Haunts and habits. In the breeding season it seems to prefer a second growth of birch and poplar or other deciduous saplings in young or open woodland. Of its song, Gerald Thayer writes: "It has two main perch songs and a flight song, all subject to a good deal of variation. It belongs decidedly among the full-voiced warblers. Its commoner perch song consists of a string of 6 or 8 or more lively, rapid notes, suddenly congested into a pleasant, rolling twitter lower in key than the first part of the song and half as long. In the other perch song, the notes of what correspond to the rolling twitter are richer and the second part of the song is longer and more noticeable than the first, whose notes are few and slower, while the whole is more languidly delivered. The flight song, a fairly common performance in late summer, is sung from the height of 5 to 40 feet above the low treetops. It is like the commoner perch song but more hurried and slightly elaborated, often with a few chipperings added at both ends. Among the Nashville's calls, a very small, dry "*chip*," and a more metallic, louder chip, somewhat Water thrushlike, are noteworthy."

During the migration season the Nashville is one of our generally distributed species, frequenting the blossoming orchards and the deciduous shade trees of our lawns and village streets. Even in migration time it seems to show a decided preference for rows of white birches or the scattered birch trees on village lawns, every tree during the season exhibiting each morning from 1 to 5 or 6 of these warblers among its budding leaves. Sometimes during the second week of May the orchards are fairly alive with this species, 50 or 60 often being counted in an hour's excursion. It is a very restless species, continually peering about among the blossoms and foliage and flying from bough to bough or from tree to tree.

The nest is placed upon the ground, usually at the foot of a bush or on a grassy bank in the open woodland. The eggs are white or creamy white in ground color, spotted and speckled with reddish brown and lilac of different shades, usually forming a distinct wreath, and the average dimensions are .64 by .46 inches. Mr C. F. Stone describes the only nest he has ever seen in Yates county as follows: "On May 26, 1912, W. A.

Tuttle conducted me to a nest of the Nashville warbler which was hidden by a tuft of dead grass among a growth of sumacs along the edge of a sloping field near a hemlock wooded gully. The surroundings were quite open. The nest is very flimsy, fragile and shallow-cupped, made of thin dead grasses and bits of moss, lined with a few reddish tendrils and hair. It contained 5 eggs."

Vermivora celata celata (Say)

Orange-crowned Warbler

Plate 93

Sylvia celatus Say. In Long's Exped. 1823. 1:169 (note)
Vermivora celata DeKay. Zool. N. Y. 1844. pt 2, p. 87
Vermivora celata celata A. O. U. Check List. Ed. 3. 1910. p. 308. No. 646

celáta, Lat., concealed, referring to the more or less hidden crown patch

Description. Upper parts *olive green*, more or less washed with grayish except on the rump which is brightest; a crown patch of orange brown more or less concealed by gray and olive green; eye ring and a narrow line over the eye dull yellowish; the outer tail feathers frequently have the inner edge of the inner web margined with whitish; *under parts dull greenish yellow obscurely streaked with dusky.*

Distribution. Breeds from Alaska to central Keewatin, and Manitoba, and in the Rocky mountains locally to New Mexico; winters in the South Atlantic and Gulf States and Mexico. In New York this species is only a transient visitant, rare in eastern New York in the spring but more often observed in the fall. In western New York, however, it is a regular migrant, though in small numbers, in the spring, arriving from the 12th to the 17th of May, and disappears from the 18th to the 21st. Mr E. S. Woodruff took one at Paul Smith's in the Adirondacks, May 17, 1908. In the fall, migration takes place between the 25th of September and the 12th of October. It is decidedly less common than the Tennessee warbler both in the spring and fall as would be expected from the remoteness of its breeding range to the northwestward.

During migration it is found in the orchards, shade trees and groves in situations similar to those frequented by the Nashville and Tennessee

warblers. Its call note is a sharp *chip*. Its song is described by Seton as much like that of the Chipping sparrow. Jones describes it as not very high pitched but full and strong, ending abruptly on a rising scale like the syllables "*chee-chee-chee, chw'-chw'*."

Vermivora peregrina (Wilson)

Tennessee Warbler

Plate 93

Sylvia peregrina Wilson. Amer. Orn. 1811. 3:83. pl. 25, fig. 2
Vermivora peregrina DeKay. Zool. N. Y. 1844. pt 2, p. 85, fig. 105
A. O. U. Check List. Ed. 3. 1910. p. 309. No. 647
peregrina, Lat., wandering, alien

Description. *Upper parts bright olive green;* the *crown and nape grayish blue;* a *whitish line over the eye* and usually a dusky line through it; inner webs of the 2 outer tail feathers with a margin of white; *under parts dull white,* the breast often tinged with buffy yellowish; *sides greenish. Female:* Similar to the male, but the crown washed with the color of the back and the under parts more yellowish. *Female and young in the fall:* Entirely bright olive green above. *Adult male in the fall:* Less distinctly bluish gray on the head and neck and under parts more tinged with yellowish.

Length 4.50–4.80 inches; extent 7.50–8; wing 2.7; tail 1.8; bill .4.

Distribution. Breeds from southern Mackenzie, central Keewatin, southern Ungava and Anticosti to southern British Columbia, Manitoba, northern Minnesota, Ontario, northern Maine and New Hampshire; winters from Oaxaca to Colombia and Venezuela. In New York this species is a fairly common transient in the fall, even in the eastern portion of the State, but a rare migrant in the spring in southeastern New York, though not especially uncommon in the western portions of the State, arriving in the spring from the 10th to the 18th of May, passing northward from the 22d to the 27th, and appearing in the fall from the 15th to the 31st of August, departing southward from September 25 to October 8. The latest edition of the A. O. U. Check List records it as breeding in the Adirondacks, as does also Ridgway's "Birds of North and Middle America," evidently on the authority of Doctor Merriam's list of Adirondack birds

found in N. O. C. Bul. 6:227; but the full text of Doctor Merriam's notes, which was not published in the Bulletin, does not indicate that the nest of the Tennessee warbler was found in Lewis county, or that it was even seen there later than May 29, which may well be merely a migration date. The only other testimony we have which would indicate its breeding in New York State is the statement in Roosevelt and Minot's "List of the Summer Birds of Franklin county," where it is included doubtfully as a breeder. Mr E. H. Short writes that a nest, evidently of this species, was found by Mr Robbins at North Cohocton. Thus it is clear that we are lacking sufficient evidence to include it as a summer resident of the State. It seems probable, however, that it may be found breeding in the North Woods as it has been noted both in Maine, New Hampshire and, on July 15, 1888, by Faxon on Greylock mountain, Massachusetts. The Tennessee warbler is one of those species which breed most abundantly in the interior of the boreal zone, and like the Connecticut and Orange-crowned warblers, which it resembles in this respect, is much more common in New York during the fall migration, although, as stated before, it occurs regularly in western New York during the spring.

Haunts and habits. Like the Nashville, it nests upon the ground, but according to the testimony of Brewster and others it is found during the nesting season in thick growths of black spruce, balsam, mountain ash and other trees of that association. During the migration it is found more among the deciduous trees, as is the Nashville warbler. Its song, as described by Farwell in Chapman's "Warblers of North America," is "very loud, beginning with a sawing, two-noted trill, rather harsh and very staccato, but hesitating in character increasing to a rapid trill almost exactly like a Chipping sparrow, a noticeable but not musical song."

Compsothlypis americana americana (Linnaeus)

Parula Warbler

Plate 94

Parus americanus Linnaeus. Syst. Nat. Ed. 10. 1758. 1: 190
Compsothlypis americana americana A. O. U. Check List. Ed. 3. 1910. p. 309. No. 648

compsóthlypis, Gr., κομψός, exquisite, and θλυπίς, an unknown bird

Distinguishing characteristics. Duller than the Northern parula, the dusky chest band indistinct or wanting; no conspicuous chestnut or reddish on the breast; bill longer; size smaller.

Wing ♂ 2.3, ♀ 2.18 inches; tail ♂ 1.68, ♀ 1.56; bill .44.

According to the A. O. U. Check List, this subspecies ranges from the District of Columbia south to Alabama and Florida, wintering probably in Florida and the West Indies. The subspecies grades almost imperceptibly into the subspecies usneae, but Ridgway, in his "Birds of North and Middle America," part 2, page 482, states that numerous specimens of the Parula warbler from Ossining and Shelter Island must be assigned to the southern subspecies. It may, therefore, be considered an inhabitant of New York State in the coastal district, but can be distinguished from the common northern form only by careful measurement and comparison with museum specimens.

Compsothlypis americana usneae Brewster

Northern Parula Warbler

Compsothlypis americana usneae Brewster. Auk. Jan. 1896. 13: 44
Sylvicola americana De Kay. Zool. N. Y. pt 2, p. 97, fig. 108
Compsothlypis americana usneae A. O. U. Check List. Ed. 3. 1910. p. 309. No. 648a

americána, American

Description. Upper parts *ashy blue;* middle of the *back with a greenish yellow patch;* lores dusky; an incomplete eye ring; wings and tail blackish but edged with the color of the upper parts; *2 broad white wing bars; 2* outer tail feathers with large white patches on the inner webs near the tip; *throat and breast yellow;* an *orange brown and blackish collar band* crossing

the lower throat; lower belly white. *Female:* Like the male but duller in coloration; the blue more or less veiled with greenish. *Young:* Resemble the female.

Length 4.50–4.75 inches; extent 7–7.50; wing ♂ 2.42, ♀ 2.25; tail ♂ 1.7, ♀ 1.62; bill .41.

Distribution. Breeds from northern Minnesota, central Ontario, and Cape Breton, to Texas, Alabama and Virginia. Winters in the West Indies, Mexico and Central America. This species breeds throughout New York State, but is local in distribution during the nesting season, being confined to swamps and gullies which produce a growth of gray moss or usnea. It is probably commoner as a breeding species in the swamps of Long Island and in the Catskill and Adirondack districts than in other portions of the State, although I have noticed a few pairs nesting in the gullies of the Finger Lake region and in various scattered peat swamps of western New York. In the North Woods it is fairly common, as I noticed in the swamps about the Ausable lakes, Elk lake and the Boreas ponds and as my assistants found in nearly every portion of the Adirondacks, yet it is by no means generally distributed in the North Woods, but almost entirely confined to the swamps. During the migration season it is a common transient in nearly all portions of the State, arriving in the spring from the 1st to the 10th of May, the average date in southern New York being the 5th, but sometimes appearing by the 26th or 27th of April. In the fall the return migration begins the 15th to the 31st of August and ends between the 5th and the 20th of October.

Haunts and habits. During the migrations, the Parula warbler associates with the Dendroicas among the foliage of our shade trees and orchards, being most common about the time of the bursting of the apple blossoms, usually seen in about equal abundance with the Chestnut-sided warbler in most localities of central New York. As soon as he reaches his summer home, however, he is practically confined to the swamps and bogs of the Catskills and Adirondacks, and the damper localities of our swamps and ravines in western New York, and in similar situations along the coastal district, preferring, during the nesting season, evergreen trees,

although occasionally found in mixed groves where the deciduous species predominate. It is practically confined to the localities where usnea moss is fairly abundant, although in the ravines on Canandaigua and Seneca and Cayuga lakes I have found it nesting where the atmosphere was damp on the south side of the gully and the hemlocks rather abundant, but almost no usnea was visible. In the Adirondacks we found it in the spruce swamps where this moss was particularly abundant. The nest is almost always concealed in a large hanging bunch of usnea, largely composed of filaments of the bunch itself as it hangs from the twigs, but also interwoven with soft plant fibers and bits of usnea brought from neighboring trees. The nest is thus pensile and softly lined with cottony substances.

"The salient feature of the Parula warbler's song in all its many variations is a guttural *buzz*. The song may be one uninterrupted buzz uttered in an evenly accented scale or broken into separate notes at the beginning or end; but the buzz is always apparent in some portion and always serves to distinguish it from the song of Dendroica blackburniae, which sometimes approaches it quite closely in form. The call is a *chip* not very characteristic" (Thayer MSS.). Chapman has characterized the song of the Parula warbler very aptly as a "sizzling gurgle."

Dendroica tigrina (Gmelin)

Cape May Warbler

Plate 95

Motacilla tigrina Gmelin. Syst. Nat. 1789. 1:985
Sylvicola maritima DeKay. Zool. N. Y. 1844. pt 2, p. 104, fig. 132
Dendroica tigrina A. O. U. Check List. Ed. 3. 1910. p. 310. No. 650
dendroica, from Gr., meaning tree inhabitant; *tigrina*, Lat., striped

Description. *Adult male: Side of neck bright yellow;* a conspicuous chestnut or *orange-rufous ear patch* which frequently reaches forward both below and above the eye; *crown black; rump yellow;* back greenish olive spotted or obscurely streaked with black; *under parts* principally *yellow,* changing to white on the belly, conspicuously *streaked on the breast and sides with black;* wings and tail black edged with the olive green color of the back; a conspicuous *white wing patch* formed by the tips of the greater

and lesser wing coverts, sometimes tending to form 2 white wing bars. *Adult female:* Upper parts *grayish olive; under parts yellowish white streaked* on the breast and sides *with blackish* but much less conspicuously than in the male; wing bars grayish white, not forming the conspicuous white patch seen in the male; side of the neck and line over the eye and rump vary from yellowish to olive green. *Young male:* Lacks the black crown and chestnut ear patches; upper parts grayish olive green obscurely spotted with black; rump dingy yellow; the wing bars grayish white; under parts dull yellow streaked less conspicuously than in the adult. *Young female:* Similar to the adult female but less yellow and the streaks more obscure. Adult males and females are both more obscurely colored in the fall plumage, being tinged with grayish. The adult female similar to the spring, but yellower on the rump and more tinged with whitish on belly.

Length 5–5.2 inches; extent 8.32; bill .3; wing 2.62–2.7; tail 1.9; tarsus .75.

Distribution. The Cape May warbler ranges in summer from Nova Scotia, New Brunswick, Hudson bay and Great Slave lake, southward to the northern portion of Maine, northern New Hampshire, Minnesota and westward to Manitoba and Assiniboia. It has been reported on good authority that a few breed in the island of Jamaica. The winter range of the species is the West Indies and Central America.

In New York State this species is only a transient visitant and for more than a century has been considered a rare species, but of recent years has apparently increased perceptibly in numbers so that for the last 3 or 4 years it has been a positively common migrant in various sections of western New York, as I have found it in Monroe, Ontario and Erie counties. On several mornings in the spring of 1912, the author was able to see, within a space of two hours, from 12 to 20 different individuals each morning, often as many as 8 or 10 males being in sight at the same time. I believe that this really indicates an increase in the species and that it has not been overlooked in past years as it is quite conspicuous and easy to observe wherever it occurs, and is one of the most frequently reported by amateur observers who are unfamiliar with it, but are able to describe it so that it can be positively recognized. The migrations in New York begin between the 4th and the 10th of May. In some portions, however,

it is not reported earlier than the 20th. The average date of arrival for several years has been May 9 in western New York. Between the 20th and 30th of May it disappears on its northward migration. After the 20th of the month very few, if any, males are seen; but on Decoration day, during 2 or 3 years of my experience, I have seen from 3 to 5 females near the southern shore of Lake Ontario in Monroe county. Although, as stated above, this warbler is known to breed in corresponding latitudes, we have been unable as yet to record it positively as a breeding species in the Adirondack district, although the author searched for it diligently during the spring and summer of 1905, and various bird students who are perfectly familiar with the species have looked for it in the same region without success. In the fall, migration begins between the 5th and the 12th of September and the last of the species is usually seen between the 15th and the 20th of that month.

Haunts and habits. This warbler is slower and more deliberate in movements than most of the genus Dendroica, but it seems to have a predilection for the tree tops during the migration season, although I have seen it in considerable numbers in cherry orchards and shrubbery, especially on cool, damp mornings. Brewster and Gerald Thayer have both called attention to the fact that it is a loud and persistent singer, and that it frequently remains in isolated trees near houses during the migration. Its song has been called a "remarkable jingling noise," and some have considered it usually a mute species, which has been the author's experience with the migrating birds of western New York. On its breeding grounds, however, the song is fairly conspicuous, resembling considerably the Black and white warbler's penetrating note. Comparatively little is known of its breeding habits, but most of the nests found have been placed in low, evergreen trees, usually in rather open fields or pastures. The nest is rather loosely and roughly constructed, though more compact than that of the Magnolia, according to Chamberlain, and "the lining is almost entirely of horse hair, the brim being turned with exquisite grace." The eggs have been compared in ground color to those of the Magnolia warbler,

but the Cape May's are less pyriform and the point less acute. The markings are different shades of lilac and reddish brown, and the dimensions of the eggs average .67 by .49 inches.

Dendroica aestiva aestiva (Gmelin)

Yellow Warbler

Plate 95

Motacilla aestiva Gmelin. Syst. Nat. 1789. 1:996
Sylvicola aestiva DeKay. Zool. N. Y. 1844. pt 2, p. 99, fig. 130
Dendroica aestiva aestiva A. O. U. Check List. Ed. 3. 1910. p. 311. No. 652

aestiva, Lat., summer

Description. Color principally yellow; the head and under parts rich *golden yellow streaked on the breast and sides with rufous* or reddish brown; *upper parts principally greenish yellow;* wings and tail dusky, but margined and overlaid with the color of the back; inner webs of the tail feathers yellow; wing bars yellow. *Female:* Decidedly *less yellow than the male;* upper parts a yellowish olive green; under parts much paler yellow than the male and the reddish brown streaks scarcely discernible. *Fall plumage:* Less bright than in the spring, especially on the top of the head and under parts, the reddish brown streaks obscured. *Young* in the fall resemble the adults but streaks on the under parts mostly wanting.

Length 5.1 inches; extent 7.8; bill .4; wing 2.43; tail 1.9; tarsus .74.

Distribution. This species inhabits the greater portion of the United States and British America with the exception of the southwestern states and the Florida peninsula. It is also absent from the Arctic zone and the higher portions of the mountains. It spends the winter from southern Mexico to Peru and Brazil. In New York it is a common summer resident in all portions of the State except the spruce and balsam forests of the Catskills and Adirondacks, but it penetrates those regions as far as the clearings and river valleys extend. The spring migration begins between April 18 and May 9, the average date for southeastern New York being May 1, and for northern New York, May 5. In western New York it rarely appears before the 23d of April. In the fall it is last seen between the 2d and 20th of September.

Haunts and habits. The Yellow warbler or Summer yellow bird is the most familiar member of the family, inhabiting our gardens, shrubbery and shade trees, making its nest even among the parks and trees of the city streets. It seems to be one of the merriest and mildest in disposition of the whole warbler family and is commonly regarded as a bit of the sunshine which it resembles. Its cheery song of "*weé-chee, weé-chee, weé-chee,*" or "*weechee, chee, chee, chur-wee,*" or "*sweet, sweet, sweet, sweetie*" being well known to bird lovers throughout the State. According to Bicknell the song period lasts from late in April through the month of July, sometimes nearly until the middle of August, but in my experience its song is rarely heard after the 12th of July; but after the song has ceased there is no period of revival before the warbler's departure in the fall. The common call note of the Yellow warbler heard in the spring is "*dzt.*" so common to many members of the family, and a mild chip similar to that of the Parula warbler.

The nest is usually placed in a shrub or low tree within a few feet of the ground, but sometimes is found in the branches 30 or even 40 feet above the ground. It is a neatly woven, symmetrical, cup-shaped structure of fine vegetable fibers, especially the bark of the milkweed, fine grasses and down from willows, poplars, ferns and various other plants, lined with fine grasses, plant down, hairs, and feathers. The eggs are 4 or 5 in number, of a grayish white or pale greenish ground color, rather thickly sprinkled with spots, blotches and irregular markings of umber, black, lilac and purplish, usually tending to form a wreath near the larger end. They average .69 by .50 inches in size. The first sets in southern New York are completed from May 17 to 30, and about a week later in the northern counties. Sets are frequently found also from the 20th to the 30th of June, or even the 10th of July, indicating that a second brood is probably reared in many instances. This species is one of those most frequently selected by the Cowbird as a foster mother for its offspring, but the warbler often outwits the Cowbird by building a second lining over the intruder's egg and laying her own on the new lining, thus

forming a two-story nest, or, in one or two cases which have been called



Photo by Ralph S. Paddock

Yellow warbler's nest and eggs, with egg of Cowbird

to my attention, even a three-story nest, so that the egg of the Cowbird

is not hatched and the warbler's brood is saved from destruction. Although I have noticed many of our native birds desert their nests when they have been parasitized by the Cowbird, the Yellow warbler is the only one that I have noticed which builds a new lining over the interloper's egg.

The food of the Yellow warbler consists largely of smooth caterpillars, plant lice, small beetles, various flies, especially the Ephemeridae and the smaller Hymenoptera. During the migration season I have watched the Yellow warbler in company with other species devouring plant lice in apple trees and shade trees about our lawns, and, before the young have left the nest, have noticed them bringing large numbers of measuring worms and green caterpillars, gall flies and lake flies. Aside from the destruction of a few beneficial beetles and parasitic Hymenoptera, this beautiful little bird does no damage at all and in general it must be considered a very beneficial species, and it is at the same time one of the most beautiful and interesting of those which nest about our gardens and orchards.

Dendroica caerulescens caerulescens (Gmelin)

Black-throated Blue Warbler

Plate 94

Motacilla caerulescens Gmelin. Syst. Nat. 1789. 1:960

Sylvicola canadensis DeKay. Zool. N. Y. 1844. pt 2, p. 98, fig. 109 and 131

Dendroica caerulescens caerulescens A. O. U. Check List. Ed. 3. 1910. p. 312. No. 654

caerulēscens, Lat., bluish, beginning to be blue

Description. *Adult male: Upper parts grayish blue; cheeks, throat and sides black; lower breast and belly pure white;* wings and tail blackish but edged and overlaid with the color of the back so that when closed the whole upper parts seem nearly uniform in color; a conspicuous *white spot in the wing* formed by the white bases of the primaries; the 3 outer tail feathers with conspicuous white spots on their inner webs. *Adult female:* An inconspicuous, neutral colored warbler; *upper parts dusky olive green* with only a tinge of bluish on the crown and tail; an obscure whitish line over the eye; *dingy white spot in the wing* at the base of the primaries in the same position as the pure white spot in the male's wing; *under parts*

pale buffy whitish; outer tail feathers with white spots. Young female: Similar to the adult but greener above with no trace of bluish; white wing spot barely discernible; white in the tail much reduced.

Distribution. Eastern North America from Hudson bay and Newfoundland south to the Northern States, and in the highlands and mountains to Massachusetts, Connecticut, Pennsylvania and Maryland. Its breeding range in New York State is shown by distribution map on page 25, volume I, of this work. In all parts of the State where it is not a summer resident it is a common or even an abundant transient, arriving in the spring from April 25 to May 8 and passing northward from May 20 to 30, reappearing in the fall from August 27 to September 17, and departing for the south from September 28 to October 17. On rare occasions it will be noted as late as the 20th or 30th of November. Throughout the Catskill and Adirondack districts it is a common summer resident, but prefers mostly the deciduous and mixed woodlands to the forests of spruce and balsam. On the colder hillsides and gulleys of central and western New York it is rather scarce as a breeding species, but nearly every ravine in the central lake district has from one to three pairs of breeding birds.

Haunts and habits. The Black-throated blue warbler, though not so brilliantly colored as many members of the family, is one of the neatest and best groomed of all the warblers. He usually arrives in our State before the foliage of our deciduous trees is formed, and as he flies from bough to bough or from bush to bush he displays to fine advantage the clear black and white and blue coloration, the white spots in the wing and tail flashing like the wings of a butterfly. He carries his wings and tail partially spread somewhat in the manner of the Redstart. His song, though very versatile, is among the thinnest and most nonmelodious of the family. Gerald Thayer has noted several different variations of the strain beside the "*zwee-zwee-zwee*" so often found in the bird books. One of the songs he compares to the explosive song of the Blue-winged warbler, resembling the syllables "*swee-chir-r-r-r-r*" or "*wher-w-e-e-e-e-e*"; another is "*wher-wher-whee-ee*" uttered with deliberation; another he renders by

the syllables "*hi-hi-hi-hi-hi-hi-hi*" ending in a high-pitched long drawn "*whee-ee*"; another he writes "*bzzz-bzzz-bzzz-bzzz-bzzz*," a "weak, insectlike grating." In all these variations Mr Thayer recognizes a "characteristic, full-voiced huskiness" which distinguishes the species. John Burroughs's description of the first known nest of this species, discovered in Delaware county, is found in his "Locusts and Wild Honey." The eggs are usually of a buffy white or light greenish ground color, blotched and spotted with reddish brown and lilac, often forming a wreath near the larger end, but sometimes evenly distributed over the entire egg. They average .67 by .51 inches in size. Mr Clarence F. Stone describes the nests found near Branchport by himself and Mr Burtch, as follows: The nest is usually placed near the ground in a low sapling amidst a fairly dense growth of underbrush, especially in woods of beech and maple with a slight admixture of pine or hemlock.

Some years this warbler is a common summer resident, other years very uncommon. Its abundance seems to depend upon whether there are clearings in woods that offer the kind of nesting situations suited to its tastes. In this locality the Black-throated blue warblers prefer clearings amidst hemlock woods or along hemlock-clad gully banks where there are dense underbrush, bushes and stump sprouts bearing multitudes of large leaves.

The male is not so nervously active or demonstrative at any time as many other warblers. The female is extremely shy when flushed from the nest, so that it requires some time to get a good look at her. This warbler's nest often contains an egg of the Cowbird.

The nests are variously attached to slender scrubby bushes, 8 to 30 inches up, usually very close to trails or old wood roads. They are very neat, compact, thick walled, and made outside of shreds of weed bark, bleached blades of grass, beech buds, with lining of fine brown colored rootlet fibers and horse hair. A constant characteristic of this warbler's nest is the decoration of decayed, spongy pieces of light colored wood fastened to outside by strands of spider's web.

Dendroica coronata (Linnaeus)

Myrtle Warbler

Plate 94

Motacilla coronata Linnaeus. Syst. Nat. Ed. 12. 1766. 1:333
Sylvicola coronata DeKay. Zool. N. Y. 1844. pt 2, p. 88, fig. 103
Dendroica coronata A. O. U. Check List. Ed. 3. 1910. p. 312. No. 655

coronâta, Lat., crowned

Description. *Adult male: A yellow patch on the center of the crown,* on the *rump* and on *each side of the breast; upper parts bluish gray streaked with black;* cheeks black; *throat white; breast largely black* running down each side below the yellow patches; center of the belly and under tail coverts white; flank streaked with black; 3 pairs of outer tail feathers with conspicuous white spots; 2 conspicuous *white wing bars. Adult female in spring:* Pattern of coloration similar to the male's, but the bluish gray replaced by *brownish;* the breast less extensively black; the flanks less heavily streaked; the yellow patches on the crown and sides sometimes obscured, but the rump patch is as conspicuous as in the male. *Male in the fall:* Similar to the spring female but browner. *Young:* Similar to the male and female in fall plumage, but the crown and breast patches usually obscured.

Length 5.65 inches; extent 9.05; bill .35; wing 2.9; tail 2.2; tarsus .71.

Distribution. Breeds from the limit of trees in Alaska and Labrador to Maine, northern New Hampshire, Vermont, New York, western Massachusetts, northern Michigan, Minnesota and British Columbia. In New York the breeding range is apparently confined to the spruce belt of the Catskills and Adirondacks. Its breeding at Utica and Buffalo which has been reported has never been confirmed by later observation although it may occasionally, like other species, breed casually in various parts of the State. The winter range extends from Cape Elizabeth in Maine, eastern Massachusetts, southeastern New York, southern Illinois, southward to the West Indies, Mexico and Panama. Throughout New York this is one of the commonest of the warblers in migration time, arriving from the 5th to the 17th of April in the southeastern portion of the State, from April 17 to 28 in central and western New York, April 26 to 30 in Essex county. In central New York it is commonest during the first 10 days of May, and passes northward from the 20th to the 28th of

May. In the vicinity of New York City it passes northward between the 10th and 20th of May. During the migration season it is evident that the males precede the females, as is the case with many birds. Sometimes a flock of 20 or 30 males is seen during the third week of April and during the second and third weeks of May almost nothing but females are found. In the fall the southward migration is sometimes noted as early as the 16th of August, but usually in central New York between the 20th and 28th of September; in the vicinity of New York City, from the 1st to the 7th of October, whereas the departure of the greater number for the south occurs between the 25th of October and the 11th of November.

Haunts and habits. The Myrtle warbler is found in the spring mostly in deciduous woods, often feeding in the tops of oaks, chestnuts and maples, but in the fall it is commoner in the thick growths of bushes along the edges of swamps and cedar thickets and feeds largely on the berries of the wax myrtle which have given it its common name. The remainder of the year its food consists almost entirely of insects, during the early part of the season, especially of cocoons, larvae and eggs which it seeks about the buds and branches of trees. In the summer it frequents the coniferous forests of the Canadian zone of the Catskills and Adirondacks, being the most abundant warbler breeding on the higher slopes of the mountains, as far up as the stunted spruces on the summits of Skylight, Haystack, Marcy and Whiteface, associating there with the Blackpolled warbler and the Junco.

The common call note heard in the spring is a characteristic "*tchip.*" Another is noted by Allison, which he writes "*sweet*" with rising inflection. The song is not heard in its full volume till late in the migration season or on the breeding ground, but begins in the southern states in March. According to Thayer it has "a loud and silvery sleighbell trill," "a vivid spritely utterance." Sometimes he utters a deliberate phrase of 3 or 4 well-separated syllables having the usual tone and volume but lacking sometimes only in part, the jingling tremolo.

The nest of the Myrtle warbler is usually placed in a low coniferous

tree only a few feet from the ground. It is a rather loose and bulky nest of dead twigs from spruces and hemlocks, grass stems, a few leaves, lined with fine roots and hair and usually a number of feathers. The eggs are from 3 to 5 in number, dull white to creamy white in ground color, spotted and blotched with reddish brown, lavender and a few purplish black marks. The average size is .70 by .53 inches. The date of nesting in Essex county is May 30 to June 15.

Dendroica magnolia (Wilson)

Magnolia Warbler

Plate 97

Sylvia magnolia Wilson. Amer. Orn. 1811. 3:63. pl. 23, fig. 2
Sylvicola maculosa DeKay. Zool. N. Y. 1844. pt 2, p. 90, fig. 112
Dendroica magnolia A. O. U. Check List. Ed. 3. 1910. p. 313. No. 657
magnólia, named from the magnolia tree which it frequents

Description. Predominant colors black, yellow and white. *Adult male:* Back, cheeks, frontlet and upper tail coverts black; *crown* and *back of the neck bluish gray;* wings blackish edged with gray and with broad white wing bar; *rump* and *under parts bright yellow; heavily streaked on the breast and sides with black;* tail black with a *broad basal zone of white* formed by the white inner edges of the feathers except the central pair extending from the base half or two-thirds of the way to the tip. *Adult female:* Duller than the male; back olive green spotted with black· the whole upper parts more or less tinged with gray; under parts lighter yellow and less heavily marked with black. *Male in the fall:* Brownish gray on the crown and neck; back olive green indistinctly streaked; rump and tail as in spring; breast and sides marked with concealed black streaks very different from the spring. *Female in fall:* Upper parts mostly brownish olive green; sides with a few obscure black streaks; dusky band across the upper breast.

Length 4.75–5 inches; extent 7–7.5; wing 2.2–2.5; tail 2; bill .35.

Distribution. Breeds from southern Mackenzie, Keewatin, northern Quebec and Newfoundland to central Alberta, Saskatchewan, Minnesota, northern Michigan and northern Massachusetts; in the mountains to Maryland and Virginia. Winters from southern Mexico to Panama. In New York it is a common summer resident of the Canadian zone in the Catskills and Adirondacks and breeds sparingly in the swamps, gullies and

cooler hillsides of central, western and southwestern New York. Throughout the State it is a common transient, arriving from the 3d to the 14th of May; average date for western and southeastern New York, May 9, rarely appearing as early as the 28th of April. In southeastern New York and the lowlands of central and western New York it disappears between the 22d and 31st of May, to reappear again the middle to the last of August, and passes southward from the 1st to the 12th of October. The present



Photo by Clarence F. Stone

Magnolia warbler's nest and eggs

breeding range of this species is shown by a map, page 26, volume 1, of this work.

Haunts and habits. Throughout the migration season the Magnolia warbler is common throughout our orchards and shade trees, as well as the woodlands. It flutters about considerably while pursuing winged insects, displaying its brilliant black, yellow and white coloration, spreading the tail and showing the broad basal band of white which sometimes will

distinguish it at a long distance through the grove. It is also one of our full-voiced warblers, the song resembling the syllables "*wee-to, wee-to, wee-e-tee,*" or "*witchi, witchi, witchi, tit, witchi-tit, witchi-tit, witchi-tit*" the first four words deliberate and even, the last three hurried and higher pitched. Aberrant songs also noted by Mr Thayer are "*ter-whiz, wee-it*" and another "*wee-yer, wee-yer, wee-yer.*" The song is louder than the Yellow warbler's, and in addition it has several "*chips*" which are scarcely distinguishable from other species, and a more characteristic call note with a slight metallic ring, "*'tlep, 'tlep.*"

In its nesting grounds, this warbler prefers coniferous growth, especially young spruces, which crowd the edges of the northern swamp or appear in slashings, burnt lands and pastures. The nest is almost invariably placed in a low spruce tree only a few feet above the ground, and is constructed of dead twigs of spruce and hemlock, pine needles, grasses and downy substances, and lined with fine rootlets. The eggs are 3 to 6 in number, usually 4, of a dull, creamy white ground color with spots and blotches of reddish brown, chestnut, purplish and lilac, often heavily covered, at other times forming a wreath near the larger end. The average size is .66 by .48 inches. Mr C. F. Stone thus describes the nests which are found in the gullies of the Finger Lake region: "Every hemlock-clad gully or hemlock woods where the trees are close and limbs intertwined afford suitable haunts for this lively and emphatic singer, for the Magnolia is one of our most agile warblers and utters its two songs, with their variations, in a clear, loud, emphatic enunciation. Among the smaller gullies 1 or 2 pairs may be found, and in the larger gullies it is not unusual to locate 12 or 15 pairs during the nesting period. In some of these situations the Magnolia does not seem to occur, perhaps because it is so persecuted by red squirrels and cowbirds. The latter seems to make a specialty of presenting this warbler with one or more of its eggs, generally puncturing the eggs of the Magnolia before leaving the nest. The nest-building of this species begins by May 25 and fresh eggs are found by June 2 to 15. In this locality the nests are usually situated anywhere

from 6 to 15 feet above the ground and from 4 to 15 feet from the body of the tree in a tangle of branches. Rarely do they select other than hemlock trees, but I found one nest in the forks of a maple bush in a thick undergrowth among hemlocks. Another was placed in the top of a scrub beech through which a hemlock limb extended. While the Magnolia is one of the most beautiful warblers, agile in actions and energetic in song, it is a very shabby nestbuilder, lacking by far the skill and neatness displayed by the Black-throated green. The nests are made of hemlock twiglets very loosely interwoven and mingled with grass stems, fine root fibers, always lined with plenty of horse hair. The nests are also decorated on the outside with brown and white woolly substances."

Dendroica cerulea (Wilson)

Cerulean Warbler

Plate 94

Sylvia cerulea Wilson. Amer. Orn. 1810. 2:141. pl. 17, fig. 5
Sylvicola caerulea DeKay. Zool. N. Y. 1844. pt 2, p. 92, fig. 107
Dendroica cerulea A. O. U. Check List. Ed. 3. 1910. p. 314. No. 658

cerúlea, Lat., sky blue

Description. *Adult male:* *Upper parts blue*, the back slightly streaked with blackish; crown richer blue and with a few dark markings; *under parts pure white streaked* in a band across the breast and *on the sides with black;* ear patch dusky; eyelids and line over the eye white; wings and tail blackish, edged with the color of the back; the tail with small white spots on the outer feathers near the tip and the wings with 2 broad white bars formed by the greater and median coverts. *Adult female:* Much less blue on the upper parts than the male; more grayish in hue and tinged, especially on the back, with greenish; line over the eye and under parts pale yellowish instead of white and only very indistinctly streaked on the sides. *Young* resemble the female.

Length 4–4.5 inches; wing 2.65; tail 1.95.

Distribution. Breeds from southeastern Minnesota, southern Michigan and southern Ontario, western New York and western Pennsylvania and central Delaware to West Virginia, central Alabama, Louisiana and eastern Texas. The breeding range in New York is shown by map on page 26.

It is locally a common summer resident in various localities of central and western New York, especially Tonawanda swamp, Howland island, Potter swamp, Penfield swamp, Stockbridge hill and many open deciduous woodlands of the central lowland. In eastern and southeastern New York this species is extremely rare, only three migration dates coming from New York City. A single summer date, Hyde Park, July 4, 1895, comes from Lispenard Horton. Evidently it has invaded this State from the Mississippi valley and its migrations each year follow this route. It arrives from the 3d to the 14th of May, the 5th being the average date on its breeding grounds in Yates county. No reliable dates of departure are before me. Personally, I have never seen it later than the third week in August.

Haunts and habits. Mr Stone thus describes the breeding habits of the Cerulean in Potter swamp: "They are numerous in the maple woods on the hillsides overlooking the swamp, as well as in the swamp itself, and in the vicinity of Branchport they also occur in isolated pairs during the nesting season. In the heavily timbered Urbana and Scottsville swamp about 5 miles south of Prattsburg they also occur, but less commonly than in the Potter swamp. The Cerulean spends most of its time cavorting through the highest tree tops in the most lively manner, singing almost constantly its '*zwee-zwee, zwee, wee-ee,*' during the nesting season. During rainy days they descend to the lower limbs where they may easily be observed. When gathering nest materials they give no heed to the presence of human beings but fly to the ground or along the logs and fallen trees within a dozen feet, carrying the materials directly to the nest. This is situated anywhere from 15 to 60 feet above the ground and on all sorts of limbs from 20 inches to 20 feet from the body of the tree. Sometimes they sit squarely on a big limb; again in the fork of a limb just like the Wood pewee; and again, 15 to 20 feet out in the tip end of a branch. I have found nests almost concealed in a thick cluster of twigs on the knotty portion of a horizontal branch. The nests are sometimes very shabby and fragile, but usually they are works of art, made of strands of weed bark, wild grapevine bark, fine grasses, lined with fine reddish rootlets

and tendrils, giving the interior a decidedly ruddy appearance. It is characteristic of the Cerulean's nest to be more or less decorated on the outside with a sort of whitish lichen and I have never found a nest that did not have this ornamentation. Other materials are also used, as duck down, small feathers, feathers of the Cerulean itself, horse hair, dead wood, pieces of moss and spider cells. Nestbuilding begins about May 22. Full sets are found as early as May 28, but the usual date for complete sets is June 4 to 6. The eggs in this locality are usually 4 in number, sometimes 5." They are pale bluish white or greenish in ground color, speckled quite uniformly with reddish brown and lilac. In size they average .69 by .52 inches.

Dendroica pensylvanica (Linnaeus)

Chestnut-sided Warbler

Plate 96

Motacilla pensylvanica Linnaeus. Syst. Nat. Ed. 12. 1766. 1: 333
Sylvicola icterocephala DeKay. Zool. N. Y. 1844. pt 2, p. 102, fig. 134
Dendroica pensylvanica A. O. U. Check List. Ed. 3. 1910. p. 314. No. 659

pensylvánica, of Pennsylvania

Description. *Crown plain yellow;* sides of the head and neck and *under parts pure white;* black patch in front of the eye sending a black line back above the eye bordering the yellow crown and another down the side of the throat bordering the white cheek patch; *broad streaks of chestnut* run from the sides of the throat entirely *down both sides;* back streaked with pale yellow or yellowish white and black; wing bars usually fused into a large *white wing patch. Adult female:* Similar but colors less distinct; loral spot usually wanting, and the chestnut streaks thin or obscure. *Fall plumage, male: Greenish yellow* above *obscurely streaked with black;* side of the head gray; sides, wings and tail as in the spring. *Female in the fall, and young:* Similar to the adult male in fall plumage, but the back greenish and less distinctly streaked and the chestnut on the sides obscure or wanting.

Length 5.14 inches; extent 7.8–8.1; wing 2.45; tail 2; tarsus .72; bill .35.

Distribution. Breeds from Saskatchewan and southern Manitoba, central Ontario and Newfoundland to Rhode Island, New Jersey, northern Ohio, Illinois and eastern Nebraska, and southward in the mountains to Tennessee and South Carolina. In New York this species is a common

or abundant transient visitant in nearly all parts of the State, arriving from the 3d to the 9th of May, sometimes as early as the 2d, at other times as late as the 12th. The main troop of migrants has passed northward from the southern counties from the 19th to the 30th of May, returning in the fall from the 15th to the 30th of August, and passing south from the 18th to the 30th of September, sometimes as late as the 10th of October. It also breeds in all portions of New York State, though uncommonly on Long Island and only locally in the southeastern portions of the State; but throughout the Alleghanian and Canadian zones it is a common summer resident, especially in the bushy pastures of eastern, central and western New York and the outskirts of the Adirondacks, its distribution varying considerably in different years, dependent upon the season and the characteristic cover to be found. A considerable increase of slashings and brambly thickets in any section of the State is almost sure to be followed by a decided increase in the numbers of this species as summer residents.

Haunts and habits. The Chestnut-sided warbler nests about the edges of woods, bushy pastures and neglected roadsides, usually in wilder and more deserted situations than those frequented by the Yellow warbler. It is partial to the deciduous bushland throughout the hillsides of western New York; rarely found within the depths of the forest or where there is any considerable admixture of evergreens. Its hunting ground, as Gerald Thayer writes, lies between the ground and the tops of the small deciduous trees.

Its song is a "full-voiced warble." Two types are distinguishable, "both too liquid to be suggested by any set syllables except the clearly enunciated ending of one of them which may be written '*wee-chew, tit-a-wit-a-wit-a-wit-we chew*,' being something like the phrasing of the whole song. The other is an elaboration of this rolling warble, with the *wee-chew* left off." During the migration this is one of the commonest species in all parts of the State and its cheery little song may be heard in all the orchards and shade trees from the first to the third week in May about our villages and parklands and the edges of woods.

