

AMERICAN MUSEUM OF NATURAL HISTORY

The Birds of the Vicinity of New York City



BY

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REPRINTED FROM THE AMERICAN MUSEUM JOURNAL

VOL. VI, Nos. 2 and 3, APRIL and JULY, 1906

Guide Leaflet No. 22

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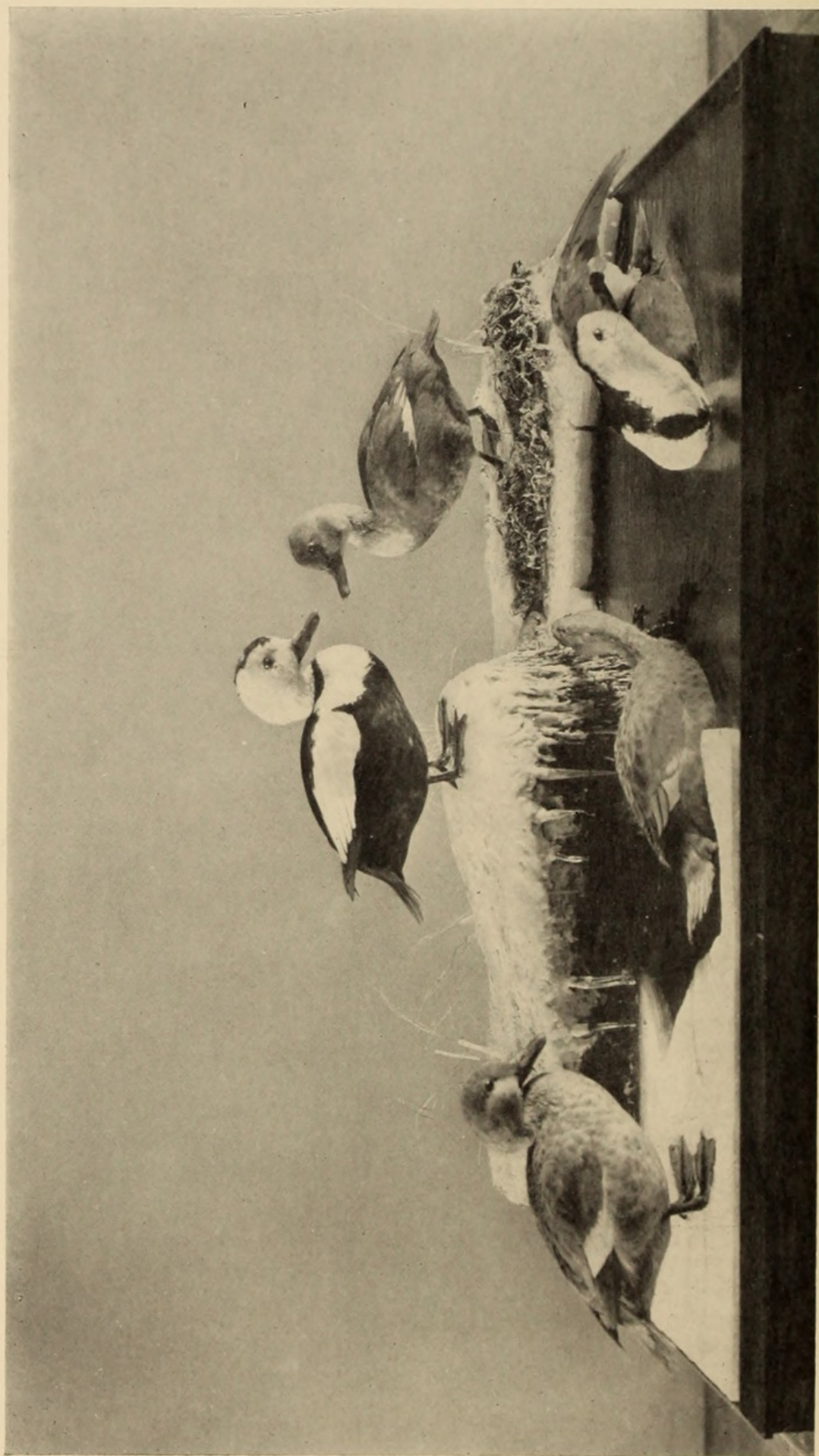
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THE LABRADOR DUCK
Group, Hall No. 208

The
Birds of the Vicinity
of
New York City

A Guide to the Local Collection
in the
Department of Ornithology

By

FRANK M. CHAPMAN

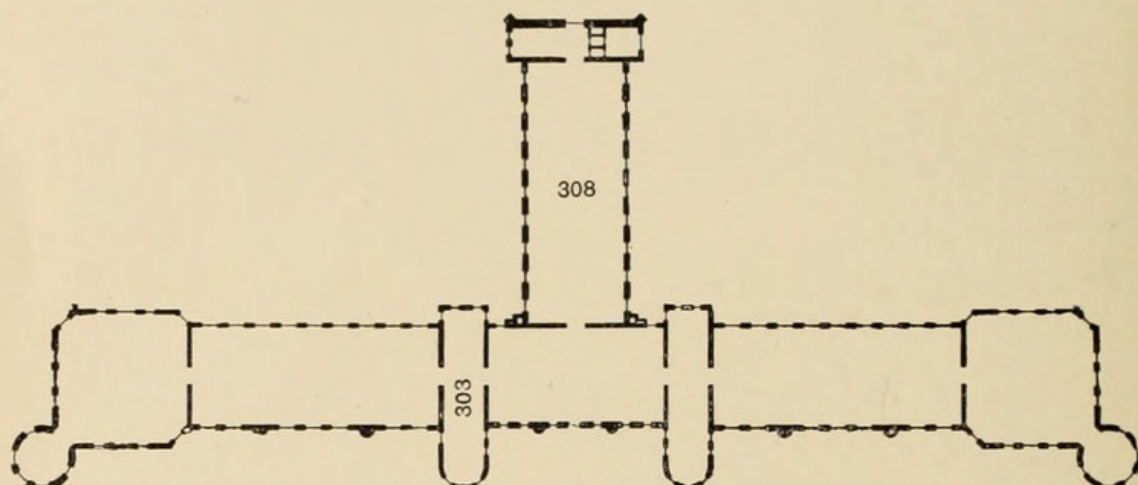
Associate Curator of Mammalogy and Ornithology

