. "Length, 10.00 inches; wing, 6.50; tail, 6.30 inches. Female without white on tail."

(B. B. & R., II, p. 413.)

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**Chuck-will's-widow.**

*Antrostomus carolinensis* Gould.

To the friend of Nature no other State of our great country affords so many pleasures and displays such a variety of tropical scenery as Florida. Bounded on one side by the Atlantic and on the other by the warm blue waters of the Gulf of Mexico, dotted by an almost countless number of fresh water lakes, traversed by mighty streams, and above all, blessed with a climate unequalled in delight and salubrity by any other, Florida is considered a true paradise of the tourists. The Indian River region with its orange groves, pine-apple fields, charming cocoa-nut plantations, and beautiful gardens is an almost ideal winter home. The flame-tree or royal poinciana, the jacaranda and a host of other strictly tropical plants have made the gardens of Lake Worth famous all over the country. In the region of Miami, in the Everglades around Lake Okeechobee, and on the Caloosahatchee tropical trees and shrubs abound in a wealth and luxuriance not found anywhere else in this country. The large lakes and the great streams, particularly the St. Johns, Suwanee, Chattahoochee, and Ocklawaha, are bordered by almost impenetrable hammock woods. The innumerable small and large lakes add a special charm to the landscape, as also do the many palmetto groups and broad-leaved evergreen trees, which are often covered from summit to base with pretty
CHUCK-WILL'S-WIDOW.

fern, air plants, and orchids. The sandy pine woods, appearing rather barren to the casual observer, are replete with beautiful flowers in great variety throughout the year.

Of particular interest is a trip by steamer on the narrow Ocklawaha and the St. Johns. The various excursions made by me on the last named river are always remembered with much delight, especially a particular one made in the latter part of April, 1886. Late in the afternoon I took one of those comfortable steamers running between Sanford and Jacksonville. The air was exquisitely mild and refreshing, and the silvery light of the moon imbued the landscape with an indescribable charm. The starry sky in Florida is always enchantingly beautiful, but I had never enjoyed its magnificence in such high spirit. The groups of palmettos, and the bushes and smaller trees overgrown and festooned with moonflowers (Ipomoea Bona-Nox), growing on the banks of the narrow and constantly winding stream, had a charming appearance. For hours I remained on deck, enjoying the wonderful night and the enchantingly beautiful pictures appearing and vanishing before my eyes. Now a group of magnolias was passed, their glossy evergreen foliage relieving the large, starry, white flowers with an almost weird-like effect. A most delicious fragrance, exhaled by these blossoms, filled the air. Now an orange grove came in view, from whence the inimitable song of the Mockingbird resounded, and now a cypress swamp was passed, the home of numerous alligators.

Soon after dusk my attention was constantly called to the motions and circular flights of a bird, whose characteristic sounds came from far and near. This was the CHUCK-WILL'S-WIDOW, or, as it is often called by northern settlers, the "Spanish Whippoorwill." The whole forest on both sides of the river appeared to be alive with these birds. They circled around and over the palmetto groups and thickets festooned with moonflowers, and were equally numerous among the orange trees. Frequently they were skimming over and around the steamer, passing and re-passing only a few feet from where I observed their gyrations. They were not at all shy and uttered their notes frequently while circling around in rapid flight. Often they alighted on old prostrated logs, and apparently also on palm fronds. The call-notes of these nocturnal, swift-flying birds resounded so often and so rapidly and with such pathos, that the whole woods seemed to be alive with them. It was a singularly harmonious and impressive living picture, filling the soul with delight and higher emotions. The glorious moonlight night, the soft pure air, filled with the odor of magnolia and orange blossoms, the loud call-notes of the Chuck-will's-widow, and at a distance the song of the Mockingbird and Cardinal! When the steamer entered Lake George, the picture vanished and the last notes of an exquisite concert faded away. An extensive and smooth stretch of water lay before us, and it remained silent throughout the rest of the night.

Scarcely anyone is better acquainted with the habits of this poetical night bird than the orange growers in the woods. The evenings in the orange groves and ornamental plantations of Florida are almost always charmingly beautiful. I am not able to describe such nights of bird-song and flower perfume. Only a man of ideal thoughts and higher emotions is capable to appreciate this kind of natural beauty. It must be experienced in order to convey an adequate idea. As the bird not infrequently alights on the roof of a cottage during the night, uttering its notes rather suddenly and unexpectedly, those not accustomed to these unique nocturnal sounds often become startled
and the superstitious even scared. I have heard their call-notes near my open bed-room window, where a large night jasmine wafted its fragrance through the invigorating air, but to me they always had a very pleasing effect. When the short twilight of Florida is fading into night, these birds emerge from the secluded retreats, which the dense and gloomy forests afford them and in which they invariably pass the day, appearing frequently in the neighborhood of man. In such places, especially in the cow yard and around the stable, it is sure to find a profuse supply of all kinds of flying insects, its sole food.

The true home of the Chuck-will's-widow are the States bordering the Gulf and south Atlantic, north to the Indian Territory, southern Illinois, and the St. James River. In its most northern habitat it is seldom met with, being scarce even in the vicinity of Charleston, S. C. I have observed the bird regularly in Texas, but not in such abundance as in Florida. Its favorite haunts are the deep, dark forests near water, where it inhabits shady glades perfectly safe from intruders. During day-time it is usually found on the ground among old leaves, or it sits lengthwise on an old log. When flushed, it flies noiselessly in a straight course through the forest. Its peculiar color harmonizes admirably with the old leaves on the ground or with the partly decayed wood of postrate forest giants.

Although the peculiar chuck-will's-widow is usually uttered while the bird rests on the ground or on an old stump or log, there is no doubt that it also resounds while it is circling around in quest of flying insects. The notes are somewhat ventriloquial, often appearing as if they come from above, from behind, or from a great distance. During all the time while we are listening the bird sits, perhaps, on an old log or on the ground just in front of us. When heard in a short distance, the call is given with startling energy and is repeated and poured forth in a very hurried manner. When mellowed by distance, it has a soft, dreamy cadence which has an extremely soothing effect. To my ear the notes sound rather like chuck-a-ra-we, or like whip-poor-a-will, and according to Mr. Maynard, the Seminoles of the Everglades, the remnants of a once powerful Indian nation, in allusion to its sounds call the bird Chic-co-bil-lar.

In the forest regions of Texas the call of the Chuck-will's-widow is familiar to every country boy. While occupying a small cabin in the woods on the West Yegua creek, the bird often alighted on the roof, interrupting my slumber by its constant call-notes. It was everywhere common in the thickly wooded dells near my house, where I also found its eggs repeatedly. These are deposited on the bare ground, usually among some old leaves. When I looked a second time for the eggs, they had invariably disappeared. It is a well-known fact, that the old birds carry the eggs as well as the very small young away to a safer place in their capacious mouths. The eggs are two in number, and the spot chosen for them is in the darkest and most secluded part of the forest. Their ground-color is a pinkish-buff, being spotted and marked over the entire surface with dark purplish-brown, and cloudings of a grayish-lavender color. They closely resemble those of the Whippoorwill.

The food of these rather large nocturnal birds consists of large flying insects, such as moths and beetles, etc., for which purpose their mouths are admirably adapted, "opening with a prodigious expansion, and assisted by numerous long bristles, which prevent the escape of an insect once within their enclosure." It does not fly around in
the manner of the Night-hawk, or the Swallows, as it frequently alights on the ground. The flight is swift and exceedingly graceful. "It is performed by easy flappings of the wings, with occasional sailings and curving sweeps." It flies, usually not very high, over open fields and over small trees, ascending or descending, or sailing with graceful motions, all the time in pursuit of flying insects. Often it passes and repasses over the same area, occasionally alighting on the ground or on a fence rail, where it utters its peculiar refrain, "and then resumes its search for insects. And thus it passes pleasant summer nights." In Lee Co., Texas, I have observed the birds in spring usually about April 15, and when the weather was exceptionally warm, a few days earlier. In Orange Co., Fla., they make their appearance in the first week of April, and on the Chattahoochee I have heard them utter their call-notes on April 17. As the birds are very silent after the young are hatched, it is no easy matter to ascertain when they are moving southward. In the latter part of September I caught one of these birds in a hollow stump. It was exceedingly fat, and snapped its bill and opened and closed its eyes constantly when I held it in my hands.

**NAMES:** Chuck-will's-widow, Southern Whippoorwill, Spanish Whippoorwill.

**SCIENTIFIC NAMES:** Caprimulgus carolinensis Gmel. (1789). Antrostomus carolinensis Gould (1833).

**DESCRIPTION:** "Bristles of the bill with lateral filaments. Wing nearly nine inches long. Top of the head, finely mottled reddish-brown, longitudinally streaked with black. The prevailing shade above and below, pale rufous. Terminal two-thirds of the tail-feathers (except the four central), rufous-white; outer webs of all mottled, however, nearly to the tips. Female without the white patch of the tail." Length, 11.50 inches; wing, 8.80; tail, 6.28 inches. (B. B. & R., II, p. 410.)

The Poorwill, Phalaenoptilus nuttalli Ridgway, inhabits the western part of the country, from the Sierra Nevada eastward to eastern Nebraska and eastern Kansas, north to Idaho and Montana, and south to southern Mexico. According to the late Col. N. S. Goss, it is a common summer resident of Kansas, where it may be looked for on the high prairies and rocky grounds along the banks of streams. The eggs, two in number, are pure white, unspotted, and are found upon the bare ground. This bird is also known as Nuttall's Whippoorwill.

The Frosted Poorwill, P. nuttalli nitidus Brewst., inhabits Texas west to Arizona, north to western Kansas. The Dusky Poorwill, P. nuttalli Californicus Ridg., is found along the coast of California.

Paraunque, Nyctidromus albicollis merrilli Sennett. This peculiar bird occurs in the valley of the lower Rio Grande in Texas north to the Nueces River, south into north-eastern Mexico. Dr. J. C. Merrill first added this species to our fauna in 1876. In the vicinity of Fort Brown it was a regular summer resident, arriving early in March and leaving by the middle of November. It frequents shady thickets and copses, and, when flushed, dodges rapidly and silently among the bushes, but soon alights. The notes are among the most characteristic night sounds of the lower Rio Grande, and are constantly heard every evening during the summer months. They consist of a repeated whistle, resembling the syllables whew, whew, whew, whew, whe-e-e-e-o-w, much stress being laid upon the last, which is prolonged. The whole is soft and mellow, but can be heard at a great distance. The eggs, two in number, are of a rich creamy-buff, sparingly marked with a deeper shade of the same and with lilac.
NIGHTHAWK.

Chordeiles virginianus Swainson.

Plate XXXIII. Fig. 3.

In the northern and central parts of our country the summer heat is much more oppressive and disagreeable than in the Gulf region. The nights in July and August are extremely warm, while in the South even the hottest days are followed by cool and pleasant nights. The most beautiful month in the northern parts of our country is June. In June the birds are almost all breeding, and their songs awaken the dreamy woods with their reverberating echoes. The Bobolink makes the meadows ring with its tinkling song, and the Redwing charmingly enlivens the marshes and sloughs with its loud notes.

The most suggestive and poetical part of the day in June is vespertine time. We are sitting on one of the many moss-covered stones, so common in the pastures of Wisconsin. The sun has just disappeared on the horizon, and the air is exceedingly soft and mild. This time of the day affords a rare opportunity for observing the aerial play of the Nighthawks, also known in some parts of the country as the Bull-bats, Mosquito Hawks, and Goatsuckers. How abundant they are and how they cross and recross each other's paths high up in the air! How gracefully they soar and dart up and down, to the right and left! There is probably no other bird with the exception of the Swallows and Swifts, which can rival these birds in the beauty and ease of their aerial motions, abounding as they do in feats of the most wonderful agility. Sometimes they rise several hundred feet in the most careless manner, crying louder and louder their brirrrr, brirrrr, as they ascend, then instantly one or the other glides obliquely downward with astonishing gracefulness and rapidity almost to the ground, then darting off in a horizontal way with wonderful swiftness, again ascending perpendicularly. The friend of Nature can scarcely find a better entertainment and a greater source of pleasure than to observe the gamboling and the gyrations and evolutions of these birds. They are not nightbirds as their name would imply. They are revellers of the late afternoon and the evening twilight, being never found on the wing after dark. As soon as the shades of the night creep over the landscape, all retire and none are seen again until the day begins to dawn in the morning.

Regularly every afternoon, usually between four o'clock and sunset, the Nighthawks awake from their day dozing, and one by one joins the “revellers aloft.—now climbing the heavens with rapid spiral flight, whence with a sudden dip and folded wings they plunge headlong down, down, as though to dive in the gossy mill-pond in the valley below; and now, with a sweeping curve of magnificent grace and proportions, skimming the tree-tops in buoyant upward glide, while we catch the vibrant twining of the cleaving wings.” (W. Hamilton Gibson.)

In the days of my boyhood I have often enjoyed myself in throwing my hat or a piece of wood in the air where the Nighthawks were sailing around. One or the other of these birds darted down after the falling object in a wonderfully rapid manner, then
suddenly spreading its wings and tail, a very peculiar booming sound was heard, which may be compared to the noise caused by "blowing strongly into the bung-hole of an empty hogshead." This exceedingly peculiar noise, which is most frequently heard when the birds are in a playful mood, shortly before and during the breeding season, is undoubtedly produced by the wings.

Even in broad day-light, when the sun shines most brightly, we may often see large numbers of Nighthawks high up in the air. In the most densely populated cities they fly over steeples and tall chimneys, apparently not at all minding the smoke and noise. In Texas I have seen countless numbers late in April and again in September. These multitudes of birds were either on their way to the North or South. They are late arrivals in spring, appearing in Texas usually in the latter part of April, and in south-western Missouri in the first week of May. In the vicinity of Milwaukee they are rarely seen before May 15, and are not common before the last week of that month. Their arrival cannot be overlooked by the careful observer, as they are exceedingly numerous and very conspicuous while flying. All over the eastern part of North America, west to the Plains, and from the Fur Countries and Labrador south to Florida and Texas, the Nighthawk is an abundant summer sojourner. It is found south through tropical America to the Argentine Republic.

Not being a woodland bird like the Whippoorwill and Chuck-will's-widow, the Nighthawk's favorite haunts are open localities, where fields, meadows, and swamps alternate with remnants of forest. While its two relatives prefer the dense shade of the forest during day-time, the Nighthawk revels in the full glare of the sun. Although we may often see these birds fly over the forest in quest of their insect prey, they are most frequently seen over fields, meadows, and prairies, where they are gamboling wildly throughout the summer in the late afternoon. The great abundance of flying insects in our large cities has had such an influence on the habits of the birds, that they at present breed abundantly on the flat Mansard roofs of the large ware-houses in the most crowded parts of our large towns. These roofs afford them safe and convenient shelter during the day-time as well as in the night. Scarcely can there be found better protected places for the deposition of their eggs than these flat roofs. Man, the greatest enemy of bird-life, rarely invades the seclusion of the Mansard roofs, and birds of prey as well as mammals probably never molest the Nighthawks in the heart of the large cities. I have found these birds breeding abundantly in such places in Milwaukee and Chicago. Originally they nest in fields, on rocks and in stony pastures, on the prairie and on hill-sides, always in spots open to the sun. The eggs are placed on the bare ground or on a flat, moss-covered rock, usually in a slight depression. The breeding bird and its eggs are so similar in coloration to the surroundings of the nest, that they are not likely to be discovered, except by accident or by the actions of the parent bird. On the flat roofs of the large ware-houses they often breed in small communities. It has always been a wonder to me how the eggs can be kept from rolling away under the breeding female, as there is not a straw and no depression on the roof that can hold the eggs in their position.