"This warbler may be considered abundant and evenly distributed in Yates county. It is found in all clearings where bushes have grown up, whether it be the highland or lowland. They begin nestbuilding about the 17th of May, and in three instances noted take 5 or 6 days to complete the nest. The full set of eggs is deposited as early as May 26, sometimes as late as June 9. One nest of the Chestnut-sided warbler was found July 13 containing young just hatched, but July nesting seems to be rare. The nests are very shabby, being loosely interwoven with broad blades of bleached grass, shreds of weed bark and grass stems, lined with fine, round, reddish grasses or tendrils, and horse hair. The eggs are 4 in number, white or creamy white, marked with wreaths of brown, blackish and lavender. Nesting situations are always along old wood roads or close to open places or the bushy edges of woodland, the nest being concealed in briers or the forks of bushes from 15 inches to 4 feet from the ground" (Stone MSS.).



Photo by L. S. Horton
Chestnut-sided warbler's nest and eggs

As Burtch and Stone have found this the most abundantly distributed warbler in Yates county brushlands, so I found it in Erie and Cattaraugus counties from 1882 to 1885, nesting commonly in the same situations selected by the Indigo bird, and almost always within 2 feet of the ground.

Dendroica castanea (Wilson)

Bay-breasted Warbler

Plate 96

Sylvia castanea Wilson. Amer. Orn. 1810. 2:97. pl. 14, fig. 4
Sylvicola castanea DeKay. Zool. N. Y. 1844. pt 2, p. 94, fig. 116
Dendroica castanea A. O. U. Check List. Ed. 3. 1910. p. 314. No. 660
castánea, Lat., a chestnut, alluding to the color of the breast

Description. *Adult male in spring: Throat and fore breast,* running part way down the sides, *chestnut; crown deep chestnut;* black forehead, eye spot and line over the eye; back streaked with black, grayish olive and buffy; a *buffy patch on the side of the neck* back of the auriculars; tail dusky, margined with gray; 2 or 3 outer feathers with white patches on their inner webs near the tip; wings with 2 broad *white bars;* belly white; *Female:* Similar to male, but the chestnut markings less pure, the chestnut on the throat and sides sometimes appearing only in patches. *Male in the fall: Olive green,* somewhat streaked with blackish; crown showing some concealed chestnut when a bird is examined in the hand; wings and tail similar to the spring plumage but more tinged with yellowish; *under parts whitish* tinged with yellowish on the throat and breast, with *buffy on the flanks* and under tail coverts; sides with more or less chestnut. *Young:* Similar to the fall plumage of the male, but showing no chestnut on the crown or sides.

Length 5.63 inches; extent 8.95; wing 2.95; tail 2.12; bill .41.

Distribution. Breeds from northeastern Alberta, southern Keewatin, Ungava and Newfoundland to Manitoba, northern New Hampshire and northern Maine. Winters in Panama and Colombia. Although I searched for this warbler through the highest portion of the Adirondacks during the breeding season of 1905, neither I nor any one of my five assistants could find any evidence of its residence in that region. As it breeds in the mountains of northern New Hampshire we expected to find it about Whiteface, Marcy, Skylight, Haystack or some of the neighboring mountains, but utterly failed to find any but negative evidence of it. During the migration season this is a common transient in most portions of New York, though somewhat irregular in distribution. During some seasons it is fairly abundant in western New York and some seasons on Long Island

and the Hudson valley it is recorded as common or abundant; during other seasons as uncommon, and sometimes as rare. During 15 years of observation in western New York, however, my experience indicates that it is nearly as common as the Blackburnian warbler and almost as regular in migration. The dates of arrival range from May 3 to 16, May 12 being about the average. An exceptionally early date of April 30 is recorded at Branchport. The last migrant is usually seen between the 25th and 31st of May. In the fall they make their appearance from the 16th to the 24th of September and pass southward from the 18th to the 10th of October. The average date of spring arrival in southeastern New York is recorded by Cook and Chapman as May 8.

Haunts and habits. The Bay-breasted warbler usually frequents the tops of deciduous trees during migration, being especially fond of chestnuts, oaks and hickories just as the leaves are bursting. It is also found in orchards and about the shade trees of the streets and parks as well as in the midst of woodlands. Like the Black-poll, in my experience, however, it prefers the upper portions of trees except in cold or stormy weather when they descend and feed among the underbrush.

The song is described by Farwell as a "weak, monotonous, saw-filing note." Gerald Thayer says: "It varies greatly, from the bases of at least 2 and probably 3 clearly distinct main songs. One of these — 6 or more barely separated lisping notes — are all alike in volume, accentuation, tone and speed. They are slightly louder than the average Black-poll notes and not quite so smooth in tone. Another song begins in about the same way but ends with 3 or 4 clearly separated, louder notes which have a more nearly full-voiced ring. The third uncommon song which I have all but surely traced to the Bay-breast is louder throughout and otherwise very different, begins with about 10 penetrating notes in close-knit couplets like those of the Black and white's shorter song, and much the same tone but louder, and it ends abruptly with a single lower toned, much richer note, like a fragment of the Ovenbird's song."

Dendroica striata (J. R. Forster)

Black-poll Warbler

Plate 96

Muscicapa striata Forster. Philos. Trans. 1772. 62:406, 428
Sylvicola striata DeKay. Zool. N. Y. 1844. pt 2, p. 95, fig. 129
Dendroica striata A. O. U. Check List. Ed. 3. 1910. p. 315. No. 661
striāta, Lat., striped or marked with lines

Description. *Adult male in spring: Crown black; back grayish streaked with black; cheeks white; under parts white, the sides heavily streaked with black;* outer tail feathers with white patches on inner webs near the tip; wings washed with greenish; 2 white wing bars; inner wing feathers margined with white. *Female in spring:* Upper parts grayish olive green streaked with black; under parts dingy white, sometimes tinged with yellow, slightly streaked with black on the sides of the throat and breast. *Fall plumage all sexes: Upper parts olive green* obscurely streaked with black on the back and on top of the head; *under parts dull yellowish* or yellowish white, *obscurely streaked* with dusky on the sides.

Length 5.56 inches; extent 8.9; wing 2.92; tail 2.05; bill .4.

Distribution. Breeds in the boreal zone from the limit of trees in Alaska and Labrador southward to northern Maine, New Hampshire, Vermont, New York, Minnesota and in the mountains to Colorado and New Mexico. In New York this is the most purely boreal in its affinities of all our breeding warblers, being confined to the higher mountains of the Catskills and Adirondacks. In the Adirondacks my party found it breeding quite commonly near the summits of the Indian head, Mount Colvin, Geological cobble, Skylight, Haystack, Wolf's Jaws, Marcy and Whiteface. There is very little doubt that it may be found on all the higher peaks which run above 2500 or 3000 feet, at least where there are stunted spruces and balsam firs. As a transient visitant it is abundant in all portions of the State, especially in the coastal district and Hudson valley, arriving from the south from the 9th to the 16th of May, occasionally as early as the 5th, and passing northward from the 26th to the 31st. In the fall Doctor Fisher has noticed it as early as the 5th to the 16th of August at Ossining. In western New York we rarely see it earlier than the 9th to

the 12th of September. Both in eastern and western New York the fall migration closes between the 28th of September and the 16th of October, stragglers sometimes being noticed as late as the first week in November. Its abundance in the coastal district may be inferred from the fact that 356 individuals of this species were found in a single count at the foot of Fire Island light, killed by striking on the night of September 23, 1887.

Haunts and habits. During the migrations, the Black-poll frequents the higher portions of our deciduous trees. The thin, wiry song is frequently heard about the village streets and throughout our groves and parks. It is not so easily observed as our other migrating warblers, due to the fact that it arrives late in the season when the leaves have partially, or sometimes entirely, completed their growth, and it is a neck-breaking occupation to hunt down these high-feeding warblers with an opera glass. However, when they are found feeding among the groves of oaks and chestnuts we may have greater success for their leaves are not so fully grown at the third week in May when the Black-poll's floodtide of migration occurs. In my experience, the Black-poll is least frequently of all our warblers seen feeding among the lower shrubbery, in the migration season, but it does descend, especially on cool and rainy days and, as with all warblers, we can gain a partial victory by mounting a hilltop and looking downwards into the foliage of the lower hill slopes. Gerald Thayer writes: "Its song is a string of from 6 to 12 or more short and equally divided sibilant notes, cobweb-thin and glassy clear, uttered rather fast; the whole song smoothly swelling in volume to the middle, and then smoothly falling off. This should, perhaps, be called the one main song, but the variations from it are many and pronounced. Its syllables vary in number from 4 to 15 or more. They are sometimes uttered very hurriedly and close together — a song like a trembling wire — and sometimes they are deliberately and distinctly enunciated. Occasionally these 2 styles of delivery are combined in one utterance. Again, the song's characteristic swell and fall in volume is sometimes, though seldom, wholly wanting; and the

shorter versions are often crescendo to the end" (Chapman, Warblers of North America).

The nests of the Black-poll which Mr Howard Bradstreet found about the Ausable lakes were placed in low spruces from 3 to 8 feet from the ground, composed of twigs, rootlets and bits of moss, and lined with fine grass, feathers and vegetable down. The eggs are 4 or 5 in number, creamy white or grayish white in ground color, blotched and speckled with reddish brown, lilac and gray, usually forming a wreath as with others of the family, and averaging in size .71 by .52 inches. Adirondack nesting dates vary from June 5 to 20.

Dendroica fusca (Müller)

Blackburnian Warbler

Plate 97

Motacilla fusca Müller. Natursyst. Suppl. 1776. 175
Sylvicola blackburniae DeKay. Zool. N. Y. 1844. pt 2, p. 93, fig. 113
Dendroica fusca A. O. U. Check List. Ed. 3. 1910. p. 315. No. 662
fúsca, dark or dusky in color

Description. *Adult male: Throat and upper breast rich orange;* side of the neck, broad line over the eye, spot over the eye, spot on the forehead, orange; upper parts in general black; streaked with whitish on the back; wings and tail blackish; the *wings with a large white patch;* the outer tail feathers largely white on the inner web; the outer webs white at base, showing as a conspicuous white area when the tail is spread; abdomen whitish, its forward portions suffused with the color of forward portions of the breast, but ranging to white on the under tail coverts; sides streaked with black. *Adult female:* Much duller than the male; the upper parts grayish brown to dusky where the male is black; the orange of the throat and breast *much paler;* all the markings less distinct. *Fall birds:* Duller than the corresponding sexes in spring plumage, more veiled with brown and grayish. *Young:* Like female but duller, the throat nearly yellowish.

Length 5.25 inches; wing 2.7; tail 1.95; bill .4.

Distribution. Breeds from Manitoba, southern Keewatin, Quebec and Cape Breton to central Minnesota, northern Michigan, Massachusetts, the highlands of Connecticut and in the Alleghanies to Georgia and South Carolina; winters from Yucatan, to Colombia and Peru. In New York

this warbler is a common summer resident of the Catskill and Adirondack districts, and breeds locally throughout the cooler swamps, gullies and highlands of central and western New York. Its nest has been recorded from Tonawanda swamp, Orleans county (Langille); Remsen and Holland Patent, Oneida county (Ralph and Bagg); Stockbridge, Madison county (Maxon); Hamilton and Shedd's Corners (Embody); Seneca and Clark's Glens, Canandaigua lake (Eaton); Springville, Erie county (Eaton); near Mayville, Chautauqua county (Kibbe); Hamburg, Erie county (Savage); gullies of Keuka lake (Burtch and Stone). During the migration season it is common throughout central and western New York and in the Hudson valley, but is recorded as uncommon on Long Island, arriving from April 30 to May 8, average date May 5; sometimes appears as early as April 26. The main migration is passed by the 21st to the 31st of May. In the fall the return migration may be noted from August 15 to September 7, the last being noted between October 5 and 16.

Haunts and habits. The Blackburnian warbler during the migration season associates with the Magnolia, Bay-breasted and Chestnut-sided warblers among the blossoming fruit trees and the leaving shrubbery and shade trees of our lawns and parks. During the nesting season, however, it is almost entirely confined to mixed and evergreen forests, being especially fond of hemlocks and spruces. In the Adirondacks we noticed it as one of the characteristic woodland warblers, being practically as abundant in the depths of the forest as about the edges of the clearings or along the streams and edges of the swamps. In the gullies and swamps of central New York I have never found it in the nesting season except where there is a liberal sprinkling of hemlocks, which it seems to prefer to the pine, and the old name of Hemlock warbler which was applied to the young of this species is perfectly appropriate. The Blackburnian flutters about while feeding almost as conspicuously as the Redstart and Magnolia, displaying its brillant colors and pied pattern very effectively.

The song is heard during migration time as well as in the nesting coverts, described by Thayer as " Thin, but exquisitely smooth in all the

many variations of its two or more main songs. One of these is much less changeable than the other. This is the simple one, which may be syllabled '*tsívvi-tsívvi-tsívvi-tsívvi*,' or a variation '*sissi-vit, sissi-vit, sissi-vit, sissi-vit*,' deliberately and almost languidly uttered in both cases with a fine 'kinglety' sibilant-voiced tone. The other common song, though it begins in much the same way, is more hurried throughout and ends on a sharply ascending scale with a sort of explosion of small, crowded notes; but the utterances vary widely and the one last described is about the most changeable of all the warblers' songs I know. Even the tone quality is not quite constant, for though it never, in my experience, varies toward huskiness, it does occasionally range towards full-voiced richness. Thus I have heard a Blackburnian that began its otherwise normal song with two or three clear notes much like those of the most full and smooth-voiced performance of the American redstart and another that began so much like the Nashville that I had to hear him several times, nearby, to be convinced that there was not a Nashville chiming in."

The nesting site of the Blackburnian is usually the horizontal limb of a conifer, spruce or hemlock. Merriam mentions one 84 feet from the ground; Bolles, one placed in a sugar maple 60 feet from the ground; and nests which our party found on the slopes of the Bartlett range and Mt Marcy were in hemlocks 45 and 60 feet up. The nests reported by Mr Burtch from the gullies near Branchport were in hemlocks about 35 feet from the ground and 6 feet from the tree trunk. Mr C. F. Stone thus describes the nesting as he has observed it: "After the great Blackburnian wave has reached its height and passed northward, a few may still be found breeding in the gullies in this vicinity. I know of but 3 or 4 pairs that remain to breed in our larger gullies where they are found among the tallest and thickest hemlock trees. The male, at least, spends most of his time in the highest hemlocks, darting from one tree to another, continually on the move so that it is hard to get even a glimpse of him, and if one were not familiar with his liquid warble the bird would go unidentified unless the gleaming throat could be seen. To my ear the

Blackburnian's warble is scarcely distinguishable from that of the Cerulean's and, in fact, both of these warblers have the same habit of flying through the tree tops, hurriedly warbling their songs, apparently giving no heed to the incubating female. While I have observed the Blackburnian as late as July 1, locating them by the song, I have found but one nest, which was on June 7, 1903. It contained 4 eggs and the situation was on the top of a gully bank in a hemlock rather isolated from the others over a bush grown area. It was placed 25 feet up and about 10 feet from the body of the tree in the end of a limb and effectively concealed from view. The female sat very closely and when flushed remained within 10 feet, slowly flying about uttering a mild chip of alarm. The male did not appear. The nest is a neat, compact, nicely interlaced structure of hemlock twiglets mixed with fine, dry grasses, the latter being inside the interlaced twigs, and scantily lined with black horse hair." The eggs are grayish white to bluish white in ground color, spotted and blotched and speckled with cinnamon and olive brown; average size .68 by .50 inches. The nesting date in New York varies from May 24 to June 12. Like most of our warblers, this species evidently rears only one brood in a season.

Dendroica dominica dominica (Linnaeus)

Yellow-throated Warbler

Motacilla dominica Linnaeus. Syst. Nat. Ed. 12. 1766. 1:334
Dendroica dominica dominica A. O. U. Check List. Ed. 3. 1910. p. 315. No. 663

dominica, of Domingo; originally described from Santo Domingo

Description. Upper parts mostly *bluish gray; line over* the *eye, throat* and *upper breast yellow;* forehead, *cheek* and *stripe on the side* of the *head black*, and a black line extending from this downward on the side of the neck; side of the neck behind the black cheek, white; also white line above the black line on the side of the head; under eyelid white; 2 conspicuous *white wing bars* and much white edging of the feathers; *belly white;* throat and breast bordered on the sides with black. The conspicuous *black streaks* running backward *along the side. Female:* Similar to male but showing less black on the head and side. *Young:* Very similar to adults, but slightly washed with brownish.

Distribution. This species breeds from central Delaware and southern Maryland to middle Florida, and winters from southern Florida to the Bahamas and Greater Antilles. During the migration it occasionally wanders as far northward as New England. There are two records for New York State, the first from Crow hill, Kings county (see Dutcher, Auk, 10:277; and Lawrence, Ann. Lyc. Nat. hist. of New York, 6, 8). The second record is also from Long Island, Oyster Bay, July 4–8, 1907, a bird of this species discovered by Mrs E. H. Swan jr, identified by Theodore Roosevelt and recorded in Scribner's Magazine, volume 42, page 387. This latter specimen, I believe, is now preserved in the American Museum of Natural History. It is evident that this bird is the rarest of our accidental visitants of the warbler family, being considerably less common in this State than the Prothonotary warbler.

Habits. The Yellow-throated warbler inhabits open piny woods. Its motions are much slower than those of the Black and white warbler, but it has a similar habit of searching the larger branches and trunks of trees for food, its motion being more of a hopping than a creeping one, its hunting ground being confined mostly to the higher branches and bunches of pine needles. Its song is loud and ringing, the common form being "*ching-ching-ching, chicker-cher-wee,*" with the wild, ringing, carrying quality which recalls the song of the Water thrush, and has also been compared to the song of the Indigo bird (Brewster and Chapman).

Dendroica virens (Gmelin)

Black-throated Green Warbler

Plate 97

Motacilla virens Gmelin. Syst. Nat. 1789. 1:985
Sylvicola virens DeKay. Zool. N. Y. 1844. pt 2, p. 100, fig. 114
Dendroica virens A. O. U. Check List. Ed. 3. 1910. p. 317. No. 667

virens, Lat., green

Description. *Upper parts yellowish olive green; face and sides of the head yellow;* 2 conspicuous whitish wing bars; outer tail feathers largely white; *throat and breast black;* sides streaked with black; belly yellowish white. *Female:* Similar but duller above and the throat whitish; the

breast black, tipped with yellowish white; the other markings paler and less sharply defined than in the male. *Young:* Sometimes lack all traces of black on the throat and breast. Fall birds in general more brownish above and the black markings on the male veiled with yellowish white feather tips.

Length 5 inches; extent 7.7–8; wing 2.46; tail 2; bill .4; tarsus .16.

Distribution. Breeds from northeastern Alberta, southern Manitoba, central Ontario, northeastern Quebec and Newfoundland to southern Minnesota, northern Ohio, northern New Jersey, Long Island and Connecticut, and in the Alleghanies to Georgia. Winters in Mexico and Central America. In New York it is one of our most abundant breeding species throughout the Canadian zone of the Adirondacks and Catskills, in the mixed and evergreen forests of all portions of the State, especially in the hemlock woodlands near the Pennsylvania border, in the wooded gullies of the central lake region, in all the cooler swamps of central and western New York, and locally in southeastern New York, even on Long Island, as reported by Roosevelt in the vicinity of Oyster Bay, and in Suffolk county by Helme and Worthington. On the whole, it seems to be slightly more boreal in distribution than the Chestnut-sided warbler, as indicated by its New York distribution, but like that species is found locally, at least, breeding in all portions of the State. During the migrations it is one of the most abundant species, arriving from the 23d of April to the 7th of May, the average date being May 3 in western New York, and passing on to the north from May 25 to 31. In the fall the last individuals are seen between the 10th and 26th of October. In my experience for 10 years in Monroe county, this species is one of the hardiest warblers, usually being the third on the list to arrive, following close after the Myrtle and Pine warblers during the last week of April.

Haunts and habits. The Black-throated green warbler prefers a mixed or evergreen forest during the nesting season, especially forests of hemlock, pine and spruce, trees of second growth being especially attractive to it. Its usual "beat" is half way up the full-grown evergreens, or in the upper third of the second growth trees of 30 to 50 feet.

Gerald Thayer describes the song as possessing "a certain quality of huskiness like the Black-throated blue's, but much less obtrusively noticeable and rather enhancing than marring the quiet sweetness of the song. One of the two main utterances is remarkable for its deliberate and highly modulated enunciation; the other, not. The deliberate song of 5 (sometimes 6 or 8) notes is the one usually described in books, but here about Monadnock the other is at least as often uttered and in midsummer is the commonest of the two. The differences between them are suggested, though feebly, by the two phrases '*sweer, sweer-r-r, swi-ni swee*' (the first and the last accented notes the highest pitched), and '*wi-wi-wi-wi-wi-wi-wi, wer-we-e-e,*' the last note highest pitched as well as most emphatic. Two, at least, of this warbler's call notes are fairly characteristic, a plainly dendroicine but rather loud and full-toned '*tsip*' and a reduplicated smaller '*chip*' often running into chippering like that of many young but few other adult warblers."



Photo by Verdi Burtch
Black-throated Green warbler's nest and eggs

The nest is usually placed in a hemlock tree. Burtch and Stone note 25 nests all placed in hemlocks with one or two exceptions and they were placed near the branches of a hemlock. They are usually from 15 to 40 feet from the ground, near the thicker portion of the limb some distance from the trunk. The nest is rather compactly built and deeply cupped, made of fine twiglets of hemlock lined with tendrils, rootlets and hair, sometimes a few feathers and dead grasses and fine strips of inner bark,

and occasionally is ornamented on the exterior with bits of cottony substances and spiders' cells. The eggs are commonly 4 in number with a creamy or grayish white ground color more or less heavily marked with specks and blotches of various shades of brown, purplish and lilac, usually forming a well-defined wreath. The average size is .65 by .51 inches. Nesting dates for western New York vary from May 26 to June 20, the average date being June 5. Adirondack nests usually have fresh eggs by the 10th of June.

Dendroica vigorsi (Audubon)

Pine Warbler

Plate 95

Sylvia vigorsii Audubon. Birds Amer. 1828. (folio) 1, pl. 30
Sylvicola pinus DeKay. Zool. N. Y. 1844. pt 2, p. 101, fig. 120
Dendroica vigorsi A. O. U. Check List. Ed. 3. 1910. p. 318. No. 671

vigorsi, to N. A. Vigors, an English naturalist

Description. *Adult male in spring: Upper parts yellowish green;* wings margined with grayish; *2 dull whitish wing bars;* outer tail feathers with white patches near the end; *under parts greenish yellow, obscurely streaked* on the breast and sides with dusky; lower belly whitish. *Female:* Much duller than the male, the under parts being soiled whitish tinged with yellow and the upper parts dusky olive green with grayish or brownish tinge. *Young and fall birds:* More tinged with brownish.

Length 5 inches; wing 2.8; tail 2.2; bill .42.

Distribution. Breeds in eastern North America from New Brunswick and Saskatchewan southward to the Gulf States. In New York this species is rather local in distribution depending upon the presence of pine woods. It is a summer resident throughout the southeastern, eastern, western and central portions of the State, especially on Long Island, but has not been noticed in the Canadian areas of the Catskills and Adirondacks. It has been recorded as breeding in Suffolk county by A. H. Howell, Oyster Bay by Theodore Roosevelt, central Long Island by L. S. Foster, Schenectady by James E. Benedict, Rensselaer county by Seymour Woodruff, Cohoes by A. F. Park, Oneida lake by Egbert Bagg, Ithaca by Louis Fuertes, Reed and Wright, Hammondsport and Branchport by C. F.

Stone, Seneca glen, Canandaigua lake, by E. H. Eaton. This is a hardy species, arriving in New York early in April (5 to 15 or 20) and even remains throughout the winter according to the testimony of Mr Benedict who took February specimens in the pine woods near Schenectady in 1881. In the fall the latest residents are usually observed between October 15 and November 1.

Haunts and habits. It is probable that the Pine warbler is even more particular in the coverts which it selects for a home than the Black-poll or the Nashville warbler. I have never found it except in pine groves, especially groves of pitch pine and red or Norway pine. Even in the migration season it is rarely found far from the pines and here it remains throughout the summer months.

Its song is described by Allison as a "rather slow, monotonous trill. I have heard the songs in two keys following each other so closely that it seemed that they were executed by the same bird. These songs are uttered at all seasons, I think; certainly not more than a few weeks in December mark a cessation. The ordinary call note is a rather soft, lisping *chirp* somewhat like that of the Parula warbler. During courtship and while the young are being fed, a rapid and incessant chipping is common." Gerald Thayer says: "Its common song is clear and sweet; an unbroken, fluent trill, with a tone character at once distinguishable from those of other trilling wood birds of New England. It is uttered in an even scale, but is often crescendo in its first half and diminuendo in its second."

Clarence F. Stone thus describes its breeding habits: "The Pine warbler is rare in this locality (Yates county) at all times. I know of but 10 pairs that are breeders here. Along the Hammondsport glen in Steuben county there are at least 4 or 5 pairs that remain throughout the summer. Hereabouts this warbler haunts only the woods that are thickly interspersed with red pines. On May 24, 1903, I found the first nest about 55 feet up in a Norway pine and 6 feet from the trunk in the end of a limb among clusters of cones. The female remained on the nest until I reached toward her, when she dropped to the lower branches and soon returned

with the male who had been singing over and over his whirlwind trill in a distant part of the wood. However, he refused to take any part in protesting with the female against my presence, but persisted in his rolling, whistling trills in the near-by trees while the female came toward me slowly moving about among the branches uttering a mild '*peet, peet.*' The nest contained 4 fresh eggs. It was firmly attached to the limb and almost hidden from below by clusters of cones. It is composed of strands of grapevine bark, fine rootlets and horse hairs, decorated with bits of brown and white spider cells and lined with a compact mass of animal hair and fluffy feathers with a thick ring of woolly material around the rim. The other nest found on June 6th contained 3 eggs and 1 of the Cowbird; as usual, 1 egg of the warbler was punctured. This nest was placed about 50 feet from the ground in a Norway pine and 4 feet out on a crooked, cone-laden limb, over a cleared place along the edge of the wood. This nest is made outside of hemlock twigs, strands of grayish weed bark, grapevine bark and fine reddish rootlets, lined with animal hair and crow feathers. Both of these nesting sites were somewhat isolated from other coniferous trees in portions of the wood surrounded by deciduous trees. The Pine warbler does not seem at all shy. I watched the female feed the young ones only 5 feet away while I sat on a limb 40 feet above the ground. Another time I hastily dismounted from my bicycle to observe a bird gathering horse hairs from the roadside only 8 feet away and apparently unconcerned about my presence. Another time while I was sitting quietly at the base of a pine, a female warbler hopped about on the ground so close that I could have touched her with my hand."

Dendroica palmarum palmarum (Gmelin)

Palm Warbler

Plate 95

Motacilla palmarum Gmelin. Syst. Nat. 1789. 1:951
Dendroica palmarum palmarum A. O. U. Check List. Ed. 3. 1910. p. 318. No. 672

palmárum, Lat., of the palms, which it frequents in its winter home

Description. Upper parts grayish olive brown, tail coverts yellowish, the upper parts obscurely streaked with dusky; *crown chestnut rufous;* yellowish line over the eye; narrow blackish line through the eye; 2 whitish wing bars; outer tail feathers with white patches near the tip; throat and *upper breast light yellowish*, also the under tail coverts; the rest of the under parts grayish white more or less suffused with yellow; distinctly but *not heavily streaked with blackish* on the sides of the throat, on the sides and across the breast. *Female:* Practically like the male. *Young* and *fall specimens:* Similar to the adult, but the crown tipped with brown and in young specimens sometimes scarcely showing the rufous at all.

Length 5.43 inches; extent 8.4; wing 2.61; tail 2.1; bill .4; tarsus .77.

Distribution. Breeds from southern Mackenzie, central Keewatin, southward to northern Minnesota. Winters from southern South Carolina, Florida and the Bahamas to the West Indies and Yucatan. In New York this warbler is purely a transient visitant, commoner in western New York than in the coastal district, but appearing on Long Island and throughout eastern New York sparingly during the migration season. Spring dates vary from April 14 to April 27 for arrival and April 30 to May 12 for departure to the north. Western New York arrivals vary from April 20 to 29; latest birds seen, May 12 to 14. In the fall this warbler reappears in September between the 12th and the 23d. It is fairly common during the first half of October, disappearing between the 3d and the 18th. It must be accounted an uncommon species in the eastern part of the State and only a fairly common migrant in western New York except in the fall when it is sometimes common for two or three weeks after the first sharp frost, but at that season it is never more than one-fourth as common as the Myrtle warbler.

Haunts and habits. The Palm warbler frequents more open situations than most of the dendroicas, frequently occurring along the banks of streams where there is very little shrubbery, or even about the banks of ponds and swamps where there is no cover at all. Sometimes it is noticed in company with other Dendroicas feeding among the foliage, but it is unusual to notice it far from the edges of swamps and streams. It is comparatively a low-feeding species, flying about near the ground or in the low shrubbery, continually wagging its tail more after the manner of pipits, however, than like the water thrushes. The voice is described by Jones as a "trill, consisting of the syllables *tsee* four times repeated, uttered with a distinct swell."

Dendroica palmarum hypochrysea (Ridgway)

Yellow Palm Warbler

Plate 95

Dendroica palmarum hypochrysea Ridgway. Bul. Nuttall Orn. Club. Nov. 1876. 1:85

Sylvicola ruficapilla DeKay. Zool. N. Y. 1844. pt. 2, p. 89, fig. 133

Dendroica palmarum hypochrysea A. O. U. Check List. Ed. 3. 1910. p. 318. No. 672a

hypochrýsea, Gr., meaning golden below

Description. Similar to the Palm warbler but larger, the upper parts more olive and the *under parts entirely yellow*, the breast *streaks reddish brown* or rufous, the line over the eye yellow at all seasons.

Wing 2.7 inches; tail 2.2; bill .4.

Distribution. This subspecies breeds from Ontario, northern Quebec and Newfoundland to southern Nova Scotia, New Brunswick and northern Maine; winters from Carolina and casually as far north as Pennsylvania to Florida and Louisiana. In New York it is a transient visitant in the coastal district, arriving from the south from the 14th to the 28th of April, average date April 18, and usually passing northward by the 12th of May. It is a fairly common transient in the coastal district, largely displacing there the Palm warbler which is more characteristic of the interior of New York. Specimens of the Yellow palm warbler have been taken in migration also at Syracuse, according to A. W. Perrior, and near Albany by

A. F. Parks. Doctors Reed, Wright and Allen also report a specimen from Ithaca, but aside from these migration dates for the interior every other specimen of the Palm warbler which I have examined has been of the subspecies palmarum and this is the species which I observe each season during the migration both in the spring and fall; whereas, while observing the migrations in the lower Hudson valley and in the vicinity of New York City I have noticed nothing but the Yellow palm warbler during both the spring and fall flights. In habits this subspecies does not differ from the Palm warbler already described.

Dendroica discolor (Vieillot)

Prairie Warbler

Plate 95

Sylvia discolor Vieillot. Ois. Amer. Sept. 1807 (1809?) 2:37, pl. 98
Sylvicola discolor DeKay. Zool. N. Y. 1844. pt 2, p. 96, fig. 110
Dendroica discolor A. O. U. Check List. Ed. 3. 1910. p. 319. No. 673
discolor, Lat., variegated or parti-colored

Description. *Upper parts olive green*, the *back spotted with rufous* or reddish chestnut; line over the eye, space beneath it, the 2 wing bars and entire *under parts yellow;* a *black line through the eye*, another along the side of the head and a crescentric patch on the side of the neck; *sides streaked with black;* outer tail feathers largely white, the second and third white near the tip. *Female:* Similar to the male but paler and less distinctly marked, the chestnut patch on the back sometimes very small or wanting. *Young in fall* frequently lack the chestnut marks altogether and general plumage less brightly and clearly marked but preserving the same pattern in coloration.

Length 4.75–4.90 inches; extent 7.15; wing 2.2; tail 1.95; bill .35; tarsus .67.

Distribution. Breeds from northeastern Nebraska, southern Ohio, southwestern Pennsylvania, southern New Jersey and along the coast from Massachusetts south to Florida, northern Mississippi and western Missouri; locally to central Michigan, southern Ontario and New Hampshire, and rarely in the Gulf States. Winters from central Florida to the Bahamas, and West Indies. In New York this warbler is local in distribution,

commonest in the southeastern part of the State and on Long Island. Its nest and eggs have been reported from Long Island, Oyster Bay, common (Roosevelt " Birds of Oyster Bay," 1879), still common in 1907 (Scribner's Magazine 42, 387); Millers Place, common (A. H. Helme); Shelter Island, common (W. W. Worthington); Long Island, rather common (Braislin). It is reported as rare or uncommon at Highland Falls, 1877, by Doctor Mearns; and at Ossining by Doctor Fisher. According to DeKay, this species was abundant near Lake Erie in 1844. We have always suspected, since DeKay published this on hearsay evidence, that he was mistaken; nevertheless, the local distribution and erratic habits of this warbler render it possible that it was abundant there 70 years ago and has since disappeared. During the last 30 years it certainly has been a rare summer resident in central and western New York. I have met with the species on only four occasions and these were in migration time. Baird, Brewer and Ridgway (Land Birds 1, 276) report a nest and eggs from central New York. D. W. Soule and M. R. Crockett report a nest and eggs June 2, 1899, from Sandy Creek, Oswego county. E. H. Short reports a nest from Orleans county June 16, 1904, collected by J. A. Ritenburg, and C. F. Stone two from Branchport. The spring migration of this warbler near New York City begins from the 1st to the 6th of May, the average date being May 4. In the fall it disappears from Long Island between the 1st and the 13th or 18th of September. Migration dates for western New York are May 3, 9, 11 and 12, birds observed near Rochester and Geneva by the author. The late E. S. Woodruff reports an adult female taken at Paul Smith's in the northern Adirondacks, May 17, 1908. As the birds which the author saw near Rochester were evidently migrating eastward along the shore of Lake Ontario, it is probable that a thin line of migration has been established through Oswego county and down the St Lawrence valley.

Haunts and habits. The Prairie warbler is not a bird of the grassland, as might be inferred from its name, but prefers dry hillsides, partially covered with a scrubby growth of bushes and saplings. In eastern Massachusetts Brewster speaks of it as preferring hilly pastures partially over-

grown with barberry and juniper. In the southern states it is found principally on sunny hillsides covered with bushes and saplings. Near Washington Doctor Coues found it in rather scrubby, hilly, open localities.

The nests are usually placed in barberries or low hickories, dogwood, scrub pines or cedar bushes from 1 to 5 feet from the ground. Mr Stone describes the nests he found near Branchport as follows: "I know of but three localities where this warbler finds suitable haunts, and but one pair in each locality. Here they are found in the same surroundings of bushes, saplings and briers which they prefer in other parts of the country, nesting in close proximity to the Chestnut-sided warblers. The nests are attached to forks of bushes from 2 to 3 feet from the ground and are compact and firmly woven, thick-walled structures of grayish colored shreds of weed bark, narrow dry grasses, fine round reddish grass stems, and lined with black horse hair, the outside resembling considerably nests of the Yellow warbler. Two of the four nests that I have found each contained 4 eggs on June 1 and 2, and two others had 1 and 3 eggs respectively on June 4. One nest was placed in a hazel bush surrounded by a dense growth of shrubbery close to a bubbling brook; another was in an elderberry bush in the midst of a brush lot."

The eggs are white or greenish white in ground color, speckled, spotted and blotched with dark umber, reddish brown, purplish and lilac shell markings, often with a well-formed wreath about the larger end. The dimensions average .64 by .49 inches.

The song of this species is "a lisping trill much like that of the Parula warbler in general character" but with a thin, wiry quality which Doctor Coues has compared to "the plaint of a mouse with a toothache," surely an extremely individual performance which, when once heard, will certainly distinguish this bird from all the other warblers.

Seiurus aurocapillus (Linnaeus)

Ovenbird

Plate 92

Motacilla aurocapilla Linnaeus. Syst. Nat. Ed. 12. 1766. 1:334
Seiurus aurocapillus DeKay. Zool. N. Y. 1844. pt 2, p. 79, fig. 102
A. O. U. Check List. Ed. 3. 1910. p. 319. No. 674

seiúrus, Gr., σείω, to wave, and οὐρά, tail; *aurocapillus*, Lat., gold hair or gold-headed, referring to the golden crown

Description. *Upper parts uniform olive green; crown a dull orange* or golden brown with a black line running down each side from the base of the bill to the nape; *under parts white*, rather *thickly spotted* on the breast and sides *with blackish;* narrow maxillary streak on each side of the throat; sexes alike *Fall specimens* practically like the spring ones.

Length 6.2 inches; extent 9.75; wing 3; tail 2.15; bill .50; tarsus .92.

Distribution. Breeds from southwestern Mackenzie, northern Ontario, southern Ungava and Newfoundland to Colorado, Kansas, southern Missouri, Virginia, and in the mountains to Georgia east to the Atlantic coast from Nova Scotia to Virginia. Winters from South Carolina and Florida through the Bahamas and West Indies to Colombia. In New York this bird is uniformly distributed in all woodlands from the slopes of Mt Marcy to the groves of Staten Island. It is fully as dominant a species as the Yellow warbler though, of course, it requires woodland. Spring arrivals vary from April 25 to May 3, average dates near New York City being April 28; in western New York, May 2. In the fall it disappears between September 20 and October 10, a few sometimes lingering till the 20th.

Haunts and habits. The Ovenbird, or Golden-crowned thrush as it was formerly called, prefers a rich deciduous woodland, but it is by no means confined to our woods of maple, beech and hornbeam, or oak, hickory and chestnut, but is equally common in mixed woodlands, and in the North Woods I have found it where the growth was predominantly spruces and pines with only a few deciduous trees intermingled. We noted it a common species as high as the 3500 foot line on several of the mountains of the

higher Adirondacks, and throughout the State it is one of the most familiar members of the family. Its cheery note is heard throughout the summer months at least to the third or fourth week in July, and later on from the 10th of August to the middle of September.

The Ovenbird is a ground warbler, seeking almost all its food among the dead leaves and growing plants of the forest floor, but frequently flying



Ovenbird's nest and eggs

Photo by Ralph S. Paddock

up to the larger and lower branches of the trees. Like the Water thrush, it is a walker, searching about with springy tread for worms, spiders and various kinds of insects. Its nest is placed upon the ground, usually at the foot of a small sapling or on the side of a slight rise of the ground. It is almost always arched over by the brown leaves of last season and so completely concealed from view that it can rarely be discovered unless

the mother bird is frightened from the nest as one walks through the forest. It is composed of dry leaves and grasses and is rather bulky, but blends inconspicuously with the materials on the ground. The entrance is at one side, the dry leaves drooping down over it so that one can not look in without thrusting the cover aside. The eggs are usually 4 or 5 in number, of a creamy white ground color, rather profusely speckled with reddish brown and lilac. They average .85 by .65 inches in size.

The call note of the Ovenbird is a weak *cheep* which is uttered when the bird is worried or frightened, especially while an intruder is near the nest, when it is frequently reiterated. Its common song has been written for more than a generation by "*tea-cher, tea-cher, tea-cher, tea-cher,*" each repetition being louder and more emphatic than the preceding; but, as many modern observers have remarked, the accent does not fall on the first syllable, the proper rendering of the performance being "*chér-te, chér-te, chér-te, chér-te.*" This ringing refrain is often heard as one journeys through the forest, in springtime and early summer, and will surely attract the attention of everyone that passes. It is not, however, the most melodious of the Ovenbird's performances, the passion song, as it is usually called, being commonly delivered on the wing when the bird is flying through the trees, as I have witnessed it on several occasions, the performer rising from a limb of moderate elevation and flying upward through the forest until he reaches nearly the height of the tallest trees when he seems fairly to burst with a torrent of warbling, gurgling notes which have no special form of delivery but are certainly melodious and impressive. After the torrent has spent its force, the performer partially closes his wings and darts down to the forest floor again, the song seeming to die away, as Thayer has said, "as if smothered by the sudden descent of the bird through the air." This flight song I have witnessed on a few occasions delivered just in the early dusk of evening, when the bird was flying upward from the highest tops of the forest trees to an altitude of 100 or 200 feet above the forest, fluttering its wings and rising higher and higher and pouring forth a confused medley of melody until apparently exhausted, like the Skylark, it closes

its wings and darts like an arrow to the sheltering coverts of the forest, the song echoing and dying away on the quiet evening air. This performance of the Ovenbird is truly startling, and it is to be regretted that it can not be oftener heard.

Seiurus noveboracensis noveboracensis (Gmelin)

Water Thrush

Plate 92

Motacilla noveboracensis Gmelin. Syst. Nat. 1789. 1:958
Seiurus noveboracensis DeKay. Zool. N. Y. 1844. pt 2, p. 78, fig. 106
Seiurus noveboracensis noveboracensis A. O. U. Check List. Ed. 3. 1910. p. 319. No. 675

noveboracénsis, new Lat., of New York

Description. Upper parts dark *olive brown;* a line over the eye, and *under parts yellowish white* or light sulphur yellow *heavily streaked with blackish;* sexes practically alike. *Fall plumage:* Like the spring.

Length 5.5–6 inches; extent 8.5–9.5; wing 2.7–5.3; tail 2.25; bill .5.

Distribution. Breeds from northern Ontario, northern Ungava and Newfoundland southward to central Ontario, New York, northern New England, and in the mountains south to West Virginia; winters from Mexico to the West Indies, Colombia and British Guiana. In New York this species is a common summer resident of the Adirondack district as well as in the Catskills and many swamps in central and western New York, especially Potter swamp in Ontario and Yates counties, Canandaigua Inlet swamp, Urbana swamp near Prattsburg, Montezuma swamp, Oak Orchard swamp and the swamp about Chautauqua Lake outlet. There also can be no doubt that it breeds in many other localities which have not been particularly studied by bird students familiar with this species. It certainly is a common summer resident in several of the localities mentioned as well as through the swamps of the Adirondacks and higher Catskills. Throughout the State it is a fairly common or common transient visitant, arriving from April 26 to May 7, average date in western New York being April 29, the spring migration ending between May 21 and 29. In the fall, southward movement begins from the 1st to the 19th of August;

in some localities not until the 1st to the 7th of September, and the last birds are recorded between the 16th of September and the 6th of October.

Haunts and habits. During the spring migration, the Water thrush is fairly common about the edges of ponds and swamps, especially where there is a friendly cover of shrubbery, even about the edges of our lawns, and wherever little rivulets run through meadows and parklands or groves, bordered by a sparse growth of bushes, one is sure to find this species during the season of late April and early May. It walks lightly and nimbly over the lawn or along the damp margin of the brooklet, bobbing its tail somewhat after the manner of the Palm warbler, but the motion seems to be produced by a springy movement of the legs and the whole rear portion of the body, rather than by a bobbing of the tail itself. The flight of the Water thrush is swift and darting. When disturbed in its favorite haunts it dashes rapidly away at a moderate elevation down the stream, its course seeming to be directed by the brooklet along which it resorts. Even in the migration season its song is frequently heard, though not with such fulness and richness as in its summer haunts. It is a loud, ringing roundelay, rather rapidly delivered with a "ringing wildness" suggestive of the cool and bubbling streams of its summer home; "a ringing, bubbling warble, swift and emphatic, made up of two parts, the second lower toned and



Photo by Verdi Burtch
Water thrush's nest and eggs

diminuendo." Both Brewster and Chapman have agreed in considering this song, short as it is, more melodious than that of the Louisiana water thrush which has been so highly commended by many bird lovers. It certainly is inspiring in the vivid suddenness with which it bursts from the coverts of the swamp or streamside and fades away again into the echoing forest.

C. F. Stone thus describes its breeding habits: "In Potter swamp this warbler is a common summer resident, and also in Urbana swamp, where it finds ideal nesting situations in the wettest portions of the heavy timber. It is a most jubilant singer, rendering its song with animation in a ringing, sweet, clear voice, the characteristic song of Potter swamp from the last of April to about June 25. They have full sets of eggs as early as May 4, and nesting begins, some seasons, as late as June 10, the average time, however, is from May 15 to June 1. The nests are invariably snugly hidden in thick beds of moss at the bases of trees or stumps or decayed moss-covered logs, and rarely in the roots and dirt of upturned stumps, anywhere from the level of the damp ground to 2 feet above the stagnant pools of water. The mossy nest is formed from the bits of moss that are pulled out when the cavity is made in the bed of moss, and the lining is of the reddish moss stems. The eggs are 4 or 5, decidedly smaller than those of the Louisiana water thrush, but a series of both these water thrushes will exhibit such an intergradation that they are indistinguishable."

Seiurus noveboracensis notabilis (Ridgway)

Grinnell Water Thrush

Seiurus noevius notabilis Ridgway. Proc. U. S. Nat. Mus. 1880. 3:12
Seiurus noveboracensis notabilis A. O. U. Check List. Ed. 3. 1910. p. 320. No. 675a

Description. Coloration practically identical with that of the Northern water thrush, but perhaps a little darker and less olive on the upper parts, and *whiter below*, but the size *larger* and the *bill longer*.

Wing 3.1–3.25 inches; tail 2.20–2.50; bill .52.

Distribution. This species breeds from northwestern Alaska, central Mackenzie and central Keewatin to British Columbia, central Montana and northwestern Nebraska and northwestern Michigan; winters from Cuba and Mexico to South America. Migrates through the Mississippi valley and the South Atlantic coast. Specimens of this subspecies of the Water thrush have been reported from Raritan and from Princeton, N. J. The only New York specimen was taken at Millers Place, Long Island, by A. H. Helme and is now in his collection. It is purely accidental in New York.

Seiurus motacilla (Vieillot)

Louisiana Water Thrush

Plate 92

Turdus motacilla Vieillot. Ois. Amer. Sept. 1807 (1808?) 2:9. pl. 65
Seiurus motacilla A. O. U. Check List. Ed. 3. 1910. p. 320. No. 676

motacílla, Lat., wagtail

Description. Upper parts *olive brown; stripe over the eye white; under parts white washed on the flanks* and *under tail coverts with buffy; breast and sides streaked with blackish* but not so closely as in the Northern water thrush, the throat and center of the abdomen being plain white. Sexes alike.

Length 6–6.30 inches; extent 10–10.75; wing 3–3.25; tail 2.25; bill .55; tarsus .91.

Distribution. Breeds from southern Minnesota, southern Michigan, Ontario, New York and southern New England to South Carolina and northeastern Texas; winters from Mexico, the Bahamas and West Indies to Colombia. The New York distribution of this species is shown by map on page 27, volume 1, of this work. It is a common summer resident in the lower Hudson valley and locally as far north as Catskill and even the southern end of Lake George. Throughout central and western New York it is found in all the ravines of the central lake district as well as in the Genesee valley and some of the streams flowing into Lake Erie; also in the wooded valley of the Cohocton and Chemung. It is an early migrant, appearing in southeastern New York from the 9th to the 15th of April,

sometimes not before the 20th; in western New York usually not before the 18th to the 24th of April. In the fall it is last seen between the 24th and 30th of August according to many observers, but the last dates given by Chapman for the vicinity of New York City and the observations at Englewood, N. J., give September 20 to 30 as the date of departure.

Haunts and habits. The Louisiana or Large-billed water thrush prefers wooded stream sides, especially rugged streams where the water is tumbling over the rocks and steep banks. It is found near the bottom of these ravines, usually seeking its food of water insects in the shallow stream as it runs over beds of shale, or flitting from rock to rock that rise just above the surface. In the southern states it is said to abound in rich wooded bottomlands, but in New York it is rarely found in swampy localities, leaving these situations more to the Northern water thrush. Yet a few have been found nesting in swampy woods in the same locality with the other species although, as far as my observation goes, there is a sharp contrast in the habitat of the two species, the Northern water thrush keeping to the flooded swamps where there is dense cover of forest and underbrush, and moss-covered logs are in abundance on every hand; whereas this species prefers, as stated, the shaly glens of our Finger Lakes region, making its nest close to the bottom of the gully, usually only 2 or 3 feet above the level of the stream which flows through the glen.

The song of this species resembles somewhat that of the Northern water thrush, the flight song being particularly thrilling. This is often uttered as the bird rises from the lower portions of the glen and mounts up above the treetops, pouring forth a sudden burst of melody which Brewster syllables by the words "*pseur, pseur, persée, ser,*" fully as loud as that of the Northern water thrush and almost as rapid, but lacking the beautiful crescendo termination, and altogether a less fine performance. The call note is scarcely different from that of the Northern water thrush, which Chapman describes as a sharp, steely alarm note, "*clink,*" and Thayer calls "a ringing *chip* somewhat less loud and emphatic than that of the Louisiana water thrush." Stone says: "In every ravine and gully

along Lake Keuka, as well as those in the valley north of Branchport, the Louisiana water thrush finds an ideal summer haunt, as wild and weird as its ringing, melodious song that is uttered in a most ecstatic manner. They arrive in this locality as early as April 10, usually close to April 15, and I have noted a single individual as late as October 2, but by September 25 they are usually gone. In a small hemlock-clad ravine but one pair will be found, while in the greater gullies that extend from the valley back into the hills two miles or more as many as three or four pairs will make their summer home. They also occur in Potter swamp, Yates county, in limited pairs where they hide their nest the same as the Northern water thrush at the base of trees, stumps and logs. In the gullies, however, they select all sorts of cavities, always within 12 feet above the rocky bottom over swift flowing water or some deep pool. Of over 75 nests examined, probably nine-tenths were within 4 feet of the bottom of the gully. A favorite nest site is under a dirt, shale or mossy ledge, behind dangling rootlets. Sometimes an excavation is made in the mossy bed on nearly perpendicular banks, in cavities at the base of small trees, in barren slate



Photo by Clarence F. Stone
Louisiana waterthrush's nest and eggs

stone cavities, and sometimes the same cavity is used two or three years in succession. The Louisiana water thrush also has a habit of starting as many as three nests, then abandoning them for some other site. They are also found occasionally at the extreme entrance of the gully and sometimes at the upper end or in the entrance of a small branch leading into the main gully. The nests are made of skeletonized leaves, moss, rootlets, twiglets, grass stems, and often lined with fine grasses, hemlock twigs, dark rootlets, and horse hair, but dead pine needles is the usual lining. A characteristic feature of this warbler's nest is the doormat or path of leaves, from 6 to 12 inches long, leading from the nest, sometimes forming a striking contrast against the dark green mossy back. Many times the nest is cunningly concealed behind drooping ferns, but the pathway of leaves betrays the location of the nest to the careful observer. The female is a close sitter, allowing one to almost touch her, but when flushed she glides away, trailing around the rocks and debris with wings akimbo and extended tail, nervously dabbling her bill in the water in the most dainty manner. This warbler is much imposed upon by the Cowbird whose visits usually cause disaster by its clumsiness in filling the nest with loose shale or dirt while kicking 2 to 3 of the thrush's eggs out of the nest. In two instances I have noticed 5 eggs of the Louisiana water thrush with 2 of the Cowbird; in two instances, 6 of the water thrush and 2 of the Cowbird. Several times nests were deserted where the Cowbird had deposited her egg. One egg a day is laid, often with an interval of 5 and 6 days before the last egg is deposited. If the first nest is destroyed it requires 15 days to build a new one and lay 5 eggs. Of 61 nests observed, 7 contained 4 eggs, 36 contained 5, and 18 had 6 eggs. They vary greatly in size and shape and from almost plain to lightly dotted, heavily blotched and sometimes beautifully wreathed around the larger ends. The average size is .78 by .61 inches. Normally, the nesting period extends from May 4 to May 30, and young just able to fly are noted out of the nest as early as May 20. I consider all fresh June sets second attempts at nesting owing to accidents with the first nests."

Oporornis formosus (Wilson)

Kentucky Warbler

Plate 98

Sylvia formosa Wilson. Amer. Orn. 1811. 3:85. pl. 25, fig. 3
Sylvicola formosa DeKay. Zool. N. Y. 1844. pt 2, p. 105, fig. 127
Oporornis formosus A. O. U. Check List. Ed. 3. 1910. p. 320. No. 677
oporórnis, Gr., ὀπώρα, autumn, and ὄρνις, bird; *formósus*, Lat., beautiful

Description. Upper parts olive green; under parts bright yellow; fore crown and a broad bar running from the bill to below the eye, black; line over the eye bright yellow. Sexes alike. The female slightly duller. Fall specimens have the black markings partially veiled.

Length 5.50–5.75 inches; extent 9.25; wing 2.65–2.90; tail 2; bill .45.

Distribution. Breeds from northeastern Nebraska, southern Mississippi, southern Pennsylvania and the lower Hudson valley south to eastern Texas and Alabama; winters from Tabasco and Chiapas to Colombia. Its distribution in New York is shown by the map on page 28 of volume 1 of this work. It is common as a breeding species only in the lower Hudson valley where Doctor Fisher found it a regular summer resident near Ossining and Bicknell near Riverdale and Fort Lee. It is also reported from Newburgh by F. B. Robinson, and from many localities in New Jersey and near New York City. On Long Island it has always been considered rare as a summer resident, but Mr Helme reports a nest and young from Sayville, L. I., and Mr Babson from Bellport. It has also been noted in the migration at Raynor South May 18, 1834, and Fire Island light August 19, 1888 (Dutcher, Auk, 6:139), and also from Flatlands (Auk, 10:277). In the interior of New York this is one of the very rarest of our summer warblers. It is reported from Chili May 1894 by Short; Lockport May 21, 1891, by Davidson; Rochester, May 14, 1904, by Professor Dodge; and its nest has been found near Cincinnatus, June 27, 1903, and at Taylor, June 11, 1906, by H. C. Higgins. It is probable that this Cortland county colony is connected with the Rockland county and northern New Jersey range through the Delaware valley. The spring migration of this species begins in southeastern New York during the first week in May, the dates

ranging from May 2 to 18; in the fall Doctor Fisher records it as disappearing on August 27.

Haunts and habits. The Kentucky warbler is a bird of the deciduous forest, preferring especially densely grown, well-watered woods and overgrown clearings, in nearly every instance occurring where there is a dense growth of underbrush and a fairly moist atmosphere. Gerald Thayer writes: "The song is remarkably loud and clear, strikingly similar to that of the Carolina wren; a series of 3 clear whistled notes, repeated 5 to 10 or more times, "*tee-wee-o, tee-wee-o, tee-wee-o*," etc. The male while singing is usually perched on a branch far up on some tall tree and very often seeks a new perch at some distance after singing a few times, flying directly and rapidly at a moderate height through the woods. At other times it may be found on the ground, walking about like the Ovenbird, but more spritely in action." Chapman describes the song as a loud clearly whistled performance of 5, 6 or 7 notes, "*turdle-turdle*," clearly heard at a distance of 150 yards. During the breeding season it is a persistent singer. On one occasion he watched a male for three hours. During this time, with the exception of 5 interruptions of less than 45 seconds each, he sang with regularity every 12 seconds.

The nest is placed on the ground or near it in a dense tangle among the roots of a tree and is rather bulkily constructed of twigs, rootlets and several thicknesses of leaves. The interior is well lined with dark rootlets and long horse hair. The eggs are 4 or 5 in number, white in ground color, speckled and blotched with umber, reddish brown and lilac, evenly distributed or forming wreaths near the larger ends. Their average size is .74 by .58 inches. Nesting dates from the lower Hudson valley range from June 1 to 14.

Oporornis agilis (Wilson)

Connecticut Warbler

Plate 99

Sylvia agilis Wilson. Amer. Orn. 1812. 5: 64. pl. 39, fig. 4
Oporornis agilis A. O. U. Check List. Ed. 3. 1910. p. 321. No. 678
ágilis, Lat., active, agile

Description. *Adult male: Upper parts olive green* becoming *ashy on* the *sides* and *fore part of the head; throat* and *fore breast slaty gray;* lower *breast, belly* and *under tail coverts deep yellow;* a distinct *white eye ring. Female: Throat* and *upper breast brownish,* palest on the throat; otherwise similar to the male but duller throughout, showing no ashy or slaty gray, but the white eye ring nearly as distinct as in the male.

Length 5.50 inches; extent 8.50–9; wing 2.75–3; tail 2; bill .48; tarsus .80.

Distribution. Breeds from Manitoba to central Minnesota and northern Michigan; winters in South America. In spring, rare east of the Alleghanies, but in fall common east of the Alleghanies and rare in the Mississippi valley. In New York this species is only a transient visitant. Although several reports of spring specimens seen have come to me from western New York I have been unable to secure or find in collections any spring specimen from the State. The dates of fall migration range between August 26 and October 11, the average date of arrival being September 7 and the usual date of departure September 25 to October 5. It is by no means rare during the fall migration, especially during the middle and third week of September.

Haunts and habits. As the Connecticut warbler is not found here during the spring migration, its song is not heard within our boundaries. During its stay with us it is found in thickets of winterberry, shad bush, jewel weed and other dense growing herbs and shrubs of the ditches and swamplands, usually keeping near the ground and under dense cover. It is frequently seen on the bare margin of sluggish brooks or ditches walking along like other birds of its genus, not hopping like the dendroica.

Its call note is a quick, sharp, metallic "*plink.*" Its song, as heard in its summer home in the tamarack swamps of Manitoba, is described by

Seton as resembling the words "*beecher, beecher, beecher, beecher, beecher*"; at other times like the syllables "*fru-chappelle, fru-chappelle, fru-chappelle, whoit.*" As several careful observers, notably Maurice Blake and the late Frank Antes of Canandaigua, as well as Lawrence Achilles and Tom Taylor of Rochester and Ernest H. Short of Chili, have reported seeing birds which they felt sure were examples of this species migrating with other spring warblers toward the northeast, I made a very careful hunt for the Connecticut warbler among the spruce and tamarack bogs and swamps of the higher Adirondacks, but entirely without success. New York evidently lies outside its breeding range and any spring migrants found in the State would undoubtedly be only stragglers from the main route of migration.

Oporornis philadelphia (Wilson)

Mourning Warbler

Plate 100

Sylvia philadelphia Wilson. Amer. Orn. 1810. 2: 101. pl. 14, fig. 6
Trichas philadelphia DeKay. Zool. N. Y. 1844. pt 2, p. 81, fig. 122
Oporornis philadelphia A. O. U. Check List. Ed. 3. 1910. p. 321. No. 679

philadélphia, named for Philadelphia, near which Wilson discovered the species

Description. Very similar in size and shape to the Connecticut warbler. *Adult male: Head* and *neck bluish slate;* the lores blackish; the *throat showing blackish feathers among the slaty gray,* becoming *quite black on the breast* where it gives way suddenly to the *deep yellow* of the *lower breast and belly;* sides strongly tinged with the color of the back; no white eye ring. *Adult female:* Has the bluish slate of the *head* and *neck* lighter and *tinged with brownish;* the olive green upper parts and yellow under parts duller than the male's. *Young in the fall:* Similar to the adult, but *lacking the bluish slate* of the head and neck and the males lacking the blackish seen in the adults in spring. The young females being nearly uniform olive green above and yellow below. *Young* also show an obscure whitish eye ring.

Length 5.63 inches; extent 7.60–8.15; wing 2.40–2.60; tail 2–2.25; bill .45; tarsus .80.

Distribution. Breeds from central Alberta, southern Saskatchewan, southwestern Keewatin, Nova Scotia and the Magdalenes south to central

Minnesota, Michigan, central Ontario, New York and Pennsylvania and the higher portions of Massachusetts; in the mountains to West Virginia. Winters from Nicaragua to Colombia and Ecuador. The New York range is shown by the map on page 28 of volume 1. It is fairly common as a summer resident in the Catskill and Adirondack districts as well as in the highlands and colder swamps of central and western New York. Unmistakable evidence of its nesting has been reported at Green Island, Albany county, by Austin F. Park; Peterboro and Stockbridge by Maxon and Miller; Buffalo by James Savage; Niagara county by J. L. Davison; Orleans county by C. F. Possun; Phelps by Bowdish; northern Cayuga county by Frank S. Wright; Cincinnatus by H. C. Higgins; Ithaca by Reed, Wright and Allen; Scottsville by E. H. Short; the "big gully" near Chautauqua lake by H. L. Achilles. I have noticed it breeding in several of the glens of Canandaigua and Seneca lakes as well as in Potter swamp and in the cooler hillsides overlooking the village of Springville, Erie county.

Haunts and habits. In these localities the nest is usually placed among tangles of briers and ferns on the shady side of the gully or among second growth in partially cleared woodlands. The eggs are usually 4 in number, white in ground color, rather sparingly spotted and blotched with reddish brown, hazel, light umber and occasionally a few obscure shell markings, averaging .72 by .56 inches in size. The nesting dates reported vary from June 1 to 17, the average date being June 7.

Mr Gerald Thayer writes: "The song, which is not very commonly uttered during migration, resembles that of the Kentucky warbler and the Maryland yellow-throat in that it consists throughout of a repetition of two or three clear, whistled notes and also resembles that of the former bird somewhat in the modulation of the voice. The song is decidedly softer and more hesitating than that of the Yellow-throat and has no great carrying power. The call note resembles somewhat the '*chack*' of the Yellow-throat, but is less pronounced." To my ear, the carrying power of this warbler's song is fully as great as that of the Yellow-throat. On

his nesting grounds I am able to hear it at as great a distance as the Oven bird's, in fact, the note seeming to my ear fuller and louder than that of any other species except the Ovenbird.

Mr Verdi Burtch of Branchport thus describes the nesting habits of this warbler in Yates county: "In Potter swamp, where the timber has been well thinned out, where the ground is wet and springy, where the ferns, skunk cabbage, tall rue, spice bush, bishop's cap, false Solomon's seal, white baneberry and marsh marigold mingle, and poison ivy and woody



Photo by Verdi Burtch

Mourning warbler's nest and eggs

nightshade cover the stumps and dead tops, and here and there a tall dead stub towers above the bushes, here the Mourning warbler makes its summer home, nesting along the abandoned wood roads and more open places that are now grown up with grass, ferns, skunk cabbage, rue and marsh marigolds. It arrives about May 9 to 20 and is fairly common, nesting in company with Northern yellow-throats and Golden-wing warblers. It begins nestbuilding the last week of May and complete

sets are laid by June 3 to 10. The eggs are 4 or 5 in number, more often 5, creamy white in color and vary considerably in style of markings, some sets have fine specks with blotches and spots of reddish brown and a few lilac shell markings, the markings mostly at the larger end forming a wreath. A set of 5 has 4 eggs heavily marked about the larger end with bright reddish brown and lilac shell markings and large dauby blotches of reddish brown placed irregularly over the balance of the eggs; the other egg is well marked about the larger end with a few spots scattered over the rest of the egg. Nearly all eggs have a few fine spots or scrawls of dark brown like the eggs of Northern yellow-throat and some eggs resemble those of the Yellow-throat very much but are mostly larger and rather more elongated. In some sets the markings are rather dull, running mostly to shell markings. The nest is of dead weeds and grass, lined with fine dead grass and in most cases with fine strips of black inner bark or black rootlets. In fact, the lining, with very few exceptions, is black. It differs from the nest of the Northern yellow-throat by not having any coarse grass or dead leaves in the base; the cavity is larger but more shallow and it is broad and flat while that of the Yellow-throat's is small and tall. A typical nest measures: diameter, outside, 4 inches; inside, 2 inches; depth, outside, $2\frac{1}{2}$ inches; inside, $1\frac{5}{8}$ inches. These swamp nests are usually situated in a grassy place among the brush and tops that were left by the lumbermen, in a bunch of weeds, or the middle of a bunch of skunk cabbage or ferns. One nest was placed on top of a thick vine that ran over the ground and there was scarcely any attempt at concealment. Another was in a very wet place in the heart of a marsh marigold. Another was in a bunch of weeds on a rotted moss and dirt-covered log. The nests are usually very well concealed and very near the ground. When a nest is found the female usually runs a little ways ahead, then flies slowly to a bush, but soon comes back, dodging around among the bushes chipping all the time. The chip of the female is sharp and rather loud. It might be likened to the noise produced by striking two pebbles together gently. When the grass above one nest was parted the female, which was on the

nest, hissed and stuck to the nest until almost touched by the hand. The male has a habit of sitting on a dead or naked branch high over an open space where he sings by the half hour stopping occasionally to preen his feathers. The Mourning warbler also nests in an entirely different situation near Branchport. June 4, 1903, a nest was found in a dry bush lot clearing along a large gully at an elevation of 250 feet above the valley. It was placed in a small beech bush 18 inches from the ground among wild blackberry bushes, beech stumps and sprouts. It contained 2 eggs and no more were laid. They were taken June 7. June 21 a second nest was found in the sprouts around a beech stump. It contained 4 eggs and was $2\frac{1}{2}$ feet from the ground. As it was only 3 rods from the place where the first nest was found and as both nest and eggs strongly resembled the first nest and eggs, it was undoubtedly a second set from the same bird. Both nests were larger and more bulky than the Potter swamp nests. One measures: diameter, outside, 6 inches; inside, $2\frac{1}{4}$ inches; depth outside, $3\frac{1}{2}$ inches; inside, $2\frac{1}{8}$ inches. Both nests were of dead weeds and grass, thickly lined with black horse hair.

"A nest found June 13, 1909, was a little farther up this same hill and was placed on the ground in a clump of oxeye daisies close by the highway through some woods and it was less than 2 feet from the beaten track. It contained 5 eggs."

Geothlypis trichas trichas (Linnaeus)

Maryland Yellow-throat

Plate 98

Turdus trichas Linnaeus. Syst. Nat. Ed. 12. 1766. 1: 293
Trichas marilandica DeKay. Zool. N. Y. 1844. pt 2, p. 80, fig. 123
Geothlypis trichas trichas A. O. U. Check List. Ed. 3. 1910. p. 322. No. 681

geóthlypis, Gr., γῆ, earth, and Θλυπίς, a proper name, meaning unknown, word coined by Cabanis in 1847; *trîchas*, Gr., word for thrush or some similar bird, used by Aristotle

Description. *Adult male: Upper parts olive green; throat and breast bright yellow* changing to dingy white on the abdomen; frontlet and sides of the face, *the mask, jet black* bordered above by bluish gray. *Female:*

Entire upper parts olive green slightly more brownish than in the male; forehead often tinged with reddish brown; throat and breast yellowish, sometimes dingy white; rest of under parts whitish tinged more or less, especially on the sides, with brownish; whitish eye ring; no black mask.

Length 5.33 inches; extent 7.20; wing 2.20; tail 2.05; bill .42; tarsus .80.

Distribution. Breeds from North Dakota, northern Minnesota, northern Ontario and southern Labrador, south to central Texas, northern parts of the Gulf States and Virginia; winters from North Carolina and Louisiana to Florida, the West Indies and Guatemala. In New York this species is a summer resident of all parts of the State. Though it is confined to swampy localities, it is abundant in the coastal district as well as the central and western counties and even the interior of the Adirondacks where I found it breeding commonly at Elk lake and the " Flowed land " within a few miles of Mt Marcy. The spring migration begins from the 28th of April to the 10th of May, average date being May 5 in the south-eastern counties, May 4 in western New York. In the fall it disappears between the 15th and the 25th of October, in the coastal district, and from the 5th to the 15th of October in western New York. The Yellow-throat, like the Yellow warbler, Redstart and Ovenbird, is one of the dominant species of this family in New York, and is one of the four best known warblers in all portions of the State.

Haunts and habits. The Maryland yellow-throat is not a bird of the dense forest, but frequents the swampy thicket and the edges of moist woods, the margins of wooded streams, or dense tangles in damp open woodlands. I have even found it a member of the marsh society far from the edge of the wood, associated with the Swamp sparrows and Marsh wrens, especially where a few bushes were intermingled with the dense growths of flags and sedges. Where garden shrubbery lies near the edge of ponds or swampy tracts, the Yellow-throat will sometimes make its home among the berry and currant bushes or about the edges of the garden shrubbery. It spends most of its time near the ground but is rarely seen walking about like some of its near relatives, but almost continually flitting

from one weed or low bush to another, peering about in all sorts of crannies for caterpillars and other small insects.

The call note is a sharp *chick* or *chack*, sometimes changing to *chit* or *quit*. It also utters a variety of jarring, chattering notes almost suggestive of the scolding of a wren, sometimes a little long-drawn snarl, as Thayer calls it, a wrenlike "*b-r-r-r-r-r.*" Its song is a full-voiced performance but rather irregular in form. The commonest form has usually been written "*wichity, wichity, wichity,*" or "*rapity, rapity, rapity.*" This song is almost endlessly varied, but is a curious ringing whistle which will certainly be suggested by these attempts to syllabize the ditty.



Photo by L. S. Horton
Maryland yellow-throat on nest

The nest is usually placed on the ground or near it, among thick bushes or weeds, sometimes in a tussock of marsh grass, sometimes in a low bush or in a tangle of briers. It is rather bulky in construction, composed of dead leaves, coarse grasses and strips of bark, lined with finer grasses, tendrils and rootlets, sometimes a few long hairs. The eggs are 3 to 5 in number, usually 4, of a shiny white ground color, speckled, spotted and blotched with reddish brown, purplish black, umber and a few spots of lilac. Sometimes the markings are in long pen lines and forming a wreath near the larger end. The average size is .72 by .54 inches. Nesting dates in western New York and on Long Island vary from May 24 to 31, fresh sets being found as late as June 12. Occasionally nests with fresh eggs are found as late as the 4th to the 10th of July, possibly representing a

second brood, although I have no definite evidence that a second one is reared.

Icteria virens virens (Linnaeus)

Yellow-breasted Chat

Plate 98

Turdus virens Linnaeus. Syst. Nat. Ed. 10. 1758. 1:171
Icteria viridis DeKay. Zool. N. Y. 1844. pt 2, p. 126, fig. 71
Icteria virens virens A. O. U. Check List. Ed. 3. 1910. p. 324. No. 683

ictéria, from Gr., meaning jaundice, referring to the bird's yellow color; *virens*, being green

Description. Upper parts olive green; throat and breast rich yellow; belly white; lore black; stripe from nostril over the eye, upper and under eyelid and a narrow maxillary streak white; bill black; feet leaden blue. *Female:* Very similar but duller, especially the lore, which is grayish. *Young:* Like the female.

Length 7.44 inches; extent 10; wing 3; tail 3.15; bill .55; tarsus 1.02.

Distribution. Breeds from southern Minnesota, Wisconsin, Michigan, Ontario, central New York and southern New England to the gulf coast; winters from Pueblo and Yucatan to Costa Rica. The distribution of the Chat in New York is shown by the map on page 27, volume 1 of this work. It is a common summer resident in the lower Hudson valley and Long Island. It is extremely local in distribution in other portions of southern, central and western New York, occurring especially in the Delaware, Susquehanna and Chemung valleys and near the southern ends of the Finger lakes. The average date of arrival in southeastern New York is May 9, but it occasionally arrives as early as the 2d of May; in some seasons it is not noted till the 14th. In central New York the dates of arrival are somewhat earlier, averaging May 5; sometimes at Ithaca and Branchport as early as the 30th of April. The last fall dates occur between August 24 and September 13. Definite breeding dates from the interior of New York are as follows: Cohoes, June 19, 1878, A. F. Park; Kendall, June 1885 and 1889, David Bruce; West Seneca, June 17, 1895, James Savage; Holland Patent, June 6, 1898, Williams, Auk 15:331;

Granville, June 17, 1890, F. T. Pember; Chili, May 26, 1890, E. H. Short; Branchport, June 13, 1899, Stone, Auk, 16:285; Castleton, June 1897, nest and eggs in State Museum; Ithaca, 1900 to 1910, Fuertes, Wright and Allen; Penn Yan, July 8, 1900, Verdi Burtch; Monroe county, June 2, 1902, E. H. Short; Cincinnatus, June 25, 1902, H. C. Higgins; Peterboro, June 17, 1877, adult male but no nest reported, Gerritt S. Miller jr, Maxon, Auk, 20:266; South hill, Canandaigua lake, July 5, 1906, Burtch, Stone and Eaton; Oneonta, summer of 1900, W. E. Yager; Corning, summer 1902, George P. Hollister.

Haunts and habits. The Chat is not a bird of the dense woodland or of open situations, but is confined to thick coverts of shrubs, vines and young saplings, preferring a denser covert than even the Chestnut-sided warbler and the Catbird. It is rarely seen far from such situations and its distribution will depend on the presence of dense tangles of vines and shrubbery or thick growth of brush where the forest has recently been cut on some hillside pasture or where bushes are allowed to grow up in confusion upon the hillside or in some bit of swamp or bunch of rocks. Though the Chat is so averse to being seen, he will sometimes be found even within the limits of our villages and cities where suitable thickets of considerable extent are found and his loud song is frequently heard from the village streets and sidewalks. " The voice of this bird is flexible to an almost unlimited degree. It has no notes suggesting its place among the warblers. Perhaps the commonest note is a harsh, rather nasal *chuck*, often prolonged into *chuck-uck*. The song is almost impossible to describe. It begins with two slow, deep notes; then follows one high-pitched and interrogative note; then several, rapid and even, and from that point on to the end, I have never been able to give any rendering of the clucking and gurgling that completes the long song. As far as I have described, it may be rendered thus: *quoort-quoort! whee? whew-whew-whew!* " (Allison, Chapman " Warblers of North America "). Bicknell notes the song period from the date of arrival to the third or even the fourth week of July, quite regularly to the middle of the month. An imperfect song is

sometimes heard as late as August 14, the last perfect song, however, being heard between July 15 and August 1; but the *chut* or *chat* note can be heard as long as the bird is present. The wonderful performances of the Chat during his singing ecstacy have been well described by Taverner (Bird Lore 8, 131): "His love song is a woodland idyll and makes up for much of his shortcomings. From some elevated perch from which he can survey the surrounding waste for a considerable distance he flings himself into the air, straight up he goes on fluttering wings — legs dangling, head raised, his whole being tense and spasmodic with ecstacy. As he rises he pours forth a flood of musical gurgles and whistles that drop from him in silvery cascades to the ground, like sounds of fairy chimes. As he reaches the apex of his flight, his wings redouble their beatings, working straight up and down, while the legs hanging limply down remind the observer of drawings we sometimes see from the brushes of Japanese artists. He holds his hovering position for an instant, then the music gradually dies away and he sinks toward the ground. He regains his natural poise and seeks another perch like that from which he started." The nest of the Chat is placed in the midst of some thicket or tangle of vines or briers close to the ground, usually about 3 feet up. It is a rather bulky structure composed of dead leaves, grasses, weed stalks, strips of bark, lined with fine grasses. The eggs are from 3 to 5, usually 4 in number, pure white in ground color, sometimes tinged with pink or greenish; usually rather evenly spotted with reddish brown, chestnut and purplish lavender, rather sharp and clearly outlined, but sometimes forming a wreath near the larger end, the size averaging .92 by .72 inches. The nesting dates in southeastern New York range from May 25 to June 13; in central New York May 27 to June 14.

Wilsonia citrina (Boddaert)

Hooded Warbler

Plate 93

Muscicapa citrina Boddaert. Table Pl. Enl. 1783. 41
Wilsonia mitrata DeKay. Zool. N. Y. 1844. pt 2, p. 107, fig. 128
Wilsonia citrina A. O. U. Check List. Ed. 3. 1910. p. 324. No. 684

wilsónia, genus named by Bonaparte in honor of Alexander Wilson, father of American ornithology; *citrína*, like a citron, yellow

Description. *Upper parts olive green; face and under parts bright yellow;* 3 pairs of *outer tail feathers largely white;* a *jet black hood* covering the crown of the head extending around the sides of the neck and covering the throat, inclosing the brilliant yellow face. *Female:* The whole face and under parts yellow, black appearing behind the crown and running down the side of the neck, barely indicating the hood.

Length 5.67 inches; extent 8.25; wing 2.58; tail 2.3; bill .4; tarsus .77.

Distribution. Breeds from southeastern Nebraska, southwestern Michigan, central New York and the lower Connecticut valley south to Louisiana and Georgia; winters from Vera Cruz and Yucatan to Panama, occasionally to Cuba. Its breeding range in New York is shown by the map on page 28 of volume 1 of this work. It is rare on Long Island and apparently occurs only as a transient visitant in the immediate vicinity of New York, and in Westchester county it is also a rare species; but farther north and west, especially near Highland Falls, it is found as an abundant summer resident; also at Palenville, Greene county (La Dow, Auk, 25:480). In the interior of New York its distribution is local, but breeding colonies of considerable extent have been noticed in Cortland county by Higgins; in Madison county by Maxon, Bagg and Embody; in northern Cayuga and Wayne counties by Rathbun and Wright; near Brockport by David Bruce; near Forest Lawn, Monroe county, by Dr C. A. Dewey and Mr George Perkins; near Springville by E. H. Eaton; in East Hamburg by Thomas N. Bunting; near Mayville by A. E. Kibbe. The date of the arrival of the Hooded warbler in spring averages May 5 in southeastern New York; in central New York from the 6th to the 12th of May; Long Island records,

which are very few, range between April 30 and May 14. The last appearance in the fall is usually between the 1st and 8th of September. In the vicinity of New York Chapman gives September 20 to 30.

Haunts and habits. The Hooded warbler prefers a deciduous forest although mixed woodlands are frequently occupied in central and western New York. The preferred growth is beech, maple, cherry and hornbeam, or oak, chestnut, hickory and sassafras, or oak and laurel, and if the woodland is rich and well watered it is all the more attractive to this beautiful warbler — not open woodland, but rather mature forest, with a considerable growth of saplings and underbrush of moderate height. The males are frequently seen above the line of undergrowth in the lower branches of the taller trees, singing their songs throughout the breeding season.

This song is well characterized by Chapman in his " Warblers of North America " as distinguished by an " easy, sliding gracefulness. To my ear the words ' You must come to the woods or you won't see me,' uttered quickly and made to run one into the other, exactly fit the bird's more prolonged vocal efforts though they are far from agreeing with the attempts at syllabication of others. The call is a high, sharp chip, easily recognized after it has been learned." Allison says the usual note is clear and nervous, but not a metallic chirp. " There are two common songs, both uttered on every possible occasion in spring when the woods are ringing with them. The most frequent is a short one of four syllables '*se-whit, se-wheer*'; a longer song may be rendered ' *Whee-whee-whee-a-wheer,*' accented as marked. A sharp or very clear-cut *chirt* is sometimes to be heard late in the evening, about dusk." Bicknell agrees with Allison and other observers in noting two distinct songs of this warbler. He has heard the song as late as July 1 to 15 and occasionally again during the fourth week of August. The song of this warbler is one of the few which the author can hear with perfect distinctness and enjoy. While the song of the Chestnut-sided warbler is audible to him only for a distance of 5 or 6 rods, and the song of the Blackpoll is utterly inaudible even at a distance of 3 rods, the song of the Hooded warbler can be heard almost throughout the forest for a dis-

tance of 30 or 40 rods, and the description which is given by Langille seems to fit very well the birds of western New York as it did when he described it years ago in his "Birds in Their Haunts": "*che-reek, che-reek, che-reek, chi-di-ee,*" the first three with a loud, bell-like ring, the rest much accelerated with a falling inflection.

The nest of the Hooded warbler is usually placed in a low sapling or bush from 1 to 3 feet from the ground. In my experience it is the easiest of all the warbler nests to find. Wherever I have noticed a Hooded warbler singing in a patch of woodland, I have been very successful in locating the nest by placing my eye close to the ground and looking through the shrubbery from below the cover of the undergrowth. Then the nest will almost surely be seen if one is within a few rods, appearing like a bunch of leaves a short distance above the ground. As soon as the female is frightened from the nest she flits about from bush to bush, flashing her tail and uttering a mild *chip* or *cheep*. The nest bears some resemblance to that of the Indigo bird, but is more neatly constructed of dry leaves, strips of bark, grasses and rootlets lined with fine grasses and sometimes a few dark rootlets. The eggs are 3 to 5 in number, almost always 4, creamy white in ground color, rather sparingly spotted, especially in wreaths about the larger ends, with reddish chestnut, purplish, and obscure shell markings of pale lavender. The average size is .74 by .54 inches. Nesting dates from southeastern New York range from May 26 to June 15; from western New York May 18 to June 12.

Wilsonia pusilla pusilla (Wilson)

Wilson Warbler

Plate 98

Muscicapa pusilla Wilson. Amer. Orn. 1811. 3: 103. pl. 26, fig. 4
Wilsonia pusilla DeKay. Zool. N. Y. 1844. pt. 2, p. 108, fig. 117
Wilsonia pusilla pusilla A. O. U. Check List. Ed. 3. 1910. p. 325. No. 685

pusílla, Lat., small

Description. *Upper parts olive green; crown shining jet black* bordered on the frontlet and sides of the head with bright yellow; under parts bright

yellow. *Female:* Like the male, but the colors less bright and the black cap more or less veiled. *Fall specimens:* The crown tipped with olive in the male, the *young females lacking the black cap.*

Length 5 inches; extent 6.97; wing 2.21; tail 2; bill .32.

Distribution. Breeds from central Mackenzie, central Keewatin and central Ungava and central Newfoundland south to southern Saskatchewan, northern Minnesota, central Ontario, New Hampshire, Maine and Nova Scotia. Winters from Guatemala to Costa Rica. Migrates mainly along the Alleghanies. In New York this warbler is only a transient, the most careful search for it in the Adirondacks having, as yet, been fruitless, although it is recorded from northern New Hampshire and Maine as a summer resident. The spring migration begins near the coast from the 9th to the 17th of May, the 12th being the average date. In western New York it is occasionally noted as early as the 3d of May, but the 11th seems to be the average date of arrival. The last birds pass northward between the 22d and 31st of May, a few dates in southeastern New York running as late as June 13. In the fall, migrants come from the north between the 10th and the 27th of August, sometimes not before the 9th of September, and the last depart for the south from the 1st to the 6th of October. The species is rather erratic in abundance, some years scarcely being noticed at all, other seasons appearing in large numbers, but in general, it is called an uncommon species in the southeastern portion of the State and in many stations of central New York it is regarded one of the rarer warblers; but in all localities near the southern shore of Lake Ontario as well as the region about the central lakes, the Wilson warbler is quite regular in occurrence, but the abundance varies as has been noted by many observers. The late David Bruce of Brockport called my attention to the fact that during the years while he was collecting in Monroe county he was unable to secure specimens of the Black cap for several seasons; then perhaps in one day he would notice hundreds of the species and be able to secure all the specimens he needed for years to come. Personally, I have succeeded in recording the species every spring, while observing in Monroe, Erie and Ontario counties, but, on the average, it is considerably less

common than the Canada warbler, but decidedly more common than the Tennessee and Orange-crowned warblers during the spring migration.

Haunts and habits. Wilson's black cap is usually noticed among the lower shrubbery, thickets, brush piles and undergrowth at the edge of the forest rather than in the taller trees. "Its song suggests somewhat in miniature that of the Northern water thrush although it is itself quite loud and rich, a bright, hurried, rolling twitter, suddenly changed into more of a trill, richer and somewhat lower in tone. The first portion of the song varies in length and richness, sometimes longer and fuller in tone, more often shorter and weaker than the second, while some individuals omit it altogether, uttering only the trill when the song is rather difficult to recognize. This song is about as loud as that of the Nashville warbler or slightly louder and resembles it somewhat. The call note is a weak but ringing *tschip*." (Gerald Thayer MSS.)

Wilsonia canadensis (Linnaeus)

Canada Warbler

Plate 94

Muscicapa canadensis Linnaeus. Syst. Nat. Ed. 12. 1766. 1:327
Sylvicola pardalina DeKay. Zool. N. Y. 1844. pt 2, p. 91, fig. 115
Wilsonia canadensis. A. O. U. Check List. Ed. 3. 1910. p. 325. No. 686
canadénsis, of Canada, quite appropriate name of this warbler

Description. *Upper parts bluish gray;* forehead and spot before and behind the eye mostly black; *under parts yellow;* a well-defined *necklace of black streaks* on the forebreast and lower neck; *loral stripe and eye ring yellow. Female:* In similar pattern but less brightly colored, and black on the forehead and cheeks obscured; the black necklace also less pronounced. *Young:* Like the female but duller and tinged with brownish on the back; black necklace scarcely discernible.

Length 5.61 inches; extent 8.1; wing 2.53; tail 2.23; bill .4; tarsus .75.

Distribution. Breeds from central Alberta, southern Keewatin, northern Ontario, northern Quebec and Newfoundland south to Minnesota, Michigan and Massachusetts; in the Alleghanies to North Carolina and Tennessee; winters from Guatemala to Educador and Peru. The distri-

bution in New York is shown by the map on page 28, volume 1 of this work. It is a common summer resident of the second growth, slashings and burnt lands of the Catskills and Adirondacks, and in many localities in central and western New York. Miller and Maxon have found it a common summer resident in the vicinity of Peterboro; Ralph and Bagg in northern Oneida county; Embody near Verona Beach, Oneida lake; Burtch and Stone in Potter swamp; W. E. Yager near Oneonta; Reed and Wright south of Ithaca; James Savage and the author in Bergen swamp; the author in the gully sides and hill slope woodlands of Cattaraugus and southern Erie counties; H. L. Achilles in "the gulf" near Chautauqua lake. The spring migration of this species begins from the 3d to the 12th of May both in eastern and western New York, average date being about May 8. Some seasons it has not been noted earlier than May 14. The principal migration flight is passed by the 25th or the 28th of May. In the fall the return migration begins from the 10th to the 21st of August and the last migrants depart between September 19 and October 12.