The eggs, two in number, resemble the stones among which they are found, the soil, or the color of the roof to such a degree, that they are rarely found, except by the expert field ornithologist, who knows exactly where to look for them. "Their ground
is of various shades of stone-color, in some of a dirty white, in others with a tinge of yellow or blue, and in yet others of clay-color. The markings are more or less diffused over the entire egg, and differ more or less with each specimen, the prevailing colors being varying shades of slate and of yellowish-brown.

"If approached when sitting on her eggs, the female will suffer herself to be almost trodden on before she will leave them, and when she does, it is only to tumble at the feet of the intruder and endeavor to draw him away from her treasures by well-feigned lameness and pretended disability. Her imitation of a wounded bird is so perfect as to deceive almost any one not aware of her cunning devices." (Dr. T. M. Brewer.)

The food of the Nighthawk consists wholly of insects. It swallows great numbers of moths, beetles, mosquitoes, grasshoppers, crickets, etc., and for this reason alone it is an extremely useful bird. All who have the welfare of our country, and the more ideal life of our people at heart, should do all in their power to protect our beautiful native birds, and among them the Nighthawk. Notwithstanding its beauty and utility, great numbers of these birds are shot annually in mere wantonness, their swift flight making them an attractive target for heartless and senseless gunners. May it be remarked here that these birds are of far greater value to mankind than the worthless idler who kills them.—The term Nighthawk is not an appropriate one, as the bird never hunts for insects in the darkness, and as it has nothing in common with the Hawks. The early settlers called it Goatsucker because of its resemblance to the European Nightjar, which from time immemorial has been supposed by the ignorant to rob the goats of their milk at night. In the South it is known in many localities under the name of Bullbat. This alludes to its booming sound to which I have referred in the foregoing.

There are several well established varieties of this bird. The Western Night-hawk, Chordeiles virginianus henryi Coues, inhabits the western part of the United States, from the Great Plains to the Pacific coast, and from British Columbia south to northern South America. The Florida Night-hawk, C. virginianus chapmani Scott, is confined to Florida and the Gulf coast of Texas.

NAMES: Nighthawk, Nightjar, Goatsucker, Mosquito-hawk, Pisk, Bullbat.


DESCRIPTION: "Male, above greenish-black, but with little mottling on the head and back. Wing-coverts varied with grayish; scapulars with yellowish-rufous. A nuchal band with fine gray mottling, behind which is another coarser one of rufous spots. A white V-shaped mark on the throat; behind this is a collar of pale rufous blotches, and another on the breast of grayish mottling. Under-parts banded transversely with dull yellowish or reddish-white and brown. Wing-quills quite uniformly brown. The five outer primaries with a white blotch (about half an inch long) midway between the tip and carpal joint, not extending on the outer web of the outer quill. Tail with a terminal white patch, which does not reach the outer edge of the feathers. Female without the caudal white patch, the white tail-bands more mottled, the white of the throat mixed with reddish."

Length, 9.50 inches; wing, 8.20; tail, 5.00 inches. (B. B. & R., II, p. 401).

The Texan Night-hawk, Chordeiles acutipennis texensis Ridg. This species inhabits the southern border of the United States, from Texas to southern California, north to southern Utah. Dr. J. C. Merrill found it most plentiful just outside of Brownsville, and several sets of eggs were discovered within the fort. These are usually deposited in exposed situations, among sparse chaparral, on the ground baked almost as hard as brick by the intense heat of the sun.
WOODPECKERS.

Picidae.

Woodpeckers, the guardians and protectors of our forests, are common birds all over the country where woods abound. They are easily distinguished from other birds by their stiff, elastic, pointed, and graduated tail-feathers, which are used as a support in climbing up the tree trunks, their ends being pressed against the bark, to prevent retrogression. The bill is angular and wedge-shaped, forming a powerful hammer or axe, with which to cut off chips of bark or wood in search of insects, or to dig holes into the wood for nesting and roosting purposes.

Being solitary birds, the Woodpeckers rarely associate with others of their own kind. Some of the smaller species, like the Downy and Hairy Woodpecker, etc., seem to be fond of the society of Titmice, Creepers, Nuthatches, Chickadees, Kinglets, etc., during their rambles through the woods in autumn and winter. “During the breeding season some species are known to produce a remarkable whirring sound, the so-called ‘drumming,’ by rapidly striking a dry branch, which can be heard to a great distance. This seems to be the male’s love-song.”

The flight is generally powerful, but undulating if kept up for some distance and not very far. During their search for food, they fly from trunk to trunk, ascending them by starts from the lower part until they reach the top, whence, in a single curve, they descend to the base of the next. The eggs are glossy white.

The Woodpeckers inhabiting our country are divided into the following genera:

IVORY-BILLED WOODPECKER.
Campephilus principalis Gray.

Majestic bird! the broad Ohio knows
Its presence well. Here and along the banks
Of Mississippi, whence luxuriant rise
Towering to heaven the tall and graceful pines,
And cypress trees from black and gloomy swamps
Prodigious of extent: here are its favorite haunts;
Among these trees—some in maturity,
And others overgrown with verdant moss,
Of every leaf dismantled, standing forth,
By time's impartial hand memorialised,
As emblems apt of that unwished decay
Which all that lives, alas! must undergo.

ALEXANDER WILSON.

THIS beautiful inhabitant of the southern forest is almost extinct in most localities
where it formerly occurred. Erewhile it was found in all the South Atlantic and
Gulf States, from North Carolina to Texas, and in the Mississippi valley as far north
as southern Missouri, southern Illinois, and southern Indiana. According to the observa-
tions of my friend, Mr. Otto Widmann, it still inhabits, though sparingly, the vast
forests of the lowlands in southern Missouri. I have several times met with the bird in
the extensive forest lands of Harris and Montgomery Co., Texas. In the wilds of the
Okeefinockee swamps in southern Georgia the Ivory-billed Woodpecker has been found
by Mr. Maurice Thompson a few years ago. Mr. W. E. D. Scott found it breeding in
Hillsborough Co., Fla. The nest, which was dug in a large cypress tree in the midst of
a dense swamp, was forty-one feet from the ground, and contained one young. The depth
of the cavity was fourteen inches. Old residents told Mr. Scott that the bird was once
very common in that region. On the day the nest was found, eleven of the birds were
counted in the swamp, occasionally four or five were seen at one time. The eggs of the
Ivory-billed Woodpecker are very rare in collections. The Public Museum, in Milwaukee,
Wis., contains a set of three, presented by the late Capt. B. F. Goss, who told me that
they were collected in the Neches River bottom, Jasper Co., Texas, on May 3, 1885.
The cavity was about twenty-four inches deep, situated forty feet from the ground, and
the entrance was large enough to admit Mr. Goss' hand.

Audubon describes the favorite haunts of the Ivory-billed Woodpecker in the follow-
ing vivid language:

"I wish, kind reader, it were in my power to present to your mind's eye the
favorite resort of the Ivory-billed Woodpecker. Would that I could describe the extent
of those deep morasses, overshadowed by millions of dark, gigantic cypresses, spreading
their sturdy, moss-covered branches as if to admonish man to pause and reflect on the
many difficulties which he must encounter, should he persist in venturing farther into
their almost inaccessible recesses, extending for miles before him, where he would be
interrupted by huge projecting branches, here and there the mossy trunk of a fallen and
decaying tree, and thousands of creeping and twining plants of numberless species!
Would that I could represent to you the dangerous nature of the ground, its oozing,
spongy, and miry disposition, although covered with a beautiful but treacherous carpeting,
composed of the richest mosses, flags, and water-lilies, no sooner receiving the pressure
of the foot than it yields, and endangers the very life of the adventurer; whilst here
and there, as he approaches an opening, that proves merely a lake of black, muddy
water, his ear is assailed by the dismal croaking of innumerable frogs, the hissing of
serpents, or the bellowing of alligators! Would that I could give you an idea of the
sultry, pestiferous atmosphere that nearly suffocates the intruder during the meridian
heat of our dog-days in those gloomy and horrible swamps! But the attempt to picture
these scenes would be vain: nothing short of ocular demonstration can impress any
adequate idea of them."

DESCRIPTION: Bill, horn-white. Body, glossy bluish-black; a white stripe beginning behind the eye, and
passing down the sides of the neck, and extending down each side of the back. Under wing-coverts,
and entire exposed portion of the secondary quills, with ends of the inner primaries, bristles, and a
short stripe at base of bill, white. Crest, scarlet, upper surface, black. Female, similar, without any
red on the head.—Length, 21.00 inches; wings, 10.00; tail, 6.50 inches.

HAIRY WOODPECKER.

Dryobates villosus Cabanis.

The Hairy Woodpecker, though only occurring in the northern and middle portion
of the Eastern States, west to the Great Plains, is represented in other portions of the
country by closely related varieties. Everywhere, in the East and West, North or South,
where forests exist, one or the other variety of this Woodpecker may be found.

The Hairy Woodpecker is a resident species, only roving about in the country
during winter in quest of food. In fall, winter, and spring it even visits our large cities,
where it is seen busily engaged in cleaning the fruit and shade trees of all kinds of insect
pests. Its favorite haunts at this time of the year are orchards and the border of
woodlands, and during the breeding season it inhabits preferably the deep interior of
extensive forests. About forty years ago it was a very abundant bird in Wisconsin, but
the constant decrease of the woods has caused it in a great measure to desert this region.

It is a very noisy bird in the woods, the loud call-notes, sounding like *pips, pips,*
being almost constantly heard during the beautiful days of May and June. In large old
apple orchards, where it often breeds at present, it utters its sounds not as frequently,
being altogether more suspicious and shyer than in the woods. The nest is always
found in a dry old limb of a large tree or in the partially dead top of a smaller one,
from twelve to thirty feet from the ground, the depth of the cavity varying from
eight to fifteen inches. No material is used for lining the nest except a few chips. The
eggs, usually four, but sometimes five in number, are pure glossy white.

The Hairy Woodpecker as well as the Downy, seem to be fond of the company of
other birds while roving about in the southern forests. "A motley troop," writes Prof.
Wm. Brewster in his fascinating way, "consisting of numerous Warblers, Titmice, Blue-
birds, Woodpeckers, rambled through the woods (in south-eastern Georgia), continuously
chasing each other from tree to tree or from bush to bush, chirping, calling, and singing
as their various moods dictated. I usually noticed that the Bluebird led the van, while
the Woodpeckers invariably brought up the rear."
The following varieties of this species are known to science: The Northern Hairy Woodpecker, Dryobates villosus leucomebas Ridgway, inhabits northern North America, south to about the northern border of the United States. The Southern Hairy Woodpecker, D. villosus audubonii Ridgway, represents the typical form in the South Atlantic and Gulf States, north to North Carolina and Tennessee. Harris' Woodpecker, D. villosus harrisii Ridgway., is found on the Pacific coast, from northern California to Alaska. Cabanis' Woodpecker, D. villosus hylocephus Brewst., inhabits the western United States, except north-west coast.

Scientific Names: Picus villosus Linn. (1766). Dryobates villosus Cab. (1863).

Description: Above, black, with a white band down the middle of the back. All the middle and large wing-coverts and all the quills with conspicuous spots of white. Two white stripes on each side of the head; the upper sparingly confluent behind, the lower not at all so; two black stripes confluent with the black of the nape. Beneath, white. Three outer tail-feathers with the exposed portions, white. Male, with a nuchal scarlet crescent on the hind-head.

Length, 8.75 inches; wing, 4.70; tail, 3.37; bill, 1.12.

Downy Woodpecker.

Dryobates pubescens Cabanis.

This is the most familiar and most social of all our Woodpeckers, frequently entering gardens and orchards, even in villages and larger cities. In fall and winter, and also early in spring, it seems to enjoy the company of other small birds, especially Nut-hatches, Titmice, Kinglets, and Brown Creepers, in whose company it roves about in the forests and orchards, and even in the parks of densely populated cities. It searches the branches of the trees, saplings, hedges, fence-posts for insects and their larvae. In spring, the love-season, it is fond of drumming on some dead bough whose center is hollow, and whose shell is hard and resonant. In such places it will often drum for an hour at a time, now and then stopping to listen for a response from its mate or some rival. This is one of our most interesting and lively Woodpeckers, and like all its congeners, it is exceedingly valuable as an insect destroyer, feeding as it does, almost exclusively of worms that infest the trees. It is a very unsuspecting bird, and when engaged in excavating a hole for its nest, it continues its busy chiseling, not heeding our near approach. The nest is usually found in the trunk of a small dead tree, often in a dead limb of an old apple tree. The eggs, four to six, are glossy white.

The Downy Woodpecker inhabits the Eastern United States, west to the Great Plains and south to the Gulf of Mexico.

Gairdner's Woodpecker, Dryobates pubescens gairdnerii Ridg., a variety of the foregoing, is found on the Pacific coast, north to British Columbia; while Batchelder's Woodpecker, D. pubescens oreicus Batch., is found in the Rocky Mountain region of the United States.

Names: Downy Woodpecker, Lesser Sapsucker, Small Sapsucker.

Scientific Names: Picus pubescens Linn. (1766). Dryobates pubescens Cab. (1863).

Description: A miniature of Dryobates villosus.—Length, 6.50 inches; wing, 3.72; tail, 2.51 inches.
WOODPECKERS.

Red-cockaded Woodpecker, Dryobates borealis Ridgw. I found this species rather abundantly in the flat pine woods from eastern Texas to Florida. It is a very lively species and quick in its motions, gliding upwards on the trees and sideways along the trunks and branches with great agility, uttering occasionally its loud and shrill call-notes, which can be heard at a considerable distance. The nest I usually found in a half decayed limb of an oak tree or in an old stump. The bird is also said to excavate a nesting cavity in tall pine trees, living or dead, but I have never found it in such. As the wood of the southern pines is exceedingly hard, I do not believe that any Woodpecker excavates a nesting-site in these trees. It ranges from the Gulf of Mexico north to North Carolina, Tennessee, and the Indian Territory.

DESCRIPTION: A narrow red stripe on each side of the black hood of the head distinguishes this loud and noisy southern species.

Texan Woodpecker, Dryobates scalaris bairdi Ridgw., also known as the Ladder-backed Woodpecker, inhabits the southern border of the United States, west to California, north to southern Nevada and southern Utah. This beautiful and lively little bird is an abundant inhabitant of the post oak woods of central Texas. It is very similar in all particulars to our common Downy Woodpecker. In winter it frequently visits the ornamental plantations and orchards in company of Titmice, Nuthatches, Brown creepers, and Kinglets. The Saint Lucas Woodpecker, Dr. scalaris lucasanus Ridgw., occurs in Lower California.

Nuttall’s Woodpecker, Dryobates nuttallii Ridg., is found in southern Oregon and California, and the Arizona Woodpecker, Dryobates arizonae Ridg., in southern Arizona and northern Mexico. All these small species agree with each other in their habits and mode of living.

The White-headed Woodpecker, Xenopicus albolarvatus Malherbe, is a very beautiful species, deep bluish-black with a pure white head and pure white spot on the primaries. It inhabits the mountains of the Pacific coast, from southern British Columbia to southern California, east to central Idaho. It is said to haunt the groups of big trees, the red-wood forest, and the woods of the Pinus ponderosa.

The Arctic Three-toed Woodpecker, Picoides arcticus Gray, is a common species in winter in northern Minnesota and Michigan, north to the Arctic regions. It is a beautiful bird, on the upper parts mostly black, lower parts mostly white, with a bright yellow forehead. Another species of this genus, the American Three-toed Woodpecker, Picoides americanus Brehm, inhabits British America, east of the Rocky Mountains, from the Arctic regions southward to the Northern United States (Maine, Massachusetts, New York). Its variety, the Alaskan Three-toed Woodpecker, P. americanus alascensis Ridg., inhabits Alaska, south to northern Washington. The Alpine Three-toed Woodpecker, P. americanus dorsalis Baird, is an inhabitant of the Rocky Mountain region, from British Columbia and Idaho south into Mexico.
YELLOW-BELLIED SAPSUCKER.