Haunts and habits. The Canada warbler during the migration season is found about our dooryard shrubbery, and the thickets on the edges of streams and woodlands. It is very spritely at this season and its song is frequently heard. It feeds nearer the ground than the *dendroicas*, as is the case with the Wilson and the Hooded warblers. I am always sure to find it about the tangles of vines and berry bushes in neglected spots near the edges of the villages, cities and parklands during the first three weeks of May. In the nesting season we must seek for it in the cooler gullies of central and western New York or in damp, cool woodlands of deciduous or mixed growth, usually at an altitude of 1000 to 2000 feet, but it nests in Bergen swamp as well as Oak Orchard swamp where the altitude is scarcely above 500 feet, and the evidence seems to indicate that a high degree of humidity and a dense covert of herbs and shrubbery is more to be desired by this species than a low temperature, although the two may go together. In Potter swamp the Canada warbler is found in the same situations as those preferred by the Mourning and Golden-

winged warblers, in close proximity to the nesting sites of the Water thrush and Maryland yellow-throat. It is not a warbler of the dense woodland, but prefers an open growth of trees with a dense undergrowth of vines and shrubbery. In Erie and Cattaraugus counties I have noticed the nest usually concealed among a dense growth of ferns and blackberry bushes close to the ground or resting upon it, a rather bulky affair constructed of weed stalks, leaves, grasses and strips of bark lined with fine grasses and sometimes a few long hairs. The eggs are 3 to 5 in number, usually 4, of a white ground color marked more or less thickly with spots and blotches of reddish brown, gray and lavender. The average dimensions are .68 by .52 inches. Nesting dates in central and western New York vary from June 1 to 20, usual date June 6.

" The song is very brisk and clear toned, a series of 10 or more short notes uttered in rapid succession and with considerable snap, a very pretty warble and one of the most noticeable warbler songs to be heard in the east, frequently uttered during migration. The call, a peculiar '*tang*,' is recognizable by its vigor and somewhat metallic or ringing tone " (Gerald Thayer MSS.). Chapman syllabizes the song as "*rup-it-che, rup-it-che, rup-it-chitt-it-lit.*"

Setophaga ruticilla (Linnaeus)

Redstart

Plate 97

Motacilla ruticilla Linnaeus. Syst. Nat. Ed. 10. 1758. 1:186
Muscicapa ruticilla DeKay. Zool. N. Y. 1844. pt 2, p. 111, fig. 68
Setophaga ruticilla A. O. U. Check List. Ed. 3. 1910. p. 326. No. 687

setóphaga, from Gr., meaning insect-eating; *ruticílla*, from Lat., red-tail

Description. *Male:* Colors salmon *orange and black*, the orange appearing in 2 conspicuous patches on the sides of the breast and zones through the basal portion of all the wing feathers and the basal portion of all the tail feathers except the central pair; black forms nearly all the remaining upper parts, especially the head, neck, back, the greater portion of the wings, the central tail feathers and the terminal zone of the tail; the central abdomen white. *Female:* Grayish *olive brown* where the male is black on the upper parts *and yellow* where the male is orange,

the head being nearly plain gray; the throat and under parts grayish white; yellowish patches on the sides of breast and sides of tail are conspicuous; the yellow patch in the wing is not as extensive as the male's orange patch. Young resemble the female, young males in the spring passing gradually into the plumage of the adult. Specimens midway between the colors of the male and female are frequently seen showing more or less black feathers on the breast and gradually changing into the black plumage of the male on the back.

Length 5.42 inches; extent 7.9; wing 2.57; tail 2.27; bill .35; tarsus .66.

Distribution. Breeds from central British Columbia, central Mackenzie, southern Keewatin, northern Quebec and Newfoundland to Washington, Colorado, Arkansas and North Carolina; winters in the West Indies and from central Mexico to Ecuador and Guiana. It is a common summer resident of New York, breeding in all portions of the State. I have found its nest in Central Park, New York City, and in all the deciduous woodlands examined in eastern, central and western New York, and in the slashings of the McIntyre Iron Company on the slopes of Skylight and Mt Marcy in the Adirondacks. The Redstart is probably as universally distributed as the Ovenbird and the Yellow warbler but is not becoming accustomed to civilized conditions so rapidly as the latter, though adapting itself, perhaps, more easily than the Ovenbird. The spring migration begins between the 27th of April and the 7th of May, depending upon the advance of the season, average date near New York being about May 1; in western New York, May 2 or 3. In the fall the last migrants depart between the 23d of September and the 4th of October.

Haunts and habits. The Redstart prefers a deciduous woodland with plentiful undergrowth of saplings and low trees. I have found it nesting in low, damp woods as well as in dry, well-drained upland woods; also in mixed woodland with a considerable growth of pine or hemlock, and in the Adirondacks where spruces occupy half the ground. This flaming little warbler is one of the liveliest of the family, continually fluttering about among the foliage and darting after flying insects, being almost as expert a flycatcher as the Wood pewee; in fact, the shape of its bill and the bristling of the rictus have often beguiled ornithologists into

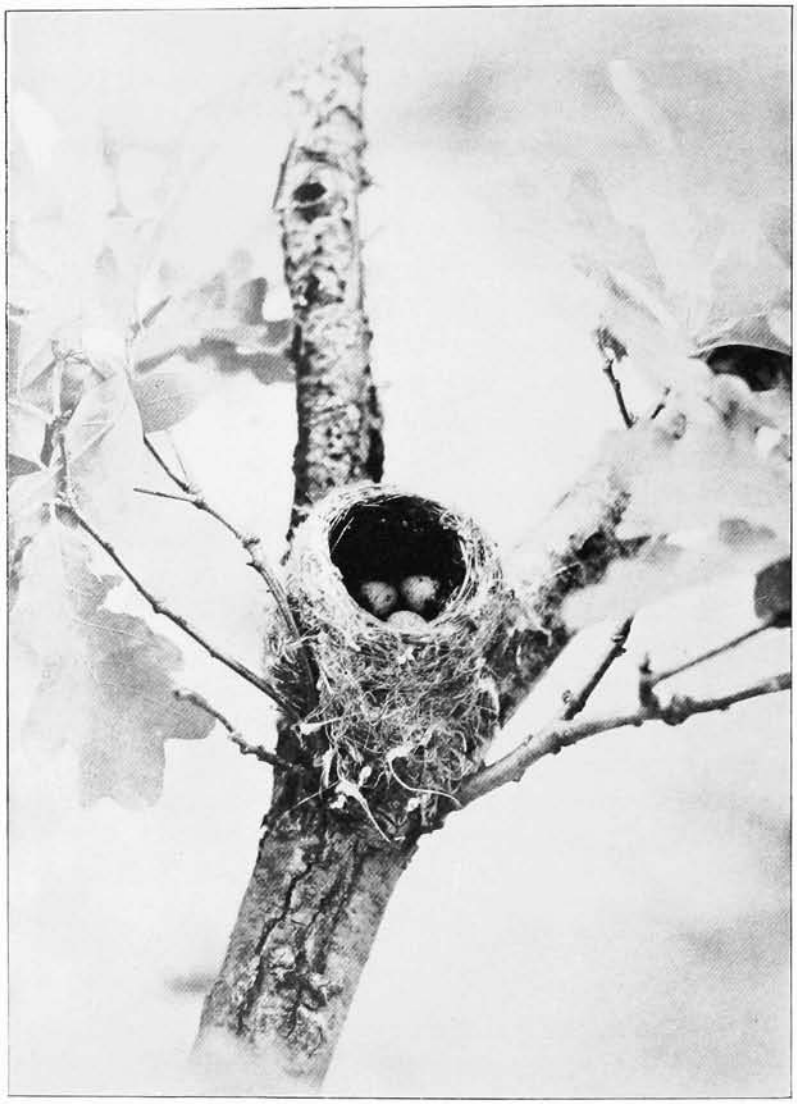


Photo by Ralph S. Paddock

Redstart's nest and eggs

placing it among the true flycatchers. As it flutters about the foliage it carries the wings and tail partially expanded, being even more addicted to this habit than the Magnolia warbler or any member of the family with which I am familiar. The general resemblance to the flitting of a butterfly has often been remarked by bird students with whom I have visited its haunts.

The call note of the Redstart is a characteristic *tsip*. The Redstart has several distinct songs. Chapman syllables one as "*ching, ching, chee; ser-wee, swee, swee-e-e.*" Another is often written "*zee-zee-zee,*" sharp and rasping in tone, suggestive of the Black and white warbler's. Sometimes it has a resemblance to the *buzz* of the Parula's song; again to the *wheezing* of the Black-throated blue. It is always so thin and wiry in quality that the author is unable to hear it for more than twice the distance of the Black-poll warbler's song.



Photo by L. S. Horton
American redstart on nest

In my experience the nest of the Redstart is the most neatly constructed of any of our warblers' nests, though not so elaborate or so highly ornamented as some. The materials used are fine shreds of plant down, the thin gray outer covering of milkweed stalks, spiders' webs, the inner bark of vines, and grasses, woven into a thin but compact and shapely cup, lined with fine grasses and thin brown shreds of bark and brownish root fibers and long horse hair; rarely a few feathers are found in its construction. The nest is usually placed in the upright fork of a sapling from 6 to 12 feet from the ground although I have found many nests in oaks, maples and beeches at a height of 20 and even 35 feet. The eggs are 3 to 5 in number,

almost universally 4, of a beautiful creamy white ground color, rarely with a greenish tinge, marked with specks and blotches of cinnamon brown, reddish, lilac and occasionally a few dark umber spots, with obscure shell markings of lavender. Sometimes a distinct wreath is formed near the larger end and the rest of the egg is nearly plain; sometimes these markings are more evenly distributed. The eggs in my experience vary considerably in size, but the average dimensions are about .64 by .48 inches. Nesting dates in western New York vary from May 20 to June 10. Later fresh sets are often found as late as the 26th of June or even the 10th of July. The average date for fresh eggs, however, is May 28. Near New York City many fresh sets are recorded as early as May 17.

Family MOTACILLIDAE

Wagtails

Wings rather long and pointed; secondaries large and elongated; primaries only 9; tail as long as the wing, square or rounded; bill shorter than the head, slender, acute, straight and notched near the tip; nostril uncovered; rictus slightly bristled; tarsus slender and scutellate; toes long and slender, the inner one cleft, the outer one joined by half its joint to the inner; hind toe with long straightish claw; plumage somewhat variegated; moult double.

The wagtail family is more developed in the Old World than in America. The members are medium small in size, more or less gregarious and migratory in habit; they are insectivorous and largely terrestrial, our species being walkers like the larks to which they bear a decided resemblance both in structure and habits. They differ from the larks, however, in the structure of the bill, the tarsus and the double moult. Our American species are boreal or arctic in distribution and are only birds of passage in the eastern states, frequenting the bare shores, mud flats and wide plowed fields.

Anthus rubescens (Tunstall)

Pipit

Plate 69

Alauda rubescens Tunstall. Orn. Britannica. 1771. 2
Anthus ludovicianus DeKay. Zool. N. Y. 1844. pt 2, p. 76, fig. 99
Anthus rubescens A. O. U. Check List. Ed. 3. 1910. p. 328. No. 697
ánthus, Gr., ἄνθος, some kind of a small bird; *rubéscens*, Lat., becoming red

Description. *Upper parts grayish brown;* centers of the feathers showing obscure dusky shaft streaks; wings and tail fuscous; wing coverts tipped with buffy and wing feathers edged with the same; a buffy superciliary line; *under parts* varying from dull white to *buff* or even ocherous; *streaked with blackish on the breast and sides;* the 2 *outer tail feathers* largely *white*. *Fall specimens* are *browner* on the upper parts; *spring birds* often slaty gray. Sexes alike. Hind claw elongated.

Length 6.25–7 inches; extent 10.25–11; wing 3.25–3.50; tail 2.75–3; bill .5; tarsus .9.

Distribution. The Pipit is an arctic species, breeding in northern Alaska, Mackenzie, west coast of Davis strait, west coast of Greenland, south to Great Slave lake, central Keewatin and Newfoundland, occasionally south in the mountains to California, Colorado and New Mexico. Winters from southern California, Ohio and New Jersey to the gulf coast and Guatemala. In New York State it is an abundant transient visitant in suitable localities, arriving on the coast of Long Island from the 12th to the 29th of March and disappearing from the 15th to the 25th of April, a few sometimes remaining until the 3d or even the 27th of May. In western New York the spring migration occurs mostly in April, but the species is much less common in the interior of the State during the spring than during the fall migration. Records from Erie and Monroe counties vary from the 15th of April to the 12th of May. In the fall the Pipit makes its appearance from the 16th to the 24th of September, sometimes as early as the 6th, and departs for the south from the 25th of October to the 16th or even the 30th of November, a few individuals remaining throughout the winter on the tidal flats of Long Island. During the fall

migration it is exceedingly abundant on the mud flats and marshes of the central lake region and the shores of the Great Lakes, as well as along the larger rivers and on the coast of Long Island, occurring in the same localities as the Pectoral and Red-backed sandpipers.

Haunts and habits. When disturbed, the pipits rise with an easy undulating flight, uttering a soft *dee-dee*, mounting high in the air and hovering about over the marshes, sometimes returning to within a few feet of the intruder. They walk about or run hurriedly over the muddy and sandy shores in search of aquatic insects and seeds which are left by the receding water. In the spring, when the flats of western New York are usually flooded with water, the Pipit occurs mostly on plowed fields and burned tracts, and even on the hilltops. I have noticed the spring specimens are of a much more grayish cast above and of a lighter shade on the under parts than the fall specimens.

Family MIMIDAE

Thrashers

Wing short and rounded; 10 primaries; tail large, long and rounded; bill slender, usually more or less curved, about equal to the head in length; rictus bristled; tarsus equal in length to the middle toe with its claw, the toes deeply cleft; size medium; colors rather sober grays and browns.

Thrashers are closely related to the wrens and are fully as melodious in voice, some of them often surpassing the thrushes in this respect, especially our world-famous Mockingbird which is regarded by some as the best songster of the world. They frequent low growth and shrubbery and often seek their food upon the ground. They are largely insectivorous, but resort more than the wrens to a diet of fruit in its season. The family is exclusively American and numbers about 40 species, more southerly in distribution than the wrens, barely reaching beyond the upper austral zone. They are only slightly less nervous and spritely in habits than the wrens, continually bobbing about or pumping their tails, which has given them the family name of Thrasher. The nests are bulky and constructed

in a thick covert of shrubbery. The eggs are usually 4 or 5, of a color varying from deep bluish green to grayish and speckled.

The food and economic relations of the thrashers are discussed in the Yearbook of the United States Department of Agriculture for 1895, pages 405–18; also in various bulletins of the Biological Survey, especially no. 17 by Doctor Judd.

Mimus polyglottos polyglottos (Linnaeus)

Mockingbird

Plate 101

Turdus polyglottos Linnaeus. Syst. Nat. Ed. 10. 1758. 1:169
Orpheus polyglottus DeKay. Zool. N. Y. 1844. pt 2, p. 67, fig. 84
Mimus polyglottos polyglottos A. O. U. Check List. Ed. 3. 1910. p. 331. No. 703

mímus, a mimic; *polyglóttos*, from Gr., meaning many tongued

Description. Upper parts *ashy gray;* lower parts soiled white; wings and tail fuscous; basal portion of the primaries and a portion of the greater coverts white showing as a *large white wing patch* in flight; 3 *outer tail feathers largely white*, the outermost one entirely so. *Young:* Brown; lower parts dull whitish, speckled with dusky.

Distribution. The Mockingbird inhabits the southern United States from eastern Nebraska, Illinois, Ohio, Maryland, to eastern Texas and southern Florida, occasionally as far north as Wisconsin, Ontario and Massachusetts. On Long Island and in southeastern New York this bird has been reported on numerous occasions and there seems to be some evidence that it has bred near Rockaway, Long Island, and possibly in other portions of southeastern New York; but no definite evidence to this effect has ever been brought forward. The New York specimens have been recorded as follows: Rockaway, Long Island, September 1871 (Lawrence, Forest and Stream, 10, 235); Rockaway, November 7, 1877 (Lawrence, N. O. C. Bul. 3:129); Riverdale, October 28, and November 21, 1877 (Bicknell, N. O. C. Bul. 3:129); Brooklyn, 1877 (Coues, N. O. C. Bul. 4:32); Gravesend, August 9, 1879, young bird (DeL Berier, N. O. C. Bul. 5:46); Fort Hamilton, October 1 and 2, 1880 (DeL Berier, N. O.

C. Bul. 6:125); Flatbush, Long Island, November 1884 (Dutcher, Auk, 5:183); Millers Place, Long Island, May 10, 1887 (A. H. Helme); Shelter island, April 29, 1891 (W. W. Worthington); Croton-on-the-Hudson, winter of 1899 (Miss Annie Van Cortlandt); Floral Park, Long Island, August 27, 1900 (Childs, Auk, 17:390); Rockaway Beach, September 14, 1902, a young bird (Braislin, Auk, 20:53). In the interior of New York it has also been taken, especially in the western portion of the State. J. L. Davison reports a specimen from Lockport, December 27, 1906; Ottomar Reinecke writes that it has been taken occasionally near Buffalo; Miss Evelyn Moore reports it from Olean; and several specimens have been seen in the vicinity of Rochester by different bird students nearly every year for the last 10 years, sometimes in the spring, especially in May; other times they appear in the early winter and have been observed week after week, but in every instance, although the birds have been fed, they seemed unable to survive the coldest part of the winter, usually disappearing about the third week in January. Near the shore of Lake Erie, between Dunkirk and Silver Creek, it is supposed to breed, but I have never known of any person who has found its nest. Miss Sarah Waite observed it in full song in that vicinity during the spring of 1900. It is thus evident that this famous songster is scarcely able to withstand our northern winters, although it may breed occasionally within the limits of the State. If it would only migrate a few hundred miles to the southward and return again in the spring this bird could undoubtedly be introduced in New York, but all specimens which have been liberated have disappeared.

Haunts and habits. The wonderful song powers of the Mockingbird are too well known to require description. In habits it resembles our Brown thrasher, to which it is closely related. Its nest also is similar to the thrasher's nest, but usually placed in thick bushes. The eggs are of a bluish green ground color, heavily speckled with different shades of brown. They average 1 by .75 inches in dimensions.

Dumetella carolinensis (Linnaeus)

Catbird

Plate 101

Muscicapa carolinensis Linnaeus. Syst. Nat. Ed. 12. 1766. 1:328
Orpheus carolinensis DeKay. Zool. N. Y. 1844. pt 2, p. 69, fig. 85
Dumetella carolinensis A. O. U. Check List. Ed. 3. 1910. p. 331. No. 704

dumetélla, diminutive of Lat., *dumetum*, thornbushes or thicket, referring to the bird's chosen habitat

Description. Tail long and rounded; color *slaty gray*, lighter below; *crown and tail black;* under tail coverts chestnut; exposed portion of the wings like the back. This is our only dark slaty bird, slightly smaller than the Robin, with nearly uniform coloration, with restless habits, almost continually pumping its tail like the rest of the thrashers.

Length 8.5–9 inches; extent 11–12; wing 3.5–3.7; tail 3.6–4; bill .65.

Distribution. The Catbird inhabits eastern North America, breeding from British Columbia, central Alberta, Saskatchewan, southern Manitoba, central Ontario, southern Quebec and Nova Scotia, to northeastern New Mexico, eastern Texas and northern Florida. Winters from the Southern States to Cuba and Panama. In New York it is uniformly distributed throughout the Carolinian and Alleghanian zones, but does not enter the spruce and balsam forests of the Catskills and Adirondacks, although it penetrates those districts along the clearings and river valleys up to an elevation of 2000 feet. Throughout the settled portions of the State it is one of the dominant species, almost equaling the Chipping sparrow and Red-eyed vireo in abundance. It arrives from the south from the 20th to the 30th of April in the warmer portions of the State, from the 5th to the 10th of May farther north; and departs in the fall from the 5th to the 25th of October. In the coastal district a few individuals remain throughout the winter, but in western New York this is a very rare occurrence, and those which do not migrate are usually destroyed by the coldest weather of January and early February.

Haunts and habits. This is one of the best known of our common

birds, frequently taking up its abode under the very windows of the farmhouse, and, wherever it is protected, seems to prefer the vicinity of human habitation, frequently nesting in the barberry bushes and other shrubbery of lawns in the midst of our cities and villages. It is never found in the depths of the forest but prefers clearings and the thicket at the edges of woodlands, the hedgerows and shrubbery on the edges of streams and gullys, and the edges of pasture land. Though constantly seen and heard, it seldom ventures far from the protecting coverts of the thicket and does not seek so elevated a perch while delivering its song as is the custom with the Brown thrasher. This song of the Catbird seems to me, at its best, not quite equal to that of the Brown thrasher, just as the Thrasher scarcely equals the best performance of the Mockingbird. Nevertheless, he is a famous songster. If he would only omit the scolding notes and catlike "meows," which are frequently interspersed with his rarest notes, he would be one of our favorite song birds.



Photo by James H. Miller
Catbird at nest

The Catbird's nest is placed only a few feet from the ground in some dense shrub or vine and is rather a bulky affair, the exterior composed of long sticks and straws, and the inner nest carefully woven of reddish brown rootlets. The eggs are from 3 to 5 in number, usually 4, of a deep bluish

green color, and average .95 by .70 inches in size. They are laid from the 15th to the 30th of May, and second sets are often observed as late as the first week in August, evidently two broods often being reared in a season in our latitude.

This bird is undoubtedly a beneficial species. The greater part of its food during the spring and summer consists of injurious insects. It kills



Photo by Ralph S. Paddock

Catbird's nest and eggs

quite a number of ground beetles and other predaceous insects, however, and as soon as cultivated cherries and berries are ripe it takes a considerable toll of these fruits. Furthermore, he occasionally destroys the eggs of other birds, a habit which, in justice, we must say is not characteristic of this species. I suspect that, like the House wren, he dislikes near neighbors because his food range about the nest is rather circumscribed, and finds

it to his advantage to have a clear field for his operations. In the autumn the Catbird's food consists largely of wild fruit. After all has been said, we must consider the Catbird less agreeable as a neighbor than the Robin or even the Cedarbird, for its scolding notes become exceedingly monotonous, especially when they are uttered day after day, as usually happens whenever the owner of the premises appears. He becomes more inconspicuous as a neighbor after the first week of August, sometimes singing slightly for a week or two before his departure in October, after the moult has been completed.

Toxostoma rufum (Linnaeus)

Brown Thrasher

Plate 101

Turdus rufus Linnaeus. Syst. Nat. Ed. 10. 1758. 1: 169
Orpheus rufus DeKay. Zool. N. Y. 1844. pt 2, p. 68, fig. 82
Toxostoma rufum A. O. U. Check List. Ed. 3. 1910. p. 332. No. 705
toxóstoma, from Gr., bow-mouth, that is, curved-billed; *rúfum*, Lat., reddish

Description. *Upper parts bright rufous* or reddish brown; the wing coverts tipped with buffy whitish tending to form 2 wing bars; *under parts* buffy whitish *heavily streaked with black* except on the throat and center of the abdomen. Whenever the amateur sees a brown-backed bird longer than a Robin, with heavily spotted breast and long rounded tail, he may be sure it is a Thrasher.

Length 11.5–12 inches; extent 12.5–14; wing 3.8–4.25; tail 5; bill 1; tarsus 1.3.

Distribution. The Brown thrasher inhabits eastern North America from southern Alberta and Manitoba, northern Michigan, southern Ontario, southern Quebec and southern Maine to eastern Louisiana, Mississippi, Alabama and northern Florida. Winters from southern Missouri and North Carolina to Texas and southern Florida. In New York its range coincides very closely with that of the Catbird, but it is less common than that species, especially in the colder portions of the State. The spring migration is performed between the 15th and 25th of April in the warmer counties, from the 1st to the 10th of May in the northern portions. It sometimes appears about New York City as early as the 2d of April, and disappears

in the fall from the 10th of October to the 3d of November, a few individuals remaining throughout the winter in the warmer districts. It sometimes tries to winter in western New York, but is usually killed by the coldest weather of January and February.

Haunts and habits. The Brown thrasher has not learned to tolerate the presence of mankind so well as the Catbird. He prefers hedgerows, thickets, hillside pastures and dry fields overgrown with shrubbery and vines. He seeks his food mostly upon the ground, rustling about and scratching the dry leaves in search of worms and insects hidden beneath them.



Photo by Clarence F. Stone
Brown thrasher's nest and eggs

The song of the Thrasher is one of the loudest and richest bird melodies that can be heard in New York State. When one has listened to this bird in full song he is sure to carry a memory of the wonderful song which is usually delivered from a lofty perch — sometimes the dead top of a tall tree — where he sings during May and early June by the half hour, especially early in the morning and on cloudy or rainy days. The song bears considerable resemblance to that of the Mockingbird, and anyone who is familiar with the Catbird's song can picture to himself the song of the Thrasher by considering all the "meows" omitted and the notes made fuller, louder and richer until the whole hillside resounds with the melody. The alarm note of the Thrasher is a sharp *click*, but louder and sharper than the corresponding note of the Catbird.

The nest is placed close to the ground or even on it, in the midst of

a dense thicket or a tangle of vines. The nesting materials consist of twigs, straws, leaves and coarse rootlets. The eggs are usually 4 in number, sometimes 3 or 5, grayish white or bluish white in ground color, thickly and rather evenly speckled with minute spots of cinnamon or rufous brown. They average 1.1 by .8 inches in dimensions. In the southern portions of the State the first eggs are laid from the 15th to the 25th of May; one or two weeks later in the northern counties.

In the spring and summer the Thrasher's food consists principally of worms and ground-inhabitating insects. Later in the season it partakes freely of cherries, berries and other fruits. It is to be regretted that so famous a songster and so striking a bird as the Thrasher will not become accustomed to the presence of man and live familiarly about our gardens and lawns like the Robin and the Catbird, but it seems to be scarcely more accustomed to the presence of mankind than when the first settlers found him on the edges of their clearings.

Family TROGLODYTIDAE

Wrens

Wing short and rounded; primaries 10, the first not noticeably reduced; tail for the most part short and rounded, in some species, however, longer than the wing; bill slender, nearly straight, as long as the head or, in some species, considerably less; nostril oval, uncovered by feathers but with an overhanging scale; the rictus is not bristled; tarsus scutellate; the inner toe joined by more than half its first joint to the outer toe. In size the wrens are small birds, gray and mottled brown in coloration. In disposition they are fearless or impertinent, spritely and rather quarrelsome, insectivorous in diet, and migratory in habits. They are among our most prolific songbirds, laying from 7 to 9 eggs or even more and frequently rearing two broods in a season. In the family there are over a hundred species on both continents, our little winter wren, which is so common in the North Woods, being the representative of " Jenny Wren " of England, though our House wren fills more nearly her place in the economy of our gardens and

orchards. The wrens are among our most exclusively insectivorous birds, and undoubtedly do a great amount of good about the thicker portions of the garden shrubbery and hedges where few other birds glean their livelihood. The especial value of the wren, as shown by examination of its stomach contents, may be found in the Yearbook of the United States Department of Agriculture for 1895, pages 416–18; and in bulletin 17 of the Biological Survey, pages 45–46 and 416–18.

Thryothorus ludovicianus ludovicianus (Latham)

Carolina Wren

Plate 102

Sylvia ludoviciana Latham. Index Orn. 1790. 2: 548
Troglodytes ludovicianus DeKay. Zool. N. Y. 1844. pt 2, p. 55, fig. 94
Thryothorus ludovicianus ludovicianus A. O. U. Check List. Ed. 3. 1910. p. 337. No. 718

thryóthorus, from Gr., θρύον, rush, and θορεῖν, to jump; *ludoviciánus*, of Louisiana

Description. The largest of our wrens. *Rufous brown; wings and tail barred with black;* a conspicuous white superciliary stripe; *under parts buffy* to *ocherous*, becoming nearly white on the throat.

Length 5.5–6 inches; extent 7.5; wing 2.4; tail 2.2; bill .65; tarsus .75.

Distribution. The Carolina wren inhabits the eastern United States, breeding from southern Iowa, Ohio, southern Pennsylvania and the lower Hudson and Connecticut valleys to the Gulf States. It is practically resident wherever found. In New York it is confined principally to the lower Hudson valley, especially the western shores of the Hudson, to Staten Island and Long Island, but has been reported occasionally from all portions of the austral zone of New York, especially from Crow hill, Flushing, Roslyn, Westbury station, Bellport, on Long Island; and Gardner's island, where it was found a common resident by Chapman in 1903 (see Bird Lore, 5:175, 182), and was also noted by Bruen in 1904 (Wilson Bulletin 50:18); from Staten Island, Manhattan Island, Riverdale, Spuyten Duyvil, Larchmont, Piermont, Hastings and Inwood in the lower Hudson valley, in all of which localities it has been known to breed, but especially along

the palisades of the Hudson. In the interior of the State it has been recorded from Ithaca, Tully, Batavia, Buffalo, Brockport, Forest Lawn (Monroe county), and Whiskey point, Canandaigua lake. All these records from the interior, however, are of individual birds or pairs, except the Ithaca records, the first of which, June 21, 1878, was by King (see N. O. C. Bul. 3:193); the second by Fuertes; and the third by Doctor Reed, June 12, 1903. All three of these reports seem to indicate that the species breeds near the southern end of Cayuga lake and that it is found year after year in the same locality. It is probable that it breeds in other localities of western New York, but even this Ithaca instance has not yet been proved by the finding of the nest. Therefore we must regard this wren confined, as a breeding species, to the warmest portions of the Carolinian area in New York. It is interesting to note, however, that of recent years the Carolina wren has enlarged its territory toward the north, having been found on various occasions in southern New England, the writer having observed it himself at Wood's Hole, Mass., in July 1909; and the reports mentioned above from Canandaigua lake, Forest Lawn, Batavia and Buffalo probably indicate a recent advance of the species from the south, as has occurred in various other Carolinian species. It is to be hoped that this interesting bird will become common throughout the warmer portions of the State.

Haunts and habits. This wren is exceedingly active and spritely in habits, but is rather retiring in disposition, preferring rocky glens, borders of streams, swamps, brush heaps and undergrowths near water, and fallen tree tops, to the orchard and garden which the House wren prefers. Its call notes are varied and spritely, consisting of innumerable *clacks* and *clinks* and metallic rattles, musical trills and *k-r-ings*, its commoner song notes having been compared to the syllables *whee-udee, whee-udee, whee-udee,* and *tea-kettle, tea-kettle, tea-kettle.* Its nest is concealed in old stumps, holes, hollows in trees and crevices in rocks and buildings. It is a bulky affair, constructed of twigs, grasses and leaves, lined with feathers and other soft material, fine grass and hair. The eggs are 4 to 6 in number, white

in ground color, speckled with brown, reddish and lavender. They average .74 by .60 inches in dimensions. Eggs have been found by Dean at Flushing May 8, 1879, and by Bicknell at Spuyten Duyvil May 2, 1879. Chapman gives March 28 as the nesting date for the vicinity of New York City.

Thryomanes bewicki bewicki (Audubon)

Bewick Wren

Troglodytes bewickii Audubon. Birds Amer. 1827. (folio) 1. pl. 18
Thryomanes bewicki bewicki A. O. U. Check List. Ed. 3. 1910. p. 338. No. 719

Description. This southern and western species is of about the size of the House wren, wings and tail being slightly longer. It may be distinguished easily by the fact the *primaries* are *not barred;* central tail feathers colored like the back but barred with black; *outer tail feathers* are *black tipped with ashy white;* white line over the eye; *under parts whitish.*

Bewick's wren inhabits eastern United States from northern Illinois, southern Michigan and central Pennsylvania to Arkansas, northern Mississippi and central Alabama. There has been no report of this species from New York State, but as it has occurred in Ontario, western Pennsylvania and southern New Hampshire it is probable that it has also visited New York State and may possibly be found here in the future.

Troglodytes aëdon aëdon (Vieillot)

House Wren

Plate 102

Troglodytes aedon Vieillot. Ois. Amer. Sept. 1807 (1809?). 2: 52. pl. 107
DeKay. Zool. N. Y. 1844. pt 2, p. 53, fig. 97
Troglodytes aedon aedon A. O. U. Check List. Ed. 3. 1910. p. 340. No. 721

troglódytes, Gr., a cave-dweller; *aëdon* = Gr., ἀηδών, the nightingale

Description. Upper parts *cinnamon brown*, brighter on the upper tail coverts; the back with indistinct dusky bars; *wings and tail finely barred with blackish; under parts grayish white,* the sides and flanks with blackish bars.

Length 4.5–5.2 inches; extent 6.75; wing 2; tail 2; bill .5.

Distribution. The House wren inhabits eastern North America from Wisconsin, Michigan, central Ontario, southern Quebec and New Brunswick, to Kentucky and Virginia, winters in the South Atlantic and Gulf States. In New York it is a common summer resident except in the Canadian zone, arriving in the spring from the 21st to the 30th of April in the southern portion, from the 1st to the 10th of May in northern New York, and disappearing in the fall from the 1st to the 14th of October.

Haunts and habits. The House wren, as nearly everyone knows, inhabits gardens and orchards, especially the neglected garden and the old unkempt orchard. It is also found about the edges of woods and sometimes even in the forest or in the midst of swamps where there is a small opening, and dead trees and stumps, brush heaps and fallen trees are abundant. During the last 25 years this species has exhibited periods of scarcity in central and western New York. Ralph and Bagg refer to its disappearance in Oneida county between the years 1887 to 1893. I have noticed a similar disappearance of this species farther west in the State during the early nineties, and it has only regained its old-time abundance within the last 7 years in Ontario, Monroe and Erie counties. During the summer of 1897 I noticed again that it was unusually scarce in many of the towns of western New York. In fact, I heard only two wrens singing during that summer — one in the midst of Bergen swamp far from the habitations of man, and one on the streets of Albion. In localities where dozens of wrens might be heard in the summer of 1912, not a single wren song was audible in 1896–7. It is possible that some calamity happened to the species in its winter quarters in the South just as happened to the Bluebird during the winter of 1895, and again during the winter of 1911–12; but many have explained this disappearance of the House wren by the increase of the English sparrow and the occupation of all the wrens' nesting sites about the towns, villages and country homes. I have noticed that the English sparrow, by filling wren houses and cavities with its nesting materials before the wren has returned in the spring, has had an unfavorable influence upon this species, as has also occurred in the case of the Bluebird

and the Purple martin, but I am inclined to think that the House wren is much more able to take care of itself and find a nesting site than any other of our native species which come in competition with the English sparrow. It is probable that severe weather in the southern states must be the cause which explains the curious disappearance of this species from its haunts. At the present time, the House wren is well established again throughout western New York.



Photo by L. S. Horton
House wren at nesting box

It is one of our commonest and most familiar birds in most localities, frequently building its nest in crannies about the house and garden, occupying cigar boxes, old boots, watering pots or any hollow objects hung in trees. Its nest is composed of short twigs and grass stalks, almost always more or less ornamented with spiders' nests and lined with soft materials. The eggs are from 6 to 8 in number, of a pinkish brown or vinaceous hue, almost uniformly covered with minute speckles of a deeper shade but usually with a wreath or cap at the larger end. They average .65 by .52 inches in dimensions. Fresh eggs are found from the 16th to the 30th of May. Later sets are often found from the 25th of June to the 20th of July.

The song of this Wren is a characteristic, bubbling, gurgling warble which seems to burst spontaneously from his swelling throat, as he sits upon the fence or some old twig, raising his head and lowering the tail,

his throat and tongue vibrating with uncontrolled delight as the melody gushes forth.

Jenny Wren is more agreeable to her human than to her feathered neighbors. I have frequently noticed that wrens visit all the boxes placed about the garden or orchard for the occupation of Bluebirds and White-breasted swallows, and fill them with sticks and other nesting materials. Some of my nature-loving friends would have me believe this is to have a nest ready as soon as the new one is needed for the second brood, but I am inclined to the belief that it is done to prevent any neighbors moving into the houses which are about the wrens' happy hunting ground. Furthermore, I have noticed that the wren frequently visits the nests of the Yellow warbler, Chipping sparrow and other species which nest about the garden, and picks small holes in the eggs so that they never will hatch. I am inclined to think that this habit, like the similar one of the Catbird, is to prevent too great competition in hunting the early worm when their 6 or 8 greedy young ones are crying for food, for the wren makes only short flights from its nest in search of food and must necessarily find a plentiful supply near home. For this reason it must take care that it has only a few near neighbors when the nesting season is at its height. I have often wondered how the wren can escape the numerous cats which are found about the house and garden, but they seem perfectly able, like the English sparrow, to cope with the domestic cat, whereas almost none of our other birds have this facility. If anyone wishes to have wrens about his garden he can prevent the English sparrow occupying their houses by making the entrance hole only one inch in diameter, which the wren can enter with ease, while the English sparrow can not occupy the house.

Nannus hiemalis hiemalis (Vieillot)

Winter Wren

Plate 102

Troglodytes hiemalis Vieillot. Nouv. Dict. d'Hist. Nat. 1819. 34: 514
Troglodytes hyemalis DeKay. Zool. N. Y. 1844. pt 2, p. 57, fig. 96
Nannus hiemalis hiemalis A. O. U. Check List. Ed. 3. 1910. p. 341. No. 722

nánnus, Gr., νάννος, a dwarf; *hiemális*, Lat., of winter

Description. Upper parts *dark cinnamon brown;* wings and tail distinctly barred with blackish; under parts pale cinnamon brown; breast, belly and sides finely *barred with black.* The more distinct barring, especially on the under parts, of this Winter wren, as well as the short tail which is usually held higher than that of the House wren, will distinguish it. Furthermore, in the greater part of New York it is a common wren only in the early spring and winter months.

Length 4–4.2 inches; extent 6.15; wing 1.9; tail 1.25; bill .35; tarsus .73.

Distribution. This species breeds in the boreal zone of eastern America, from central Alberta, northern Quebec and Newfoundland to central Minnesota, northern Wisconsin and the mountainous portions of New York and Massachusetts, and along the Alleghanies to North Carolina. Winters from Michigan and Massachusetts to Texas and northern Florida. In New York this little wren is a summer resident of the Catskills and Adirondacks and of various localities of central and western New York, see map page 29, volume 1, but is most of all a common transient visitant in all the more inhabited portions of the State, arriving commonly from the 25th of March to the 5th of April and passing northward from the 25th of April to the 10th of May, in western New York frequently lingering to the 20th. In the fall it is seen mostly during October and early November. In the Adirondacks and higher Catskills it is an abundant summer resident, its tinkling, rippling melody being heard throughout the spruce and balsam forests, a different songster of this species usually being heard at least every five minutes as one journeys along the woodland trails throughout the North Woods.

Haunts and habits. The Winter wren delights in rocks and brush heaps and rubbish in the wildest portions of the mountains and higher valleys, along the edges of the dashing torrents, and in the silent depths of the forest, as well as the moss-covered logs and rocks of the humid slopes. The song, as it appeals to Bicknell, has an indescribable effect, "full of trills and runs and grace notes, a tinkling, rippling roundelay." The young men from Rochester mentioned in the Essex county list who helped me in my bird survey of the Mt Marcy district, voted unanimously that the song of the Winter wren was the sweetest melody they heard in the North Woods, and we gave considerable time to the study of the songs of the Hermit, Olive-backed, Bicknell and Wood thrushes. Besides its song, the Winter wren has a sharp chirp of surprise, and a "*quip-quap*," as Chapman writes it, while he bobs and bows to one and hops about the fallen log or the brush pile which he frequents as a retreat from his enemies.

The nesting site is usually in the upturned roots of some fallen tree or in the cavity of a stump or log. The nest is composed of plant stems, mosses and lichens, with a small circular opening, lined with moss, hair and feathers. The eggs are 5 to 8 in number, white in ground color, finely dotted with reddish brown and lavender. They average .65 by .50 inches in dimensions. Six sets of eggs in the Smithsonian Institution from Holland Patent and Clinton Falls, N. Y., were taken between June 17 and 29. From the fact that nearly all the Winter wrens which we saw in the Adirondacks between the 20th of June and the 1st of August had young well out of the nest by July 10th, I am inclined to think the middle of June is the usual date for fresh eggs. It is possible that a second brood is reared as many of the dates of eggs taken in the Adirondacks range from July 16 to the 25th and 29th.

During the migration, this little wren is commonly observed about the shrubbery of our lawns, parks and the edges of woods, when disturbed retreating to the recesses of some brush pile or under the damp edges of the stream bank. A few remain throughout the winter in western and

central New York, and it is fairly common as a winter resident in the southeastern portion of the State, but in the principal breeding range of the Adirondacks and Catskills it is only a summer resident.

Cistothorus stellaris (Naumann)

Short-billed Marsh Wren

Plate 102

Troglodytes stellaris Naumann. Vögel Deutschl. 1823. 3. Table to p. 724
Troglodytes brevirostris DeKay. Zool. N. Y. 1844. pt 2, p. 58, fig. 93
Cistothorus stellaris A. O. U. Check List. Ed. 3. 1910. p. 342. No. 724

cistóthorus, Gr., κίστος, shrub, and θορεῖν, to run through; *stelláris*, Lat., starry, speckled

Description. *Upper parts streaked* with white, black, and ocherous, wings and tail barred; *under parts white washed with buffy on the breast*, sides and under tail coverts. This species may be distinguished from the Long-billed marsh wren by its *streaked crown* and entire upper parts, and by its shorter bill.

Length 4–4.5 inches; extent 6; wing 1.75; tail 1.5; bill .4.

Distribution. The Short-billed marsh wren inhabits the austral zone of eastern North America from southern Saskatchewan, southern Ontario and southern Maine to eastern Kansas, Missouri, Indiana and northern Delaware. It winters from southern Illinois and southern New Jersey to the Gulf States. In New York this species is local in distribution and uncommon in nearly all parts of the State except a few colonies in the lower Hudson valley and in parts of central and western New York. It has been reported as breeding at Green Island near Cohoes, June 12, 1875, where E. S. Stebbins took its eggs for the Smithsonian collection; in central New York by Fowler (Forest and Stream 6, 180); at Cornwall-on-the-Hudson, near the mouth of Moodna creek, in June 1882 (Mearns, Auk 7, 56; Rowe, N. O. C. Bul. 8:179); at Gretna, in Dutchess county, June 23, 1897, by Lispenard Horton; in Onondaga county by A. W. Perrior; Cayuga county by Rathbun and Wright; in the Tonawanda swamp, May 30, 1899, by Grame P. Clarkson, from which locality a colony was also reported by Langille in " Our Birds in Their Haunts "; at Hebron by F. T. Pember;

Grand island, Niagara river, and West Seneca near Buffalo, by James Savage; Irondequoit creek, Monroe county, June 1910, by Fred Gordon. These are the only breeding records before me, which will show conclusively that it is both a local and uncommon summer resident of the State. It arrives from the south in the vicinity of New York City between the 10th and the 20th of May, according to Chapman, and departs between the 10th and the 30th of October. Worthington's record of May 17, 1901, at Erie, Pa., will indicate that its arrival in western New York is about the same. Merriam's record, October 27, 1877, from Lowville, Lewis county, shows that it departs late in October from the interior of the State. Chapman gives the breeding date for New York City as May 31, which agrees with Clarkson's in Tonawanda swamp.



Photo by L. S. Horton
Nest of Short-billed marsh wren

Haunts and habits. This wren prefers wet meadows and the borders of marshes, being less confined to the flooded areas than the Long-billed marsh wren, and more secretive and retiring in its habits than that species. It is much more often heard than seen when one invades its coverts. Its clinking alarm notes may be heard all about one when a colony of this species is invaded, its call having been aptly compared to the sound of two pebbles struck together, but rarely may one of the birds be seen, as they are very mouselike in actions and dislike to appear outside the protecting cover of the grass and sedges, the difficulty of flushing the bird undoubtedly accounting for its apparent rarity in many places where it must be a summer resident. Its song is

written by Chapman as "*Chup-chup-chup-chup, chup, chup-chup-chup-p-p-r-r-r-r.*" During the love season it expresses its feelings in a more ambitious refrain, quite varied and musical, but still conspicuous for the great amount of chuppering which enters into its composition.

The nest is placed close to the ground in a dense bunch of grass or sedges, is globular in structure with the entrance on one side, and is constructed of grasses, sedges and plant down. The eggs are from 6 to 8 in number, pure white in color, with thin, brittle shell, averaging .62 by .45 inches in dimensions. They are not so broad near the larger end as the white eggs of the Long-billed wren.

Telmatodytes palustris palustris (Wilson)

Long-billed Marsh Wren

Plate 102

Certhia palustris Wilson. Amer. Orn. 1810. 2: 58. pl. 12, fig. 4
Troglodytes palustris DeKay. Zool. N. Y. 1844. pt 2, p. 56, fig. 92
Telmatodytes palustris palustris A. O. U. Check List. Ed. 3. 1910. p. 342. No. 725

telmatódytes, Gr., swamp dweller; *palústris*, Lat., marshy

Description. Upper parts *brown*, the crown and back almost black, and the latter distinctly *striped with white;* a *white stripe runs over the eye* to the side of the neck; *under parts white tinged with ocherous* on the sides, flanks and under tail coverts; wing and tail barred with fuscous.

Length 5.2 inches; extent 6.54; wing 1.75–2; tail 1.7; bill .52; tarsus .8.

Distribution. The Long-billed marsh wren inhabits eastern United States, breeding from southern Ontario and southern Quebec southward to the Potomac and the coast of Virginia. Winters from southern New Jersey to South Carolina and Florida. In New York this species is a common summer resident in all extensive marshes of the coast, Hudson river, Lake Erie, Lake Ontario, Niagara river and the central lakes. In the marshes at the head and the foot of Canandaigua lake, at the outlet of Seneca lake and the head of Seneca and Cayuga lakes, the whole length of Seneca river, Tonawanda swamp and the Niagara river it is a very abundant species, arriving in the spring from the 4th to the 16th of May,

and departing in the fall from the 1st to the 30th of October. A few individuals remain throughout the winter along the coast and in the lower Hudson valley, and rarely a few brave the winters of western New York, especially in the Montezuma marshes.

Haunts and habits. The Long-billed marsh wren is practically confined to the flooded marshes, delighting in a rank growth of cat-tails, sedges and grasses where the water is from 1 to 3 feet in depth. In such localities one may rarely wade a distance of 4 to 6 rods without coming upon one of its globular nests securely interwoven with the stems of flags and grasses, composed of the dead leaves of the same woven into a compact structure, with a small circular opening on one side, the interior warmly lined with down from the cat-tail. Usually from 6 to 8 nests must be examined before one containing eggs can be found, for it is evidently a habit of this wren also to build more nests than it occupies for breeding purposes. The eggs are usually laid between the 30th of May and the 25th of June, possibly two broods being reared in the southern part of the State. The eggs are from 5 to 9 in number, the darkest colored of all of our wrens' eggs, being thickly mottled with chocolate brown so as to give the egg a nearly uniform old mahogany tint. They average .65 by .49 inches in dimensions, rather broadly ovate in shape.

One can not be in the favorite haunts of the marsh wren many minutes without hearing its "rippling, bubbling, gurgling song." Doctor Mearns says: "The marsh wrens live in colonies and are as attractive, merry little birds as you would wish to see, scolding hard when their retreats are invaded but singing a busy, happy refrain the moment you pass on. There are few sounds so cheerful and pleasant to hear as the jingling melody produced by a colony of marsh wrens left in quiet (?) possession of their oozy territory after such a disturbance." Frequently the merry songster overflows so with the delight of love and life that he rises on fluttering wings above the tops of the marsh grass and sings in lowly imitation of the soaring Skylark until utterly exhausted he sinks again into the coverts of the rushes.

Like most of our small birds which frequent the shrubbery, this little wren migrates at night. On one occasion while I was concealed in a blind watching for ducks to enter the marsh, I saw the last representative of this species leave the marshes at the foot of Canandaigua lake. It was a cool night late in October when the moon was at the full. The little fellow uttered a feeble warble which attracted my attention and then rose from near my station, fluttering higher and higher into the air until lost at an elevation of about 300 feet, where I caught my last glimpse of him against the full moon. The following morning when I visited the marsh no more wrens were left. Evidently they migrate at night, and high in the air, so as to see their way and escape their enemies more successfully.

Family CERTHIIDAE

Creepers

Ten primaries, the first very short; point of the wing formed by the third, fourth and fifth; tail rather long, rounded, the shafts stiffened and the feathers pointed, showing a curious analogy to the tails of woodpeckers; bill long, slender and curved nearly throughout its length; nostril exposed; the rictus without bristles; the toes joined up to the first joint; the claws curved and sharp; size small; plumage soft brown and gray in color. This is a small family related to the wrens and the nuthatches but showing several sharp family characteristics, especially the slender curved beak and the stiffened tail. In habits they are scansorial, climbing upon the trunk and branches of trees in the manner of woodpeckers, using the tail as a brace against the bark. They are insectivorous in habits and migratory, although hardy enough to withstand the winters in temperate latitudes. Our one species is closely related to the tree creeper of Europe and subspecifically to the Mexican, Rocky mountain and California creepers. Only one species, with five subspecies, is recognized in North America.

Certhia familiaris americana (Bonaparte)

Brown Creeper

Plate 102

Certhia americana Bonaparte. Geog. & Comp. List. 1838. 11
DeKay. Zool. N. Y. 1844. pt 2, p. 50, fig. 90
Certhia familiaris americana A. O. U. Check List. Ed. 3. 1910. p. 344. No. 726

cérthia, Lat., *certhius*, a creeper; *familiáris*, Lat., domestic

Description. *Upper parts streaked and mottled with brown, white and ocherous;* rump pale rufous; wings when spread show a band of creamy buff across the middle of the feathers; tail grayish brown, the tips of the feathers pointed and stiffened; *under parts dull white; bill slender* and slightly *curved.*

Length 5.25–5.75 inches; extent 7.5–8; wing 2.6; tail 2.7; bill .63; tarsus .53.

This little bird, which is the only representative of its family in New York, may easily be distinguished from all of our other tree-creeping birds by its principal color matching so closely the tree bark, its slender curved bill, and its long tail which is held against the tree for a support, like the tails of woodpeckers.

Distribution. This subspecies inhabits eastern North America, breeding from southern Manitoba, central Ontario, southern Quebec and Newfoundland southward to eastern Nebraska, northern Indiana, New York, Massachusetts and along the Alleghanies to North Carolina. Winters from New York to the gulf coast. In the greater portion of New York it is a transient visitant, and sparingly a winter resident, the few which remain all winter being joined, between the 1st and the 15th of April, by numerous individuals which have wintered farther south. The greater number leave for their northern summer home from the 10th to the 30th of April in the warmest part of the State, and from the 1st to the 16th or even the 25th of May in the interior. Throughout the Adirondacks and Catskills this bird is an abundant summer resident. While passing along the trails of the Adirondack wilderness one meets this species every few

minutes. The same is true of the upper Catskills. In the remainder of the State it is only a local summer resident. Reported as a common breeder in central New York by Fowler (Forest and Stream 6, 180); near Buffalo by Ottomar Reinecke and James Savage; from Oneida county by Ralph and Bagg (Auk, 6:232); from Hamilton by Maxon (Auk, 20:266); Peterboro by Gerritt S. Miller; Montezuma and Canandaigua inlet by E. H. Eaton; West Seneca (Erie county) and West Barre (Orleans county) by James Savage; and from Potter swamp (Yates county) by Burtch and Stone.

Haunts and habits. During migration, the Brown creeper is abundant throughout our woods, groves and shade trees, sometimes as many as 20 or 30 individuals being seen in a single dooryard or small parkland in the midst of our villages and cities. All observers from the time of Giraud and Audubon agree with Doctor Mearns in the facts embodied in his apt description of its habits: "The creeper is usually a tame bird, paying less heed to its admirers than to the capture of insects that infest the bark of trees; that being the main purpose of its life. With that object in view, it alights at the base of a tree and begins to ascend in a spiral; in this manner it advances until the trunk and principal branches have been explored, when, having reached the top, it spreads its wings and with a direct, sweeping movement, attaches itself to the extreme base of another tree, and the same performance is repeated. Thus the creeper has many ups and downs in its life though, on the whole, it is a monotonous career of labor; but in spite of this, the bird is interesting and its habits have a certain fascination. Its somber colors serve an excellent purpose for concealment, matching so well those of the trees upon which it lives as to make it very inconspicuous. Its long, slender, curved bill seems ill-adapted as a means of musical expression and, indeed, I never suspected it of possessing such attributes until one day I discovered it was the author of a very pleasant song." Mr Brewster says: "In its summer home, amid the northern spruces and firs, it has an exquisitely pure and tender song of four notes, the first of moderate pitch, the second lower and less emphatic, the third

rising again and the last abruptly falling, to die away in an indescribably plaintive cadence like the soft sighing of the wind among the pine boughs."

As far as my experience goes, the nest of this species is uniformly placed behind a strip of bark which has been loosened from the trunk of some tree in the swamp. In Potter swamp, where it was an abundant summer resident, these strips of bark were loosened by the ice which formed when the swamps were flooded, and left favorable nesting sites near the ground. Now these trees have been removed and the creeper is no longer common. The nest is composed of fine twigs, bark, mosses and bits of dead wood, lined with soft materials. The eggs are from 5 to 8 in number, white in ground color, speckled with cinnamon or reddish brown and lavender tending to form a wreath near the larger end of the egg. The dimensions are .62 by .48 inches. The nesting dates for western New York vary from the 5th to the 25th of May. Of nine sets of eggs in the Smithsonian Institution from Herkimer and Oneida counties, New York, the dates vary from the 2d to the 21st of May, from the 12th to the 30th of June and the 18th of July, indicating that two broods are frequently reared in the Adirondacks. During my trips to the Adirondacks I have found the birds feeding their young throughout the month of June and frequently late in July, indicating also that in the Mt Marcy district there are two broods reared at least by some of the birds.

This species is undoubtedly one of the most valuable assistants of the horticulturist and forester, as its food is almost entirely insectivorous and is taken from the bark and trunks of trees. Although a few predaceous species may be destroyed, it seems to feed principally upon injurious insects.

Family SITTIDAE

Nuthatches

Wing long and pointed, with 10 primaries; tail short and broad, nearly square, composed of soft feathers; bill slender, acute and subcylindrical in shape, tapering and compressed, about as long as the head; nostril as in titmice; the tongue elongated, pointed and barbed; tarsus short, rather

stout; toes long, and their claws long, curved and compressed. The members of this family are small in size like the titmice; their plumage is compact; they are highly scansorial in habits, spending the greater portion of their time climbing about the trunks and larger branches of trees, going down the trunk head foremost or clinging to the underside of limbs with the head hanging outward like true acrobats, seeking everywhere in the crevices of the bark for the insects which constitute their principal food. In the fall, however, they feed on various kinds of nuts and a few wild fruits, and in the winter are easily attracted to the orchard and dooryard by bits of suet or bones or scraps of meat fastened to the trees. Their voices are rather unmelodious. They nest in hollows of trees and like the titmice lay numerous eggs, 7 to 9 being the usual complement. These eggs are like the eggs of chickadees, finely speckled with brown. Like the titmice and woodpeckers they are to be regarded among the most efficient guardians of forest and orchard trees, and should be encouraged by every horticulturist to nest as near his orchards as possible. See Yearbook of the United States Department of Agriculture 1900, pages 296–97.

Sitta carolinensis carolinensis Latham

White-breasted Nuthatch

Plate 103

Sitta carolinensis Latham. Index Orn. 1790. 1: 262
DeKay. Zool. N. Y. 1844. pt 2, p. 48, fig. 91
Sitta carolinensis carolinensis A. O. U. Check List. Ed. 3. 1910. p. 345. No. 727

sítta, Lat. and Gr., a nuthatch

Description. *Top of head and neck deep black; upper parts bluish gray;* wing and tail feathers blackish but the outer webs of the wing feathers and the central pair of tail feathers are the color of the back so that the whole upper parts, excepting the top of the head and neck, appear ashy or bluish gray when the wings are closed; broad diagonal patch of white on the outer tail feathers near the tip; sides of the head and neck and *under parts white;* crissum and base of under tail coverts rusty brown; bill dark lead color; feet dark brown. *Female:* Similar but slightly duller; top of the head washed with the color of the back.

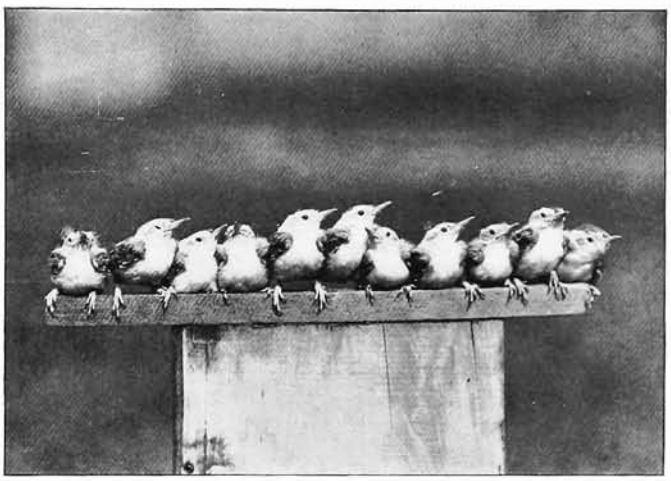
Length 5.5–6 inches; extent 10.5–11; wing 3.5; tail 1.75; bill .66; tarsus .7.

Distribution. The White-breasted nuthatch breeds in eastern North America from northern Minnesota, central Ontario and Newfoundland, south to northern Louisiana and Georgia. In New York it is generally distributed throughout all parts of the State excepting the spruce and balsam belt, or the Canadian zone of the Catskills and Adirondacks. Bicknell found it uncommon in the valleys of the Catskills. It certainly is uncommon even in Keene valley and about Old Forge, but a few invade the cleared land and valleys of the Adirondack country up to the edge of the coniferous woods, where it is replaced by the Red-breasted nuthatch. It is a resident in other parts of the State and breeds in nearly every county, being somewhat less common in the northern portion, but generally distributed throughout the Alleghanian life zone. This is one of our few species that exhibit scarcely any tendency to migrate.

Haunts and habits. The haunts of the White-breasted nuthatch are orchards, shade trees, groves and forests. He is found on the trunks and larger limbs of trees, almost never alighting on the twigs and smaller branches. He occasionally alights upon the ground in pursuit of insects or food which he has dropped from the tree. The nuthatch is famous among our birds as an acrobat, being our only species of creeping birds which climbs about a tree up or down or around, and seems to prefer to hang with his head down and tilted outward when examining intruders. As he hops nimbly from ridge to ridge of the bark on the trunk of the tree he usually keeps up a contented *hank, hank* or *onk, onk,* which is frequently answered by his mate from some neighboring tree in slightly higher key as if to assure him that the company is still together. He also has a note consisting of the *onk, onk, onk* many times repeated, a kind of a rolling call. This is undoubtedly his love song as it is heard in February, March and April as the nesting season advances. Early in spring he occasionally utters a whistled note, *chēē-o.*

The nuthatch remains throughout the fall and winter in little companies

of 4 or 5, frequently associated with chickadees and creepers and Downy woodpeckers. They mate early in the season and build their nest in some hollow tree, rarely in the deserted nesting hole of the Downy woodpecker. All those I have found, however, have been in hollow trees with the entrance through a knothole, sometimes slightly enlarged by the nuthatches. The nest is composed of leaves, mosses, soft grass and feathers. The eggs are from 5 to 8 in number, pinkish white in ground color, rather finely speckled, more heavily near the larger end, with reddish brown and grayish lavender.



A brood of Nuthatches (*one family*) posed on stick

They average .8 by .6 inches in dimensions. The young are usually out of the nest by the first or second week in June and are frequently seen seated in a row on some limb adjoining the nesting site for two or three days before they are able to creep successfully around the tree trunks as their parents do. The mortality among young nuthatches must be high as there seems to be almost no increase in their numbers in localities where they are protected year after year. Since the revival of interest in nature and bird study, many people feed the nuthatches in winter with bits of suet, nuts and seeds of the sunflower, which are placed on lunch counters

or trays on the window ledge or nailed to the trunks of trees. They partake freely of the food and undoubtedly are helped to weather successfully the severest portion of the winter.

The nuthatch is unquestionably one of our valuable tree protectors. He keeps up a continued hunting for beetles, larvae and eggs of insects which are hidden behind the crevices of bark or about the dead limbs. Although he feeds to a considerable extent on nuts, grain and oily seeds in the fall and winter, I have never heard complaint of his becoming a nuisance. He sometimes takes seed corn which is hung up to dry, but on account of his small size he never is very destructive even in parts of the State where open corn cribs are used.

"The nuthatch is an eminently useful and industrious bird. He devotes his entire existence to the occupation of scrambling about upon the tree trunks, grubbing out insects from their hiding places under the bark. At this commendable, but somewhat prosaic, employment he spends his days; and when night comes, he betakes himself to a hole in some tree, where, weary with his day's toil, he sleeps the sleep of the just till daybreak; nor is our bird friend addicted to the disagreeable practice of early rising. He depends not upon craftiness for his daily sustenance, but gets it by the sweat of his brow; therefore he indulges in a morning nap after the sun is up, and the nocturnal worm is permitted to crawl safely into his den. Doubtless this interesting bird should commend our highest respect, and our deepest gratitude; for his life is one of tireless industry and great usefulness. Nor, indeed, should we question the personal motives which impel him to the accomplishment of such important and valuable results.

"Though the nuthatch does not possess the gift of song, still he is well and favorably known to most persons who live in the country — whose lines have fallen in pleasant places. He is found wherever there are forests, and gets into our orchards and about our dwellings. Moving steadily in any direction upon the tree trunks and branches, he searches the interstices of the bark, tapping hard upon suspected spots with his bill. At frequent intervals he utters his peculiar cry, a sort of nasal *honk-*

honk. When moving downward, he always advances head first, and never in the opposite position, as the woodpeckers do. Sometimes his diet is slightly varied. He never refuses raw meat; and when in Lewis county, New York, during the latter part of December 1877, I found him eating the beech nuts, in company with the Red-headed woodpeckers and with evident enjoyment. The stomachs of the specimens shot were found distended by those nuts. Sometimes, during storms, in winter, the trees become so thickly coated with ice that the woodpeckers and creeping birds, since nature has neglected to supply them with adjustable ice spurs suitable for such emergencies, are unable to climb upon the icy trees, and consequently are obliged to desist from their usual vocations and betake themselves to other situations in quest of food. On such occasions the nuthatches seem to be particularly distressed, flying about, uttering loud cries, and alighting freely upon the roofs of buildings." (Mearns, " Birds of the Hudson Highlands.")

Sitta canadensis Linnaeus

Red-breasted Nuthatch

Plate 103

Sitta canadensis Linnaeus. Syst. Nat. Ed. 12. 1766. 1:177
De Kay. Zool. N. Y. 1844. pt 2, p. 49, fig. 88
A. O. U. Check List. Ed. 3. 1910. p. 346. No. 728

Description. Decidedly smaller than the White-breasted nuthatch; *upper parts bluish gray* but deeper and bluer than the White-breasted nuthatch; wing feathers fuscous, edged with color of the back; central tail feathers like the back, others black, the 2 outer pairs with white patches; *top of head and neck black*, also *broad stripe through the eye* and along the head and neck; stripe from base of bill over the eye and down the side of the crown, white; *under parts rusty* or reddish brown; almost white on the throat and side of the neck. *Female and young:* Similar, but the top of the head more like the color of the back and the rest of the plumage duller than in the male.

Length 4.5–5 inches; extent 8–8.5; wing 2.6; tail 1.5; bill .5.

Distribution. This species inhabits North America, breeding in the Canadian zone from the Yukon valley, southern Mackenzie, central Kee-

watin, northern Quebec, Newfoundland, southward to northern Minnesota, Michigan, Massachusetts and in the mountains to California, New Mexico and North Carolina. Winters from southern Canada to the gulf coast. In New York this species is a fairly common transient visitant in all parts of the State, but is somewhat irregular in appearance, sometimes being extremely abundant in the coastal region and at other times in western New York; other seasons very few are seen. The usual season of migration in the spring is from March 15 to May 10, and in the fall from October 8 to November 22. It is also frequently seen throughout the winter in any portion of the State which seems to offer sufficient food; but it is decidedly more common, as stated before, in the migration season. It is a summer resident of the Canadian zone of New York, being very abundant throughout the Adirondack forests and in the Catskills above an altitude of 2000 to 3000 feet. This is probably one of the commonest breeding birds in the Adirondacks, where its call is continually heard. As one canoes along the Adirondack streams and lakes, its sharp nasal *yna-yna-yna* is continually heard from the pines, spruces and balsams along the shore. Along the trail, when crossing mountain ranges or ascending even the highest peaks, one meets the same experience. It has also been reported as breeding near Peterboro by Gerritt S. Miller jr; from West Falls by James Savage; and from the vicinity of Branchport by Verdi Burtch. Ralph and Bagg report eggs from Wilmurt taken May 30, 1887, and Holland Patent, April 30, 1889. Evidently the breeding season in the outskirts of the Adirondacks corresponds very closely with the date for the White-breasted nuthatch, which ranges from April 25 to May 10 in western New York. The nesting habits of the Red-bellied nuthatch are similar to those of its more southern relative. The eggs are from 4 to 6 in number and average .62 by .50 inches. Similar in color to those of the White-breasted nuthatch.

Sitta pusilla Latham

Brown-headed Nuthatch

Sitta pusilla Latham. Index Orn. 1790. 1: 263
A. O. U. Check List. Ed. 3. 1910. p. 346. No. 729
pusilla, Lat., very small

Description. *Top of the head and neck grayish brown;* a partly concealed white patch on the nape; upper parts bluish gray; under parts dingy whitish; outer tail feathers black tipped with grayish.

Length 4 inches; extent 8; wing 2.5; tail 1.25; bill .5; tarsus .6.

Distribution. This little nuthatch breeds from southern Delaware and Missouri to southern Florida and eastern Texas. It rarely straggles northward as far as Ohio and Michigan. In New York it is a purely accidental visitant, one specimen having been taken at Elmira, May 24, 1888, an adult male (see Swift, Auk, 5:432). Everyone who has visited the states of the southern coastal plain is familiar with this little bird. In habits it resembles closely our nuthatches of the north.

Family PARIDAE

Titmice

Wings rather short and rounding; primaries 10; tail elongated, rounded, the feathers softer than the stiffened feathers of thrushes and kinglets; bill short, rather stout and practically straight, somewhat compressed and conoid in shape; nostrils concealed by bristly tufts of feathers; tarsus longer than the middle toe; feet short and stout; the toes joined for most of the basal joint form a compact palm; the hind toe is padded, thereby assisting these birds in their gymnastic feats while clinging to the smaller branches of the trees; in size they are small; plumage is soft and usually plain, the color of our native species consisting mostly of grays and grayish brown and a little black. They are hardy little birds, some of them remaining in the Canadian zone throughout the winter and all our New York species are resident birds wherever found. They are of cheerful disposition and great activity, continually exploring the twigs, branches

and bark of trees for insects, cocoons or eggs which are hidden in the crevices or about the bud scales. In this way they render great service in the forest, orchard and garden. See Bulletin 54 United States Department of Agriculture, page 43, and Yearbook 1900, pages 295–96. Occasionally their diet is varied with seeds, nuts, and a few wild fruits. Titmice, like nuthatches and woodpeckers, may be attracted to the birds' lunch counter by the window side or to scraps of suet fastened to tree trunks, thereby accustoming them to frequent our dooryards and orchards. Mr Forbush in his Massachusetts home has induced chickadees to nest in boxes erected for them by the side of his study window.

Baeolophus bicolor (Linnaeus)

Tufted Titmouse

Plate 103

Parus bicolor Linnaeus. Syst. Nat. Ed. 12. 1766. 1:340
DeKay. Zool. N. Y. 1844. pt 2, p. 59, fig. 101
Baeolophus bicolor A. O. U. Check List. Ed. 3. 1910. p. 347. No. 731
baeólophus, from Gr., little crest; *bícolor*, Lat., two-colored

Description. Upper parts *ashy gray;* under parts dull white washed on the *sides* with *rufous;* a conspicuous *crest.*

Length 6–6.5 inches; extent 10–10.75; wing 3.1; tail 2.8; bill .42; tarsus .8.

Distribution. This species inhabits the warmer portions of the eastern United States from Nebraska, Illinois, Ohio, Pennsylvania and New Jersey to Texas and the gulf coast, occasionally straggling to Wisconsin, Michigan and Connecticut. In New York it is confined to the warmer portion of the Carolinian district as a breeding species. It has been reported at Williams Bridge by Lawrence; at Riverdale by Bicknell and Mearns; on Staten Island by Richmond and Hollick; near Brooklyn by Dutcher (Auk, 10:277); at Sheepshead bay by Braislin; and at Bellport by W. A. Babson. I have found no records of its breeding in the interior of the State, but it has occurred at Holley, March 17, 1889 (Possun, Auk, 16:196); Mayville, May 21, 1891 (A. E. Kibbe); Chemung county (Gregg);

Rochester, May 21, 1903 (E. H. Eaton); Brockport, December 29, 1908, 12 seen (George F. Guelf); Junius, Seneca county, March 8, 1910 (C. J. Hampton); Geneva, February 22, 1913 (E. H. Eaton). Chapman's record (American Museum Journal 6, No. 3, page 186) of its breeding on Staten Island, on the authority of Hollick, is the only definite record of its nesting within the State which has come to my attention. It is now rare on Long Island, although evidently more common in the days of Giraud, and it is certainly rare or uncommon in the lower Hudson valley. On various occasions when it was noted in western New York, pairs or small flocks were found together, and as these occurrences were early in the season we would naturally be led to infer that it occasionally breeds in this district, but no definite record can be found.

Haunts and habits. The Tufted titmouse prefers groves and woodlands, is spritely in habits and by no means shy in disposition. Its common notes are a frequently reiterated loud clear whistle, written by Chapman and others as *peto, peto, peto, peto;* at other times it calls *de-de-de-de*, somewhat like the Chickadee, but louder. Its nest is usually placed in the deserted hole of a woodpecker or a hollow stump, and is composed of leaves, strips of bark, moss and feathers. The eggs are from 5 to 8 in number, of a creamy white ground color, closely spotted with reddish brown. They average .74 by .56 inches in dimensions.

Penthestes atricapillus atricapillus (Linnaeus)

Chickadee

Plate 103

Parus atricapillus Linnaeus. Syst. Nat. Ed. 12. 1766. 1:341
DeKay. Zool. N. Y. 1844. pt 2, p. 60, fig. 100

Penthestes atricapillus atricapillus A. O. U. Check List. Ed. 3. 1910. p. 349. No. 735

penthéstes, Gr., one that mourns, alluding to its plaintive cry; *atricapíllus*, Lat., black-haired, black-crowned

Description. *Crown, nape* and *throat jet black;* rest of *upper parts ashy gray;* wing coverts margined with whitish; wing and tail feathers

margined with whitish; *sides of the head and neck* and under parts *white;* sides and *flanks* tinged with *buffy*.

Length 5.27 inches; extent 8.05; wing 2.54; tail 2.43; bill .37; tarsus .6.

Distribution. The Chickadee inhabits the Canadian and Transition zones of eastern America, from southeastern Keewatin, southern Ungava and Newfoundland southward to central Missouri, northern Indiana, Ohio, Pennsylvania and New Jersey, and in the Alleghanies to South Carolina. In New York it is found in every county as a resident species and is common in most portions of the State, inhabitating both the depths of the woods and the groves and orchards near human habitations.

Haunts and habits. It is, perhaps, the most fearless of all our birds, especially in winter, allowing the observer to approach within a few feet, and frequently taking sunflower seeds and bits of nuts from the hand or from one's shoulder, and may be taught to come regularly to the window sill for its supper and breakfast. Suet and oily seeds are its favorite food at this season of the year. As soon as spring and summer come, he retreats to the swamps and woodlands, only a few remaining in the more cultivated localities. The *chickadee* or *dee dee dee* note, which is recognized by everyone, may be heard at all times of the year, but more commonly in the winter. In the early spring he frequently utters a whistled call like the word *phe-be*. In actions he is nearly as restless as the kinglets, flying almost continually from twig to twig and indulging in acrobatic feats, hanging head downward or clinging to the bark of trees in search of hibernating insects and eggs which may be hidden in the crevices of buds and bark. When flying from twig to twig there is commonly a muffled fluff-fluff of the wings as he proceeds with jerky flight and pumping tail from one location to another. Chickadees are even more sociable in habits than nuthatches, and usually travel in small parties of 5 to 12 or more individuals and are usually associated with nuthatches, Brown creepers and Downy woodpeckers during fall, winter and spring. As Doctor Barrows has shown, the Chickadee destroys some beneficial insects, but in the main his habits seem beneficial on account of the large number of

insects injurious to trees which are destroyed during his scrutiny of the orchards or forests.

The nest is commonly placed in small cavities of dead trees within a few feet of the ground, sometimes 15 or 20 feet up. On many occasions I have seen the chickadees excavating their own holes in dead birch stubs or other soft wood. The entrance is about 1 inch in diameter and the cavity usually about 6 or 8 inches in depth. The nesting materials are soft grasses, mosses, cottony down from ferns and other plants, and feathers.

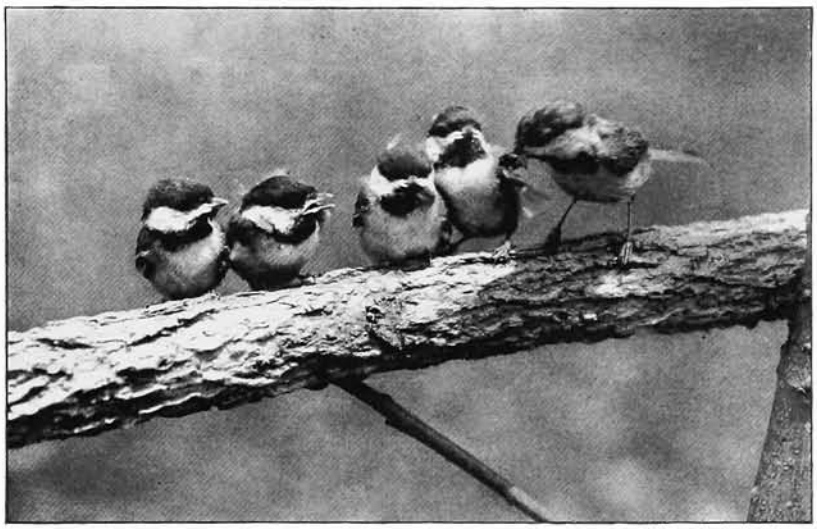


Photo by L. S. Horton

Chickadee feeding young

The eggs are 5 to 8 in number, white in ground color spotted with reddish brown, with a tendency to form a wreath near the larger end of the egg, which is broadly ovate, almost spherical at times, in outline. They average .60 by .47 inches in dimensions. Both birds labor not only in the construction of the nest, but in incubating the eggs and caring for the young. Building operations in western New York begin from the 18th of April to the 10th of May, and fresh eggs are usually found between the 12th and 26th of May, frequently as late as the 20th of June, although I am inclined to think that rarely more than one brood is reared in a season.

Penthestes carolinensis carolinensis (Audubon)

Carolina Chickadee

Parus carolinensis Audubon. Orn. Biog. 1834. 2:341
DeKay. Zool. N. Y. 1844. pt 2, p. 61, fig. 123

Penthestes carolinensis carolinensis A. O. U. Check List. Ed. 3. 1910. p. 350. No. 736

Description. In color very similar to the common chickadee, but *smaller;* the *wing coverts not margined with whitish;* the wing and tail feathers with very little white visible. Length 4.06–4.75 inches; wing 2.2–2.48; tail 1.88–2.12; bill .30–.32.

Distribution. This little Chickadee inhabits the southeastern United States from central Missouri, Indiana, central Ohio, Pennsylvania and central New Jersey south to southeastern Louisiana and the gulf coast. Although it has been referred to New York State by several writers, there are no actual specimens of the species taken within our borders. According to Mr Dewitt Miller, of the American Museum of Natural History, who has found it in neighboring parts of New Jersey and is familiar with its notes and habits, there are no chickadees on Staten Island, or in the lower Hudson valley which he has suspected of belonging to this species. Nevertheless, it is possible it may yet be taken on Staten Island and the neighboring portions of the State.

Haunts and habits. Mr Chapman describes the whistled call of the Carolina chickadee as consisting of four tremulous notes instead of the two clear notes of the northern bird, and notes a substantial difference in its other calls, one of which sounds to his ears like the words "*my watcher key, my watcher key.*" Doctor Richmond states that the "chickadee call of carolinensis is higher pitched and more hurriedly given than that of atricapillus," and that the whistle consists of three notes. Mr Brewster says the "low, plaintive *tswee-dee-tswe-dee* of the Carolina chickadee contrasts sharply with the ringing *te-derry* of its northern cousin."

Penthestes hudsonicus littoralis (H. Bryant)

Acadian Chickadee

Plate 103

(Arcadian chickadee, in error, on plate)

Parus hudsonicus, var. littoralis Bryant. Proc. Bost. Soc. N. H. 1865. 9:368

Penthestes hudsonicus littoralis A. O. U. Check List. Ed. 3. 1910. p. 351. No. 740a

hudsónicus, Lat., Hudsonian; *littorális*, of the coast, that is, the Acadian district

Description. *Upper parts ashy brown;* the *back similar to* the *crown but lighter;* wings and tail grayish; *throat black;* sides of the head, the breast and the belly, white; *sides rufous;* in size the same as the common chickadee.

Distribution. This subspecies inhabits northeastern America from northern Quebec and Newfoundland to the Adirondacks, northern Vermont and central New Hampshire, occasionally straggling southward in winter to Massachusetts and Connecticut. In New York this chickadee was found by Roosevelt at Bay Pond, Franklin county, in small flocks, during the early part of August 1877. Dr F. H. Headley found it as abundant as the common chickadee in the vicinity of Big Moose lake during February and March 1882; and Doctor Merriam collected four specimens in a balsam and tamarack swamp near Lake Terror, April 29, 1882 (Merriam, Adirondack notes mss., no. 13; also N. O. C. Bul. 6:226). Ralph and Bagg reported it from Remsen, Oneida county, December 25, 1886 (Auk, 7: 232); and the list of Ralph and Bagg reports it as breeding in Herkimer and Hamilton counties on the authority of Doctor Merriam. A small flock has been reported from Utica, January 18, 1877, by "Avis" (Forest and Stream 7, 395), and from Charlotte, Monroe county, November 29, 1894, by Charles R. Taylor of Rochester; also from Highland Park, Rochester, January 2–16, 1914, by Wm. L. G. Edson. It is, however, characteristically a nonmigratory member of the boreal fauna. During my study of the birds near Mt Marcy, I noticed this chickadee on the Geological cobble, above Upper Ausable lake, on June 23, 1905; on the Bartlett ridge, July 31; Skylight camp, on July 12 and 13; and saw it on several occasions in the spruce and tamarack swamp about the Ausable inlet during June and July. On July 2, both male and female Hudsonian chickadees were seen feeding their young along the Ausable inlet about half a mile above the head of the Upper Ausable lake, which would indicate that about the first of June would be the breeding date for that locality. Doctor Merriam's breeding date is June 15, 1883, and the eggs in the Smithsonian Institution from Jocks lake, Herkimer county, New York, are labeled July 17, 1898, in this instance evidently a second brood or a delayed nesting.

The habits of the Hudsonian chickadee are very similar to those of the common chickadee, but his notes, though evidently chickadee notes, are distinctly different from those of the common species.

Family SYLVIIDAE

Old-world Warblers and Kinglets

The structural characteristics of this family are practically the same as those of the thrushes, both as to the nature of the wing, bill, nostrils and booted tarsus, as well as the condition of the toes, which are mostly cleft except the first half joint of the inner and outer. In size, however, they are diminutive as compared to the thrushes and they undergo a double moult each year, while the young are unspotted. They are fully as melodious as the thrushes to which they are so closely related, among their members numbering the famous Nightingale and Blackcap of Europe, while in our own country the Ruby-crowned kinglet is regarded by many as one of our very best songsters of the spring. They are probably more beneficial even than the thrushes as their diet is more exclusively insectivorous. They destroy immense quantities of small leaf-eating larvae and plant lice. I have also watched a Ruby-crowned kinglet during the spring migration swallow 137 scale insects in two minutes from the branch of a garden tree which was afflicted by these pests. There can be no doubt that like the Wood warblers they render invaluable service by destroying the scales and plant lice which are just beginning their season's operations at the time of the spring migration, when both the kinglets and the warblers frequent our gardens and orchards in large numbers.

Regulus satrapa satrapa Lichtenstein

Golden-crowned Kinglet

Plate 104

Regulus satrapa Lichtenstein. Verz. Doubl. 1823. 35
DeKay. Zool. N. Y. 1844. pt 2, p. 62, fig. 95
Regulus satrapa satrapa A. O. U. Check List. Ed. 3. 1910. p. 356. No. 748

régulus, Lat., little king; *sátrapa*, Lat., ruler

Description. Upper parts grayish *olive green;* wings and tail feathers edged with yellowish; the inner wing feathers with whitish streaks; middle and greater wing coverts tipped with whitish forming *2 wing bars; crown*

black on sides and front inclosing a yellow patch which in the male is centered with flaming orange; black of the crown bordered on the sides and front by whitish, these crown markings giving the appearance of a striped head, the white lines being just above the eye succeeded by broad black line, followed by yellow and, in the male, with a central portion of orange; *under parts dull white.*

Length 4.1 inches; extent 6.75–7; wing 2.15; tail 1.75; bill .28.

Distribution. This species in eastern North America breeds from northern Alberta, southern Keewatin, southern Ungava and Cape Breton island south to northern Michigan, New York and the mountains of Massachusetts, southward to the mountains of Arizona and New Mexico, and in the higher Alleghanies to North Carolina. In New York, as far as my records show, it is confined as a breeding species to the boreal zone in the Adirondacks and higher Catskills, being, with the Winter wren, the Brown creeper, the Hermit thrush, the White-throated sparrow and the Junco, one of the commonest summer birds of the higher Adirondacks. In the remainder of the State it is an abundant transient visitant and a fairly common winter resident. Throughout central and western New York it is much less common in winter than the Chickadee, and about as common as the Brown creeper. During the migrations it is abundant, appearing in large numbers from March 30 to April 5, sometimes not arriving in force till the middle of April and passing northward between the 4th and the 12th of May, a few females sometimes lingering as late as the 25th. In the fall it makes its appearance between the 20th of September and the 5th of October, being abundant again until the early part of November, when the greater number of migrants have passed farther south. In the lower Hudson valley and the other warmer portions of the State it is common as a winter visitant.

Haunts and habits. In winter the kinglets prefer the shelter of evergreens, frequenting hemlocks, pines and cedars in the swamps and ravines, in company with chickadees, nuthatches, creepers and Downy woodpeckers. During the migration season they are found about our dooryards and shade trees, parks, groves and woodlands, sometimes being fully as abundant as the Junco, especially in the country just south of Lake Ontario and in

the Genesee valley, where troops of hundreds of kinglets are a common sight during early April. They are extremely active in habits, continually flying from branch to branch and almost as acrobatic as chickadees in their search for cocoons and hibernating insects. As they fly about they utter very often a high "*ti-ti*," which Chapman says is audible only to the practised ear. I have never heard it, the sound being pitched too high for my auditory organs. In its summer home the Kinglet gives voice to a lisping warble which Brewster describes as a succession of five or six shrill, high-pitched, somewhat faltering notes, ending with a short, rapid, rather explosive warble. The opening notes are given in a rising key but the song falls rapidly at the end. The whole may be expressed as follows: *tsee-tsee-tsee-tsee, ti, ti, ter, ti-ti-ti-ti.* The nest of the Kinglet is placed in coniferous trees at varying heights from the ground, sometimes within reach, sometimes 60 feet high. It is suspended among the thicker portions of the branches, composed of soft inner bark of trees, green mosses and feathers. The eggs are 8 to 10 in number, creamy white in ground color, speckled and blotched with pale brown and lavender. They average .55 by .44 inches in dimensions.