*Sphyrapicus varius* Baird.

PLATE XXXVI. Fig. 1.

ONE of our Woodpeckers is so common during the migration and so well-known in the northern parts of the country as the YELLOW-BELLIED SAPSUCKER, and none is so much hated and abused. I can assure my readers, however, that this beautiful bird is comparatively innocent in spite of the many holes which it drills in the maples, mountain ash trees, and conifers during its northward migration in early April. The well-known “tree-butcher” with his saw and axe does much more harm to our fine ornamental trees by his mostly very injudicious pruning than an army of Sapsuckers.

Although I have seen these Woodpeckers in Milwaukee every spring in large numbers, they were never so abundant as on the 11th of April, 1896. The trees in the streets, small and large ones, fairly swarmed with Yellow-bellied Sapsuckers. On a large silver-leaved poplar I counted forty-four individuals. This was in the heart of the residence part of the city, where people and vehicles constantly passed.* Wherever I turned my eyes I noticed these birds in great numbers. A few days later all had migrated northward. They were perfectly silent during their stay. As they punctured the maple trees in such a way that the sap was flowing freely, many were killed by people who supposed them to be injurious to the trees. In spite of this tapping the trees made a very satisfactory growth during the summer. Indeed, they grew more luxurious than in any of the previous seasons, since I made Milwaukee my home. During the past five or six years I have given the subject my special attention, but I have never found a tree that was destroyed by this Woodpecker's manner of drilling holes in the bark. I have examined many hundreds of maples and apple trees that had been girdled by the Sapsucker, but none had suffered severely. It is true that many of the fine mountain ashes died during the last few years, but closer examination revealed the fact that this is caused by a borer, who does its destructive work just above the ground. A large number of holes running into the heart wood of the tree and a dust-like brownish substance on the ground showed plainly why the trees were suffering and finally dying.

When the Sapsuckers arrive in their breeding range early in April, they at once drill small holes in the sugar maples, the sweet sap of which they highly relish. For this purpose and not for the inner bark (*cambium*) these holes are drilled. Many other birds are also very fond of the sweet drink, especially English Sparrows, who soon find out how delicious the sweet sap of the sugar maple really is. In the woods Nuthatches, Titmice, Kinglets, Palm and Myrtle Warblers, Downy and Hairy Woodpeckers are frequently observed while drinking the sweet sap. The Yellow-bellied Woodpecker has much trouble in keeping away the smaller birds, and in localities where English Sparrows are abundant, it often has to leave the place entirely.

* Mrs. A. C. Whitcomb, a very accurate and painstaking observer, writes me: “After a severe thunder storm on the night of April 10, the Sapsuckers appeared in large flocks Saturday, April 11. They were abundant in Milwaukee for some days, but not so numerous as on April 11.”
Regarding the habits of this Woodpecker in northern New York, Dr. C. Hart Merriam, of the Department of Agriculture, Washington, D. C., writes:

"The motive which induces this species to operate thus upon young and healthy trees is, I think, but partly understood. It is unquestionably true that they feed, to a certain extent, both upon the inner bark and the fresh sap from these trees, but that the procurement of these two elements of sustenance, gratifying as they doubtless are, is their chief aim in making the punctures I am inclined to dispute. As the sap exudes from the newly-made punctures, thousands of flies, yellow jackets, and other insects congregate about the place, till the hum of their wings suggests a swarm of bees. If, now, the tree be watched, the Woodpecker will soon be seen to return and alight over the part of the girdle which he has most recently punctured. Here he remains, with motionless body, and feasts upon the choicest species from the host of insects within easy reach.... In making each girdle they work around the trunk, and from below upwards, but they may begin a new girdle below an old one. They make but few holes each day, and after completing two or three remain over the spot for some little time, and as the clear fresh sap exudes and trickles down the bark, they place their bill against the dependent drop and suck it in with evident relish—a habit which has doubtless given rise to the more appropriate than elegant term Sapsucker, by which they are commonly known in some parts of the country. I have several times watched this performance at a distance of less than ten feet, and all the details of the process were distinctly seen, the bird looking at me, meanwhile, 'out of the corner of his eye.' When his thirst is satisfied, he silently disappears, and as silently returns again, after a few hours, to feast upon the insects that have been attracted to the spot by the escaping sap. This bird, then, by a few strokes of its bill, is enabled to secure both food (animal and vegetable) and drink in abundance for an entire day; and a single tree, favorably situated, may suffice for a whole season."

The Sapsucker rarely breeds south of the 42° of latitude. In Wisconsin it is invariably found in the extensive forests of white pines and other conifers, ranging northward to Fort Simpson. Unlike most other members of its family, it is a strictly migrating species, like the Flicker and the Red-head. It arrives and leaves with great regularity. Although not a gregarious bird, it is fond of company, and it is not unusual to find quite a number of its own species or other members of the family in the same locality. Thus flocks of Woodpeckers are not uncommon during migration. The majority spends the winter in the South Atlantic and Gulf States, where they are found in great abundance in the dense and extensive woods bordering streams and lakes. Many also wander to the West Indies, Mexico, and even to Costa Rica. Thus the Yellow-bellied Sapsucker occurs during certain parts of the year all over eastern North America.

Though exceedingly familiar and unsuspicious during the migration, this Woodpecker always selects its haunts in the deep evergreen forests which still cover a large portion of New England, northern New York, Michigan, Wisconsin, and Minnesota. In the days of my boyhood this was one of the most abundant birds in the immense pine forests of Sheboygan County, Wis. At that time, so full of pleasant reminiscences of birds and wild wood life, the Pileated Woodpecker was also common, and the woods swarmed at
times with Passenger Pigeons. Though not as abundant as formerly, one can scarcely enter the woods after the 10th of April, without being greeted by their querulous call-notes. They are found everywhere in the mixed woods, but they are most numerous in the vicinity of water, for they prefer to construct their nest in portions of dead trees standing on the borders of lakes and swamps. The nest is usually from twenty-five to forty feet from the ground, always in a tree or limb partly decayed. I have found it in beeches, sugar maples, ashes, and especially in white birches (Betula papyracea) and also in black birches (Betula lenta). The bird never selects a cavity already made and never excavates hard and sound wood, or such that is decayed and rotten. "A tree," says Mr. John Burroughs, "with a natural cavity is never selected, but one which has been dead just long enough to have become soft and brittle throughout. The bird goes in horizontally for a few inches, making a hole perfectly round and smooth and adapted to his size, then turn downward, gradually enlarging the hole, as he proceeds, to the depth of ten, fifteen, or twenty inches, according to the softness of the tree and the urgency of the mother-bird to deposit her eggs. While excavating, male and female work alternately. After one has been engaged fifteen or twenty minutes, drilling and carrying out chips, it ascends to an upper limb, utters a loud call or two, when its mate soon appears, and, alighting near it on the branch, the pair chatter and caress a moment, then the fresh one enters the cavity and the other flies away." The eggs, five to seven in number, are pure white. They are deposited on the fine fragments of wood at the bottom of the cavity. The eggs and young of few other birds are so completely housed from the elements, or protected from their natural enemies—the Crows, Jays, Hawks, Owls, raccoons, squirrels, etc. These beautiful birds are a great attraction of the woods and cannot be missed among the feathered choir. Like other species, they serve as carpenters for other birds, as their old holes are usually occupied during the breeding time by White-bellied Swallows, Crested Flycatchers, Titmice, Wrens, and other hole-breeders.

In the Rocky Mountain region, from British Columbia to the Sierra Bolaños, Mexico, and the Cape region of Lower California, westward across the Great Basin to the eastern slope of the Sierra Nevada in northern California, the common Sapsucker is represented by the Red-naped Sapsucker, Sphyrapicus varius nuchalis Baird.

NAMES: YELLOW-BELLIED SAPSUCKER, Sapsucker, Common Sapsucker, Yellow-bellied Woodpecker.

SCIENTIFIC NAMES: Picus varius Linn. (1766). SPHYRAPICUS VARIUS BAIRD (1858).

DESCRIPTION: Above, black, much variegated with white. Crown, crimson, bordered by black and the sides of the head and nape. A streak above the eye, and a broad stripe from the base of bill, passing below the eye, and into the yellowish of the belly, enclosing a black crescent on the breast, and a stripe on the edges of wing-coverts, white. A triangular broad patch of scarlet on the chin, bordered on each side by black stripes from the lower mandible, which meet behind, and extend into a large quadrate spot on the breast. Rest of underparts, yellow, streaked and banded on sides with black. Female, no red on throat, which is replaced by white.

Length, 8.25 inches; wing, about 4.75; tail, 3.30 inches. (After B. B. & R., II, p. 539).

Red-breasted Sapsucker, Sphyrapicus ruber Baird. This is a bird of the mountains and foot-hills of California, especially in the coast region, where it occurs north to British Columbia. Major Charles Bendire, the eminent ornithologist and oologist of the National Museum, found this species breeding in the neighborhood of Fort Klamath,
PILEATED WOODPECKER.

Ore. There it breeds in healthy live aspen trees, making a good-shaped nest, which is situated fifteen to twenty feet from the ground.

DESCRIPTION: The head and neck all round, and breast carmine-red. Above, black, central line of back from nape to rump, spotted with whitish; rump, wing-coverts, and inner webs of the inner tail-feathers, white. Belly, sulphur-yellow, streaked with brown on the sides.

WILLIAMSON'S WOODPECKER, Sphyrapicus thyroideus BAIRD, inhabits the Rocky Mountain region, west to the Sierra Nevada, south on the table lands of Mexico to the Sierra Bolaños, Jalisco. The male and female of this species are so different in coloration that they were considered for a long time as two different species. Its favorite haunts are the coniferous mountain forests, where it leads a rather retired life. In the vicinity of Fort Klamath, Ore., where it has been found breeding by Major Charles Bendire, it is shy and very suspicious.

DESCRIPTION: Male: General color, glossy black, relieved by two white stripes on the side of the head; a large white patch on middle and greater wing-coverts; throat with a median stripe of bright red. Female: Head nearly uniform light brown; sides, flanks, upper parts, regularly barred with black and white; no white patch on wings; chest, usually with more or less of a black patch.

PILEATED WOODPECKER.

Ceophleus pileatus CABANIS.

PLATE XXXVI. FIG. 6.

The magnificent primeval forests of our childhood days have vanished, and fields, meadows, and pastures have taken their place. The gigantic white pines and hemlocks, the majestic old oaks, the picturesque elms, and the stately sugar maples found their way to the saw mill or were felled and burned. The erstwhile so romantic woodland brooks and cool springs have lost most of their charm, being denuded of their border of trees and shrubs. During a large portion of the year they are dry. We may assert that with the destruction of the forests in the coniferous region of Wisconsin their beauty and poetry has also been destroyed. The farm-houses, once surrounded by beautiful woods, are scattered around in a rather desolate manner, and the few fruit and ornamental trees offer no compensation for the destroyed forest. Many of the woodland flowers have also vanished, especially those which were our childhood favorites and of which we culled beautiful bouquets. The lovely moccasin flower (Cypripedium spectabile), the stemless and the yellow lady's slipper (Cypripedium acaule and C. pubescens), the aromatic wintergreen (Gaultheria procumbens), the variegated plantain (Goodyera pubescens), and other delicate woodland species are scarcely met with at present. Other flowers, like the trilliums, hepaticas, dog's tooth violets, blood-root, Canada lilies, etc., have often found abiding places in the fence corners. White-thorns, June-berry and plum trees, viburnum bushes, wild crab trees, and dogwood are also found along fences and on the borders of the woods. When I, in late years, sauntered through the remnants of the once so magnificent woods near my home at Howard's Grove (Sheboygan Co., Wis.), a feeling of sadness and loneliness overcame me. Many of the birds, too, have become
quite rare. The Veery and the Towhee, the elegant Rose-breasted Grosbeak and the brilliant Scarlet Tanager are now rarely met with. The 'Bush-hen' (or Ruffed Grouse), whose thunder-like noise sounded through the forest, and whose young, when accidentally met, rushed to all sides, is well-nigh extirpated. Even the familiar notes of the Whippoorwill, so full of poetry and anticipation, are not so often heard of late as formerly. One inhabitant of the extensive forest, the beautiful Pileated Woodpecker, also known as the 'King of the woods,' 'Log-cock' and 'Black Woodcock,' I have not seen for many years in this locality. It seems to have vanished with the grand forests and with the Indians, who roamed about in great numbers in these woods during our childhood days."

These words, from the pen of Miss Hedwig Schlichting, about the present condition of the woods and the bird-life in the southern part of the coniferous region of Wisconsin, are doubtless true. When I left the locality in 1869, a large portion of the pine woods were quite undisturbed, and the large and conspicuous, though rather shy and never very abundant Pileated Woodpecker was a regular inhabitant in all secluded localities of the dense forests. It had a predilection for mixed woods, consisting of white pines, maples, birches, oaks, hickories, elms, lindens, etc. The many dead trees, full of large black ants and worms, its main food, offered all the subsistence necessary. But the country became densely settled, the forests vanished, and with them these birds. It was once a common bird from the Atlantic to the Pacific, and south of Latitude 63° to the Gulf of Mexico and southern Texas (except in the southern Rocky Mountains). In the East it seems to be extirpated except in the remote forests of the Adirondacks and Alleghanies, and in the well-wooded mountains of New England.

In the years of 1879 to 1882 I had excellent opportunities to observe this large and beautiful Woodpecker in Texas. It was everywhere a common bird, particularly in the post-oak woods and in the extensive bottom forests on the Colorado and Brazos Rivers. I also observed it in the region of the Acadians in southern Louisiana*, and in the hammock woods on the Chattahoochee and Lake Apopka in Florida. In the two latter States it is particularly numerous in the low woods consisting of live, water, and pin oaks, pecan trees, sweet gums, magnolias, gordonias, and cabbage palmettos, and in extensive cypress swamps, where it is a near neighbor of the rare Ivory-billed Woodpecker. During my residence in the post-oak woods of Texas I observed them throughout the year near my house. The following is quoted from my diary:

"West Yegua, Tex., July 22, 1881. This beautiful species is one of our common Woodpeckers. Without fear it visits the large post-oaks in my yard. This morning four, evidently young ones, came in the large oak only a few feet from my house. They perched on the rough bark at the base of the tree, but before they commenced to climb upwards they carefully and inquisitively looked around. The strong and stiff tail-feathers serve in an excellent way as a support, and with a vigorous jerk they move forward on the trunk. These beautiful birds with their powerful bills and their glowing red crests form a most interesting picture. They are not shy and can be easily observed. Their loud hammering sounds through the forest, but their call-notes are still louder. As soon as the leader, probably the old male, took wing, it uttered its peculiar and far-sounding call-notes, a clear a-wick, a-wick, a-wick, and the three others followed immediately."

* This locality has become famous all over the world through Longfellow's beautiful poem "Evangeline."
1. SPHYRAPICUS VARIUS Baird.
2. COLAPTES AURATUS Vig.
3. MELANERPES CAROLINUS Ridg.
4. MELANERPES ERYthroCEPHALUS Sw.
5. MELANERPES FORMICIVORUS BAIRD
6. CEOPHLOEUS PILEATUS Cab.

-WURMSPECHT
-GOLDSPECHT
-CAROLINASPECHT
-ROTHKOPHSPECHT
-SAMMELSPECHT
-HAUBENSPECHT

- Yellow-bellied Sapsucker.
- Flicker.
- Red-bellied Woodpecker.
- Red-headed Woodpecker.
- California Woodpecker.
- Pileated Woodpecker.
As nobody disturbed these birds, they became very confiding. Many of the large post-oaks near my house were cut down in the fall. The trunks were used for fence-rails, and the tops remained on the ground. Underneath the bark of these large limbs innumerable wood worms and other insects had begun their work, and the Pileated Woodpeckers were constantly at work. With powerful strokes they hammered off the bark and captured their insect prey. Their beauty, activity, and docility excited my admiration. When I approached one of them too closely, it uttered a loud and laughing ha-he, ha-he, and then took wing. It is very noisy during the mating season, and indulges a good deal of its time in drumming on a dry hollow limb. Its call-note sounds like a-wick, a-wick, but it also utters a loud tauck-taack-taak, which is several times repeated.

The nest I have found from ten to fifty feet from the ground, usually in post-oaks, but also in elms, cypresses, cotton-wood trees, and sycamores, and in Wisconsin in birches, oaks, tamaracks, and hemlocks. In Florida it is said to excavate a hole for its nest also in cabbage palmettos. The cavity is from ten to twenty inches deep, and the entrance is so large that I could easily put my hand into it. The eggs, usually from three to five, but sometimes six, are pure glossy white. Only one brood is raised in a season. I found the first nest with a full complement of eggs near the West Yegua in Texas on the first day of April.

Though a very beneficial bird, the Pileated Woodpecker is much persecuted. In the French Market of New Orleans I saw large bunches of these birds offered for sale, and they are by the Negroes of that city evidently considered as game birds, though they have a very offensive smell. This peculiar odor is imparted to them by the large black ants on which they greedily feed. In the days of my boyhood I often saw Indians who were decorated with the beautiful red crests of these Woodpeckers.


**DESCRIPTION:** Long red crest. Bill, black. General color of body, wings, and tail, dull greenish-black. A narrow white streak from just above the eye to the occiput; a wider one from the nostril feathers, under the eye and along the side of the head and neck; sides of breast (concealed by the wing), axillaries, and under wing-coverts, and concealed bases of all the quills, with chin and beneath the head, white, tinged with sulphur-yellow. Entire crown from the base of the bill to a well-developed occipital crest, as also a patch on the ramus of the lower jaw, scarlet-red. Long primaries tipped with white.—Length, 18.00 inches; wing, 9.50; tail, 6.50 inches.

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**RED-HEADED WOODPECKER.**

*Melanerpes erythrocephalus* Swainson.

**Plate XXXVI. Fig. 4.**

The MEXICANS call the Woodpeckers ‘Carpenteros,' and most appropriately, for the chisel-shaped bill not only serves the bird in procuring its daily food, but is also the sole agent employed in digging the wonderful cavities in which the eggs are laid and the young reared. It is probable that, putting aside the universal enemy,
man, the eggs and young of this family enjoy a more complete immunity from danger than those of any other. The cunning Crow and noisy Jay, both ever on the alert for a frolic after bird’s eggs, are here balked; while rain cannot enter, and the mink, weasel, and other noxious animals find their keen noses of little avail. Snakes may, and doubtless do sometimes enter the holes of the larger species, but even they probably bestow more of their attentions on ground and bush building birds. All the endless little artistic contrivances for concealment so artfully employed by other birds in the construction of their nests are here needless, and consequently ignored. In view of the manifest advantages attendant upon this mode of nidification, it is a matter of no little surprise that Woodpeckers are not more numerous, especially when it is taken into consideration that the habit of roosting in holes at all seasons of the year must protect the adults, as well as young, from many nocturnal dangers. Lack of suitable opportunities for nesting, or obtaining food, may doubtless be taken as explanatory of the comparative fewness of these birds in the older settled sections. In fact, the wilderness is the true home of the Woodpeckers, and in all primitive forest regions they abound. There Nature reigns supreme, and in defiance of artificial laws and cultivated ideas of sylvan beauty, allows her woods to fill with the decaying forms of her dead subjects,—huge moss-clad trunks, picturesque in shape, and by their grim, gaunt aspect adding wildness to an already picturesque scene. In such congenial haunts these birds find all their wants supplied, food being plenty and easily obtained, and the selection of a nesting site a matter of no difficulty.” The foregoing excellent account of the Woodpeckers in general, by Prof. Wm. Brewster, well applies also to our most beautiful and familiar RED-HEADED WOODPECKER, once a common and well-known bird in all the wooded regions of eastern North America, west to the Rocky Mountains (and casually westward to Salt Lake valley and Arizona), and from Florida and Texas north to about latitude 50°. In many parts of New England and of the densely populated districts in the Northern States it has become a rare bird of late owing to the constant persecutions of indiscriminate and senseless gunners. Common in the days of my boyhood in Wisconsin, it is now rare in many districts, except in some favorable localities where the bird has been protected. In Milwaukee it is a rather common summer sojourner in the remnants of maple woods which are still found in the residence part of the city. Opposite my home in Milwaukee it regularly breeds in the small group of trees on the grounds of the Milwaukee Hospital.

In the northern part of the country the Red-headed Woodpecker is a regular migrant, leaving late in September and usually returning in the first week of May, when its loud and melodious call-notes, sounding like hurr~hurr, are heard from all sides, adding a peculiar charm to the budding and blossoming spring landscape. Many of these birds are said to winter in the Northern States in certain years when they can find an abundant supply of food. Even in northern New York it is numerous, according to Dr. C. Hart Merriam, during such winters when the beech nuts are abundant, while they are altogether absent when the harvest of these nuts has been scarce. In Wisconsin and northern Illinois I have never found them in winter, and even in south-western Missouri, where they are very numerous in summer, only a few spend the cold season in the bottom woods, the majority moving farther south. According to Prof. R. Ridgway, they are abundant in the bottom woods of northern Illinois during the inclement season
of the year. In south-eastern Texas I found this conspicuous Woodpecker exceedingly abundant from November to April, and very numerous in summer. In Houston I found it nesting in the water and swamp oaks in the streets, and in the sycamores and maples along the picturesque Buffalo Bayou. It was very confiding and tame, hammering frequently on houses and stables, and especially on the steeples of churches and on telegraph posts. I discovered a nest in a sycamore in a street, about fifteen feet from the ground, and only a few yards from a house. In Florida, particularly on the Chattahoochee and in the woods fringing Lake Apopka, as well as on the St. Johns and Ocklawaha, I have seen this beautiful bird at all times of the year.

Its favorite resorts are the borders of woods, forests along streams and around lakes, groups of trees in pastures and fields, solitary lindens, sugar maples, beeches, and ashes along highways, parks and small groups of trees in the cities, etc. I have nowhere observed these birds so numerous as in newly cleared fields in the South. The dense bottom woods in this section of the country are not cut down. Only the underwood is cleared away, but the large trees are invariably girdled. They soon die; the smaller branches soon drop off and only the larger limbs and the trunks remain. Often they stand in the fields for many years, until one by one has been destroyed by insects and storms. Wood-worms, beetles, ants, and other insects are constantly working, and finally nothing is left of the former forest giant as a small heap of dust-like matter. When the trees are girdled, the Red-heads and other Woodpeckers find a rich supply of insects first under the decomposing bark and then in the soft and brittle wood. These fields with their girdled and dead trees present a deplorable appearance, but they are the very paradise of the Woodpeckers.

Insects of all kinds, principally those infesting the trees, form the main diet of the Red-head. Grasshoppers, beetles, and ants are also captured, and it makes frequent sallies in the air after passing moths and butterflies, which it seizes with much dexterity. When the young have left the nest, it is very intent on all kinds of fruit, particularly mulberries, poke and elder berries. It frequently enters the orchard and the garden of small fruits to take its share. In the days of my childhood it claimed the first ripe apples for itself. With powerful strokes it pecked deep holes in the finest and ripest fruit, and when disturbed it speared it with its long bill and flew off. In the South they frequently visited the fig trees near my house, committing great havoc among the sweet ripe fruit. They are also said to eat Indian corn in the milk. In fall and winter nuts and wild berries form the main diet of these Woodpeckers. This bird is also a hoarder. Beech nuts are often driven into cracks of fence rails, posts, and tree trunks, and sometimes a knot-hole is entirely filled up with nuts. "In several instances," says Dr. O. P. Hay, "the space formed by a board springing away from a fence was nearly filled with nuts, and afterwards pieces of bark and wood were brought and driven over the nuts as if to hide them from poachers."

"Last spring," writes Dr. G. S. Agersborg, of Vermillion, S. Dak., "in opening a good many birds of this species with the object of ascertaining their principal food, I found in their stomachs nothing but young grasshoppers. One of them, which had its headquarters near my house, was observed making frequent visits to an old oak post, and on examining it I found a large crack where the Woodpecker had inserted about
a hundred grasshoppers of all sizes (for future use, as later observation proved), which were put in without killing them, but they were so firmly wedged in the crack that they in vain tried to get free. I told this to a couple of farmers, and found that they had also seen the same thing, and showed me posts which were used for the same purpose. Later in the season the Woodpecker whose station was near my house, commenced to use his stores, and to-day (Feb. 10), there are only a few shriveled-up grasshoppers left."

Many of our close and conscientious observers have seen this Woodpecker rob the nests of other birds of their eggs and young. Famous ornithologists, like Mr. Otto Widmann, Major Chas. Bendire, Dr. Wm. L. Ralph, etc., report of the Red-head's cannibalism. There can be no doubt that this accusation is true, but I infer that it is only an individual trait and that not all these birds can be charged with robbery and murder. I have never caught the Red-heads in the act of doing mischief in this way, although I have observed them abundantly since my childhood days. To me this exquisitely beautiful bird has always appeared highly poetical, and I would not place it on the same line with such scoundrels and robbers as the Blue Jay, the Magpie, etc.

How anticipating and suggestive of the beautiful spring time are its melodious and far-sounding call-notes! Incessantly the loud hurr-hurr is heard during the fine days of May and June, when the male plays hide and seek with his equally beautiful mate on an old stump. His drumming on some resonant dry limb is frequently heard when frolicking and playing with his mate. Often the pair are chasing each other in a playful mood from tree to tree, and at such times they utter a rather noisy chärr-chärr. The alarm is expressed by a harsh rattling note. Mr. Otto Widmann says that they also utter a note that is so similar to that of the tree-frog (Hyla arborea), that it is undistinguishable from it, and that both bird and frog sometimes answer each other. The coloration of this Woodpecker is exceptionally beautiful, the deep red of the head is harmonizing perfectly with the bluish-black mantle and the white vest. When spreading its wings and flying in an undulating way over a small treeless area, its colors are very striking. I have often stopped with admiration when a pair of these birds had alighted on the top of an old stump, and both were calling their loud and melodious notes. It is indeed one of our most beautiful birds, as it is also one of the most familiar where it feels safe. In spite of its pilfering propensities it ought to be protected wherever found. As it is nowhere occurring in great numbers, the injuries it commits cannot be very serious.

The Red-headed Woodpecker habitually nests in dead tops of deciduous trees or in old stumps from ten to fifty feet from the ground. It usually selects sugar maples, beeches, elms, ashes, etc., and I have also found it in red cedars, tamaracks, and white cedars. On the prairies it is said to excavate often a nesting hole in telegraph or fence posts. The eggs, five to six in number, are of a glossy white color.

NAMES: RED-HEADED WOODPECKER, Red-head.—Rotkopfspecht (German).

SCIENTIFIC NAMES: Picus erythrocephalus Linn. (1766). MELANERPEIS ERYTHROCEPHALUS SWAINS. (1831).


Length about 9.75 inches; wing, 5.50; tail, 3.68 inches.
CALIFORNIA WOODPECKER.

Melanerpes formicivorus bairdi RIDGWAY.

Plate XXXVI. Fig. 5.

In suitable localities," says Major Charles Bendire in his monumental work, "Life-histories of North American Birds," "the California Woodpecker is one of the most abundant and familiar species along our southern border, and it is also rather common in many portions of California and western Oregon. Being essentially a bird of the oak belt, this handsome Woodpecker need only be looked for where these trees are abundant. . . . It is by far the most sociable representative of this family found within the United States, and it is no unusual occurrence to see half a dozen or more in a single tree. It is also a well-disposed bird, and seldom quarrels or fights with its own kind or with smaller species; but it most emphatically resents the thieving propensities of the different Jays, Magpies, and squirrels, when caught trespassing on its winter stores, attacking these intruders with such vigor and persistency that they are compelled to vacate the premises in a hurry. Its manner of flight and call-notes closely resemble those of the Red-headed Woodpecker, and, like it, it loves to cling to some convenient dead limb near the top of a tree and drum for hours at a time. It is one of the most restless Woodpeckers I know of, and never appears to be at a loss for amusement or work of some kind, and no other bird belonging to this family could possibly be more industrious. During the spring and summer its food consists, to a great extent, of insects, including grasshoppers, ants, beetles, and different species of flies, varied occasionally with fruit, such as cherries, which are carried off whole, apples, figs, and also berries and green corn; but acorns always form its principal food supply during the greater portion of the year, and large numbers are stored away by it in the thick bark of pines, as well as in dry and partly rotten limbs of oak and other trees, also in telegraph poles and fence posts. This peculiar habit of storing acorns in receptacles especially made for this purpose, and not under loose bark or similar hiding places, seems, however, to be principally confined to the birds found in California and southwestern Oregon, while it has not as yet been noted, to the same extent at least, in the somewhat smaller birds found in Arizona and New Mexico; and this habit is far too noticeable to have been overlooked by the many careful ornithologists who have visited Arizona since I was there in 1872 and 1873, and have had far better opportunities for observing its habits than I enjoyed. Although I traveled over considerable areas in both years where these birds were fairly common in places, I saw no evidence of their storing acorns in the way they do in the more northern parts of their range, though I must confess that I was then generally far more on the lookout for hostile Indians than ornithological matters. . . ."

"The supposition, that they store only wormy acorns, and allow the inhabitant to get fat before eating it, is nonsense; the meat of the acorn is the attraction, not the worm in it, and there is no doubt that it furnishes their principal food in winter, and more or less during the remainder of the year as well."
In Mexico these Woodpeckers store acorns in the dry flower stalks of the maguay or "century plant" (Agave americana) and also in dead trunks of arborescent yuccas. The nidification does not differ from that of the Red-headed Woodpecker.

DESCRIPTION: "Above and on anterior half of the body, glossy bluish or greenish-black; top of head and short occipital crest, red. A white patch on the forehead, connecting with a broad crescentic collar on the upper part of the neck by a narrow isthmus, white tinged with sulphur-yellow. Belly, rump, bases of primaries, and inner edges of the outer quills, white. Tail-feathers, uniform black. Female with the red confined to the occipital crest, the rest replaced by greenish-black."

Length about 9.50 inches; wing, 6.00; tail, 3.75 inches. (B. B. & R., II, p. 566.)

The Narrow-fronted Woodpecker, M. formicivorus angustifrons Baird, inhabits the southern portion of Lower California.

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LEWIS' WOODPECKER.

Melanerpes torquatus Bonap.