In its service to the agriculturist, this bird should be considered fully as beneficial as the chickadees and the nuthatches, for its food consists almost entirely of insects, whereas both nuthatches and chickadees consume a considerable portion of seeds and fruits.

Regulus calendula calendula (Linnaeus)

Ruby-crowned Kinglet

Plate 104

Motacilla calendula Linnaeus. Syst. Nat. Ed. 12. 1766. 1:337
Regulus calendula DeKay. Zool. N. Y. 1844. pt 2, p. 64, fig. 119
Regulus calendula calendula A. O. U. Check List. Ed. 3. 1910. p. 356. No. 749

calĕndula, Lat., gerund from *caleo*, to be warm or glow, that is the flaming crest

Description. Upper parts *greenish olive; 2 whitish wing bars; male with a flaming ruby patch* in the center of the crown which is absent or dimly

indicated in the female. *Under parts dull whitish* tinged on the sides with buffy.

Length 4.1–4.5 inches; extent 7–7.35; wing 2.25; tail 1.75; bill .29; tarsus .67.

It is well for the amateur to distinguish this Kinglet from the Golden-crowned species, not by trying to contrast the golden with the ruby center of the crown, but by the conspicuous black edges of the crown in the Golden-crested species, whereas the Ruby crown has no black about the head. It is well to note also the greater length of the present species and the dull *whitish eye ring.*

Distribution. The Ruby-crowned kinglet breeds from northwestern Alaska, Mackenzie, central Keewatin, and central Ungava, southward in the mountains to southern California, southern Arizona, central New Mexico and to northern Ontario, New Brunswick, Nova Scotia and northern Maine. It winters from southern British Columbia, Iowa and Virginia southward to Guatemala. In New York this is a migratory species, appearing in the spring from the 4th to the 23d of April according to the season and latitude, and passing northward from the 8th to the 17th of May. In the fall it reappears between the 20th and the 30th of September, passes southward between the 20th of October and the 11th of November. Some records of winter birds have recently occurred in "Bird Lore" in the Christmas census from Long Island, and a record of what was supposed to be a nest of this species containing young was reported by Ernest Ingersoll (N. O. C. Bul. 1:116). Near Skylight camp, Mt Marcy, the author saw, on July 19, 1905, what he felt sure was a kinglet of this species, evidently carrying food to its young, but as he had no means of securing the specimen or of definitely verifying the observation, the Ruby-crowned kinglet still remains without definite breeding record for this State. It is probable, however, that it will be found to nest occasionally in the cooler and damper portions of the higher Adirondacks.

Haunts and habits. The Ruby-crown, like the Gold-crest, is found throughout our woods, groves, shade trees, and the shrubbery of our lawns during the migration season, especially in the springtime, and many a morning in April I have been awakened by its ecstatic melody delivered from

just without my window. Its song is one of the sweetest among our native birds. Giraud described it as "excelling the finest tones of the trained canary." Chapman calls the song "mellow and flutelike, loud enough to be heard several hundred yards, an intricate warble past imitation or description and rendered so admirably that I never hear it without feeling an impulse to applaud." I am forced to believe that the flaming crest of the kinglet has the function not only of charming a prospective mate, but also of striking terror to the heart of rivals and antagonists. One morning while I was bird hunting among the spruces, I came upon a kinglet which was warbling so madly as to attract my attention, and I discovered him with his neck stretched up, and his flaming crest erected, as his notes were delivered, like a flame of fire from the top of his head. He slowly made his way toward the top of a limb where a kinglet, evidently a male but younger and less vigorous, was cowering as if afraid of annihilation and yet unable to flee from its approaching antagonist. This bird, at any rate, had a ruby crest, although it was not so brilliant as that of the other male, and at the beginning of the contest he sang a song which I supposed to be uttered only by the males. When his antagonist approached within a few inches, he finally dropped from the limb and flew away. The behavior of the flaming crest during this contest assured me that it aided both the warlike attitude of the singer and his wonderful song in convincing his rival of greater superiority.

Polioptila caerulea caerulea (Linnaeus)

Blue-gray Gnatcatcher

Plate 104

Motacilla caerulea Linnaeus. Syst. Nat. Ed. 12. 1766. 1:337
Culicivora coerulea DeKay. Zool. N. Y. 1844. pt 2, p. 109, fig. 126
Polioptila caerulea caerulea A. O. U. Check List. Ed. 3. 1910. p. 357. No. 751

poliόptila, Gr., gray-feather; *caerúlea*, Lat., blue

Description. Upper parts *grayish blue; under parts grayish white; tail black*, the *outer feathers* mostly white, the second partly white and the

third tipped with white; forehead and line over the eye black. *Female:* Similar but duller, no black on the head.

Length 4.5–5 inches; extent 6.3–7; wing 2.1; tail 2.

Distribution. This species ranges from eastern Nebraska, southern Wisconsin, Michigan, Ontario, southwestern Pennsylvania and southern New Jersey to Texas and central Florida. Winters from the Gulf States to the Bahamas, Cuba and Guatemala. In New York it is an irregular and uncommon summer visitant. There is, as far as I know, no definite record of its breeding within our limits, except that a nest evidently of this species was found in the fall of 1890 at Coldwater, Monroe county, by Ernest H. Short, reported in his " Birds of Western New York," page 20. The following records of its occurrence may be of interest to New York bird students: Canarsie, L. I., 1849 (Dutcher, Auk, 10:277); Far Rockaway, L. I., April 18, 1874 (N. T. Lawrence, Auk, 2:272); Fort Hamilton, L. I., October 11, 1879, young bird (Berier, N. O. C. Bul. 6:126); Penn Yan, N. Y., May 1877 (Gilbert, Auburn List, page 8); Montauk Point, L. I., September 2, 1885 (Dwight, Auk, 5:324); Canandaigua, N. Y., June 3, 1886, a pair collected by Elias J. Durand; Rochester, N. Y., May 10, 1891 (Charles R. Taylor); April 30, 1892 (Harry Denslow); Piermont, N. Y. (Chapman, Auk, 6:305); Bridgehampton, L. I., July 1, 1893 (Knoess and Dutcher); Shelter Island, L. I., September 22, 1896 (W. W. Worthington); Bellport, L. I., summer of 1899 (W. A. Babson); Central Park, N. Y., May 22, 1901 (Isham, Auk, 19:91); Rochester, N. Y., May 3, 1903 (E. H. Eaton); Branchport, May 30, 1901 (C. F. Stone); Charlotte, Monroe county, N. Y., May 7, 1905 (Lawrence and Paul Achilles); Canandaigua, April 25, 1906 (Maurice Blake, Auk, 24:226); Middle Granville, August 12, 1908 (Weber, Auk, 26:82).

It is evident that this species, like the Tufted titmouse and the Carolina wren, is of frequent occurrence in the interior of New York, but has never established itself as a breeding species.

Haunts and habits. The Gnatcatcher is a bird of the forest and is usually found in trees of dense foliage. It is restless in habit like the

kinglets, to which it is related. Chapman compares the bird, both in character, appearance and song, to the famous Nightingale, the song being an exquisitely finished production, though lacking in strength and volume. The characteristic call note is compared to the ting of a banjo string and can be heard at a greater distance than the song. The nest of the Gnatcatcher is a beautiful structure, composed of tendrils, bits of bark and fine grasses woven into a firm, deep structure, carefully covered over the exterior with lichens and resembling very much in general appearance the nest of the Ruby-throated humming bird, though, of course, larger and comparatively deeper than the humming bird's. It is placed on a horizontal branch or at the crotch of a limb from 10 to 50 feet from the ground. The eggs are 4 or 5 in number, bluish white in ground color, thickly speckled with reddish brown and umber, averaging .57 by .46 inches in dimensions.

Family TURDIDAE

Thrushes

Wing rather elongate, pointed, the primaries 10 in number, the first very small or spurious; tail rather square or slightly rounded, shorter than the wing, the feathers widening toward their tips; bill moderate in length, a little shorter than the head, rather slender, pointed, notched near the tip, nearly straight, but the upper mandible slightly decurved near the end; nostrils oval or roundish, uncovered; rictus more or less bristly; tarsus booted, long for perching birds, slender, laminiplantar on sides and rear, with the front toes deeply cleft, the outer one, however, joined to the inner for half the basal joint.

The birds of this family are of medium size for perching birds. The plumage of the adults is usually unvariegated, except for the spotting of the breast, which is common with the woodland species, and the young of all, which are spotted both above and on the breast. They undergo but a single moult each year. They are migratory in habits and largely insectivorous, though varying their diet with ripe fruits in the summer, fall and winter. They are mostly arboreal in habit, though a large portion of their insect food is captured on the ground, some species like the Robin and Hermit thrush being particularly terrestrial in feeding habits. Others

like the Bluebird simply light upon the ground long enough to seize the insects which they have discovered from near-by perches, then return to the higher station.

The nests of thrushes are rather bulky and inartistic in structure and usually have a central wall of mud or soggy, rotten wood. The eggs are from 4 to 6 in number, of bluish green color, in some species spotted with brown. The flight of thrushes is slightly undulating, in long sweeps. Our native forest species usually have curious buffy streaks across the bases of the wing feathers which show like glances of sunlight as they fly in front of one through the forest, evidently of use as directive or disappearing marks, like similar patches in the wings of plovers, sandpipers, and Brown creepers.

Thrushes are among our most melodious birds, the common names in European languages undoubtedly being attempted reproductions of the characteristic mellow quality of the prevailing family note — thrush, throstle, drossel, merle and turdus. As inhabitants of our gardens, orchards and groves, they are not only interesting because of their music, but largely beneficial. No serious complaints have been brought against any members of the family, with the exception of the Robin, which feeds extensively on cultivated cherries and other garden fruits during their season; and it is probable that all members of the family kill a considerable number of ground beetles which are predaceous in their habits; but in general, their insect fare is of species which are injurious, and they all render efficient service in scattering the seeds of fruit-bearing trees and shrubs along our hedgerows and through the forests.

Myadestes townsendi (Aububon)

Townsend solitaire

Ptilogonys townsendi Audubon. Birds Amer. 1838. (folio) 4. pl. 419, fig. 2
Myadestes townsendi A. O. U. Check List. Ed. 3. 1910. p. 359. No. 754

Description. The tail forked in the central feathers and graduated on the lateral feathers, thus appearing doubly rounded. Bill short and

depressed. *Adults:* Dull *brownish ash*, paler below, especially on the throat and belly; *wings and tail blackish;* the inner *secondaries edged and tipped with white* and the *outer tail feathers edged* and *broadly tipped with white*, nearly all the *flight feathers extensively fulvous* or yellowish brown *at the base*, the middle ones edged on the outside with the same color, these tawny markings appearing in the closed wing as an oblique spot separated by a bar of blackish from the tawny patch on the outer webs of the quills near their ends; white eye ring; iris brown; bill and feet black. *Young:* Speckled like the young thrush, but the spots disappearing after the first moult.

Length 8 inches; wing 4.25; tail 4.25; bill .5; tarsus .75.

Distribution. Townsend's solitaire inhabits western North America, breeding in the boreal zone from eastern Alaska, southwestern Mackenzie and western Alberta southward to the San Bernardino mountains, and in the Rocky mountains to Arizona and New Mexico. Winters from southern British Columbia and Montana southward, occasionally straggling eastward in migration. The occurrence of this species in New York is based on a single record. The specimen was captured at Kings Park, L. I., November 25, 1905, by A. J. Weber (Dwight, Auk, 23:105).

Hylocichla mustelina (Gmelin)

Wood Thrush

Plate 105

Turdus mustelinus Gmelin. Syst. Nat. 1789. 1:817
Merula mustelina DeKay. Zool. N. Y. 1844. pt 2, p. 71, fig. 86
Hylocichla mustelina A. O. U. Check List. Ed. 3. 1910. p. 359. No. 755
hylocichla, from Gr., meaning wood-thrush; *mustelina*, Lat., weasel-like, tawny

Description. Upper parts *cinnamon brown, brightest on the head*, neck and foreback, becoming olive brown on the rump and tail; *under parts white, boldly spotted with black* on the breast and sides.

Length 8 inches; extent 13; wing 4.25; tail 3; bill .75; tarsus 1.25.

Distribution. The Wood thrush breeds from South Dakota, Minnesota, Wisconsin, southern Ontario and southern New Hampshire to Texas and northern Florida; winters in southern Mexico and Central America. In New York it is a summer resident of all portions of the State but is not uniformly distributed. It is common in the southeastern portion of the State as well as in western New York in all mixed and deciduous wood-

lands which are well watered and provided with a fair stand of undergrowth. In 1905 I found it in the mixed forest between the Upper and Lower AuSable lakes at an altitude of 2000 feet. It also occurs in various other portions of the Adirondack region, but does not breed in the spruce and balsam forests, as far as I know. In the Catskill region it is somewhat erratic in distribution, but is fairly common in various localities of the mixed and deciduous forest up to a considerable altitude. I have noticed in various parts of the State where this bird occurs that it may be fairly abundant in certain stretches of woodland for several years and then almost entirely disappear, being supplanted, perhaps, by the Veery; but it does not commonly occur abundantly where the Veery is also in possession of the woodlands. It has adapted itself somewhat to civilized conditions and in various cities and parks is a common breeder in the shade trees. This is particularly true of the south side of the city of Rochester, of the lake bank in the city of Geneva, of the northern portion of Central Park in New York City, of some portions of the city of Albany, and various smaller villages in the State. It is to be hoped that it may become more and more adapted to civilization and become as common with us as the Robin. This thrush arrives from the 25th of April to the 10th of May, sometimes in the vicinity of New York appearing as early as the 20th of April, and in the northern portion of the State not before the 15th of May. In the fall it leaves us usually from the 1st to the 10th of October.

Haunts and habits. The Wood thrush is mostly arboreal in habits, singing in the tree tops, sometimes on the dead branches at the very top of a tall forest tree, and feeds to a considerable extent among the branches; but, like all thrushes, the principal portion of its food is gleaned from the ground, his brown back matching well with the dead leaves among which he seeks the beetles, bugs, and snails from which he principally makes his fare. As soon as the wild fruits begin to ripen he partakes plentifully of the June berry, the dogwood, viburnum and wild cherries. I never heard complaints that he has made himself a nuisance among the cultivated cherries and berry fields.

The nest of the Wood thrush is commonly placed in a sapling or on the limb of a tree at a height of from 8 to 30 feet from the ground. It resembles considerably the nest of the Robin. The exterior is composed of leaves, and weed stalks and within these a wall of mud or rotten wood is commonly placed. The lining consists mostly of fine dark rootlets and



Photo by Ralph S. Paddock

Wood thrush's nest and eggs

a few grass leaves. The eggs are 3 to 5 in number, usually 4, greenish blue in color, like those of the Robin, and average 1.08 by .71 inches in dimensions. They are usually laid from the 17th to the 30th of May, but later sets are frequently found as late as June 25 and the 10th of July.

The song of the Wood thrush has been admired by all naturalists since the days of Wilson and Audubon. He sings from the date of his arrival until July and sometimes as late as the middle of August. Chapman describes the song as "calm and restful, ringing through the woods like a hymn of praise pure and clear from a thankful heart; the flutelike opening notes are an invitation to his haunts, a call from nature to yield ourselves to the ennobling influences of the forest." He says the opening notes sound like the words "Come to me." Others syllabize his notes as "*ee-o-lee.*" The song is peculiarly rich and organlike in quality. Some birds, however, rest for a considerable time between the phrases, whereas others weave them into more of a connected anthem, yet the stately and deliberate method of his phrasing distinguish it readily from those of our other species. Besides the song, it frequently utters sharp call notes sounding like the syllables "*pip-pip-pip*" and also a shrill "*tsee, tsee*" as well as a low "*tut, tut*" similar to the Robin's.

Hylocichla fuscescens fuscescens (Stephens)

Veery

Plate 105

Turdus fuscescens Stephens. General Zoology. 1817. 10:182
Merula wilsoni DeKay. Zool. N. Y. 1844. pt 2, p. 74
Hylocichla fuscescens fuscescens A. O. U. Check List. Ed. 3. 1910. p. 359. No. 756

fuscéscens, Lat., growing dusky, somewhat dark (not very applicable to the Veery)

Description. *Upper parts uniform cinnamon brown;* lower parts white strongly *tinged on the breast with buffy* and *lightly spotted with dusky.*

Length 7–7.5 inches; extent 12; wing 3.85–4; tail 3; bill .6; tarsus 1.18.

Distribution. The Veery breeds from northern Michigan, central Ontario and Newfoundland to northern Illinois, northern Ohio and northern New Jersey, and south in the mountains to northern Georgia, being particularly a bird of the Alleghanian zone. In New York it is a common summer resident of a large portion of the State, rather uncommon on Long Island, but quite universally distributed in the damp forests of the

Alleghanian zone, practically absent from the spruce and balsam forests of the Catskills and Adirondacks where it is displaced by the Olive-backed and Bicknell thrushes. It arrives from the south from the 26th of April to the 12th of May, slightly later in the northern counties, and in the fall



Photo by L. S. Horton

Wilson thrush's nest and eggs

usually disappears between the 5th and the 30th of September, rarely later than the 15th.

Haunts and habits. The Veery or Wilson thrush prefers a damper, swampier forest than the Wood thrush and is usually very common in those forests which are flooded early in the season, and in May and June

have a dense ground cover of shrubs, moss-covered logs and thick herbage. Here they nest among the ferns and low shrubbery. The nest is commonly found on the ground or very near it, composed of leaves, strips of bark, weed stalks, lined with rootlets. Between the lining and the outside of the nest is usually a layer of well-rotted wood or mud. The eggs are commonly 4 in number, of a greenish blue color, very rarely spotted with brown near the larger end. They average .88 by .66 inches in dimensions. The nests with eggs are found from the 20th of May to the 10th of June, sometimes as late as the 30th of June.

Chapman describes the Veery's song as a "weird ringing monotone of blended alto and soprano notes. Neither notes nor letters can tell one of its peculiar quality. If you can imagine the syllables *vee-r-r-hu* repeated eight or nine times around a series of intertwining circles, the description may enable you to recognize the song." The call of the Veery is a sharply whistled *pheeu*, which is often heard during migration or when one enters his favorite coverts, repeated over and over again as one journeys through the woods or whistles in imitation of the bird.

Hylocichla fuscescens salicicola Ridgway

Willow Thrush

Browner, less tawny, than Wilson thrush; spots on breast slightly darker; size the same, or slightly smaller. (A. O. U. no. 756a)

This subspecies inhabits western North America, but straggles eastward in migration as far as New York (South Bristol, October 15, 1904, E. H. Eaton) and Connecticut (Bishop, Connecticut Geol. and Nat. Hist. Sur. Bul. 20, p. 177).

Hylocichla aliciae aliciae (Baird)

Gray-cheeked Thrush

Plate 105

Turdus aliciae Baird. Rep. Expl. & Surv. R. R. Pac. 1858. 9:217
Hylocichla aliciae aliciae A. O. U. Check List. Ed. 3. 1910. p. 360. No. 757

alíciae, to Miss Alice Kennicott of Illinois

Description. Upper parts *olive brown*, slightly darker than the Olive-backed thrush; *under parts whitish, spotted* on the sides of the throat and

on the breast with dusky; paler spots on the sides; spotting fully as heavy as in the Olive-backed thrush; eye ring and *cheek gray* with no perceptible buffy tinge; breast very slightly tinged with buffy.

Length 7.5–8 inches; extent 12.5–13.5; wing 4–4.25; tail 3; bill .55; tarsus 1.25.

Distribution. This species breeds in the Hudsonian zone from northwestern Alaska, northwestern Mackenzie, to central Ungava and Newfoundland; winters in northern South America. In New York it is only a transient visitant, arriving from the south from the 9th to the 20th of May and passing northward between the 20th of May and the 2d of June. In the fall it returns from the 18th to the 30th of September and passes southward from the 15th to the 25th of October. It is fairly common as a migrant both in the coastal district and in central, northern and western New York.

Haunts and habits. The Gray-cheeked thrush is found about our lawns and shrubbery as well as in the forests and swamps during the migration time. It is shyer than the Olive-backed thrush and retreats, at the slighest disturbance, to the coverts of the hedges and trees, assuming rather an erect posture upon alighting. Its call note is a rather sharp, petulant "*fee-a.*" It is also said by Mearns to utter a low note resembling the call of the Brown creeper and a bubble-bursting sound often heard during the spring. Its haunts and habits in general resemble those of the Olive-backed thrush, which is slightly more common with us.

Hylocichla aliciae bicknelli Ridgway

Bicknell Thrush

Hylocichla aliciae bicknelli Ridgway. Proc. U. S. Nat. Mus. 1882. 4: 377
A. O. U. Check List. Ed. 3. 1910. p. 360.

No. 757a

bicknélli, to E. P. Bicknell, the discoverer of this subspecies

Description. *Smaller* than aliciae; colors practically the same, but the upper parts *slightly* darker and *browner*, especially the tail, and the *chest slightly more buffy;* the *bill* slightly *slenderer.*

Length 6.50–7.40 inches, the females being the smaller; extent 11–11.5; wing 3.4–3.8; tail 2.6–2.9; bill .50–.54; tarsus 1.1.

Distribution. This subspecies breeds in the upper Canadian and Hudsonian zones of Nova Scotia, northern New England and in the higher portions of the Catskills and Adirondacks as well as Mt Greylock and Mt Mansfield; winters in Hayti and probably South America. In New York, Bicknell's thrush is found as a summer resident of the higher portions of the Catskills, where it was discovered, and in the Adirondacks above an altitude of 2500 to 3000 feet. Our Adirondack party in 1905 found it fairly common in the vicinity of Mt Marcy, both on the Geological cobble, Bartlett ridge and the slopes of Mt Marcy, Skylight, Haystack and various other neighboring peaks up to the limit of tree growth. Standing on the top of Mt Marcy after sunset, one could hear the Bicknell thrushes in the stunted spruce and balsam just below the tree line in every direction, singing their evening hymn. We found them feeding their young on July 12 near Skylight camp, and on July 18 took an adult male in full song near Lake Colden, at an altitude of 2800 feet.

Haunts and habits. Although the song of this thrush is so commonly heard in the higher portions of the Adirondacks as well as the Catskills, it escapes observation on account of its shy, secretive habits. The song resembles considerably that of the Veery, having the same ringing, flutelike quality, but is slightly more interrupted than the Veery's performance. Howell describes the quality as of a " fine, high-pitched reed. Unlike the Olive-backed thrush, it does not change its pitch perceptibly. The syllables *wee-a, wee-a, wee-a, chi-chi-wee,* the opening notes *wee-a* are open and flowing, followed by two staccato notes; the closing note resembling the open one is without special emphasis. The last three notes taken together form the characteristic portion of the song and are frequently given by themselves without the prelude." Besides its song, this thrush has a call, very similar to the whistled *phew* of the Veery, and a *pink* resembling that of the Olive-backed thrush.

The nest is like that of the Olive-backed thrush and is placed in low bushes or trees only a few feet from the ground. The eggs are greenish blue, spotted and speckled with reddish brown and cinnamon brown but

more finely than those of the Olive-backed thrush. The ground color is also greener.

During migration this thrush is not rare in the coastal district, especially around the shores of Long Island, appearing in the spring between the 20th and the 30th of May. In the fall it is first observed between the 18th and 23d of September and the latest records occur between the 12th and the 23d of October. It is probable that it occurs occasionally in central or western New York during migration. Doctor Merriam took one specimen at Locust Grove, but of all the specimens from western New York which I have examined I have found none which were smaller than the smallest dimensions given for the Gray-cheeked thrush and I am inclined to think they were all of that species.

Hylocichla ustulata swainsoni (Tschudi)

Olive-backed Thrush

Plate 105

Turdus swainsoni Tschudi. Fauna Peruana. 1845–46. Orn. 28
Merula olivacea DeKay. Zool. N. Y. 1844. pt 2, p. 73
Hylocichla ustulata swainsoni A. O. U. Check List. Ed. 3. 1910. p. 361. No. 758a

ustulâta, Lat., scorched, ashy, referring to the color; *swaínsoni*, to William Swainson, English naturalist

Description. Upper parts *olive brown;* under parts white, washed with grayish olive on the sides and *spotted on* the *breast and sides with dusky;* the *chest perceptibly tinged with buff*, and the *eye ring, ear coverts* and *cheeks plainly buffy.*

Length 7–7.5 inches; extent 12–12.5; wing 3.8–4.2; tail 2.9–3.2; bill .5; tarsus 1.1.

Distribution. The Olive-backed thrush breeds in the Canadian and lower Hudsonian zone from northwestern Alaska, central Keewatin, southern Ungava and Newfoundland, southward to eastern Oregon, Nevada, Colorado, Utah, northern Michigan, New York and the mountains of Massachusetts and Pennsylvania and West Virginia; winters from southern Mexico southward to Argentina. In New York it is a common summer resident of the Canadian zone, both in the Catskills and in the Adirondacks, being more abundant in the higher forests of the mountains than the

Hermit thrush, as the latter is slightly more abundant in the swamps and lower altitudes. It also breeds sparingly on the highest mountains near the Pennsylvania border where the altitude surpasses 3000 feet and has been reported from several of the colder gullies and swamps of western New York; but I have never found it breeding in these localities and think it possible that most of these reports that come to us are due to error, as they are all based on the eggs which were considered certainly those of the Olive-backed thrush because they were spotted, but they probably were spotted eggs of the Veery. During the migration season this is one of the most abundant thrushes about our shrubbery and shade trees and woodlands both of southeastern New York and the central and western portion of the State, arriving from the 9th to the 15th of May and passing northward from the 18th to the 31st of the month. A few spring dates as early as May 2 have come to my attention. In the fall it appears between the 10th and 20th of September and is last seen between the 10th and 22d of October.

Haunts and habits. During the migration, this species is not so shy as the Gray-cheeked thrush and is often seen hopping about the lawns or sitting unconcernedly in our shade trees. When flying about or disturbed it utters a subdued *plup* or *whit*, and occasionally a high-pitched note of alarm like the syllable *puk*. In its breeding grounds it utters an alarm note which I never heard during the migrations. It has been written *chee-urr, chee-urr*, the second syllable being especially harsh and strongly accented. The song of the Olive-back is frequently heard during the migration time and reminds one forcibly of the Veery's song. It is spontaneous and lyrical. Bicknell's description states, "The first note is loudest and most liquid, after which the melody becomes rapidly fainter, seeming to dissolve upon the ear like the spent vibrations of a stringed instrument." Hoffman describes the song as like a Veery's inverted, going up instead of down the scale, but throatier, more gurgling, inferior in purity, richness and suggestiveness. My impressions of the Olive-back, as heard in the Ausable swamp in the Adirondacks, were more favorable

than those expressed by Hoffman. In purity and sweetness they seemed practically to rival the Hermit thrush which was singing in the same locality at the same time, though decidedly different in character.

The nest of the Olive-back is placed in low balsams, spruces or beeches from 4 to 15 feet from the ground. It is composed mostly of mosses, dead leaves and plant stems, lined with dark rootlets. The eggs are greenish blue, spotted with reddish brown, 3 or 4 in number, and average .90 by .64 inches in dimensions. The nesting season varies from June 5 to July 20.

Hylocichla guttata pallasi (Cabanis)

Hermit Thrush

Plate 105

Turdus pallasii Cabanis. Archiv fur Naturg. 1847. p. 205
Merula solitaria DeKay. Zool. N. Y. 1844. pt 2, p. 72, fig. 80
Hylocichla guttata pallasi A. O. U. Check List. Ed. 3. 1910. p. 362. No. 759b

guttáta, Lat., spotted; *pállasi*, dedicated to the famous Russian naturalist

Description. Upper parts *olive brown*, but browner than the Olive-backed thrush; *rump and tail rufous;* under parts whitish, washed with brownish olive on the flanks; *spotted* on the *breast* with black rather more heavily than in the case of the Olive-backed and Gray-cheeked thrushes.

Length 7–7.25 inches; extent 11–12; wing 3.52–3.75; tail 2.74–2.85; bill .53; tarsus 1.2.

Young, as in the case of the other members of the genus, are spotted above with ocherous and dusky.

Distribution. The Hermit thrush breeds in the Canadian and Transition zones of eastern North America from southern Yukon, southwestern Keewatin and northern Quebec south to central Alberta, central Minnesota, northern Michigan, Ontario, New York, Massachusetts and Connecticut and in the mountains of Pennsylvania and Maryland. Winters from Massachusetts, southeastern New York and the Ohio valley to Texas, Florida and Cuba. In New York it is a summer resident of all the Canadian zone of the Catskills and Adirondacks and of the colder portions of the Transition zone near the Pennsylvania border as well as in the colder swamps, gullies and hill slopes of eastern, central and western New York.

It nests near Lake Ronkonkoma, Long Island (Braislin, Cherrie, Harper and Davis); in Bergen swamp, Genesee county; in some of the gullies near the head of Canandaigua lake; near Branchport on Keuka lake and various other localities of the central lake region. It therefore does not seem to confine itself to the Canadian zone in this State, but at the same time is practically absent from all the forests of the greater portion of the State excepting the spruce, balsam and hemlock zones. It is a common transient in all parts of the State, where it does not occur as a summer resident, and in various localities in the lower Hudson valley and on Long Island is found throughout the winter. The spring migration begins from March 25 to April 10, and where it is not a summer resident the last migrants are found to disappear between the 5th and 20th of May. It arrives from the north from the 1st to the 18th of October and passes southward from October 20 to November 26. Thus it is evidently one of the hardiest of the family, practically rivaling the Robin and Bluebird in its ability to withstand the northern cold.

Haunts and habits. During migration time this thrush is frequently seen about our lawns as well as in the woodlands in all parts of the State. It feeds mostly on the ground after the manner of the Robin, and when slightly disturbed utters a low *chuck* and flies to the low branch of a tree. Upon alighting it almost always tilts its tail slowly, thereby giving an "ear mark" of its identity when the bird is so far away that its colors can not be recognized. Besides this common call of the Hermit, it has also a harsh "*speke*" note which is usually heard only on the breeding grounds, when one is in the vicinity of its nest. The Hermit thrush is often called the Swamp robin, on account of his beautiful song and his preference for cool, damp forests. Balsam and spruce coverts are his special abode. In the winter he prefers cedar groves and evergreen swamps near the coast. In the Adirondack forest his exquisite song can be heard morning and evening throughout the breeding season, frequently through the greater portion of the day, especially in cloudy weather. Bicknell says: "The Hermit thrush bears high distinction among our songbirds. The notes are not remarkable for variety or volume, but in purity and

sweetness of tone and exquisite modulation they are unequalled, in tranquil clearness of tone and exalted serenity of expression going beyond any woods music we ever hear." Hoffman says: "The song of the Hermit is divided into cadences of different pitch. Each cadence is introduced by a pure fluted note, then follow two or three higher notes given with a tremulo effect. These are either given three on the same pitch or, more often, the last two are a little higher or lower than the first. The introductory note is held long enough to give a calm, meditative effect to the song. It also serves to give the pitch to the cadences, one of which is



Photo by Verdi Burtch
Hermit thrush on nest



Photo by Verdi Burtch
Hermit thrush's nest and eggs

so high it is hardly to be heard at a distance. The others are very full soprano or mezzo-soprano. There are no bass notes such as the Wood thrush strikes and no great intervals between any two notes."

The Hermit makes its nest on the ground or in the low branches of some thick tree. It is composed of coarse grasses, leaves and mosses, lined with dark rootlets or pine needles. Beneath the lining is usually a cup of mud or damp rotten wood as is customary with the other thrushes. The eggs are 4 to 6 in number, usually 4, greenish blue in color, lighter than those of the Wood thrush, and average .88 by .69 inches in dimensions.

Planesticus migratorius migratorius (Linnaeus)

Robin

Plate 106

Turdus migratorius Linnaeus. Syst. Nat. Ed. 12. 1766. 1: 292
Merula migratoria DeKay. Zool. N. Y. 1844. pt 2, p. 70, fig. 83
Planesticus migratorius migratorius A. O. U. Check List. Ed. 3. 1910. p. 363. No. 761

planésticus, poorly formed from Lat., *planus*, a plain, the Robin being a plains bird; *migratórius*, Lat., migratory

Description. Upper parts *slate color* more or less tinged with olive brown; the *head black;* small white spot above, below and in front of the eye; the throat largely white streaked with blackish; *breast* and nearly all the under parts *reddish brown* or rufous; the lower abdomen white; tail and wings blackish; the outer tail feathers tipped with white. *Female:* Considerably duller than the male, the breast sometimes almost ocherous brown. *Young: Spotted* above with whitish; *under parts* whitish tinged with cinnamon on the sides and *spotted with black.*

Length 10 inches; extent 16; wing 5–5.5; tail 4–4.5; bill .8; tarsus 1.25.

Distribution. Breeds from northwestern Alaska; northern Mackenzie, northern Ungava and Newfoundland south to central Alberta, southeastern Wyoming, Kansas, Indiana, Ohio, Pennsylvania, New Jersey and along the Alleghanies to North Carolina; winters from Kansas, the Ohio valley and New Jersey, to the gulf coast, and irregularly farther north. In New York the Robin is an abundant summer resident in all portions of the State, being probably our most familiar native bird and known more unmistakably than the English sparrow, the Song sparrow or the Chippy. It has adapted itself to civilized conditions and prefers to nest near the habitations of man. It does still frequent the woods, however, to a considerable extent, and I have found it breeding in the slashings of the Adirondack forest miles from any settler's house and in the woods near the lumber camp or the open summer camps of tourists in all portions of the North Woods. There can be little doubt that the Robin is and will remain our most dominant native species. The spring migration of the Robin begins often as early as the 15th of February in southeastern New

York, rarely later than the 10th of March. Dutcher's migration dates for Long Island some years begin on February 7; in western New York, March 4 to 10 is perhaps the normal time of arrival. Some years they are common as early as the 24th of February when there is an exceptionally warm wave. In an unusually late spring they sometimes are not common before the 22d of March, but it is a rare season when the Robin is not in evidence at least as early as March 12. In the fall the last migrants depart from central and western New York about the 1st to the 12th of November, a few remaining occasionally until the last of the month. Fisher gives the date of departure from Ossining as November 30, but a few remain, as stated before, in nearly all the central and southern portions of the State in favored localities throughout the winter.

Haunts and habits. The Robin places its nest even on the window ledge or the veranda post, the brackets of porches, on projections about the sheds, or under the eaves of the barn; likewise in all manner of trees on the lawn, in the orchard and shade trees along the street, or even on the trees in the forest. I have found robins' nests within 1 foot of the ground, at other times 60 feet high in elm trees, and 80 feet high on the beams which supported a water tank. The materials used in the nest construction are almost invariably grass stems and weed stalks for a foundation layer, upon which is built a shell of mud held together with blades of grass carefully mingled with it by the mother bird, who shapes the nest by pressing her breast against it, until a well-rounded cup of sufficient size to support the young birds has been constructed; then the interior is lined with fine blades of dry grass. The eggs are usually 4 in number, rarely 5, and on one occasion I found 7 eggs evidently laid by the same bird. They are of a characteristic bluish green color, rather elongated ovate in shape and average about 1.2 inches in length by .82 in diameter. Robins begin to build the nest in April; some seasons when there is a warm wave during the last week in March I have seen nests completed by the 28th of that month; usually, however, the nest is not finished before the 15th of April and fresh eggs are commonly found from April 22 to May 8. The

second brood is started from May 30 to June 15, and oftentimes a third brood from the 1st to the 19th of July. In one exceptionally early season I found a Robin's nest with fresh eggs on the 31st of March. The time of incubation varies from 11 to 13 days and the young birds remain in the nest about 12 days after hatching, sometimes leaving it in 10 days, sometimes in 2 weeks. They are fed with a great number of caterpillars, cut worms, white grubs and earthworms. As their appetite increases the old birds seem to resort almost exclusively to angleworms, as a plentiful supply of these can usually be obtained. As the young birds become nearly feathered, ripe cherries are brought them, if they have not left the nest before the cherry season arrives. I have watched the old birds feed a nestful of 4 young ones ripe cherries at the rate of 16 to 30 an hour and the young birds every few minutes would shake their heads and pump their necks until they had regurgitated the cherry pits which would rattle on the veranda floor like grape shot. By actual count the cherry pits would rattle across the floor at the rate of 7 in 15 minutes. On several occasions I have noticed that the old robins brought half ripe cherries to the young who were unable to digest them in this condition and perished accordingly. After the nesting season is past, robins seem to disappear for a time from the gardens and dooryards, the old birds and young resorting more to the woodlands and hedgerows and remote fields for feeding, and as the fall season comes on they are found in the woods partaking of pokeberries, black cherries and all kinds of wild fruit. They also become much more wary and can not be approached as in the spring and summer when they live about the garden. During the winter months, even in central and western New York where heavy snow and a temperature often below zero is recorded, the robins remain with perfect safety throughout the winter provided they have swamps or cedar thickets or a sheltered gully to which they may retreat and a convenient supply of wild grapes, barberries, wild privet, poison ivy and juniper berries to furnish them abundant nourishment.

The vocal attempts of the Robin are more varied than those of any

other of our familiar birds. Nearly everyone knows his various songs and call notes, but in the early spring the notes of many other birds are frequently mistaken for those of the Robin. Many a time my neighbors have informed me that they had heard the Robin's first spring note when my own observation taught me it was some note of the Nuthatch or the Downy woodpecker. The loud cries of the Robin which signify distress and alarm are well known to everyone. As the cats carry off the young birds one by one this distressing cry is often heard about our gardens and lawns. Also the fighting cry of the Robin when contending for the possession of a mate or endeavoring to drive intruders from the feeding ground is fully as familiar. The *tut-tut* note which is delivered as the Robin flies up into a tree and bobs its tail, is of doubtful significance, but evidently is simply intended to notify his friends that he is there. The rather explosive ejaculation of four or five rapid notes uttered as the birds start for a more or less extended flight, evidently serves the purpose of keeping the company together. The ordinary song of the Robin is familiar to all, the common evening chant heard from the time of the birds' arrival in the spring till late in July. It is also heard in the morning from daybreak until sunrise, as well as before rain and, in the nesting season, at almost any time of day.

Much discussion has taken place regarding the Robin's economic status, and the general opinion of state and government experts seems to be that he is a beneficial species, principally because of the great numbers of cut worms, white grubs, smooth caterpillars, crane fly larvae and wire worms which he destroys, and there can be no question but that he does destroy immense numbers of those pests. The harm which he does — if harm it must be considered — results from the destruction of predaceous beetles like the black ground beetles and the tiger beetles which destroy injurious insects. Of these he takes a considerable number, but it may well be, as Mr Forbush contends, that if they were allowed to increase indefinitely they might become too numerous and thus destroy each other, so that the Robin's destruction of a few of these is not to be considered

a serious offense. The next count which has been made against the Robin is his unquestioned destruction of great numbers of earthworms which are usually considered among the agriculturist's best friends, for they are continually loosening the earth and bringing up the subsoil and depositing it on the surface, thereby returning many soluble minerals from deep down to the surface again, and carrying down bits of vegetable mould, so that they are to be regarded as among the most efficient soil makers and preservers of the fertility and looseness of the ground. The same argument can be made in regard to the Robin's destruction of earthworms, that it is necessary to have the surplus individuals removed in order to keep up the vitality of the race, and undoubtedly this is a potent argument, as has been shown by British ornithologists in discussing the relationship of falcons to the game coverts of England. Where no birds of prey are present to remove the weaker individuals the race gradually loses its stamina. The third, and probably the most serious count against the Robin in the eyes of New York agriculturists is his inordinate appetite for ripe cherries, and this is a serious offense from the standpoint of the small fruit grower or of the farmer who has a few cherry trees planted for his own use. I have seen robins clear as many as a dozen cherry trees so effectively, as fast as the cherries turned ripe, that the owner was obliged to content himself in the end with 6 or 8 quarts of fruit from the dozen trees. There is scarcely any effective way of driving robins from these cherry trees. I have myself attempted to discover some means of protecting the crop, but even if one remains in the tree with a stick or flag, waving it to drive the birds away, they will continue to come and carry off the fruit in spite of one's endeavors. Even the shotgun will not frighten them away; they must be killed in order to save the crop. Many have suggested that trees of early fruit be planted in the neighborhood to attract the robins from the cherry trees and this has been found effective in many cases, but the mulberries which have been advised for this purpose, do not ripen early enough, and the author believes that a few early cherries furnish the best food for the purpose. About the only native fruit tree which comes early enough

to be of any use is the shadbush, Amalanchier canadensis. Perhaps if some enterprising bird student could introduce a very early variety of this service berry, and grow it for planting as ornament about the lawns and farmyards, he would do a great service to the Robin and to the horticulturist.

Ixoreus naevius naevius (Gmelin)

Varied Thrush

Turdus noevius Gmelin. Syst. Nat. 1789. 1:817
Ixoreus naevius naevius A. O. U. Check List. Ed. 3. 1910. p. 364. No. 763
ixóreus = ἰξοβόρος, eating the mistletoe, the Missel thrush; *naévius*, Lat., spotted

Description. Upper parts dark slate color; wings and tail blackish; *2 conspicuous wing bars of orange brown;* some of the quills edged with the same; quills white at the base on their inner webs, but this marking is not visible when the wing is closed; one or more of the lateral tail feathers are tipped with white; *bright black collar* crosses the breast and runs up the sides of the neck and head; *stripe on the side of the head* backward from the eye *and under parts orange brown* gradually changing to white on the lower belly; bill black; feet yellowish. *Female:* Very much duller on the back but in a similar pattern. *Young:* Resemble the female but have no white on the belly, but the under part often washed with umber brown, the young females sometimes showing scarcely a trace of the collar.

Length about 10 inches; extent 16; wing 5; tail 3.7; bill .8; tarsus 1.25.

Distribution. The Varied thrush inhabits the Pacific coastal region, breeding from Yakutat bay, Alaska, to Humboldt county, California, and wintering from southern Alaska to the Colorado river and frequently straggling eastward in the winter time. Besides several specimens from New Jersey and Massachusetts, at least three different specimens of this thrush have been taken in New York State, the first from Islip, L. I., reported by G. N. Lawrence (see Baird, Brewer and Ridgway, 1, 29; and Coues, " Birds of Colorado Valley," page 19; also Annals Lyc. Nat. Hist. N. Y., 8, 1866, 281; and Boston Society Natural History 3, 1848, 17). Specimen from Port Jefferson, L. I., December 20, 1889, a male, collected by A. H. Helme, reported by Dutcher, Linnaean Society of New York Proc., No. 2, page 9. A specimen from Millers Place, L. I., November 19,

1905, collected by A. H. Helme, reported by Braislin, "Birds of Long Island," page 100.