This is one of our most beautiful and peculiar birds, whose rich dark crimson and bristle-like breast feathers distinguish it at the first glance. It inhabits the western part of the country, from the Black Hills and the Rocky Mountains to the Pacific and from southern British Columbia and southern Alberta south to Arizona, and (in winter) to western Texas, being especially abundant along the eastern slopes of the Sierra Nevada in California and Nevada, as well as in those of the Cascades in Oregon and Washington, and on both sides of the Blue Mountains and connecting ranges in Oregon, Washington, and Idaho. "I have met with Lewis' Woodpecker," says Major Chas. Bendire, "in the vicinity of all the Military Posts I have been stationed at in the West, but found it nowhere so abundant as along the southern slopes of the Blue Mountains, in the vicinity of Camp Harney, Oregon, during the year 1875 to 1878. Here it was only a summer resident, usually arriving about the 20th of April, and in some seasons from seven to ten days later. It is by far the most silent Woodpecker I have met, and, aside from a low twittering, it rarely utters a loud note. Even when suddenly alarmed, and when it seeks safety in flight, the shrill huit, huit, given on such occasions by nearly all our Woodpeckers is seldom uttered by it. Only when moving about in flocks, on their first arrival in the spring and during the mating season, which follows shortly afterwards, does it indulge in a few rattling call-notes, resembling those of the Red-shafted Flicker, and it drums more or less in a lazy sort of way, on the dead top of a tall pine, or a suitable limb of a cottonwood or willow."

It does not frequent the deep interior of the forest but rather the outskirts of the pines, cedar groves on the table lands bordering the pines, as well as deciduous woods on the streams and in lowlands. Its food consists mainly of all kinds of insects, such as grasshoppers, large black crickets, ants, beetles, wood worms, but it also relishes all kinds of small fruits, especially the berries of the juniper, and the service tree, and in cultivated districts it has acquired a liking for cherries, strawberries, etc. In winter acorns and seed of conifers form a considerable part of its food.

The eggs, five to nine in number, are pure glossy-white. The cedars or "junipers which are often selected for nesting sites, were invariably decayed inside, and after the
birds had chiseled through the live wood, which was usually only from one to two
inches thick, the remainder of the work was comparatively easy.”

DESCRIPTION: Sexes alike. "Feathers on the under parts bristle-like. Above, dark glossy-green. Breast,
lower part of neck, and a narrow collar all round, hoary grayish-white. Around the base of the bill
and sides of the head to behind the eye dark crimson. Belly blood-red, streaked finely with hoary-
whitish. Wings and tail entirely uniform glossy-green. Female similar,” (B. B. & R. II, p. 561.)
Length 10.00 inches; wing, 6.65; tail, 4.55 inches.

RED-BELLIED WOODPECKER.
Melanerpes carolinus Ridgway.

PLATE XXXVI. FIG. 3.

In THE sylvan retreats, far from the noise and bustle of man, many of our most
delicate and beautiful birds find quiet and happy homes. A large number of them have been so
much persecuted, that they only feel safe in the remotest parts of extensive forests. The
large and unique Ivory-billed Woodpecker as well as the “King of the Woods” (Ceophleus
pileatus), the Carolina Parrot and several other birds are in many places of their habitat
confined to vast forests and swamps in thinly settled regions. The latter two birds will
soon be extirpated, if steps are not taken to stop the senseless killing of these beau-
tiful inhabitants of our woods. In densely populated districts most of the Woodpeckers
are constantly pursued malignantly in the false supposition that they damage the trees.
This is all erroneous. The Woodpeckers are true benefactors to man, never doing any
serious harm. They fully earn all the berries and fruits they may take, and therefore
deserve the protection of every horticulturist and agriculturist. They are exceedingly
beautiful, enlivening the woods all the year round by their loud call-notes and their
drumming on dry resonant branches. The lover of Nature as well as the farmer and
fruit grower cannot miss these birds in the concert of the woodland choir.

One of our most beautiful species is the RED-BELLIED WOODPECKER, of the Southern
States. It is the predominating species in the post oak woods of Texas, where it is a
constant resident, and I found it equally numerous in Louisiana and Florida. It is also
known as the “Carolina Woodpecker,” and in Texas it is frequently called the “Checkerred
Woodpecker,” and the “Zebra Woodpecker,” “Checkered Woodpecker,” “Zebra Woodpecker,” in allusion to its peculiar
black and white checkered coloring of the back. In Florida, where it relishes the sweet
juice of the orange, it is sometimes called the “Orange Woodpecker,” and “Orange Sap-
sucker.”

Although accidentally found as far north as Massachusetts, New York, and northern
Illinois, etc., it is not a numerous bird north of Arkansas and southern Illinois. In
the Ozark region of south-western Missouri I found it only fairly common. I have never
seen it in Wisconsin, and I know only of one pair that nested in Lincoln Park, Chicago,
many years ago. It is pre-eminently a bird of the Gulf region, occurring from the
Atlantic west to the eastern half of Texas, the Indian Territory, and Kansas.
From Maryland southward it prefers the heavily wooded bottom lands and swamps to the hilly and dry forest, while in Texas I met with it mostly in the post-oak woods, often in close proximity to farm-houses. In Florida it is found as numerous in the flat pine woods as in the hammocks bordering streams and lakes. Where the land has been cleared, and the girdled and dead trees are still found in all states of decomposition, it has taken up its abode in great numbers. Usually it is a rather shy and retired bird, but in the post oak woods near my cabin in Lee Co., Texas, it was a very tame and familiar species, breeding close to the house. Its ordinary call-note is entirely different from that of all other Woodpeckers, sounding like \textit{turrrrrturrrrr}; another sound, resembling the syllables \textit{chow-chow}, is also frequently heard during the breeding season. From this call-note it has received the name “Chow-chow” by the boys of the Texas backwoods. These sounds are “occasionally varied with a disagreeable creaking note, while during the mating season peculiar low, mournful cooing sounds are sometimes uttered, which somewhat resemble those of the Mourning Dove.”

In its northern habitat it is a migrating species, arriving in spring usually in the first days of April. It nests in Texas preferably in dry limbs and dead tops of post oaks, in old stumps, etc., from fifteen to forty feet from the ground. In other parts of the South I have found the nest mostly in soft wooded trees, such as elms, red-buds, sycamores, cotton-woods, and mulberry trees. Nest and eggs do not differ from those of other species.


\textbf{Description:} “Top of head and nape, crimson-red. Forehead, whitish, strongly tinged with light-red, a shade of which is also seen on the cheek, still stronger on the middle of the belly. Under-parts, brownish-white, with a faint wash of yellowish on the belly. Back, rump, and wing-coverts banded black and white; upper tail-coverts, white, with occasional blotches. Tail-feathers, black; first transversely banded with white; second less so; all the rest with whitish tips. Inner feathers banded with white on the inner web; the outer web with a stripe of white along the middle. \textit{Female} with the crown, ashy; forehead, pale red; nape, light red.” (B. B. & R., II, p. 554.)

Length, 9.75 inches; wing, 5.00; tail, 3.50 inches.

\textbf{Golden-fronted Woodpecker,} \textit{Melanerpes aurifrons} RIDGWAY. This species is mainly an inhabitant of eastern Mexico, north to the southern portion of central Texas.

The \textbf{Gila Woodpecker,} \textit{Melanerpes uropygialis} RIDGWAY, ranges from south-eastern California, southern Arizona, south-western New Mexico south to Lower California, Jalisco and Aguas Calientes, Mexico.
FLICKER.
Colaptes auratus Swainson.

Plate XXXVI. Fig. 2.

The last days of May in a Wisconsin forest of deciduous trees and white pines are full of hilarity and pleasant anticipation. Even the indifferent is inspired by the beauty of the budding trees and the song of the birds. Many of the trees and shrubs are in full flower and particularly the rosy-white fragrant blossoms of the wild crab trees arrest our attention. The sombre green of the single specimens and dense groups of white pines contrasts strikingly with the surrounding fresh light green of the deciduous trees and with the brownish-purple of the opening leaf-buds of the oaks. How beautiful and suggestive of spring is the fragrance of the woods! Underneath a carpet of delicate woodland flowers, on all sides the various green tints of the new leaves, the wealth of blossoms, and above the deep azure of the sky! Bird-life reigns supreme in the woods, especially around their outskirts, where many familiar songs resound throughout the day. Almost all members of the woodland choir have once more returned from their dangerous and fatiguing journey in the far South. Many even come from the tropics of Central and South America, where they sojourned among a wealth of palms, beautiful orchids and other tropical plants. The northern woodlands, however, are their true home. Here they were raised, here they sing, woo, and construct their domiciles. The days at this time of the year are the most beautiful. A spirit of restfulness and peace pervades the landscape.

Among the denizens of the northern woodland borders the Flicker or Golden-winged Woodpecker is one of the most attractive and conspicuous. It is an exceptionally noisy bird during this time of the year, its far-sounding drumming on old resonant limbs and its loud melodious call-notes being heard in all directions. Its common notes, resembling the syllables garuck-garuck-garuck, and garuha-ruha-ruha are most frequently heard. During the love season a quickly given tschuck-tschuck-tschuck, a clear wick-ah, wick-ah, wick-ah or wick-up, wick-up, and a soft persuasive quit-tu, quit-tu, quit-tu, are familiar sounds in the concert of Nature. A rapidly uttered laughing the-he-he-he and a low taek-taek-taek and many other sounds are heard when several rivals are in pursuit of a female. "Another call," says Major Chas. Bendire, "when courting its mate sounds like quit-quit, and ends with a soft puir-puir, or a cooing yu-cah, yu-cah. Low chuckling sounds are also frequently uttered during their love making; another common call-note sounds like see-ah, see-ah, and during the summer a clear pi-ack, pi-ack, or pi-ah, is also frequently heard; in fact no other of our Woodpeckers utters such a variety of sounds."

It is very interesting to watch several males wooing a female. The latter appears very coy and coquettish, favoring now one, and a few moments later another male. This playing among the trees, this drumming, calling, and wooing lasts often for several days. The mates do not attack each other like other birds under similar circumstances, they do not fight and scream, they simply pay their addresses to the female, play hide
and seek around the tree trunks, approach the subject of their love, retreat again, drum loudly and powerfully on old dry limbs and call in the most melodious and persuasive notes. I have rarely seen more amusing and pleasing performances than the courtship among these birds. It takes often several days before the female decides whom of the several males she will follow. As soon as this is done the other males leave the scene of their courtship, trying their luck somewhere else. The loud drumming, frolicking, and calling is, however, not confined to this time only, but is observed throughout the breeding season. Near their nest they are perfectly silent, their drumming and calling being heard quite a distance from it. Male and female are much attached to each other and are mostly seen together. When it happens that one or the other is absent, the sweetest and most caressing notes are uttered in order to call it back.

With the exception of the still more beautiful Red-headed Woodpecker, the Flicker is the best known of the whole family. Though not so strikingly colored as its congener, it is much more endeared to the heart of the friend of Nature, and more valuable than the former. It is a favorite wherever known, ranking in the estimation of the bird lover with such birds as the Robin, Catbird, Rose-breasted Grosbeak, Towhee, Baltimore Oriole, Mockingbird, and others. Its breeding range seems to be more extensive than that of any other species of the family, being found from Florida and the Rio Grande of Texas to the Yukon in Alaska, and from the Atlantic west to the Rocky Mountains. I found it most numerous in the mixed woods of Wisconsin and less common in the oak woods of northern Illinois. In the Ozark region of south-western Missouri it was only fairly common, while in Texas and Florida I found it sparingly during the breeding season, but very abundant in winter. Owing to its beauty, confidence, and familiarity the Flicker is in all localities of its wide range a favorite with all bird lovers and all friends of Nature. Few birds are better known and possess more local names than this species. In allusion to its common note flick, flick, it has been called "Flicker," and its names "Wake-up," "Wick-up," and "Wicket" have also been derived from its notes. "Golden-winged Woodpecker" and "Yellow-hammer" designate its prevailing color of the wings. In reference to its favorite food, which consists of ants, it has been called "Ant-eater" and "Ant-pecker." Other vernacular names are "High-hole," "High-holder," and "Pigeon Woodpecker."

In the northern parts of its habitat the Flicker is a regular migrant, though a few may remain in the breeding range throughout the year. From southern Illinois, Tennessee, and southern Missouri southward it is a constant resident throughout the year. I have observed its arrival from the North in south-eastern Texas early in November, and it is a peculiar fact that it moves, unlike other species of the family, in flocks, from ten to thirty; even a hundred being sometimes seen together. Many winter in southern Illinois and in Arkansas, but the majority find their true winter home in the Gulf States. In Wisconsin they are little behind the Robins in their spring migration, appearing usually in the first week of April, though the bulk of young males and the females do not arrive until a fortnight later. Probably the first arrivals are birds who breed in high northern latitudes. By the middle of May they again occupy their old haunts. The breeding range of each pair extends over several acres, and its limits are jealously guarded against intrusion by the old male.
“Another April comer,” says John Burroughs, the poet-ornithologist, “who arrives shortly after Robin Red-breast, with whom he associates both at this season and in autumn, is the Gold-winged Woodpecker, alias ‘High-hole,’ alias ‘Flicker,’ alias ‘Yarup.’ He is an old favorite of my boyhood, and his note to me means very much. He announces his arrival by a long, loud call, repeated from the dry branch of some tree, or a stake in the fence—a thoroughly melodious April sound. I think how Solomon finished that beautiful description of spring, ‘And the voice of the Turtle is heard in the land,’ and see that a description of spring in this farming country, to be equally characteristic, should culminate in like manner,—‘And the call of the High-hole comes up from the wood.’"

The Flicker is not an inhabitant of the deep interior of the forest. Its favorite haunts are cultivated localities, where woods alternate with pastures, fields, orchards, and meadows. The outskirts of mixed woods, consisting of a variety of deciduous trees and white pines are particularly favored, and in such places often one pair dwells near the other. Old stumps and partly decayed limbs on the borders of woods or on the banks of creeks and lakes, near the roadside, in a pasture or meadow, as well as old apple orchards will answer the purpose of choosing its nesting-site. Most numerous it is on the woodland border near pastures and fields. From here it undertakes excursions in quest of food to all directions of its territory. As it procures its food largely on the ground the deep interior of the forest is rarely visited. Few other birds are more conspicuous in their breeding haunts than the Flicker. Being very noisy, large, of striking colors, rather tame and unsuspicious where it feels safe, and always in a happy mood, it pervades its haunts with the peculiarity of its presence. It is always a feature in the landscape, that cannot be overlooked. The stumps in pastures and fields, and especially the ant nests are constantly visited and even the barn yards and orchards are often searched for insects.

Usually by the end of May a suitable place is selected for a nesting-site. Old stumps and partly decayed limbs of beeches, lindens, elms, sugar maples, birches, and oaks answer the purpose particularly. I have found the nest also in white cedars and in tamaracks, usually at a distance from the ground varying from three to fifty feet, but as a rule it is situated from ten to twenty feet from the ground. A fresh cavity is constructed every year, but where suitable stumps and limbs are not readily available it sometimes occupies one cavity for several years. In some cases the Flicker selects rather abnormal places for its nest. During two seasons I found a pair breeding on the gable end of a barn, where the eggs were placed on a few chips on a beam. The entrance hole was drilled through the boards near the nest. When chiseling its nest the greatest precaution is taken not to betray its whereabouts. While working only a low subdued hammering is heard. They approach very stealthily, and the main work is done early in the morning and late in the evening. Scarcely any chips are found underneath the nest, as they are carefully carried away that the site of the domicile may not be betrayed. The male and female alternately relieve and encourage each other by mutual caresses, renewing their labors for several days till the nest is finished. The cavity is from ten to twenty inches deep and a masterpiece of workmanship. There is no soft lining present, and the eggs rest only on a few soft chips. These, varying in number from five to nine, are pure glossy-white.
Now and then I found a pair of Flickers in places where they were scarcely expected. In June 1867 I discovered a nest in an old solitary linden stump only a few feet from the ground. This stump was about five feet high and was quite a distance from the woods. The entrance hole was so large that I could easily reach the eggs with my hand. The six eggs were hatched in fourteen days and the young were black and very ugly. When the feathers began to grow they diffused a very strong and exceedingly offensive smell. As I have made the same observations in subsequent years, I believe that this is due to their food which consists mainly of ants and all kinds of insects and larvae which are hidden under the decayed bark and in rotten wood. The nest was kept clean, as the excrements of the young were carried away by the parents. The bird has also been found nesting in a haystack that had been cut through the middle, also in gate-posts, church-towers, in an old wagon hub, in dwellings and outbuildings, etc. In south-western Missouri a pair regularly nested in the trees of an old apple orchard. Though usually exceedingly noisy and unsuspicious, the pair was perfectly quiet in their nesting haunts, and the owner of the place had no knowledge of the birds breeding so near his house. The young just hatched are nourished with the soft white larvae of ants. Later they are fed with all kinds of larger insects. Before they are fully fledged they leave the nest, climbing around the trunk or perching on the top of the stump. When danger threatens and during the night they retreat to the nest. Only one brood is raised annually, even in the South.

Prof. Wm. Brewster, in his excellent article on "A brood of young Flickers and how they were fed" (Auk, Vol. X, 1893, p. 231 ff.), observed that the parent bird swallowed all the food obtained during its foraging trips and afterwards supplied it to its young by a process of regurgitation.

The Woodpeckers have justly been called the carpenters among birds, as they construct quite a number of cavities for other birds. The Flicker also works diligently among the old stumps and dry limbs, finishing partially often quite a number of hollows before it finally makes one ready for itself. After it has abandoned these different cavities, the Nuthatches, Titmice, Wrens, Bluebirds, White-bellied Swallows and Crested Flycatchers fall heir to them.

Without any doubt the Flicker is one of our most beneficial birds, deserving always and everywhere the protection of man. I quote the following from Bulletin No. 7 of the U. S. Department of Agriculture "On the Food of Woodpeckers" from the pen of Mr. F. E. L. Beal: "Under one or the other of its various titles of Flicker, Golden-winged Woodpecker, High-holder, Yellow-hammer, Pigeon Woodpecker, and Hairy Wicket, it is known to every farmer and schoolboy, and, unfortunately, to certain so-called Sportsmen also, for this is the one Woodpecker that is often seen in city markets. In most places it is a much shyer bird than either of the preceding, and while it frequents the farm and approaches buildings freely it keeps more in the tops of trees and does not allow so near an approach of its greatest enemy, man. This is particularly true in the north-eastern part of the country, where large bags of Pigeon Woodpeckers are annually made among the wild cherry trees in which the birds feed. The Flickers soon learn whom they have to fear, and such knowledge seems to be hereditary. They are very prolific, raising from six to ten young at a brood, and so keep reasonably abundant in
most parts of the country. The Flicker is the most terrestrial of all the Woodpeckers, in spite of his high-perching and high-nesting proclivities, and may often be seen walking about in the grass like a Meadowlark. . . .

"As a large part of the food studied consists of ants, the question may be asked whether the birds are doing good or harm in destroying them. There are so many different species of these insects, and they have such widely different habits, that it is difficult to make any assertion that will apply to all, but it is safe to say that many kinds are decidedly harmful, because they attend, protect, and help to spread plant, root, and bark lice of various species. These lice are among the worst enemies of plant life, and everything which tends to prevent their destruction is prejudicial to the interests of agriculture. Other species of ants destroying timber by burrowing in it; still other, in warmer climates (especially the Southern States, N.), do much harm to fruit trees by cutting off the leaves and undermining the ground. Many species infest houses and other buildings. Apparently, then, birds do not harm in destroying ants, but on the contrary do much good by keeping within bounds these insect pests, whose greater abundance would be a serious injury to man. The Flicker takes the lead in this work, eating ants to the extent of nearly half of his whole food."

In his investigations of the stomachs of these Woodpeckers, Prof. Beal also found a great number of all kinds of beetles, grasshoppers, crickets, and two stomachs contained each a single bed bug. The berries of the dogwood, blackberry, elder, mulberry, sour gum, smilax, poke-weed, wild grape, wild cherry etc., were found in the stomachs of these birds.

Among the enemies of this beneficial and beautiful bird man takes the lead. Very often it is a target for such sportsmen, who are low-minded and churlish enough to fire at every bird they see. The Negroes in the South most especially are to be classed among the enemies of these and all our small migrating songbirds. There ought to be a high tax on all guns in the hands of the lower class in the South as well as in the North. I have seen masses of dead Flickers piled up on the stands in the French Market of New Orleans, and also in Houston, Texas. Nowhere this Woodpecker should be considered a game bird, its meat being as unpalatable to the cultivated taste as that of the Turkey Buzzard. Its main food consists of ants, which impart to it a very peculiar and rather nauseous flavor, which any amount of seasoning and cooking does not disguise. Tree-climbing snakes, raccoons, and opossums also must be ranked among its enemies, as they destroy many broods.

The Flicker does not climb so much as other Woodpeckers do, obtaining the main part of its food on the ground, probing it for ants, crickets, and beetles. When perching on trees and stumps, it is mostly not done in the clinging way of other Woodpeckers, but in the manner of the Robin and Thrasher. Its flight, although appearing heavy and laborious, is strong and swift. When flying over large treeless areas, it is undulating or wave-like, but when it proceeds only from tree to tree, it is rather jerky.

The Flicker is admirably adapted to the cage, becoming easily accustomed to confinement, and is often kept in good health for many years, provided its keeper satisfies its wants carefully and kindly. I kept several in the cage and all were very pleasant pets. One I kept for more than five years. I fed it with a mixture of Mockingbird-food,
grated carrots, and ants' eggs, and now and then with grated hard-boiled egg, mealworms, and small fruits. For the latter it showed no liking whatever in its cage-life, but was very intent on mealworms, grasshoppers, and crickets. It became so much attached to me that it took its food from my hand. It did not eat in the manner of other birds. The food was not picked up with the bill, but with the tongue, which was thrust forward and in a sinuous or curving way made all kinds of motions. With the slimy tongue it took mealworms and other food from my hand, and in the same way the ants' eggs were first singled out of the mixture of food, before the rest was eaten. When I came near its cage, it at once perched on the bars and thrust its long tongue forward in all directions. When it did not get its food at the usual time in the morning, it was very impatient, hammering vigorously on the floor of the cage and uttering very peculiar smacking sounds, somewhat like young Mockingbirds. It spent most of its time on the floor of the rather roomy cage, but also alighted frequently on the perches in the way other birds do. It always came confidingly and with raised head and intelligent looks on the bars of the cage when I entered the room. Usually it slept in a lying position in one corner of the cage, with its bill under the wings, sometimes also in a hanging position on the bars of its cage. This one as well as all the other Flickers, which I have kept in confinement, were very interesting and amiable pets.

NAMES: Flicker, Golden-winged Woodpecker, Yellow-shafted Woodpecker, Gar-up, Yar-up, Wake-up, Wick-up, Wicket, Yellow-hammer, Ant-eater, Ant-pecker, High-hole, High-holder, Pigeon Woodpecker, Cuckoo Woodpecker, Eastern Flicker.


Length, 13.35 inches; wing, 6.66; tail, 4.86 inches.

RED-SHAFTED Flicker, Colaptes cafer Stejn. This beautiful species is found in the Rocky Mountain region from British Columbia southward to southern Mexico, and west to the Coast Ranges in Oregon and Washington, and to the Pacific coast from northern California southward. It is the true counterpart of the Eastern Flicker in its general habits, food, call-notes, etc., and it is therefore not necessary to go into details. The shafts and under-surfaces of the wing and tail-feathers are of a beautiful and conspicuous red color. The sub-species, Colaptes cafer saturatior Ridg. (North-Western Flicker), inhabits the north-western coast region, from Alaska south to northern California. The Gilded Flicker, Colaptes chrysoides Reich., is an inhabitant of central and southern Arizona, to southern Sonora, and Lower California. The Guadalupe Flicker, Colaptes rufipileus Ridg., is confined to Guadalupe Island, Lower California.
KINGFISHERS.

*Alcedinidae.*

Alcedinidæ or Kingfishers form a very natural family of the great Picarian order, and are alike remarkable for their brilliant coloration and for the variety of curious and aberrant forms which are included within their number. They are very characteristic birds, sitting motionless on an overhanging dead branch or on a tree stump watching for their prey, to dart after it, seize it on the wing, and return to their original position to swallow it. They nest in holes and lay white eggs. "It is, however, to be remarked that, in accordance with a modification of the habits of the various genera, a corresponding modification has taken place in the mode of nidification, the piscivorous section of the family nesting for the most part in holes in the banks of streams, while the insectivorous section of the family generally nest in the holes of trees, not necessarily in the vicinity of water." (Sharpe.)

According to Mr. Sharpe's splendid monograph of this family there are in all about one hundred and twenty-five species, the bulk of which occurs in the eastern half of the Malayan Archipelago from Celebes to New Guinea.

The family is represented in North America by only one genus.

Genus *Ceryle* Boie. Three species.

BELTED KINGFISHER.

*Ceryle alcyon* Boie.

Plate XXXIII. Fig. 2.

On picturesque mill-ponds, near small inland lakes, on rivers and creeks, especially those bordered by woods, the Belted Kingfisher is a very conspicuous and familiar bird. In such places it forms quite a feature in the landscape and its vehement call-notes, sounding sharply like sre-sre-sre, are heard throughout the day and even
during the night in late spring and early summer. It is one of our best known birds as it is found in all suitable localities throughout North America, but it is nowhere really common. Its breeding range extends from Texas and Florida north to the Arctic regions, and in winter it is found south to Panama. Where open waters occur it sometimes braves the severe winter’s cold of the northern States. These winter sojourners are doubtless birds from the high North being more robust and therefore better adapted to withstand the vicissitudes of a northern winter, than those breeding in the locality. In south-western Missouri it was not common in winter, but in Texas it was found on all streams and rivers during the cold season. I observed the bird throughout the year on the Comal, Guadeloupe and the upper Colorado and on the Brazos in Texas, and in winter it was not at all rare on the picturesque banks of the Buffalo Bayou near Houston. I saw the bird in April on the Chattahoochee and Suwanee and on the upper St. Johns in Florida. It is a regular summer sojourner on the Spring River and Center Creek in Lawrence Co. Mo., and about twenty years ago it was a familiar summer sojourner on the Deplaines and Calumet River in the northern part of Illinois. In Wisconsin I observed it in the days of my youth on the beautiful picturesque banks of the Sheboygan and Pigeon Rivers. Clear streams and brooks, bordered with perpendicular banks, and low shores edged with bushes and trees, are the Kingfisher’s favorite haunts. Where the water is muddy and dark it does not settle. I found it most frequently near mill-ponds and rapidly flowing brooks, where shallow places alternated with quiet and deep spots.

As the Kingfisher is found on all creeks, rivers and ponds in suitable localities, it is often asserted to be a common bird. This is, however, not the case. Being a large, noisy and very conspicuous inhabitant near clear water, and occurring often in the immediate neighborhood of man, it is familiar to almost everyone, but its hunting grounds are very large, and we may often go for miles to find another individual and this is usually the female. Being exceedingly unsocial it never tolerates another individual of its own kind in its hunting grounds. Only during the nesting time both sexes congregate, but as soon as the young are able to shift for themselves they are mercilessly driven away. In spite of its very jealous and quarrelsome disposition the Kingfisher is a great ornament of its haunts. It is always found where large dry limbs hang over the water, or where snags or rocks project from the wet element. Often the banks are edged with the beautiful red cardinal flower (Lobelia cardinalis), the blue lobelia (Lobelia syphilitica), the fringed and closed gentians (Gentiana crinita and G. Andrewsii), the spotted balsam or touch-me-not (Impatiens fulva), the shell flower (Chelone barbata), ferns, etc. “Every bird,” writes Major Chas. Bendire, “seems to have several favorite perches along its range, each perhaps quite a distance away from the next, to which it flies from time to time, generally uttering its well-known shrill rattle in doing so. It is a sedentary bird, but ever watchful and rather shy, sitting frequently for an hour at a time in the same position, occasionally moving its head back and forward, watching for its prey as a cat does for a mouse. In such a posture the Kingfisher is one of the most charming features of brook and pool. Should an unfortunate fish come within sight at such times, our lone fisher is at once alert enough, craning its neck and looking into the water, until the proper moment arrives for it to plunge downward, head first, com-
pletely disappearing out of sight, and usually emerging with a wriggling captive firmly grasped in its bill, for it rarely misses its victim. It generally rises some feet into the air before dashing perpendicularly into the water.... By far the larger number of fish caught by the Kingfisher consist of species not considered worth much as food fishes, and they rarely average three inches in length." It also eats all kinds of water beetles, various species of crustacea, grasshoppers, crickets to a greater or less extent. Frogs and lizards are also acceptable prey. But the main part of its food is obtained from the clear water. The very dense, smooth and satin-like plumage feels to the touch as if oiled and the water never wets it. It is a peculiar fact that the Kingfisher is making frequent nocturnal rambles especially when it has to care for its young, and its loud sre-sre-sre convince us that it is fully as active during the night as in the daytime.

The favorite nesting sites of the Kingfisher are the perpendicular banks of creeks, and rivers directly over the water and also the walls of railroad cuts, usually in places where the soil is a mixture of clay and sand. A nearly circular tunnel is dug into these banks, averaging about four inches in diameter. According to Major Chas. Bendire, "the entrance hole is usually from two to three feet below the top of the bank, but sometimes fully twenty feet from the top. The burrows vary in length from four to fifteen feet, according to the nature of the soil, and sometimes run in perfectly straight for the entire distance; again they diverge at different angles, at various distances from the entrance. The nest-chamber is dome-shaped, usually from eight to ten inches in diameter, and always at a slightly higher level than the entrance hole." The eggs, six to eight in number, are pure white in color, and placed in a nest usually made of fish scales and bones, arranged in a saucer-shaped way. Sometimes the lining consists of coarse grasses, and in new cavities the eggs are usually deposited on the bare ground. The male does not assist in incubation, but he supplies his mate with food while she is hatching.

This bird, a great ornament of our river and mill-pond scenery and not at all injurious to man, ought to be protected wherever found.

NAMES: **Belted Kingfisher**, Kingfisher, Fisher.

**Scientific Names:** *Alcedo akyon* Linn. (1766). *Ceryle Alcyon* Boie (1826).

**Description:** "Head with a long crest. Above ashy-blue, without metallic lustre. Beneath, with a concealed band across the occiput, and a spot anterior to the eye, pure white. A band across the breast, and the sides of the body under the wings, like the back. Primaries white on the basal half, the terminal unspotted. Tail with transverse bands and spots of white. Female and young with sides of body and a band across the belly below the pectoral one light chestnut; the pectoral band more or less tinged with the same." (B. B. & R., II, p. 393).

Length 12.75 inches; wing, 6.00; tail, 3.50; bill, 2.00 inches.

**Texan Kingfisher**, *Ceryle americana septentrionalis* Sharpe. This beautiful little bird inhabits southern Texas south to the Isthmus of Panama. In general habits, food and nesting it is similar to the Belted Kingfisher. I saw it several times on the Comal and Guadeloupe near New Braunfels. The **Ringed Kingfisher**, *Ceryle torquata* Boie, is found from the lower Rio Grande southward to southern South America.
THE magnificently plumaged family of Trogonidae (Trogons) only one species penetrates into our territory from the tropics. This is the Coppersy-tailed Trogon, Trogon ambiguus Gould, an inhabitant of Mexico, north to the valley of the lower Rio Grande and the mountains of south-western New Mexico and Arizona. Though it must be considered an exceedingly rare summer resident within our borders, there is no doubt that it breeds in some of the mountain ranges of southern Arizona, especially in the Huachuca Mountains. Dr. A.K. Fisher writes: "Arriving at Fort Huachuca, Ariz., I learned that the Trogon was not uncommon among the pines in the neighboring mountains.... On June 9, I made a trip toward the head of Tanner and Garden Cañon, as it is more commonly designated in the vicinity. While riding up the shady trail among the pines a beautiful male Trogon flew across the path and alighted among the trees on the opposite side of the narrow cañon. It was impossible to follow it and to pass through the thick underbrush and loose rocks without making considerable noise, which startled the bird, and it was finally lost among the thick foliage. Higher up in the mountains I heard its peculiar note, which was uttered at regular intervals, and closely resembles that of a hen Turkey. Later in the afternoon another was heard, and by carefully approaching along the hillside a male was discovered sitting on the lower limb of a pine. It sat straight upright, with the tail hanging perpendicular to the body, and while uttering its note the head was thrown backward and the bill extended nearly upward. The stomach contained a few caterpillars."