This thrush evidently follows occasionally the troops of robins which come south from Alaska and reaches the Atlantic coast in their company. When noticed by bird observers he will appear like a curiously variegated Robin, a bird about the same size and shape; but the regular wing bars and the black collar, with the black markings and black and reddish yellow markings on the side of the head, will distinguish him at once among his more common brethren.

Saxicola oenanthe leucorhoa (Gmelin)

Greenland Wheatear

Motacilla leucorhoa Gmelin. Syst. Nat. 1789. 1:966
Saxicola oenanthe leucorhoa A. O. U. Check List. Ed. 3. 1910. p. 366. No. 765a

saxicola, Lat., rock dweller; *oenánthe*, Gr., name of some small bird; *leucórhoa*, Gr., white-rumped

Description. In summer, *ashy gray;* line over the eye, *under parts*, and *basal portion of tail, white;* breast sometimes tinted with buff; wings and *terminal portion of tail black; broad line* from the nostril *through the eye and along side of the head black;* bill and feet black. *Female:* Slightly more brownish. In *winter:* Both adults and young *olive brown above; under parts cinnamon brown;* wings and tail much as in summer.

Length 6.75 inches; extent 12.5; wing 4; tail 2.38; tarsus 1.2. Female: slightly smaller.



Wheatear. Saxicola oenanthe leucorhoa (Gmelin) From Hudson's "British Birds." ½ nat. size

Distribution. This subspecies of the Wheatear breeds in northeastern Arctic America from Elsmere Land and Boothia peninsula to eastern Greenland, Iceland and northern Ungava. It winters in west Africa, migrating through the Shetland isles and Great

Britain, occasionally straggling down the Atlantic coast to Quebec, Brunswick, Bermuda, Louisiana and Cuba. The Greenland Wheatear in New York has only four records, all of which have appeared in print as follows: Long Island, Lawrence collection (Lawrence, Ann. Lyc. Nat. Hist. N. Y., vol. 8, 1866, page 282); Junius, Seneca county, September 9, 1872 (Baird, Brewer and Ridgway, "Birds of North America," p. 501); Long Island, about 1863, female, adult, collection D. G. Elliot, in the American Museum Natural History (Allen, Auk, 3:490); Jamaica, 1885, collection of Long Island Historical Society (Dutcher, Auk, 10:277).

The western New York specimen collected by Mr Hampton is now in the collection of Hobart College. The letter written to Mr Hampton by Professor Baird in regard to the specimen will be interesting to New York ornithologists.

Washington, November 7, 1873

C. J. Hampton
Junius, N. Y.

DEAR SIR:

On looking over some old letters I find yours of February 15 in reference to the occurrence of the Stone chat in New York and as it is not indorsed as responded to I fear I have neglected to answer it. I now write to say that you are entirely correct in your supposition and that the occurrence of this species in the interior of New York is a fact of extreme interest and one which I have introduced in my forthcoming work on the Birds of North America.

Very truly yours
SPENCER F. BAIRD

This Wheatear is one of the most interesting of the land birds of America for the reason that it crosses the North Atlantic every spring to nest on the bleak shores of Labrador and Greenland, and returns again in the fall to spend the winter in northwestern Africa, evidently being the only small species of land bird which still follows the ancient line of migration as it was evidently marked out before the glacial epoch and the subsidence of the north Atlantic connection between Europe and America.

Sialia sialis sialis (Linnaeus)

Bluebird

Plate 106

Motacilla sialis Linnaeus. Syst. Nat. Ed. 10. 1758. 1:187
Sialia wilsoni DeKay. Zool. N. Y. 1844. pt 2, p. 65, fig. 98
Sialia sialis sialis A. O. U. Check List. Ed. 3. 1910. p. 366. No. 766

siália, Gr., σιαλίς, a bird so called from its slavering or sibilant note; *sialis*, "To call this Anacreon a slobberer!" (Coues). To double call him that is infamy

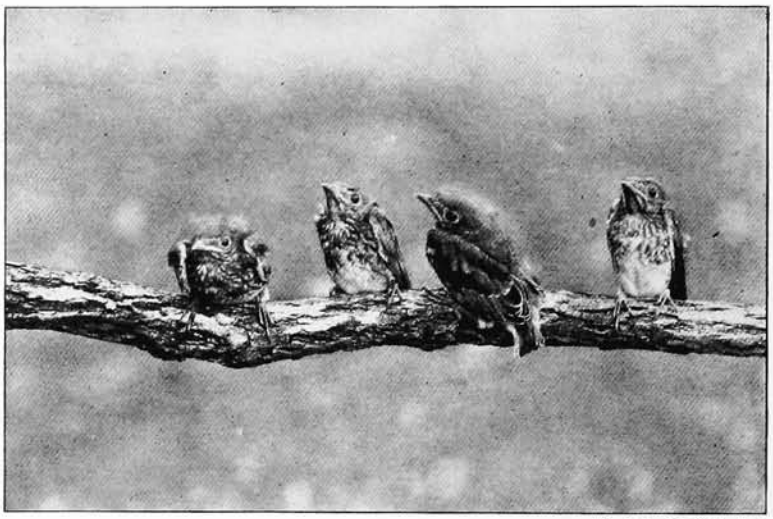
Description. *Male:* *Upper parts rich azure blue; throat, breast* and *sides chestnut rufous;* belly white. *Female:* Considerably paler, but pure azure *blue on the rump, tail and wings;* rest of the upper parts are grayish blue. *Young in first plumage:* Upper parts streaked along the shaft lines with whitish; under parts closely freckled with brownish and white; a distinct white eye ring.

Length 6.5–7 inches; extent 12–13; wing 3.75–4; tail 2.75–3; bill .25; tarsus .7.

Distribution. Breeds from southern Manitoba, northern Ontario, southern Quebec and Newfoundland, south to Texas and the gulf coast; winters from the Ohio valley and Middle States to the gulf; resident in Bermuda. In New York the Bluebird is a common summer resident of all parts of the State and locally a winter resident in the coastal district and the lower Hudson valley. In western New York I have never seen a Bluebird in midwinter, but it may occasionally remain in sheltered cedar swamps, as it does in the coastal district. Spring migration begins in southeastern New York from the 10th to the 15th of February, in exceptional seasons not till March 10. In western New York it very rarely arrives before the first of March, the average date being March 12, sometimes not till March 22. Several records of arrival before me are in the last week of February. One year (1906) I noticed bluebirds common on the 24th of February at Ithaca, Geneva, Canandaigua and Rochester. In the fall they disappear from the 16th to the 29th of October, sometimes remaining until the 10th of November or even later.

During the severe winter of 1895, the bluebirds of our northeastern states were decimated. The following summer I made a careful search

for the species in many counties of central and western New York, only to find perhaps one pair nesting, where, the previous year, 20 or more pairs would certainly have been found. I noted, however, that the broods reared were exceptionally large. Often 7 eggs were found in each of the few nests which I examined. I am inclined to think this indicates simply the exceptional vitality of the birds which survived the severe weather in their winter home, and the result was that within 5 years this species was as abundant as ever throughout the State. It is even possible that the



Young Bluebirds

Photo by L. S. Horton

elimination of all weaker individuals was of final benefit to the stock. A similar catastrophe occurred during the winter of 1911–12. This is reported by Professor Cook in Bird Lore 1:59. In the country about the central lakes I believe that during the summer of 1912 there was not more than 10 per cent of the usual abundance of bluebirds. Now, as I am writing this paragraph (March 15, 1913), the bluebirds have just become common in their spring migration and it seems to me they are nearly as abundant as I had noticed them during the last 10 years. It

remains to be seen how soon those that nest in this immediate vicinity will be as abundant as they were from 1900 to 1911.

Haunts and habits. The Bluebird is one of our familiar summer birds, frequenting the orchard and garden as well as the edges of open woodlands. It is, however, characteristically a bird of the open, and delights in vineyards, stump lots, pastures surrounded by rail fences, cultivated fields interspersed with a few trees along the fence lines, especially dead trees with hollow branches which furnish it the favorite nesting site. This species readily accommodates itself to boxes erected for its use and will build even in cigar boxes nailed to the top of fence posts or a grape trellis, preferring a height of from 7 to 9 feet. In such situations I have noticed that it is less troubled by the English sparrow than it is in boxes which are erected in apple trees or on the corners of buildings.

The Bluebird takes its food mostly from the ground, flying down from its station on the top of the fence post or small tree, seizing a beetle, grub or grasshopper which has attracted its attention and flying up again to the top of the post to devour its prey. There is no question but many of the beetles taken are predaceous ground beetles and tiger beetles which are, in general, beneficial species; but, as Forbush has indicated, even these, when they become overabundant, feed to a considerable extent on vegetation, and as the Bluebird does not feed exclusively or principally upon them we can forgive him this slight offense.

The Bluebird's warble is a mellow, cheery song, a low-pitched lay of four or five notes. It has been syllabled as "*tu-ree-a-lee*," its syllables chattered and fluted in frequent repetition. When frightened or angry he also utters a rattling chatter; and while flying, a call note which in the fall is said to be "*far away, far away*," in the spring "*Come with me.*" It certainly means "Come with me" or "Here I go," for as the little scattered company or the pairs of birds take flight, each one in succession calls the note at intervals, thus keeping the group together.

After the nesting season is finished the bluebirds remain in little family groups and will be found about the edges of the woods and in the

weedy pastures feeding largely at this season upon small grasshoppers which are so abundant in the fall. They remain until the sharp frosts of November hurry them southward. In the fall they vary their diet con-



Bluebird at nest

Photo by James H. Miller

siderably on wild fruits of all kinds, but have never been noticed as destructive to the gardener's crops.

The nest of the Bluebird is composed of grass blades and weed stalks,

lined with finer grasses, placed in a hollow limb, a woodpecker's hole or a " Bluebird box." The eggs are usually 4 to 6 in number, sometimes 7, the usual number in New York being 5. They are of a light blue color and average .80 by .60 inches in size. Two and sometimes three broods are reared in a season. As soon as the first brood is ready to leave the nest the old birds lure them gradually from tree to tree some distance from the nesting site, away to the fields and edges of the woods, the father Bluebird usually taking charge of them while the female returns to incubating the second brood. Of all our native birds, the Bluebird by many is regarded as the favorite. Its beautiful colors and lovable disposition, mellow voice and beneficial habits have endeared it to the country people. I can only regret that it is not as dominant in vitality as the Robin and needs more encouragement by having its nesting sites furnished it and protected against the encroachments of the English sparrow. We believe, however, that the species will continue to thrive in spite of the unfavorable conditions which frequently prevail in the winter and in spite of the sparrow's persecution, at least, wherever nature lovers furnish it with boxes which are kept free from the interloper.

ADDENDUM

NEW YORK BIRD HISTORY SINCE 1910

A few notable events have occurred since 1910 in New York ornithology which should be added to the histories recorded in volume I of this memoir. Besides the numerous notes published in the Auk, Bird Lore and other magazines which add somewhat to the knowledge of our birds, three separate publications which require special note have appeared.

The most significant of these in its additions to our ornithology is "The Vertebrates of the Cayuga Lake Basin, New York," by Hugh D. Reed and Albert H. Wright, Proceedings of the American Philosophical Society, vol. 48, p. 370–459, 1909. This paper represents the work of years by members of the department of vertebrate zoology in Cornell University and their assistants, and takes front rank among all faunal lists which have appeared in the State. The maps, discussion of life zones and records of migration and nesting dates have added materially to our knowledge. Although this publication arrived too late to be noted in the introduction to volume I, most of the records were furnished us to include in the Tompkins county list.

A new "Annotated List of the Birds of Oneida County, New York," was published by Egbert Bagg in the transactions of the Oneida Historical Society, vol. 12, p. 16–85, 1912. This edition brings the Oneida county list up to date, including all the additions made by Mr Bagg since the original list by himself and Dr Ralph was issued twenty-five years ago. No new additions to the Oneida county list not noted in volume I of this work occur, however, except the probable record of the Blue grosbeak.

Mr Ottomar Reinecke of Buffalo has printed his "Personal Observations and Notes on the Breeding, Migrating or Visiting Birds on the Niagara Frontier." This pamphlet of thirty-four pages (1912, no date on the impression received) gives many interesting experiences of Mr Reinecke while making his extensive oological collections in western New York.

Of the records of rare birds taken in the State since 1910, probably the most noteworthy is the capture of the Cory least bittern, Ixobrychus neoxenus, in the marsh at the head of Cayuga lake, May 27, 1913, by Mr Arthur A. Allen of Ithaca, N. Y., which gives us the first definite record of this rare bird for New York State. Mr Allen also took at the head of Cayuga lake on September 16, 1909 (Cornell University Collection 5,219) an American avocet, Recurvirostra americana, which is the only definite record of this species for our State during the last half century. Dr Carlos Cummings of Buffalo has reported another specimen of the White-faced glossy ibis, Plegadis guarauna, taken

at Grand island, Niagara river, September 18, 1908. It seems unaccountable that another specimen of this bird should be taken in the same spot as the specimen recorded in volume I after so many years and without any other specimen of the species having occurred in any of the adjoining states.

In 1912 there was another great slaughter of Whistling swans in Niagara river between March 18th and April 6th, but mostly on the latter date. Nearly 200 swans were swept over the falls and perished (see Fleming, Auk, 19:445–98). Since the "Niagara swan trap" is working such devastation upon one of our most interesting waterfowl, we believe that it should be the duty of the State Conservation Commission to station a protector on Goat island every spring between March 10th and April 10th, when the weather is favorable for swan migration, and drive the birds up the river, so as to prevent their destruction by being drawn over the falls.

In February 1912, on account of the unusual extent of ice formation on Lake Ontario and the entire freezing of Seneca, Cayuga and other central lakes, many hundreds of waterfowl perished of starvation, especially Canvasback, Redhead, Scaup, Whistler, Bufflehead, Horned grebe and Holboell grebe, but large numbers of the ducks were saved by feeding with grain under the direction of the Conservation Commission and various local sportsmen's clubs.

We regret to record that a further impetus to the extermination of the Wood duck has occurred in the continued draining of the Montezuma marshes in connection with the barge canal construction, and in the destruction of a large portion of the Potter swamp nesting coverts by reason of cutting away the timber for barrel staves.

Of all the species of birds which we had hoped to find nesting in the Adirondacks, such as the Bay-breasted warbler and Philadelphia vireo, no success has as yet rewarded our efforts in adding any new breeding species to the New York list.

ELON HOWARD EATON

Hobart College
Geneva N. Y.

EXPLANATIONS OF PLATES

Plate 43

(*See* plates 44, 46, 47, 48, 49 and 51)

TURKEY VULTURE
Page 63

BALD EAGLE
Page 91

BUTEO (RED-TAILED HAWK)
Page 87

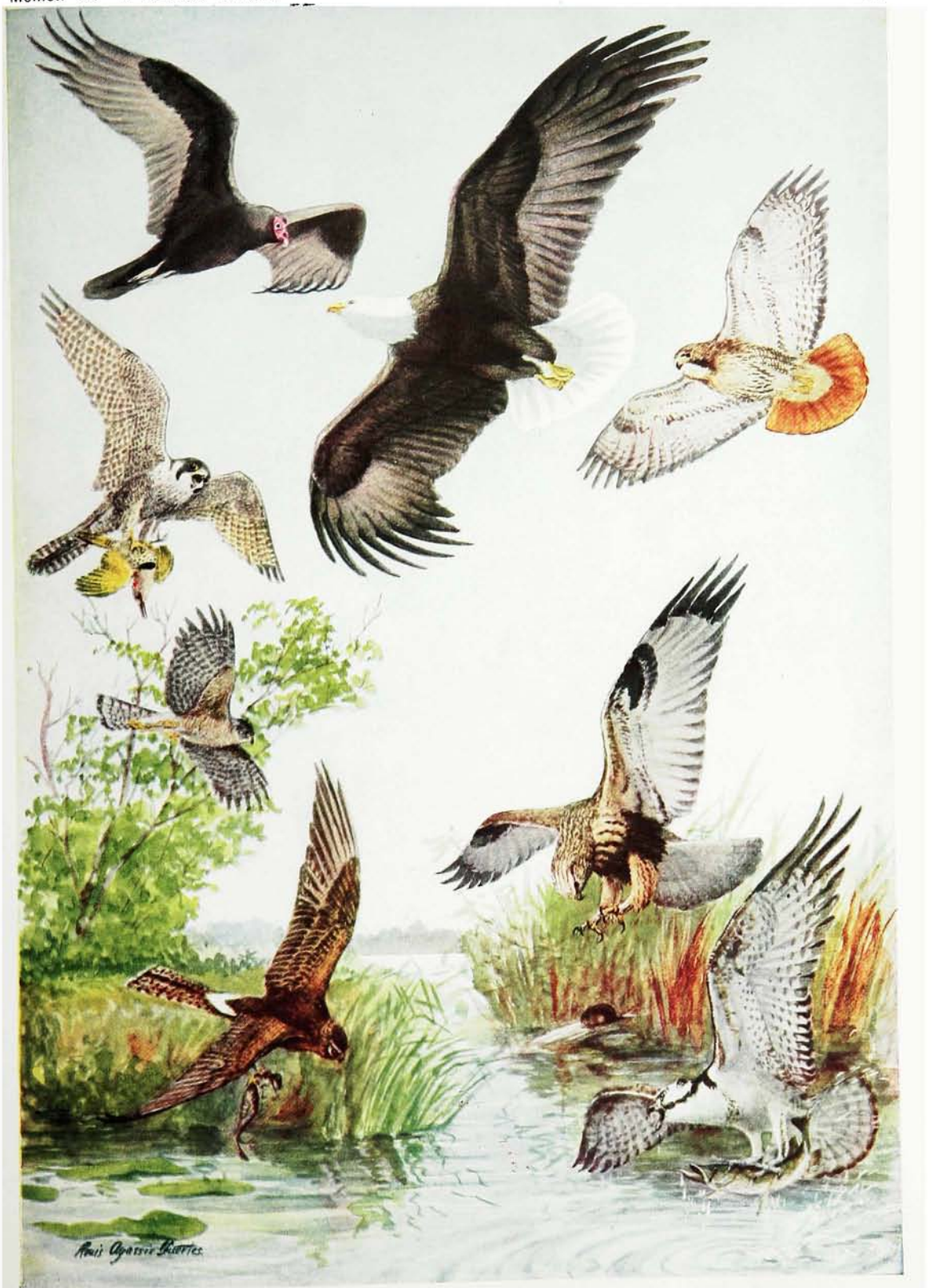
FALCON (DUCK HAWK)
Page 98

ACCIPITER (COOPER HAWK)
Page 77

ARCHIBUTEO (ROUGH-LEGGED HAWK)
Page 88

MARSH HAWK
Page 70

FISH HAWK
Page 106



Appearance of Diurnal Birds of Prey in Flight

TURKEY VULTURE
FALCON (DUCK HAWK)
ACCIPITER (COOPER'S HAWK)
MARSH HAWK-FEMALE
BALD EAGLE
BUTEO (RED-TAILED HAWK)
ARCHIBUTEO (ROUGH-LEGGED HAWK)
FISH HAWK

Plate 44

(*See* plates 43 and 46)

COOPER HAWK

Page 77

SHARP-SHINNED HAWK

Page 74



COOPER'S HAWK
Accipiter cooperi (Bonaparte)
IMMATURE FEMALE

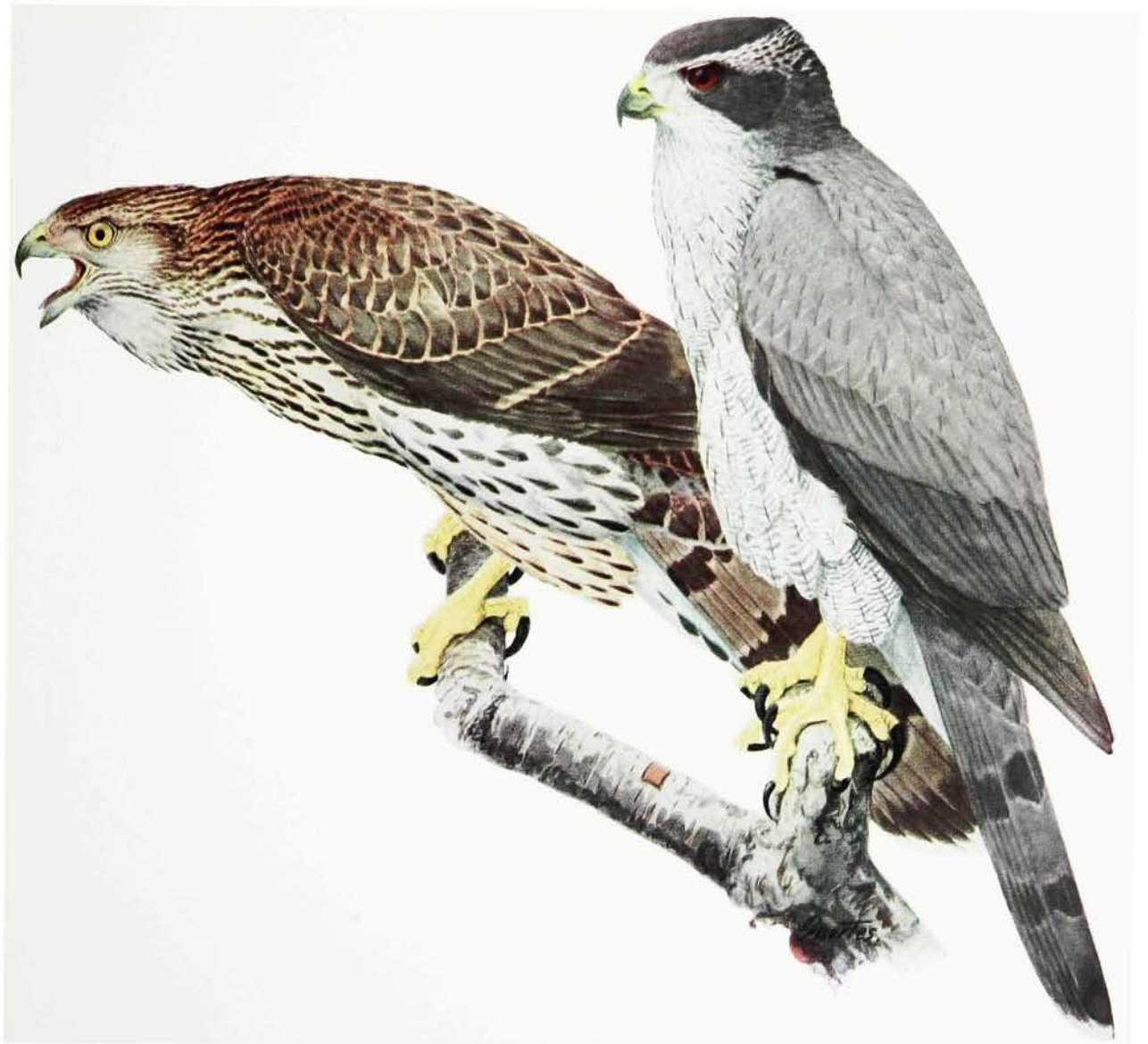
All ⅓ nat. size

SHARP-SHINNED HAWK
Accipiter velox (Wilson)
ADULT MALE

Plate 45

GOSHAWK

Page 78



GOSHAWK
Astur atricapillus atricapillus (Wilson)
$\frac{1}{5}$ nat. size

IMMATURE

ADULT

Plate 46

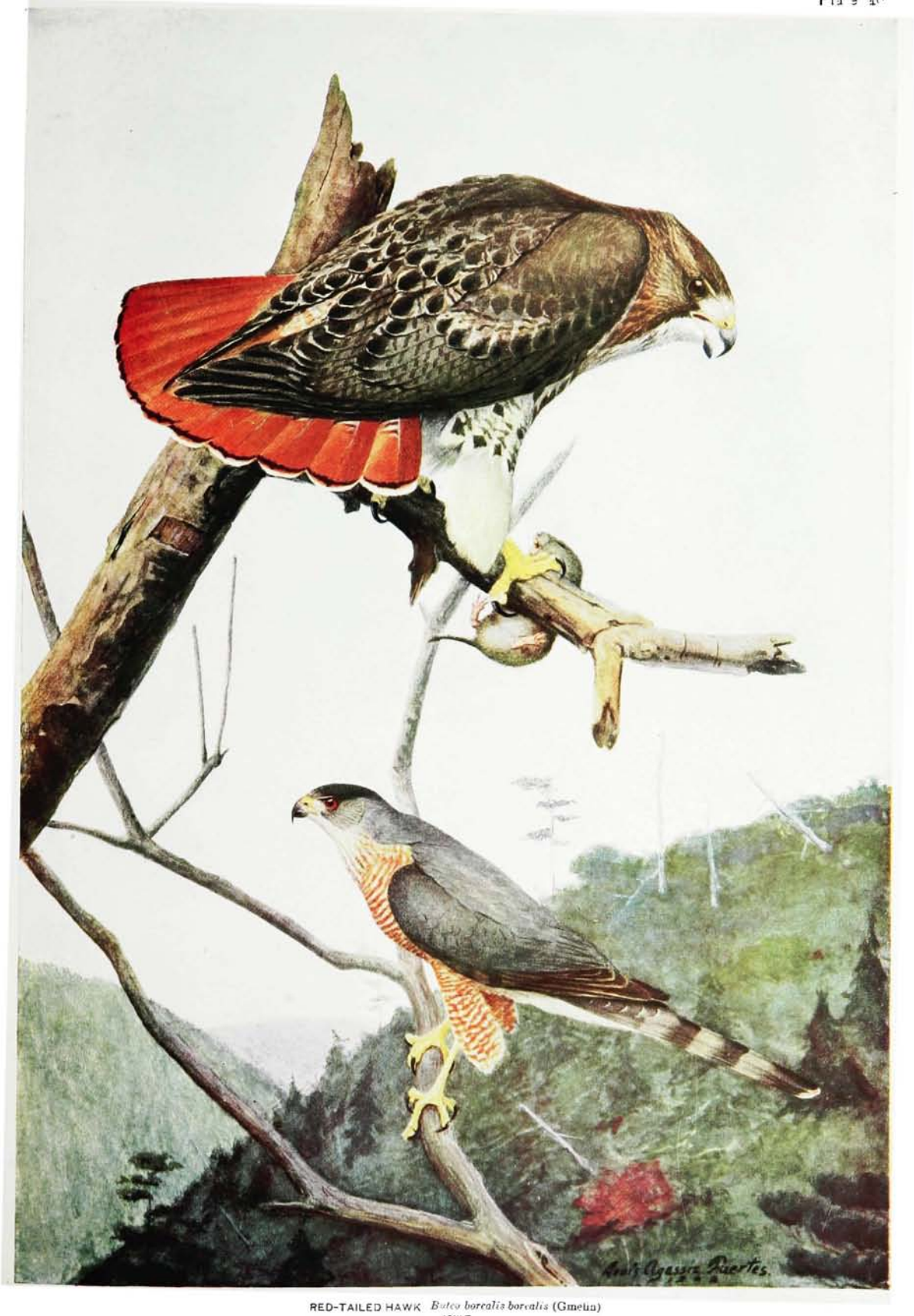
(*See* plates 43, 44 and 47)

RED-TAILED HAWK

Page 81

COOPER HAWK

Page 77



RED-TAILED HAWK *Buteo borealis borealis* (Gmelin)
ADULT
COOPER'S HAWK *Accipiter cooperi* (Bonaparte)
ADULT FEMALE
½ nat. size

Plate 47

(*See* plate 43)

RED-SHOULDERED HAWK

Page 83

RED-TAILED HAWK

Page 81



RED-SHOULDERED HAWK
Buteo lineatus lineatus (Gmelin)

IMMATURE

ADULT

RED-TAILED HAWK
Buteo borealis borealis (Gmelin)

IMMATURE

All ⅓ nat. size

Plate 48

(*See* plate 43)

BROAD-WINGED HAWK

Page 86

ROUGH-LEGGED HAWK

Page 48

MARSH HAWK

Page 70



ROUGH-LEGGED HAWK
Archibuteo lagopus sancti-johannis (Gmelin)
Black phase

BROAD-WINGED HAWK *Buteo platypterus* (Vieillot)
ADULT

IMMATURE
MARSH HAWK *Circus hudsonius* (Linnaeus)
MALE

All ¼ nat. size

Plate 49

(*See* plate 43)

GOLDEN EAGLE

Page 90

BALD EAGLE

Page 91



GOLDEN EAGLE *Aquila chrysaëtos* Linnaeus
$\frac{1}{4}$ nat. size



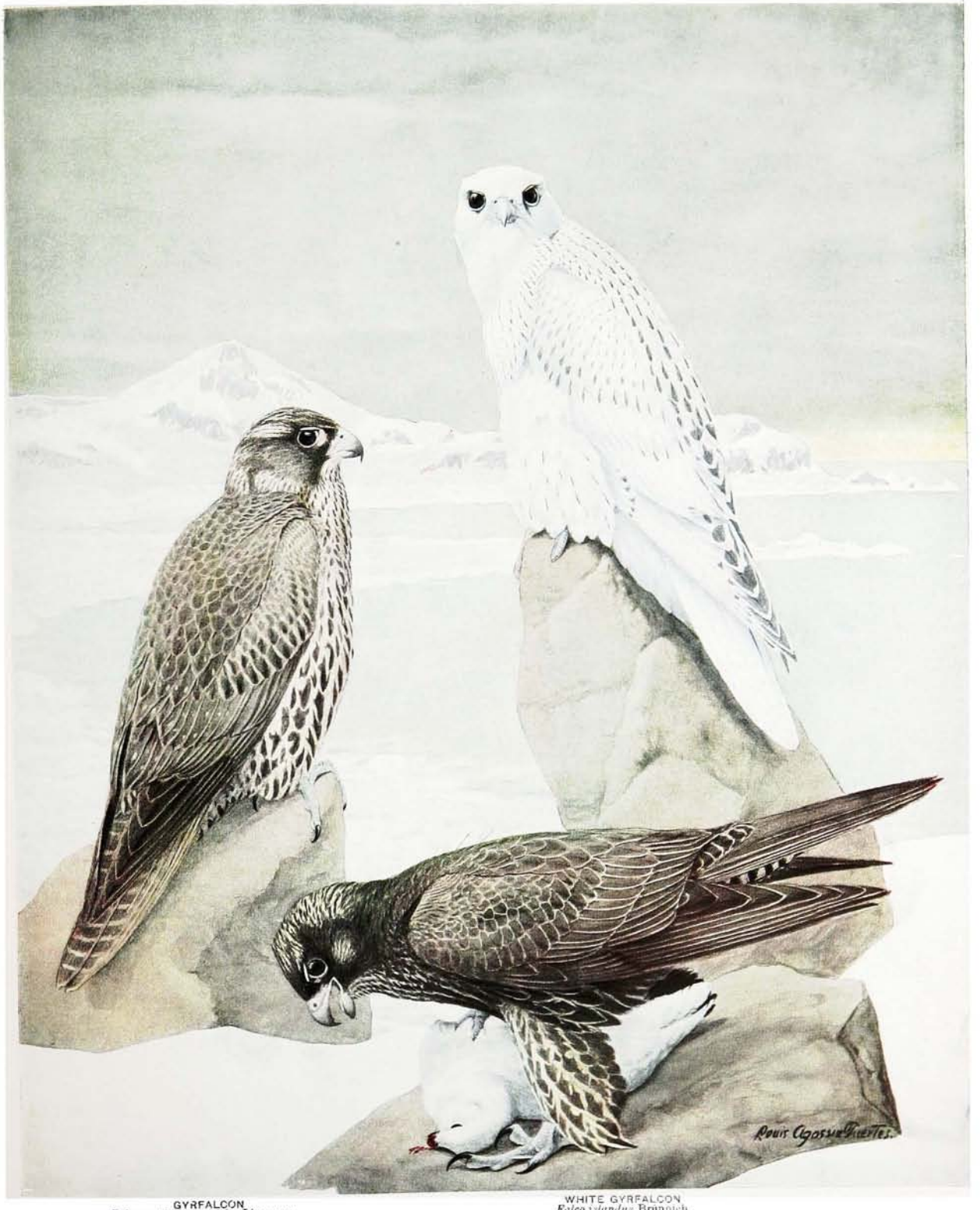
BALD EAGLE *Haliaeetus leucocephalus leucocephalus* (Linnaeus)
IMMATURE
$\frac{1}{6}$ nat. size

Plate 50

GYRFALCON
Page 96

WHITE GYRFALCON
Page 95

BLACK GYRFALCON
Page 97



GYRFALCON
Falco rusticolus gyrfalco Linnaeus

WHITE GYRFALCON
Falco islandus Brünnich

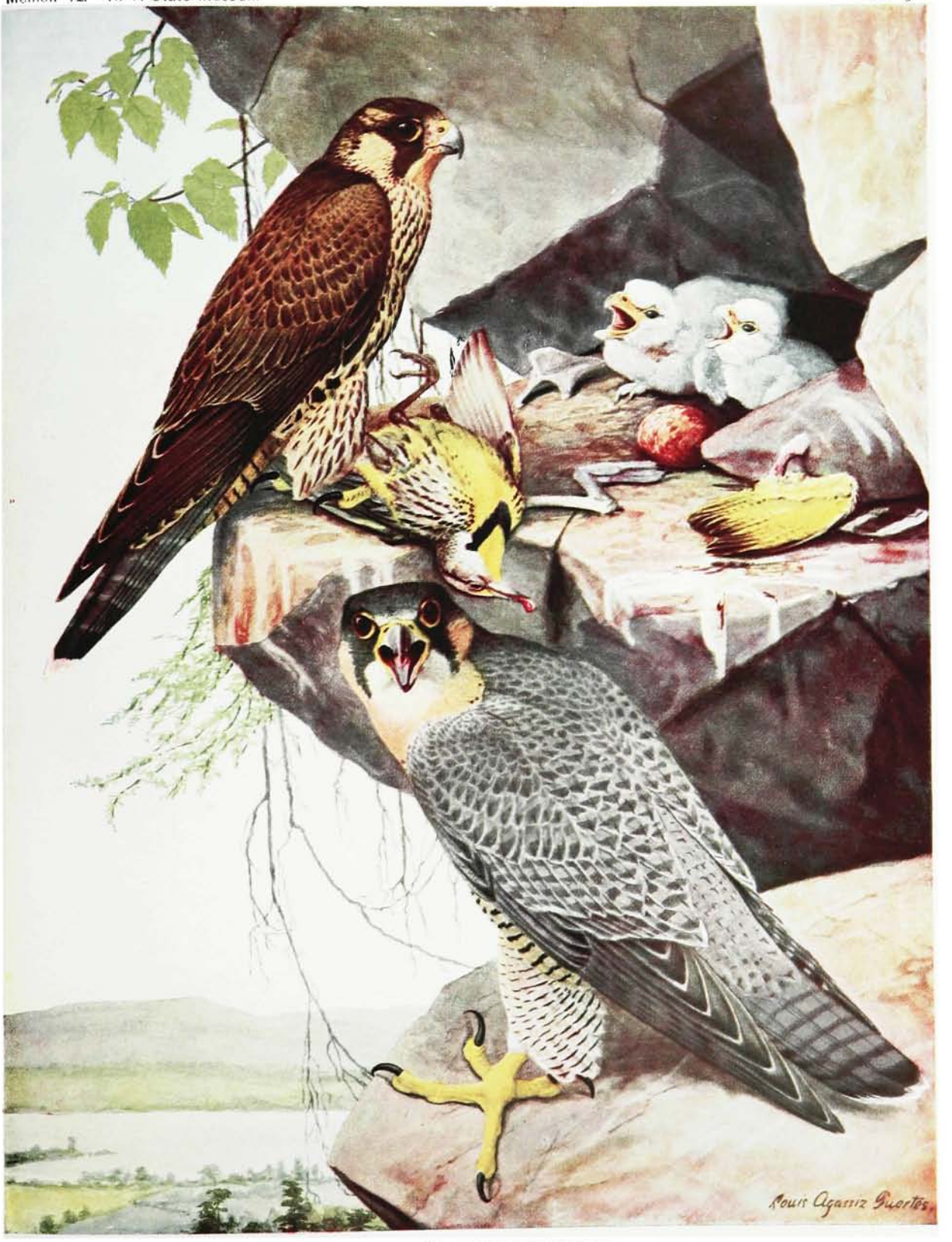
BLACK GYRFALCON *Falco rusticolus obsoletus* Gmelin
All ¼ nat. size

Plate 51

(*See* plate 43)

DUCK HAWK

Page 98



DUCK HAWK *Falco peregrinus anatum* Bonaparte

FIRST YEAR MALE — ADULT FEMALE — CHICKS AND EGG

All ⅛ nat. size

Plate 52

SPARROW HAWK

Page 103

PIGEON HAWK

Page 101





SPARROW HAWK *Falco sparverius sparverius* Linnaeus

MALE

FEMALE

PIGEON HAWK *Falco columbarius columbarius* Linnaeus

ADULT

IMMATURE

All ⅓ nat. size

Plate 53

BARN OWL
Page 109

LONG-EARED OWL
Page 112



BARN OWL
Aluco pratincola (Bonaparte)

LONG-EARED OWL
Asio wilsonianus (Lesson)

½ nat. size

Plate 54

GREAT GRAY OWL
Page 116

SNOWY OWL
Page 126

BARRED OWL
Page 115



GREAT GRAY OWL *Scotiaptex nebulosa nebulosa* (J. R. Forster)

SNOWY OWL *Nyctea nyctea* (Linnaeus)

BARRED OWL *Strix varia varia* Barton

All ⅓ nat. size

Plate 55

HAWK OWL
Page 127

SAW-WHET OWL
Page 118

RICHARDSON OWL
Page 117



HAWK OWL *Surnia ulula caparoch* (Müller)

SAW-WHET OWL
Cryptoglaux acadica acadica (Gmelin)

All ½ nat. size

RICHARDSON'S OWL
Cryptoglaux [illegible] Bonaparte

Plate 56

SCREECH OWL

Page 120

SHORT-EARED OWL

Page 113



SCREECH OWL *Otus asio asio* (Linnaeus)
Gray and red phases

SHORT-EARED OWL *Asio flammeus* (Pontoppidan)
All ⅛ nat. size

Plate 57

GREAT HORNED OWL

Page 123



GREAT HORNED OWL *Bubo virginianus virginianus* (Gmelin)
$\frac{1}{3}$ nat. size

Plate 58

BELTED KINGFISHER
Page 136

BLACK-BILLED CUCKOO
Page 134

YELLOW-BILLED CUCKOO
Page 131





BELTED KINGFISHER *Ceryle alcyon* (Linnaeus)

MALE FEMALE

BLACK-BILLED CUCKOO
Coccyzus erythrophthalmus (Wilson)

YELLOW-BILLED CUCKOO
Coccyzus americanus americanus (Linnaeus)