All the Trogons, as far as their nesting habits are known, breed in natural cavities of trees or in Woodpecker's holes. The eggs of the inimitable Quezal (Phormocras mocinnus) are said to be of a uniform pale bluish-green color, while those of the Mexican Trogon (Trogon mexicanus) are very pale greemish.

DESCRIPTION: The color of the Coppersy-tailed Trogon is metallic bronze-green on the crown, hind-neck, back, rump, and upper tail; wings delicately undulated with white and black; fore-head, lores, sides of head, chin and throat dull opaque-black; chest, metallic-greenish or coppersy-bronze, like back; a pure white band across breast; behind this, all the lower parts pure scarlet vermilion, etc.
CUCKOOS.

_Cuculidæ._

_Cuckoos_ play an important part in the bird-life of the Old World as well as of our own continent. "There are about two hundred current species of the family. Many of them . . . lay their eggs in other birds' nests. The American Cuckoos have been declared free of suspicion of such domestic irregularities; but, though pretty well-behaved, their record is not quite clean: they do sometimes slip into the wrong nest. The curious infelicity seems to be connected in some way with the inability of the female to complete her clutch of eggs with the rapidity and regularity usual among birds, and so incubate them in one batch. The nests of our species of _Coccyzus_ commonly contain young by the time the last egg of the lot is laid." (Dr. Elliot Coues.)

Three very different genera inhabit our country:

1, _Geococcyx Wagler._ Running Cuckoos. One species.
2, _Coccyzus Vieillot._ Rain Cuckoos. Three species.
3, _Crotophaga Linne._ Anis. Two species.

ROAD-RUNNER.

_Geococcyx Californianus_ Baird.

This very interesting bird is an inhabitant of our south-western border, being common in the western part of Texas, southern New Mexico, Arizona and California, and in northern and central Mexico. It has been traced as far south as the Indian Territory, and even Kansas, southern Colorado, and the southern parts of Utah and Nevada.
"Its general habits," says Major Chas. Bendire, "are far more terrestrial than arboreal, spending much of its time on the ground in search of food, and frequenting the drier desert tracts, adjacent to river valleys, and the lower foothills, covered by cactus, yuccas, and thorny undergrowth." It is rarely met in the mountains.

In southern Texas it is called by the people the Chaparral Cock, as it invariably frequents places where dense thorny bushes, cacti, yuccas, agaves, dasylirions, nolinas etc. abound and where rattle-snakes are numerous. It is not a sociable bird, and usually only the pair, or later in the season, the old and young ones are seen together. "The food consists almost entirely of animal matter, such as grasshoppers, beetles, lizards, small snakes, land snails, the smaller rodents, and not unfrequently of young birds. On the whole these birds do far more good than harm. When the fig-like fruit of the giant cactus is ripe, they also feed on this... It is astonishing how large an animal can be swallowed by one of these birds. I have found a species of garter snake fully twenty inches long in the crop of one."

"Road-runners are ordinarily rather shy and suspicious birds, and not as often seen as one would think, even where comparatively common. Within the United States they are most abundant along the southern borders of Texas and Arizona, and in southern California. I found them quite common in the vicinity of my Camp on Rillito Creek, near Tucson, Arizona, and also near Annaheim, Orange Co. Cal., and I have examined about twenty of their nests. Notwithstanding their natural shyness, they are inquisitive birds, and where they are not constantly chased and molested will soon become used to man. One of these birds paid frequent visits to my camp, often perching on a mesquite stump for half an hour at a time, within twenty yards of my tent. While so perched it would usually keep up a continuous cooing, not unlike that of the Mourning Dove, varied now and then by a cackle resembling that of a domestic hen when calling her brood's attention to some choice morsel of food. This call sounded like 'duck, duck, duck', a number of times repeated. Another peculiar sound was sometimes produced by snapping its mandibles rapidly together. While uttering these notes its long tail was almost constantly in motion and partly expanded, and its short wings slightly drooped. In walking about at ease, the tail is somewhat raised and the neck partly contracted. When suddenly alarmed the feathers of the body are compressed and it trusts almost entirely to its legs for escape, running surprisingly fast. While running it can readily keep out of the way of a horse on fair gallop on comparatively open ground, and should the pursuer gain too much on the bird, it suddenly doubles on its course and takes advantage of any thickets or broken ground in the vicinity, and is soon lost to sight. Its flight is comparatively easy and, considering its short wings, is rather swift." (Bendire).

It begins nesting as early as the middle of March. The nest is usually placed in low mesquite trees, thick bushes, and in different species of cacti, such as the prickly pear, cholla and others. It is a flat and shallow structure made of sticks and lined with dry grasses. Sometimes dry cow and horse dung, a few feathers, pieces of snake skin, rootels are found in the lining. The number of eggs varies between two and nine and occasionally as many as twelve have been found. They are white in color and unspotted,
This characteristic Cuckoo is usually called Road-runner and Chaparral Cock, but it is also known as the "Snake-killer," "Ground Cuckoo," "Lizard Bird," while the Mexicans call it the "Paisano" and "Correcamico."


**DESCRIPTION:** "Tail very long; the lateral feathers much shorter. An erectile crest on the head. A bare skin around and behind the eye. Legs very long and stout. All the feathers of the upper parts and wings of a dull metallic olivaceous-green, broadly edged with white near the end. There is, however, a tinge of black in the green along the line of white, which itself is suffused with brown. On the neck the black preponderates. The sides and under-surfaces of the neck have the white feathers streaked centrally with black, next to which is a brownish suffusion. The remaining under-parts are whitish, immaculate. Primary quills tipped with white, and with a median band across the outer webs. Central tail-feathers olive-brown; the others clear dark green, all edged and (except the central two) broadly tipped with white. Top of the head, dark blackish-blue.

"Length 20.00 to 23.00 inches; wing, about 6.50; tail, 12.00 to 13.00 inches." (B.B.&R. II, p.472.)

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**YELLOW-BILLED CUCKOO.**

*Coecyzus americanus* Bonaparte.

**PLATE XXXIII. FIG. 4.**

SCARCELY any other bird of my boyhood days aroused my curiosity more than the YELLOW-BILLED CUCKOO. Though its very peculiar and characteristic notes were familiar to my ear, the bird itself remained for a long while a mystery to me. Often I saw it gliding swiftly and noiselessly through the thickets, but this was only for a moment, giving me no chance to see it plainly. As its notes were uttered most clearly and most frequently just before a warm summer rain, this Cuckoo was known among the country people as the Rain-bird or Rain Crow.

In a large meadow in the lowlands of our farm there was an area of about two acres entirely covered with dense thickets, which had been designated by my grandfather as an asylum for the small birds. After the grass had been mown, this meadow was used as a pasture for the cows, who found among the dense thickets during the hottest part of the day a shady and cool retreat. In May and June the whole meadow was alive with frolicking and singing Bobolinks. Meadowlarks were also numerous and Goldfinches nested preferably in the ash saplings. Consisting mostly of different species of willows, and also a few small elms, ash saplings, elder, dogwood and viburnum bushes, these thickets really formed a favorite abode for many birds. On the border many a bush and small tree was overgrown with grape-vines and virgin's bower (*Clematis virginiana*), but more in the interior many of the willows had attained the size of small trees. Nowhere else have I found the Catbirds so abundant. At least seven pairs were nesting each year in the tangled bushes on the border of this domain. The Thrasher was also present, and Cedarbirds were still more numerous than the Catbirds.
Their very compact and warm nests, in the construction of which a considerable quantity of wool was used, were also found around the border. The nests of the Philadelphia Vireo, the Yellow Warbler, the Redstart and the Least Flycatcher were all found in this locality. A pair of Kingbirds had taken up their abode in a small elm standing in the centre. They were the guardians of all the small birds nesting around them. Mourning Doves and Wood Thrushes had also chosen their haunts in the interior of these thickets. It was in this locality that I found the first nest of the Yellow-billed Cuckoo. During June, July and August the very peculiar and striking sounds of this bird were heard almost incessantly. Its common call-note sounding like *coohk-cook-cook-cook-cook* was daily heard. Another familiar call, given in a rather low tone, was similar to the syllables *coo-coo-coo-coo* and *cow-cow-cow*. The long-tailed conspicuous bird with its white underside and grayish-brown back, always vanishing before my eyes when I came near its hiding places, was at last detected. After many hours of patient waiting, I saw it plainly and heard its notes close by. It was such a characteristic and mysterious bird that it appeared in my dreams, and its notes haunted me wherever I went. Several days later, in the second week of June, while rambling about in the thickets, I found the bird on its nest, a very slovenly and comparatively small structure with an exceedingly small cavity. It was built of sticks and lined with a dense felting of the wool of willow catkins. The bird glided off swiftly and did not show any uneasiness while I examined its domicile. The nest contained three greenish-blue or glaucous-blue eggs. Later in the season, and also in the succeeding years, I found other nests, all built in the same manner. The birds were rather common, and their voices were heard until late in August, when they ceased. By the middle of September they left for the South. I found that these Cuckoos in this part of Wisconsin never arrived before the last days of May.

Several years later I found the Yellow-billed Cuckoo a rather numerous summer sojourner on the Desplaines and in many other parts of northern Illinois. It was also a rather familiar bird in the Ozark region of south-western Missouri, where it rarely arrived before May 15. There it nested frequently in the apple orchards and Osage orange hedges. In south-eastern Texas, near Houston, and farther west on the West Yegua Creek in Lee Co., I found it more abundant than anywhere else. I discovered its nests usually in thickets overgrown with wild grape-vines, smilax, and trumpet creepers. It made its appearance always when the trees were in full foliage and when cater-pillars, its main food, were abundant, usually about April 20. Thus it will be seen that the Yellow-billed Cuckoo has a very extensive range in summer, breeding from the Gulf coast north to the Dominion of Canada, New Brunswick, and Minnesota, and from the Atlantic west to the eastern border of the Plains. In winter it is found abundant in the West Indies, where it is known as the “May Bird,” and through eastern Mexico to Costa Rica. Some even winter in southern Florida.

The Yellow-billed Cuckoo is a well-known bird throughout its summer range, and though comparatively few people know the bird when they chance to see it, many are well acquainted with its characteristic notes. Besides the names already mentioned it is also called “Cow-cow,” “Rain Pigeon,” “Wood Pigeon,” “Indian Hen,” and “American Cuckoo.” Of late years it has made its appearance even in the city of Milwaukee where
apple orchards occur. On account of its shy and retired habits, it is much more frequently heard than seen. Being decidedly a bird of the trees and bushes, it rarely comes down to the ground, where its motions are very awkward. On the wing it is an expert, its flight being exceedingly swift, noiseless, and graceful, “and it moves or rather glides through the densest foliage with the greatest ease, now flying sidewise, and again twisting and doubling at right angles through the thickest shrubbery almost as easily as if passing through unobstructed space, its long tail assisting it very materially in all its complicated movements. Few of our birds show to better advantage on the wing than the Yellow-billed Cuckoo. It rarely indulges in protracted flights on its breeding grounds, but keeps mostly in the shadiest trees, in dense thickets, along water courses, or on small islands, shrubbery bordering country roads, the outskirts of forests, and were it not for its peculiar call-notes, which draw attention to its whereabouts at once, it would be much less frequently seen than it usually is, even where fairly common; on the whole, it must be considered a rather shy, retiring, and suspicious bird.” (Bendire.)

While the Yellow-billed Cuckoo is a timid, shy, and retired bird in most localities, it becomes very confident and conspicuous in gardens and in hedge-rows where it feels safe and where it has been convinced that man is its friend and not its enemy. In Texas I found the nest always in thickets and small trees overrun with climbers, and often also in Cherokee rose hedges, and the characteristic structure was always very frail. Composed exteriorly of small sticks, rootlets, a few dry leaves, and a little Spanish moss, the lining was usually made of dry blossoms of hickories and oaks, a few grasses, pine needles, and bits of cotton. Often I found the soft, grayish, wooly stems of a gnaphalium-like plant (Evax proliëra and Evax multicaulis, the former growing in the dry post-oak wood, the latter in somewhat lower ground; the first one is especially a favorite nesting material with all the birds of the post-oak region) among the material, and sometimes also a piece of paper or calico is found. The lining materials “are loosely placed on the top of the little platform,” writes Major Charles Bendire, “which is frequently so small that the extremities of the bird project on both sides, and there is scarcely any depression to keep the eggs from rolling out even in only a moderate windstorm, unless one of the parents sits on the nest, and it is, therefore, not a rare occurrence to find broken eggs lying under the trees and bushes in which the nests are placed. Some of these are so slightly built that the eggs can be readily seen through the bottom. An average nest measures about 5.00 inches in outer diameter by 1.50 inches in depth. They are rarely placed over twenty feet from the ground, generally from four to eight feet upon horizontal limbs of oaks, beech, gum, dogwood, hawthorn, mulberry, pine, cedar, fir, apple, orange, fig, and other trees. Thick bushes, particularly such as are overrun with wild grape and other vines, as well as hedge-rows, especially those of Osage orange, are also frequently selected for nesting sites. The nests are ordinarily well concealed by the overhanging and surrounding foliage, and while usually shy and timid at other times, the Yellow-billed Cuckoo is generally courageous and bold in defense of its chosen home; the bird on the nest not unfrequently will raise its feathers at right angles from the body and occasionally even fly at the intruder.”

The number of eggs vary from two to six, but sets of three are most common. The eggs follow usually at such long intervals, that one or the other hatches before the
last one is dropped. Thus fresh eggs, and young may be found in a nest at the same
time. Though an orderly member of a disreputable family, it now and then practices
"the vice which disgraces so many of its relatives" and lays its eggs in the nests of
other birds. The egg has been found in the nest of the Wood Thrush, Robin, Catbird,
cedar bird, Cardinal, Mourning Dove, etc. Such instances, however, are exceedingly rare
and have never come under my observation. The color of the eggs is a peculiar glaucous-
green, which fades upon exposure to the light. Though usually somewhat larger, they
cannot with any certainty be distinguished from the eggs of the Black-billed Cuckoo.

Though rather a solitary bird, I have often seen, in Texas as well as in Missouri,
five or six individuals in one thicket, where they uttered quite a variety of notes, the
most common call being the ordinary cooh-cook-cook-cook, which changed into a low
cow-cow-cow-cow, and a somewhat plaintive coo-coo-coo-coo; others called ock-oek-
ock-ock, and kee-uh, kee-uh, kee-uh, kee-uh. In their notes they resemble closely the
Black-billed Cuckoo.