All ⅓ nat. size

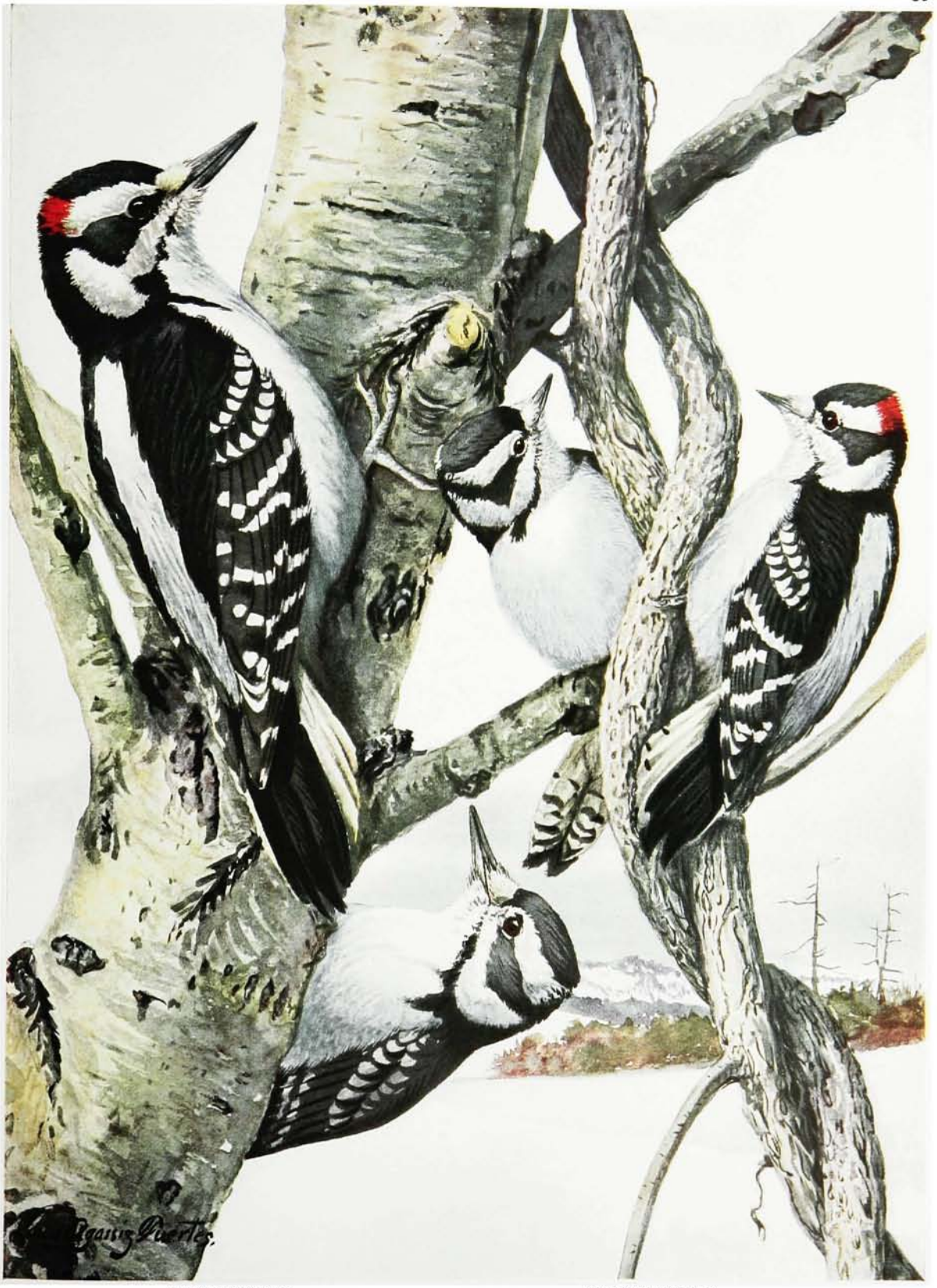
Plate 59

HAIRY WOODPECKER

Page 141

DOWNY WOODPECKER

Page 142



HAIRY WOODPECKER
Dryobates villosus villosus (Linnaeus)
MALE FEMALE

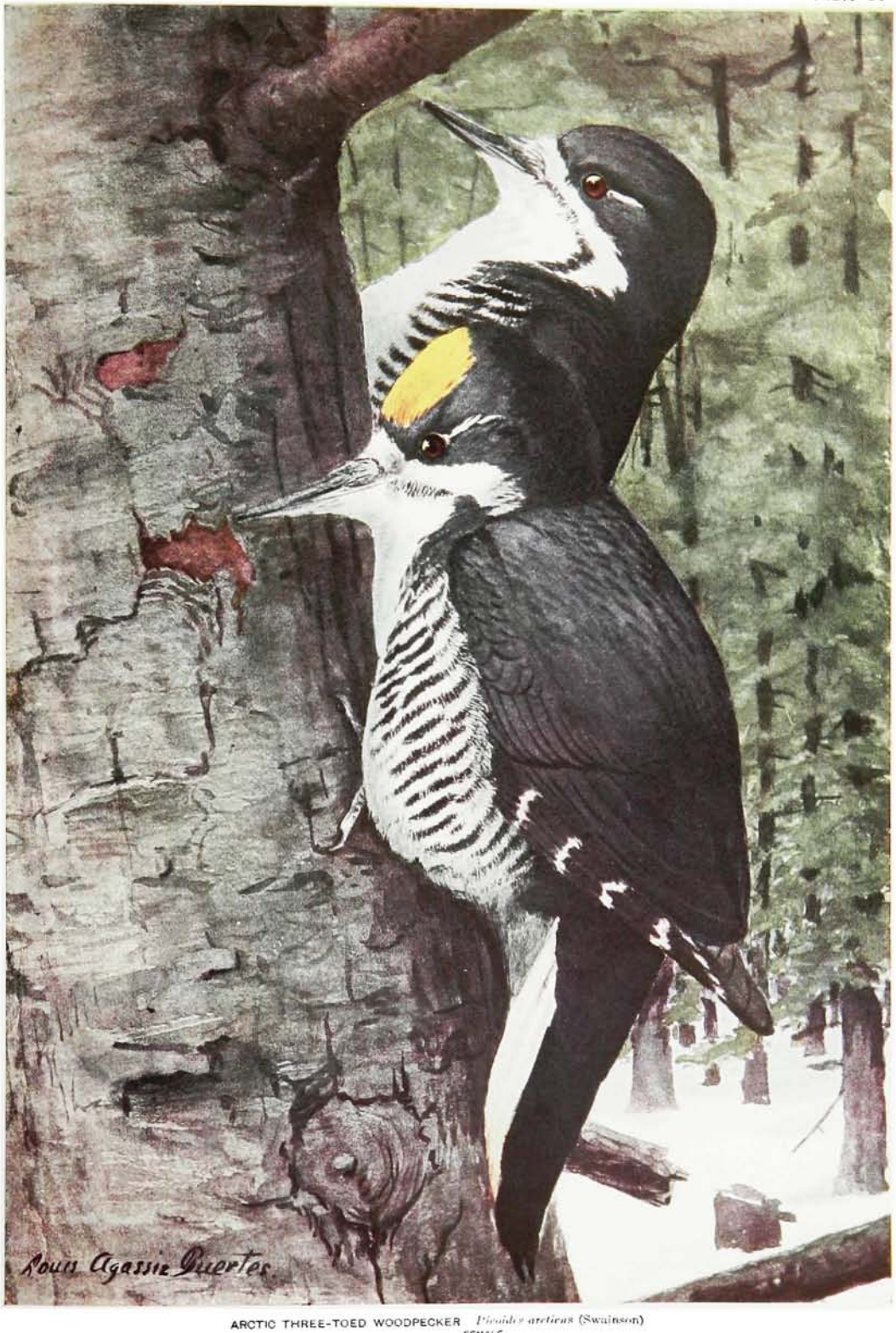
DOWNY WOODPECKER
Dryobates pubescens medianus (Swainson)
FEMALE MALE

All ⅓ nat. size

Plate 60

ARCTIC THREE-TOED WOODPECKER

Page 144



ARCTIC THREE-TOED WOODPECKER *Picoides arcticus* (Swainson)

FEMALE

MALE

$\frac{1}{2}$ nat. size

Plate 61

AMERICAN THREE-TOED WOODPECKER

Page 146



AMERICAN THREE-TOED WOODPECKER *Picoides americanus americanus* Brehm

MALE FEMALE

¾ nat. size

Plate 62

RED-HEADED WOODPECKER
Page 154

YELLOW-BELLIED SAPSUCKER
Page 148



RED-HEADED WOODPECKER
Melanerpes erythrocephalus (Linnaeus)
IMMATURE ADULT

All ⅓ nat. size

YELLOW-BELLIED SAPSUCKER
Sphyrapicus varius varius (Linnaeus)
MALE FEMALE

Plate 63

NORTHERN PILEATED WOODPECKER

Page 151



NORTHERN PILEATED WOODPECKER *Phloeotomus pileatus abieticola* (Bangs)

MALE FEMALE

About ⅛ nat. size

Plate 64

NORTHERN FLICKER

Page 158

RED-BELLIED WOODPECKER

Page 157



NORTHERN FLICKER *Colaptes auratus luteus* Bangs

FEMALE MALE

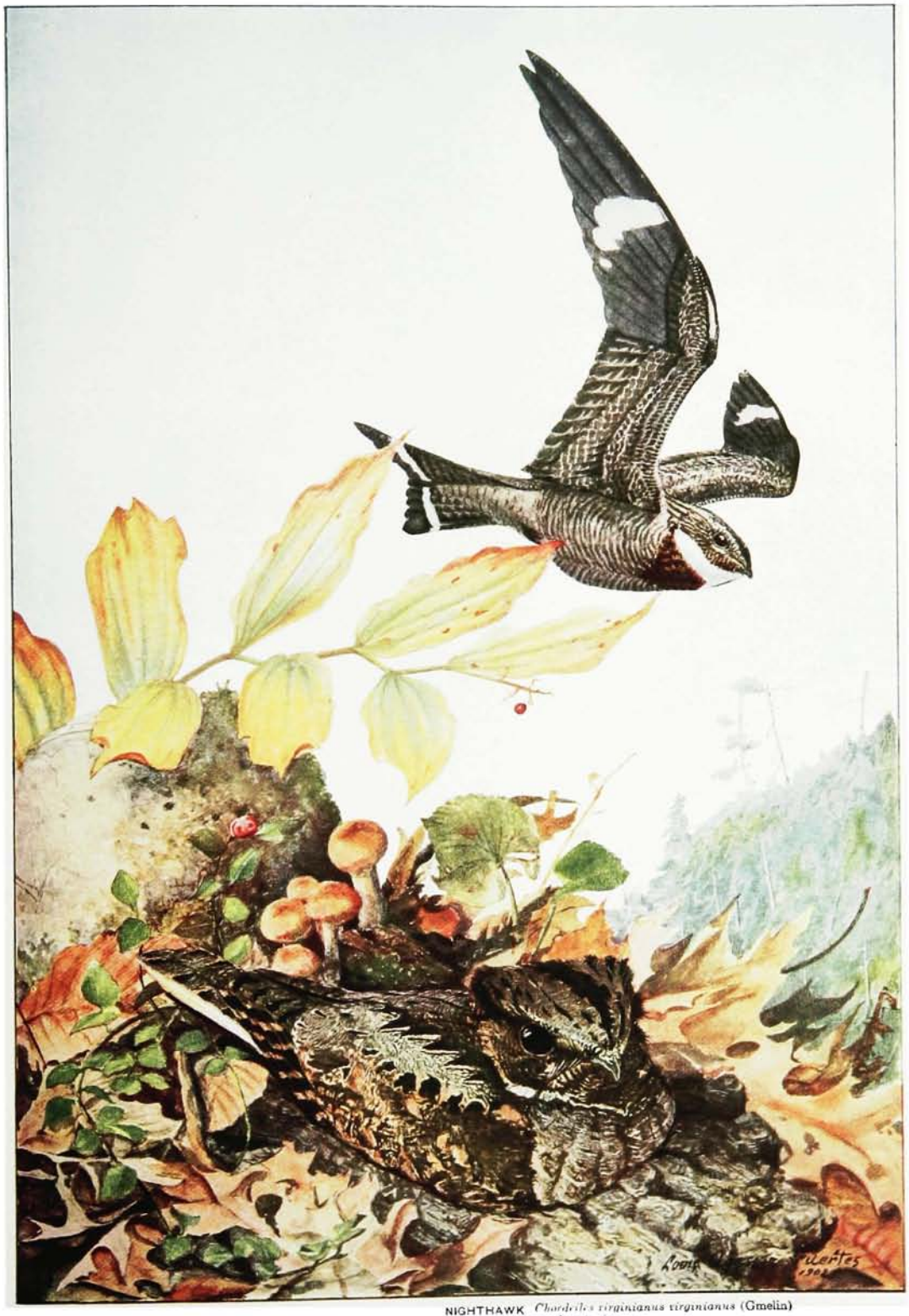
FEMALE RED-BELLIED WOODPECKER *Centurus carolinus* (Linnaeus) MALE

¼ nat. size

Plate 65

NIGHTHAWK
Page 167

WHIP-POOR-WILL
Page 164



NIGHTHAWK *Chordeiles virginianus virginianus* (Gmelin)
MALE ⅓ nat. size

WHIP-POOR-WILL *Antrostomus vociferus vociferus* (Wilson)
MALE ⅓ nat. size

Plate 66

RUBY-THROATED HUMMINGBIRD

Page 175



RUBY-THROATED HUMMINGBIRD *Archilochus colubris* (Linnaeus)

MALE FEMALE MALE

All life size

Plate 67

OLIVE-SIDED FLYCATCHER
Page 189

KINGBIRD
Page 182

CRESTED FLYCATCHER
Page 185

PHOEBE
Page 187



OLIVE-SIDED FLYCATCHER
Nuttallornis borealis (Swainson)
KINGBIRD *Tyrannus tyrannus* (Linnaeus)
CRESTED FLYCATCHER
Myiarchus crinitus (Linnaeus)
PHOEBE *Sayornis phoebe* (Latham)
All ⅞ nat. size

Plate 68

WOOD PEWEE
Page 190

ALDER FLYCATCHER
Page 196

LEAST FLYCATCHER
Page 199

ACADIAN FLYCATCHER
Page 194

YELLOW-BELLIED FLYCATCHER
Page 193



WOOD PEWEE *Myiochanes virens* (Linnæus)

ADULT

ALDER FLYCATCHER
Empidonax trailli alnorum Brewster

ACADIAN FLYCATCHER
Empidonax virescens (Vieillot)

IMMATURE

LEAST FLYCATCHER *Empidonax minimus* (W. M. & S. F. Baird)

YELLOW-BELLIED FLYCATCHER
Empidonax flaviventris (W. M. & S. F. Baird)

All ⅔ nat. size

Plate 69

SKYLARK
Page 201

PIPIT
Page 469

HORNED LARK
Page 202

PRAIRIE HORNED LARK
Page 203



SKYLARK
Alauda arvensis Linnaeus

All ⅞ nat. size

SPRING

PIPIT *Anthus rubescens* (Tunstall)

AUTUMN



HORNED LARK *Otocoris alpestris alpestris* (Linnaeus)

MALE

PRAIRIE HORNED LARK *Otocoris alpestris praticola* Henshaw

MALE FEMALE IMMATURE

All ⅞ nat. size

Plate 70

BLUE JAY

Page 208



BLUE JAY *Cyanocitta cristata cristata* (Linnaeus)
⅓ nat. size

Plate 71

NORTHERN RAVEN
Page 212

CANADA JAY
Page 210



NORTHERN RAVEN
Corvus corax principalis Ridgway

Both ¼ nat. size

CANADA JAY
Perisoreus canadensis canadensis (Linnaeus)

Plate 72

FISH CROW
Page 218

CROW
Page 214



FISH CROW
Corvus ossifragus Wilson

CROW
Corvus brachyrhynchos brachyrhynchos Brehm

All ⅛ nat. size

Plate 73

RUSTY BLACKBIRD

Page 243

RED-WINGED BLACKBIRD

Page 230

BOBOLINK

Page 222



RUSTY BLACKBIRD *Euphagus carolinus* (Müller)

ADULT MALE IN SPRING

IMMATURE IN AUTUMN

ADULT MALE IN AUTUMN

RED-WINGED BLACKBIRD *Agelaius phoeniceus phoeniceus* (Linnaeus)

MALE IN AUTUMN

MALE IN SPRING

FEMALE

BOBOLINK *Dolichonyx oryzivorus* (Linnaeus)

MALE

FEMALE

All ⅓ nat. size

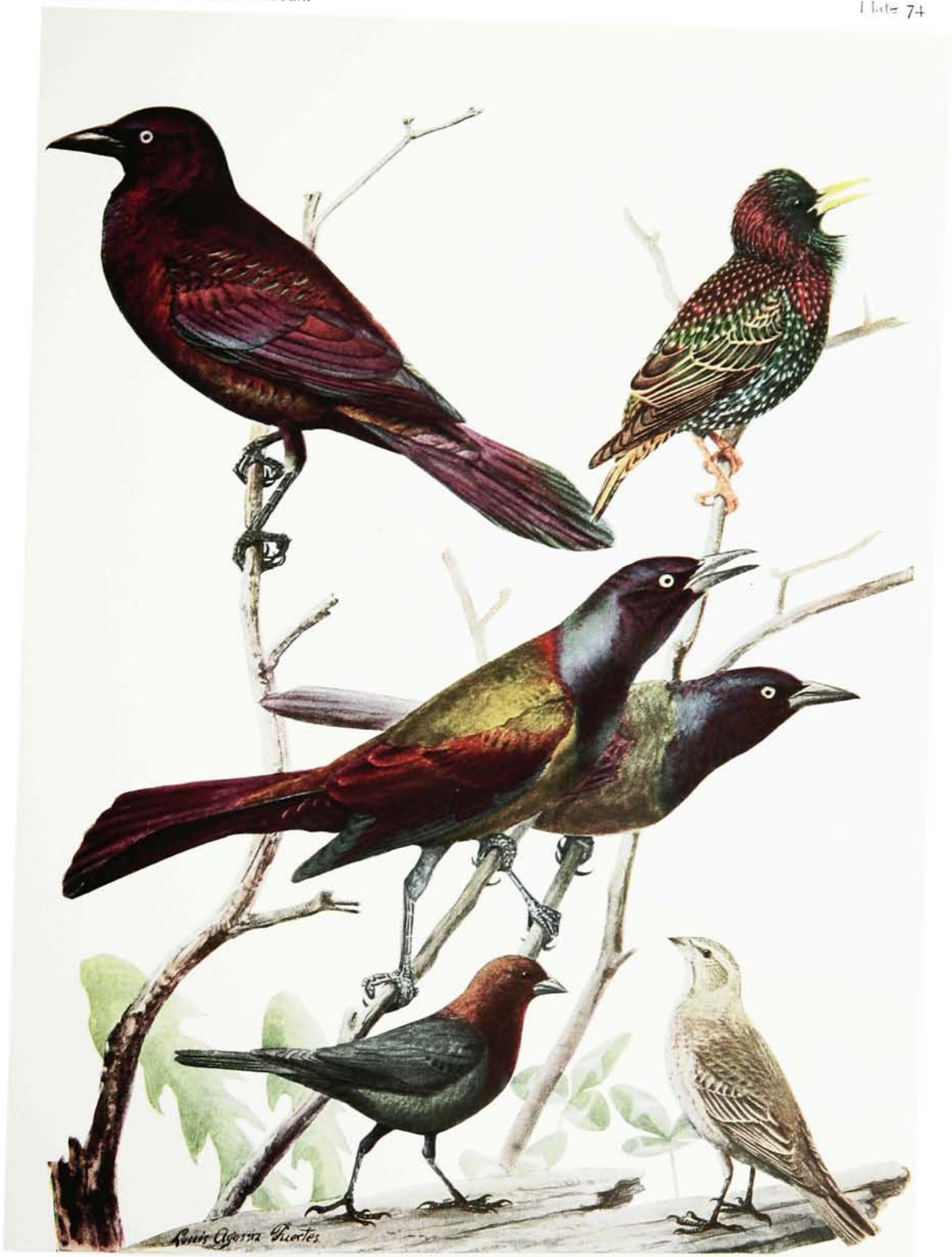
Plate 74

PURPLE GRACKLE
Page 245

BRONZED GRACKLE
Page 246

STARLING
Page 219

COWBIRD
Page 225



PURPLE GRACKLE
Quiscalus quiscula quiscula (Linnaeus)
MALE

STARLING
Sturnus vulgaris Linnaeus

BRONZED GRACKLE *Quiscalus quiscula aeneus* Ridgway
MALE FEMALE

COWBIRD *Molothrus ater ater* (Boddaert)
MALE FEMALE

All ½ nat. size

Plate 75

BALTIMORE ORIOLE

Page 238

ORCHARD ORIOLE

Page 236

MEADOW LARK

Page 233



BALTIMORE ORIOLE *Icterus galbula* (Linnaeus)
MALE FEMALE

ORCHARD ORIOLE *Icterus spurius* (Linnaeus)
FIRST YEAR MALE FEMALE
ADULT MALE

MEADOWLARK *Sturnella magna magna* (Linnaeus)
All ⅓ nat. size

Plate 76

PINE GROSBEAK

Page 255

PURPLE FINCH

Page 262



PINE GROSBEAK *Pinicola enucleator leucura* (Muller)

ADULT MALE IMMATURE MALE FEMALE

PURPLE FINCH *Carpodacus purpureus purpureus* (Gmelin)

MALE FEMALE OR IMMATURE MALE

All ⅓ nat. size

Plate 77

CROSSBILL

Page 265

WHITE-WINGED CROSSBILL

Page 268



CROSSBILL *Loxia curvirostra minor* (Brehm)

IMMATURE MALE

ADULT MALE

FEMALE

WHITE-WINGED CROSSBILL *Loxia leucoptera* Gmelin

IMMATURE MALE

FEMALE

MALE

All ¼ nat. size

Plate 78

REDPOLL
Page 271

PINE SISKIN
Page 278

GOLDFINCH
Page 276

GREATER REDPOLL
Page 274



REDPOLL
Acanthis linaria linaria (Linnaeus)
FEMALE

MALE

PINE SISKIN *Spinus pinus* (Wilson)

GOLDFINCH *Astragalinus tristis tristis* (Linnaeus)
MALE AND FEMALE IN WINTER

GREATER REDPOLL *Acanthis linaria rostrata* (Coues)
MALE

All $\frac{2}{3}$ nat. size

Plate 79

EUROPEAN GOLDFINCH
Page 280

GOLDFINCH
Page 276

EVENING GROSBEAK
Page 252





EUROPEAN GOLDFINCH
Carduelis carduelis (Linnaeus)

GOLDFINCH
Astragalinus tristis tristis (Linnaeus)
FEMALE AND MALE IN SUMMER

EVENING GROSBEAK *Hesperiphona vespertina vespertina* (W. Cooper)
MALE FEMALE

All ⅓ nat. size

Plate 80

TREE SPARROW
Page 306

SNOW BUNTING
Page 281



TREE SPARROW *Spizella monticola monticola* (Gmelin)
SNOW BUNTING *Plectrophenax nivalis nivalis* (Linnaeus)
⅗ nat. size

Plate 81

HENSLOW SPARROW
Page 293

LECONTE SPARROW
Page 295

IPSWICH SPARROW
Page 287

SHARP-TAILED SPARROW
Page 296

GRASSHOPPER SPARROW
Page 291

SAVANNAH SPARROW
Page 288

SEASIDE SPARROW
Page 299

ACADIAN SHARP-TAILED SPARROW
Page 298

NELSON SPARROW
Page 297



HENSLOW'S SPARROW
Passerherbulus henslowi henslowi (Audubon)
LECONTE'S SPARROW
Passerherbulus leconteï (Audubon)
ADULT
IMMATURE
IPSWICH SPARROW
Passerculus princeps Maynard
SHARP-TAILED SPARROW
Passerherbulus caudacutus (Gmelin)

GRASSHOPPER SPARROW
Ammodramus savannarum australis Maynard
SAVANNAH SPARROW
Passerculus sandwichensis savanna (Wilson)
SEASIDE SPARROW
Passerherbulus maritimus maritimus (Wilson)
ACADIAN SHARP-TAILED SPARROW
Passerherbulus nelsoni subcorpus (Dwight)
NELSON'S SPARROW
Passerherbulus nelsoni nelsoni (Allen)

All ½ nat. size

Plate 82

WHITE-THROATED SPARROW
Page 304

WHITE-CROWNED SPARROW
Page 301

VESPER SPARROW
Page 285

SLATE-COLORED JUNCO
Page 311



WHITE-THROATED SPARROW
Zonotrichia albicollis (Gmelin)

WHITE-CROWNED SPARROW
Zonotrichia leucophrys leucophrys (J. R. Forster)
ADULT IMMATURE

VESPER SPARROW
Pooecetes gramineus gramineus (Gmelin)

SLATE-COLORED JUNCO
Junco hyemalis hyemalis (Linnaeus)
MALE FEMALE

All ¾ nat. size

Plate 83

FIELD SPARROW
Page 310

CHIPPING SPARROW
Page 308

FOX SPARROW
Page 321



FIELD SPARROW *Spizella pusilla pusilla* (Wilson)
MALE

IMMATURE
CHIPPING SPARROW *Spizella passerina passerina* (Bechstein)
IMMATURE

MALE

FOX SPARROW *Passerella iliaca iliaca* (Merrem)

All ⅔ nat. size

Plate 84

SONG SPARROW
Page 315

SWAMP SPARROW
Page 319

LINCOLN SPARROW
Page 318

TOWHEE
Page 323



SONG SPARROW *Melospiza melodia melodia* (Wilson)

SWAMP SPARROW
Melospiza georgiana (Latham)
SPRING

AUTUMN
LINCOLN'S SPARROW
Melospiza lincolni lincolni (Audubon)

TOWHEE
Pipilo erythrophthalmus erythrophthalmus (Linnaeus)
MALE

FEMALE

All ⅔ nat. size

Plate 85

ROSE-BREASTED GROSBEAK

Page 327

CARDINAL

Page 325



ROSE-BREASTED GROSBEAK *Zamelodia ludoviciana* (Linnaeus)
ADULT MALE
IMMATURE MALE IN AUTUMN
CARDINAL *Cardinalis cardinalis cardinalis* (Linnaeus)
FEMALE
FEMALE
MALE

All ⅓ nat. size

Plate 86

BLUE GROSBEAK

Page 329

INDIGO BUNTING

Page 330



BLUE GROSBEAK *Guiraca caerulea caerulea* (Linnaeus)

ADULT MALE CHANGING MALE FEMALE

INDIGO BUNTING *Passerina cyanea* (Linnaeus)

MALE IN SUMMER FEMALE MALE IN AUTUMN

All ⅔ nat. size

Plate 87

SCARLET TANAGER

Page 337

SUMMER TANAGER

Page 339



CHANGING MALE
FEMALE

SCARLET TANAGER *Piranga erythromelas* Vieillot
MALE IN SUMMER MALE IN WINTER

SUMMER TANAGER *Piranga rubra rubra* (Linnaeus)
FEMALE MALE
CHANGING MALE

All ⅛ nat. size

Plate 88

BARN SWALLOW
Page 346

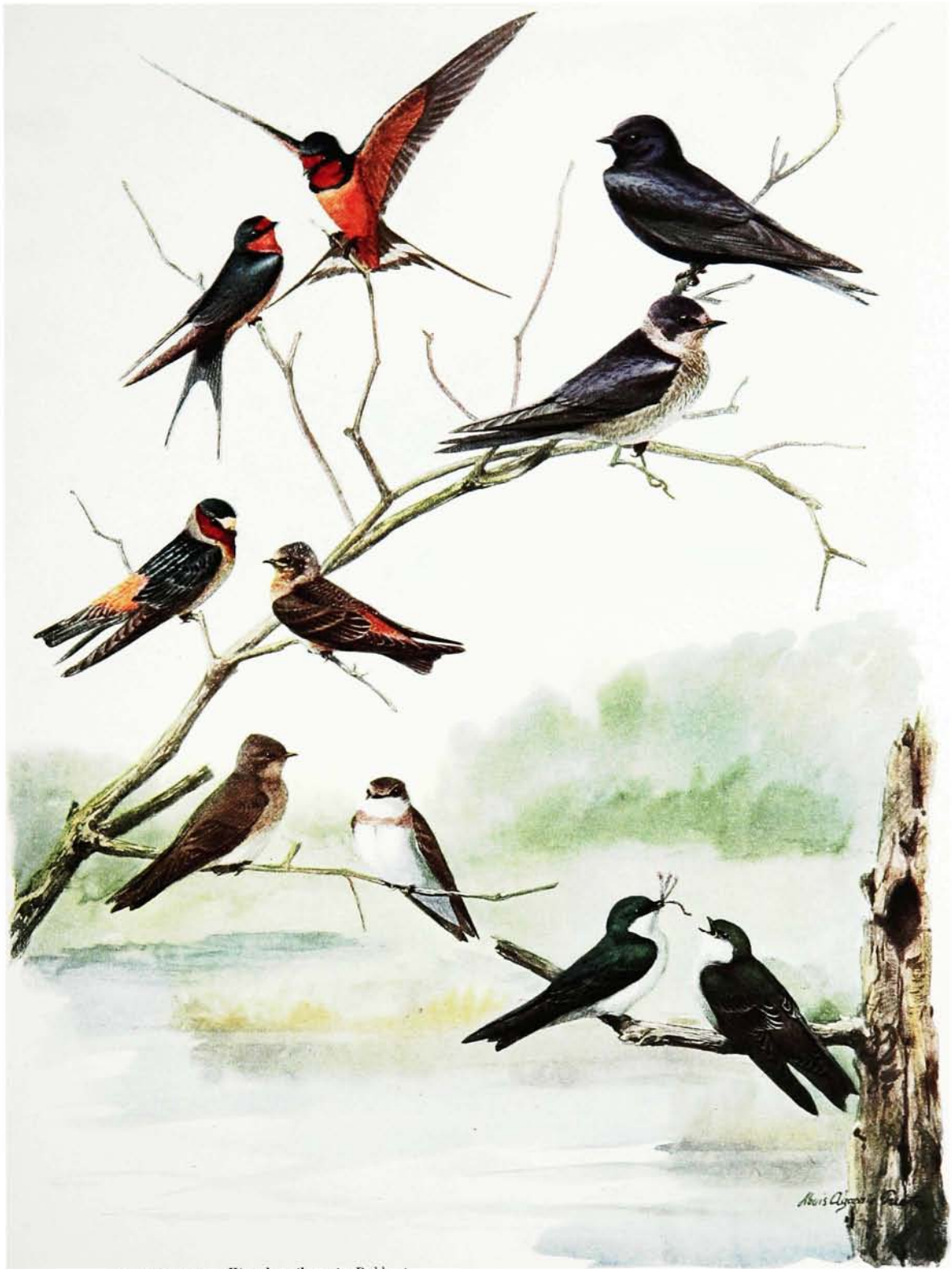
CLIFF SWALLOW
Page 345

ROUGH-WINGED SWALLOW
Page 352

BANK SWALLOW
Page 350

PURPLE MARTIN
Page 342

TREE SWALLOW
Page 349



BARN SWALLOW *Hirundo erythrogastra* Boddaert

CLIFF SWALLOW *Petrochelidon lunifrons lunifrons* (Say)
FEMALE MALE
ADULT IMMATURE

ROUGH-WINGED SWALLOW
Stelgidopteryx serripennis (Audubon)

BANK SWALLOW
Riparia riparia (Linnaeus)

PURPLE MARTIN *Progne subis subis* (Linnaeus)
MALE
FEMALE

TREE SWALLOW
Iridoprocne bicolor (Vieillot)
ADULT IMMATURE

All ⅓ nat. size

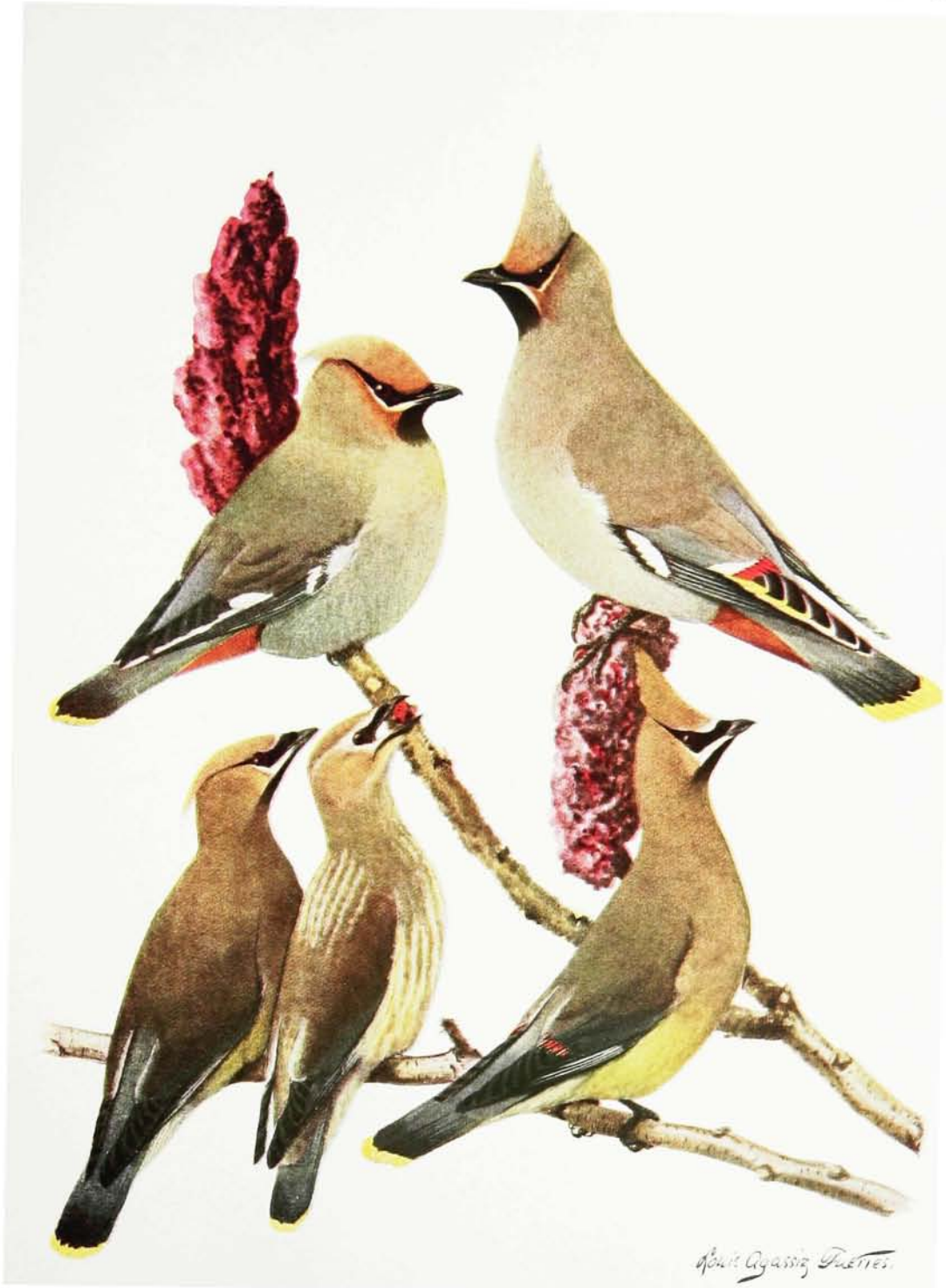
Plate 89

BOHEMIAN WAXWING

Page 355

CEDAR WAXWING

Page 356



BOHEMIAN WAXWING *Bombycilla garrula* (Linnaeus)

CEDAR WAXWING *Bombycilla cedrorum* Vieillot

FEMALE IMMATURE FEMALE MALE MALE

All ⅓ nat. size

Plate 90

NORTHERN SHRIKE
Page 358

MIGRANT SHRIKE
Page 362



NORTHERN SHRIKE *Lanius borealis* Vieillot
ADULT MALE
IMMATURE
MIGRANT SHRIKE *Lanius ludovicianus migrans* W. Palmer
IMMATURE ADULT
All ⅓ nat. size

Plate 91

WARBLING VIREO
Page 370

RED-EYED VIREO
Page 366

YELLOW-THROATED VIREO
Page 371

WHITE-EYED VIREO
Page 375

PHILADELPHIA VIREO
Page 368

BLUE-HEADED VIREO
Page 373



WARBLING VIREO *Vireosylva gilva gilva* (Vieillot)
ADULT
YOUNG
RED-EYED VIREO *Vireosylva olivacea* (Linnaeus)
YELLOW-THROATED VIREO *Lanivireo flavifrons* (Vieillot)
WHITE-EYED VIREO *Vireo griseus griseus* (Boddaert)
All ⅓ nat. size

PHILADELPHIA VIREO
Vireosylva philadelphica Cassin
BLUE-HEADED VIREO
Lanivireo solitarius solitarius (Wilson)

Plate 92

BLACK AND WHITE WARBLER
Page 378

WATER THRUSH
Page 438

OVEN-BIRD
Page 435

WORM-EATING WARBLER
Page 382

PROTHONOTARY WARBLER
Page 381

LOUISIANA WATER-THRUSH
Page 441



BLACK AND WHITE WARBLER *Mniotilta varia* (Linnaeus)
MALE FEMALE
WATER-THRUSH
Seiurus noveboracensis noveboracensis (Gmelin)
OVEN-BIRD *Seiurus aurocapillus* (Linnaeus)
ADULT JUVENAL
All ½ nat. size

WORM-EATING WARBLER
Helmitheros vermivorus (Gmelin
PROTHONOTARY WARBLER
Protonotaria citrea (Boddaert)
LOUISIANA WATER-THRUSH
Seiurus motacilla Vieillot

Plate 93

BLUE-WINGED WARBLER
Page 384

BREWSTER WARBLER
Page 389

LAWRENCE WARBLER
Page 388

GOLDEN-WINGED WARBLER
Page 386

ORANGE-CROWNED WARBLER
Page 392

NASHVILLE WARBLER
Page 390

TENNESSEE WARBLER
Page 393



BLUE-WINGED WARBLER *Vermivora pinus* (Linnaeus)

BREWSTER'S WARBLER
Vermivora leucobronchialis (Brewster)

LAWRENCE'S WARBLER
Vermivora lawrencei (Herrick)

GOLDEN-WINGED WARBLER *Vermivora chrysoptera* (Linnaeus)
MALE

ORANGE-CROWNED WARBLER
Vermivora celata celata (Say)

NASHVILLE WARBLER *Vermivora rubricapilla ruficapilla* (Wilson)
FEMALE
MALE
IMMATURE

TENNESSEE WARBLER *Vermivora peregrina* (Wilson)
IMMATURE
MALE

All ⅞ nat. size

Plate 94

PARULA WARBLER
Page 395

CERULEAN WARBLER
Page 411

MYRTLE WARBLER
Page 406

BLACK-THROATED BLUE WARBLER
Page 403

CANADA WARBLER
Page 462



PARULA WARBLER
Compsothlypis americana americana (Linnaeus)
MALE
FEMALE

CERULEAN WARBLER
Dendroica cerulea (Wilson)
MALE
FEMALE

MYRTLE WARBLER *Dendroica coronata* (Linnaeus)
MALE
FEMALE

BLACK-THROATED BLUE WARBLER
Dendroica caerulescens caerulescens (Gmelin)
MALE
FEMALE

CANADA WARBLER
Wilsonia canadensis (Linnaeus)
MALE
FEMALE

All ⅞ nat. size

Plate 95

PINE WARBLER
Page 427

CAPE MAY WARBLER
Page 397

YELLOW WARBLER
Page 400

PRAIRIE WARBLER
Page 432

PALM WARBLER
Page 430

YELLOW PALM WARBLER
Page 431



PINE WARBLER *Dendroica vigorsi* (Audubon)
MALE FEMALE

CAPE MAY WARBLER *Dendroica tigrina* (Gmelin)
MALE FEMALE

YELLOW WARBLER
Dendroica aestiva aestiva (Gmelin)
MALE FEMALE

PRAIRIE WARBLER
Dendroica discolor (Vieillot)

PALM WARBLER *Dendroica palmarum palmarum* (Gmelin)

YELLOW PALM WARBLER *Dendroica palmarum hypochrysea* Ridgway

All ⅔ nat. size

Plate 96

BAY-BREASTED WARBLER

Page 416

BLACK-POLL WARBLER

Page 418

CHESTNUT-SIDED WARBLER

Page 413



BAY-BREASTED WARBLER *Dendroica castanea* (Wilson)

IMMATURE FEMALE MALE

BLACK-POLL WARBLER *Dendroica striata* (J. R. Forster)

IMMATURE FEMALE MALE

CHESTNUT-SIDED WARBLER *Dendroica pensylvanica* (Linnaeus)

IMMATURE

MALE FEMALE

All ⅓ nat. size

Plate 97

BLACKBURNIAN WARBLER

Page 420

BLACK-THROATED GREEN WARBLER

Page 424

REDSTART

Page 464

MAGNOLIA WARBLER

Page 408



BLACKBURNIAN WARBLER *Dendroica fusca* (Müller)

FEMALE

MALE

BLACK-THROATED GREEN WARBLER *Dendroica virens* (Gmelin)

MALE

FEMALE

REDSTART *Setophaga ruticilla* (Linnaeus)

MALE

FEMALE

MAGNOLIA WARBLER *Dendroica magnolia* (Wilson)

MALE

IMMATURE

FEMALE

All ⅞ nat. size

Plate 98

WILSON WARBLER
Page 460

YELLOW-BREASTED WARBLER
Page 455

KENTUCKY WARBLER
Page 445

MARYLAND YELLOW-THROAT
Page 452

HOODED WARBLER
Page 458



WILSON'S WARBLER *Wilsonia pusilla pusilla* (Wilson)
FEMALE MALE

MARYLAND YELLOW-THROAT
Geothlypis trichas trichas (Linnaeus)
FEMALE MALE

YELLOW-BREASTED CHAT
Icteria virens virens (Linnaeus)
MALE

KENTUCKY WARBLER *Oporonis formosus* (Wilson)
FEMALE

HOODED WARBLER *Wilsonia citrina* (Boddaert)
MALE FEMALE

All ⅛ nat. size

Plate 99

CONNECTICUT WARBLER

Page 447



CONNECTICUT WARBLER *Oporonis agilis* (Wilson)

ADULT IMMATURE

Life size

Plate 100

MOURNING WARBLER

Page 448



MOURNING WARBLER *Oporornis philadelphia* (Wilson)

FEMALE MALE

⅞ nat. size

Plate 101

MOCKING BIRD
Page 471

CATBIRD
Page 473

BROWN THRASHER
Page 476



MOCKINGBIRD *Mimus polyglottos polyglottos* (Linnaeus)
BROWN THRASHER *Toxostoma rufum* (Linnaeus)
CATBIRD *Dumetella carolinensis* (Linnaeus)
All ⅓ nat. size

Plate 102

HOUSE WREN
Page 481

CAROLINA WREN
Page 479

WINTER WREN
Page 485

BROWN CREEPER
Page 492

SHORT-BILLED MARSH WREN
Page 487

LONG-BILLED MARSH WREN
Page 489



HOUSE WREN
Troglodytes aedon aedon Vieillot

WINTER WREN
Nannus hiemalis hiemalis (Vieillot)

SHORT-BILLED MARSH WREN
Cistothorus stellaris (Naumann)

CAROLINA WREN
Thryothorus ludovicianus ludovicianus (Latham)

BROWN CREEPER
Certhia familiaris americana Bonaparte

LONG-BILLED MARSH WREN
Telmatodytes palustris palustris (Wilson)

All ⅔ nat. size

Plate 103

CHICKADEE
Page 503

WHITE-BREASTED NUTHATCH
Page 495

ACADIAN CHICKADEE
Page 506

RED-BREASTED NUTHATCH
Page 499

TUFTED TITMOUSE
Page 502



CHICKADEE
Penthestes atricapillus atricapillus (Linnaeus)

ARCADIAN CHICKADEE
Penthestes hudsonicus littoralis (H. Bryant)

RED-BREASTED NUTHATCH
Sitta canadensis Linnaeus

FEMALE
WHITE-BREASTED NUTHATCH
Sitta carolinensis carolinensis Latham
MALE

MALE
TUFTED TITMOUSE
Bacolophus bicolor (Linnaeus)

FEMALE
All ¾ nat. size

Plate 104

GOLDEN-CROWNED KINGLET

Page 508

RUBY-CROWNED KINGLET

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BLUE-GRAY GNATCATCHER

Page 512



GOLDEN-CROWNED KINGLET
Regulus satrapa satrapa Licht.

MALE FEMALE

MALE
RUBY-CROWNED KINGLET
Regulus calendula calendula (Linnaeus)
FEMALE

MALE
BLUE-GRAY GNATCATCHER
Polioptila caerulea caerulea (Linnaeus)
FEMALE

MALE

All ⅔ nat. size

Plate 105

WOOD THRUSH
Page 516

HERMIT THRUSH
Page 526

GRAY-CHEEKED THRUSH
Page 521

VEERY
Page 519

OLIVE-BACKED THRUSH
Page 524



WOOD THRUSH
Hylocichla mustelina (Gmelin)

HERMIT THRUSH
Hylocichla guttata pallasi (Cabanis)

GRAY-CHEEKED THRUSH
Hylocichla aliciae aliciae (Baird)

VEERY
Hylocichla fuscescens fuscescens (Stephens)

OLIVE-BACKED THRUSH
Hylocichla ustulata swainsoni (Tschudi)

All ¼ nat. size

Plate 106

ROBIN
Page 529
BLUEBIRD
Page 537



ROBIN *Planesticus migratorius migratorius* (Linnaeus)
ADULT IN SPRING FALL IMMATURE

BLUEBIRD *Sialia sialis sialis* (Linnaeus)
MALE IMMATURE FEMALE

All ½ nat. size

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