There is scarcely another bird which does more good than this bird. It subsists
almost entirely of cater-pillars, and even the large and ugly hairy ones and those with
formidable spines are eaten. Among the most important ones so destroyed are the
canker-worm, the tent cater-pillar (Clisiocampa americana), and that of the Vanessa
antiopa, as well as of numerous other butterflies, also grasshoppers, beetles, cicadas,
small snails, etc., and different kinds of fruits, as berries, mulberries, grapes, and others...
All of our Cuckoos deserve the utmost protection; it is simply astonishing how quickly
a pair of these birds will exterminate the thousands of cater-pillars infesting orchard
and other trees in certain seasons; it makes no difference how hairy and spiny these may
be, none are rejected by them, although no other birds will touch them, and the walls
of their stomachs are sometimes completely pierced by the sharp, stiletto-like hairs,
without injury, and apparently not inconmoding these birds in the least. Their benefit
to the horticulturist is immense, and he has certainly no better friends among our birds."

In the West the Yellow-billed Cuckoo is represented by the California Cuckoo,
Coccyzus americanus occidentalis Ridg., which is found from the northern part of
Lower California north to British Columbia, east to the Rocky Mountains and south-
western Texas. Its habits are like those of the type.

NAMES: Yellow-billed Cuckoo, Rain Cuckoo, Rain Crow, Rain Pigeon, Cow-cow, Wood Pigeon, Indian-
hen.—Regenkuckuck (German).


DESCRIPTION: "Upper mandible and tip of the lower, black; rest of lower mandible and cutting edges of
the upper, yellow. Upper parts of a metallic greenish-olive, slightly tinged with ash towards the bill;
beneath, white. Tail-feathers (except the median, which are like the back), black, tipped with white
for about an inch on the outer feathers, the external one with the outer edge almost entirely white.
Quills, orange-cinnamon; the terminal portion and a gloss on the outer webs, olive; iris, brown.
Length, 12.00 inches; wing, 5.95; tail, 6.35 inches." (B. B. & R., II, p. 477.)
BLACK-BILLED CUCKOO.
Coccyzus erythropthalmus Bonap.

The Black-billed Cuckoo is a rather numerous bird in eastern North America west to the Rocky Mountains. It breeds from about the 35° of latitude north to Manitoba and Assiniboia, having been found as far north as latitude 51°. In Wisconsin it is at least as abundant as the foregoing species, but it is still more shy and retired in its habits, preferring for its haunts thickets near creeks and lakes. It is known by the same local names as the congener, which shows that the birds are often confounded. Its notes are similar, but I always could distinguish both species by their voices, though the difference can not be described. Its strange voice is frequently heard, but the bird itself is rarely seen, being very shy and furtive in its manners and winging its swift, arrowy course through the densest foliage. Especially during the breeding season it is very secretive, when it has much of the sneaky, skulking ways of the parasitic European Cuckoo (Cuculus canorus). Later in the season it is more likely to be seen when its little form enlarges by the spreading of its wings and tail as the agile creature glides noiselessly through the bushes and trees.

In its habits, notes, plumage, in its manner of flight and nesting, and in its food habits it is so similar to the Yellow-billed Cuckoo that it can scarcely be distinguished by the field ornithologist, unless close by. The nest is a little better built than that of the Yellow-billed Cuckoo, being constructed externally of fine twigs, rootlets, the soft bark of the cedar, bark strips of the linden and iron wood, and, generally, there is also a better lining which consists of plant-wool, leaf-skeletons, and similar material. The eggs vary in number from two to seven, but sets of three and four are most common. They show a deeper color of bluish-green than those of the congener and are also smaller.

DESCRIPTION: "Bill, entirely black. Upper parts generally of a metallic greenish-olive, ashy towards the base of the bill; beneath, pure white, with a brownish-yellow tinge on the throat. Inner webs of the quills tinged with cinnamon. Under surface of all the tail-feathers, hoary ash-gray. All, except the central on either side, suffused with darker to the short, bluish-white, and not well-defined tip. A naked red skin round the eye.

Length about 12.00 inches; wing, 5.00; tail, 6.50 inches. (B. B. & R., II, p. 484.)

Mangrove Cuckoo, Coccyzus minor Cabanis. This bird, also known as the Black-eared Cuckoo, and in Jamaica as the "Young Old-man Bird," is an inhabitant of the West Indies, Central and South America, but in the United States its range is a very restricted one, being confined to the Keys and the west coast of Florida and the Gulf coast of Louisiana. A variety, Maynard's Cuckoo, C. minor maynardi Ridg., is found in the Bahama Islands and southern Florida. The habits of these birds are apparently the same as those of the Yellow-billed Cuckoo.

Ani, Crotophaga ani Linn. This peculiar species of Cuckoo, which is also known as the Tick-bird, the Black Witch, Black Ani, Savanna Blackbird, etc., is common in the West Indies and eastern South America, east of the Andes, and south to the northern part of the Argentine Republic. It can only be considered as a straggler within our borders, having been found on the Florida Keys and at Charlotte Harbor, Fla. According to Major Chas. Bendire, a flock of five of these birds was seen in July, 1893, at Diamond, Louisiana, opposite Point la Hache.
GROOVE-BILLED ANI.

Crotophasa sulcirostris Swains.

The Groove-billed Ani was discovered in our territory by Mr. Geo. B. Sennett, near Lomita, Tex., on the lower Rio Grande, in May 1878, and since that time it has been found nesting in small numbers in the Chaparral near Brownsville. Stragglers have also been observed in Louisiana and Florida. From southern Texas it is distributed through Mexico and Central America, and along the western slope of the Andes, in South America, to Peru.

This Ani is a social bird, being found in small companies of from six to fifteen; it is half-domesticated in its habits, frequenting haciendas, fields, and pastures, and is considered as very useful because of its habit of destroying large numbers of parasites, especially ticks, infesting the cattle. It is known in Mexico as the "Pijon" and "Garrapatero" (Tick-eater), and another local name is "Chicuya." According to Dr. Anastasio Alfaro, Director of the National Museum of Costa Rica, at San José, it is known there as the "Zopilotillo" (so-pee-lo-teo-yo), and as the "Tijo-tijo" (tee-ho-tee-ho). Mr. Charles W. Richmond, who collected quite a number of these birds at Bluefields, Nicaragua, for the Public Museum of Milwaukee, writes: "A very abundant resident. It appears to breed at various times during the year, as I have found fresh eggs July 6, 1892, and young birds, recently from the nest, November 29, the breeding season spreading over seven months of the year at least. . . . Nests are frequently built in the heart of a thick, thorny orange or lemon tree, and this appears to be a favorite situation. In this case the nest is from four to seven feet from the ground, and, besides being difficult to get at, is somewhat protected from invasion by the wasps which invariably take up their abode in the same tree." All the nests found by Mr. Richmond were composed of dead black twigs, loosely put together, and lined with green leaves. The eggs are glaucous-blue and often spotted with a chalky matter. "An orange tree near the house was a favorite place where thirty or forty birds came to pass the night, flying in from the surrounding pasture about dusk, and after a few short flights from one tree to another, passed into the roost one or two at a time, hopping about as if seeking a favorable perch, uttering their peculiar note meanwhile." (Richmond.)

DESCRIPTION: Plumage entirely dull black, feathers on head, neck, and body edged with metallic bluish-greenish, or bronzy tints; wings and tail faintly glossed with metallic bluish or violet. Upper mandible with several distinct longitudinal groves.

Length, 13.27 inches; wing, 6.00; tail, 7.80 inches.
More than four hundred species (430) of parrots are known to science. These have been arranged by ornithologists in nine families and forty-five genera. In Dr. Anton Reichenow’s exquisite work, “Vogelbilder aus fernen Zonen,” two hundred and fifty species are figured on thirty-three plates, all painted by the late artist Gustav Mützel, after live specimens kept in confinement. The parrots are mostly inhabitants of the tropics, though many extend beyond the torrid zone. Our Carolina parrot reaches farthest north, while in the Australasian region some species extend to New Zealand, Auckland, and the Macquarie Islands (55° S.). It has been stated that the American continent is richest in species, but, according to Dr. Reichenow’s list, America contains one hundred and twenty-six species, while the Australasian region (south and east of Wallace’s line) affords a home for nearly one hundred and fifty forms. Most of the Parrots have a brilliant and strikingly beautiful plumage. In size they show a considerable variation, some (for instance the Inseparables) being scarcely larger than a Sparrow, while the Macaws of South America are three feet long. Parrots, as a rule, are very sociable birds, living together in large flocks in forests, others in grassy plains. Their food consists mostly of seeds and fruits. Their voice is loud, harsh, and discordant, but many species possess a great imitative power, learning not only to repeat human words and sentences, but also songs, and other voices. Most of the species are highly valued as cage birds.

The Carolina Paroquet belongs to the

Genus Conurus Kuhl.

CAROLINA PAROQUET.

Conurus carolinensis Lesson.

PLATE XXVI. FIG. 5.

The Carolina Paroquet, also known as the Parakeet, Carolina Parrot, and Illinois Parrot, was once an exceedingly abundant bird in the United States east of the Rocky Mountains, particularly in the Southern States and in the entire valley of the Mississippi north to the Great Lakes. It even occurred in Michigan and New York. In Wilson's and Audubon's time it was a conspicuous bird on the Ohio and Mississippi, where it was seen in very large flocks. At present, however, its range is very restricted, being only found in moderate numbers in southern Florida, and perhaps in some remote places of Louisiana, Texas, and the Indian Territory. With the exceedingly rapid settlement of all the fertile portions inhabited by these birds their number gradually diminished, until they were entirely exterminated in most places. Their total extermination is only a question of time, and by the beginning of the twentieth century probably the last one will have disappeared even from the extensive tropical forests of the Everglades.

When I visited Florida in April, 1886, I saw small flocks in the woods near Lake Apopka. In Orlando and Sanford freshly caught Parakeets were offered for sale in large numbers. In March, 1891, a pair of these birds were obtained for the Public Museum of Milwaukee, near Gotha, Orange Co., Fla. The small flocks which I saw proceeded with an astonishing rapidity and swiftness through the air. Their flight was very graceful and somewhat undulating, reminding me strongly of that of the Passenger Pigeon. I saw the birds only in the extensive hammock woods and cypress swamps.

The food of the Parakeet, before the country was extensively settled, consisted of the seeds of the cocklebur (Xanthium strumarium), of the seed contained in the round balls of the sycamore, pecan and beech nuts, seeds of the magnolia and tulip tree, fruits of the popaw (Asimia triloba), wild cherry, mulberry, etc. It has also been observed that they consumed the seeds of the sand-spur or burr-grass (Cenchrus echinatus), one of the vilest and most troublesome weeds in existence. They have also been known to visit the corn-fields, where they indulged in eating the sweet milky seeds. According to Mr. Frank M. Chapman, they eat the milky seeds of a species of thistle (Cirsium Lecontei). He saw them feeding among the thistles in March, 1890, on the Sebastian River in Florida.

"Although clumsy looking birds on the ground," writes Major Chas. Bendire, "it is astonishing how readily they move about on the slenderest limbs in trees, frequently hanging head down, like Crossbills and Redpolls, nipping off the seed bulbs of the sycamores, etc., and swinging themselves, with the assistance of their powerful beaks, from the extremity of one branch to another.

"Their flight, which is more or less undulating, resembles both that of the Passenger Pigeon and then again that of the Falcons; it is extremely swift and graceful, enabling them, even when flying in rather compact flocks, to dart in and out of the densest
timber with perfect ease. Their call-notes are shrill and disagreeable, a kind of grating, metallic shriek, and they are especially noisy while on the wing. Among the calls is one resembling the shrill cries of a Goose, which is frequently uttered for minutes at a time. Formerly they moved about in good-sized and compact flocks, often numbering hundreds, while now it is a rare occurrence to see more than twenty together, more often small companies of from six to twelve. When at rest in the middle of the day on some favorite tree, they sometimes utter low notes, as if talking to each other, but more often they remain entirely silent, and are then extremely difficult to discover, as their plumage harmonizes and blends thoroughly with the surrounding foliage.

"They are most active in the early morning and again in the evening, while the hotter parts of the day are spent in thick-foliaged and shady trees. They are partial to heavily timbered bottom lands bordering the larger streams and the extensive cypress swamps, which are such a common feature of many of our Southern States. Social birds as they are, they are rarely seen alone, and if one is accidentally wounded, the others hover around the injured one until sometimes the whole flock is exterminated. This devotion to one another has cost them dearly, and many thousands have been destroyed in this way.

"Mr. E. A. McIlhenny has kindly furnished me with the following notes on their habits as observed by him in southern Louisiana, where the species was still comparatively abundant a few years ago, but has now nearly disappeared:

"The Carolina Paroquet may be looked for in this section about April 25, or when the black mulberries begin to ripen. This fruit seemed to be their favorite food, and in the morning, from sunrise to about seven o'clock, and in the evening, from five o'clock to sunset, at which hours they feed, they were to be found in the mulberry groves. They spent the rest of the day and roosted at night in the live-oak timber. In the morning, just before sunrise, they mounted the tallest trees, congregating in small bands, all the while talking at a great rate. As the sun rises they take flight for the nearest mulberry grove, where they partake of their morning meal amidst a great amount of noise. After they have eaten their fill, they generally go to the nearest stream, where they drink and bathe; they then go to some dense oak timber, where they pass the heat of the day. After they get in the oaks they rarely utter a sound. In the afternoon they go through the same performance, with the exception of going to the water."

"The flight of the Carolina Paroquet, once seen, is never to be forgotten; it is undulating, something like the Woodpecker's, but very swift. While on the wing they chatter and cry continually; this cry sounds like qui, with the rising inflection on the i; this is repeated several times, the last one being drawn out like qui-i-i-i. These birds are rarely met with in the summer, and I do not think they nest here. They are most plentiful in May and September. In the fall they feed on the fruit of the honey locust, and are then more often seen on the ground."

About the nesting habits of the Carolina Paroquet nothing definite is known. None of our great and well-known ornithologists of the past and the present have ever found the nest. Neither Wilson, Audubon, and Nuttall, nor Allen, Coues, Ridgway, Brewster, Bendire, Chapman, Scott, B. F. Goss, etc., who visited the home of this beau-
tiful bird, have been able to enlighten us on this subject. In winter 1892 my friend, the late Capt. B. F. Goss, went to Florida with the special purpose of collecting, if possible, the eggs of this Parrot. He spent much of his time at Kissimmee, and up on the Manatee and Caloosahatchee Rivers, but all his efforts were in vain. He found the birds, but no one could give him information where they nested. He penetrated the deep interior of the cypress swamps and the tropical forests in the vicinity of the Everglades. His guide, an old hunter, had observed the birds for more than a quarter of a century, but he could tell him nothing about the nesting habits. Mr. Goss came back from his very painstaking and expensive excursion quite disappointed. Thus the once so abundant bird will in all probability soon be exterminated, and we have no knowledge about its nesting habits. Most ornithologists infer that it breeds in cavities of tall trees, while Prof. Wm. Brewster was told by a very reliable gentleman that the Carolina Parrot builds a nest made of sticks placed on the branches of cypress trees.

NAMES: Carolina Paroquet, Carolina Parakeet, Parakeet, Carolina Parrot, Illinois Parrot, Orange-headed Parrot.—Karolina-Sittich (German).

SCIENTIFIC NAMES: Psittacus carolinaensis Linn. (1758). CONURUS CAROLINENSIS Lesson (1831).

DESCRIPTION: “Head and neck all round, gamboge-yellow; the forehead, from above the eyes, with the sides of the head, pale brick-red. Body generally with tail, green, with a yellowish tinge beneath. Outer webs of primaries, bluish-green, yellow at the base; secondary coverts edged with yellowish. Edge of wing, yellow, tinged with red; tibia, yellow. Bill, white; legs, flesh-color.

Length about 13.00 inches; wing, 7.50; tail, 7.10 inches.”
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" 3. Louisiana Tanager. Piranga ludoviciana Rich..................................... 8
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