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Reprinted from THE AMERICAN MUSEUM JOURNAL

Volume VI., Nos. 2 and 3, April and July, 1906

New York: Published by the Museum



THIRD, OR GALLERY FLOOR.

Key-plan of the Museum building, showing the location of the halls in which the specimens and groups may be found to which references are made in this Guide Leaflet. Some of the groups are in Hall No. 208 of the Second Floor, directly under Hall No. 308 of this plan.

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THE BIRDS OF THE VICINITY OF NEW YORK CITY.¹

BY FRANK M. CHAPMAN.

Associate Curator of Mammalogy and Ornithology.

INTRODUCTION.

The collection which this Guide is intended to accompany has been formed especially to aid students in identifying the birds found in the vicinity of New York City. It occupies a portion of the West Corridor of the third floor (Hall No. 303). With a few exceptions, all the specimens contained in it were collected within 50 miles of the American Museum of Natural History. The species which we have as yet been unable to secure within these limits are represented temporarily by specimens from the North American Collection. The collection is placed under two heads: first, systematic, containing virtually all the birds which have been recorded from within the prescribed limits, and second, seasonal, in which only the birds of the month are exhibited, as is explained more fully beyond. Species of accidental occurrence, or those which have been found in this vicinity but once or twice, are grouped at the end of the systematic collection.

The birds are labeled in accordance with the system of nomenclature adopted by the American Ornithologists' Union. The number on the label, preceding the name of each species is its number in the Union's "Check-List" of North American birds (2nd edition, 1895). In the desk case in the center of the hall will be found a local collection of the nests and eggs of the birds which breed within 50 miles of the Museum. It is labeled on the same plan as the local collection of birds. Near by are placed photographs from nature of the nests of most of our breeding birds and exhibits of bills, feet, wings, tails and feathers designed to explain technical terms used in descriptive ornithology. A list of useful ornithological publications will also be found here.

¹ Reprinted from the *American Museum Journal*, Vol. VI, pp. 81-102, April, 1906.

The appended annotated list of the species known to occur within a radius of 50 miles of the Museum is based on information derived for the most part from four sources: (1) previously published records; (2) the author's notes covering a period of twenty years' intermittent observation, mainly at Englewood, N. J.; (3) the observations of Mr. Waldron DeWitt Miller at Plainfield, N. J.; and (4) information received from Mr. William Dutcher. For many years Mr. Dutcher has made a specialty of the study of Long Island birds and has brought together a vast amount of data concerning them.

As a matter of local interest an asterisk (*) has been placed before those species which have been observed in Central Park. This list of Park birds is based on published records, the author's observations and information received from Messrs. C. G. Abbott, S. H. Chubb and B. S. Bowdish.

The text cuts with which this Guide is illustrated, with the exception of the Starling, are from Coues's "Key to North American Birds." For their use the Museum is indebted to Messrs. Dana Estes and Company, the publishers of that work. The full page plates are from photographs of Museum exhibits.

The region embraced within our limits possesses natural advantages calculated to attract a great number of birds. Our sea-coast, with its sandy beaches and shallow bays; our rivers, creeks and ponds, with their surrounding grassy marshes; our wooded hillsides and valleys; our rolling uplands and fertile meadows, offer haunts suited to the wants of most birds. Again, our coast-line and the Hudson River valley form natural highways of migration regularly followed by birds in their journeys to and from their summer homes.

The exceptional abundance of birds in this vicinity, however, is not due alone to the varied character of the country, or to the fact that twice each year streams of migrants pass along our coasts and through our valleys. There are certain causes which tend to limit the ranges of animals, chief among which is temperature. A study of the ranges or habitats of animals and plants shows that the boundaries of the areas inhabited by many species coincide with one another and also to a greater or less extent with lines of equal temperature. The ranges of these species being thus governed by natural causes, they are taken as indices of the limits of faunas or natural life-areas. The

lines between these faunas cannot, of course, be sharply drawn. The change from one to another is gradual, and between the two a neutral strip exists in which will be found species characteristic of each. Just such a condition is found in this vicinity, the northern boundary of the Carolinian Fauna over-lapping the southern boundary of the Alleghanian Fauna in the valleys of the Delaware, Hudson and Connecticut. In other words, we have here on the one hand a number of birds which are found no farther north and on the other certain species which are found no farther south; that is, in the breeding season, for among birds only the nesting ranges are of value in determining the boundaries of faunas.

The southern limit of the Carolinian Fauna on the Atlantic Coast is near Norfolk, Virginia; its northern limit, on the coast, as said above, is in the vicinity of New York City. To be more exact, a careful study of the nesting ranges of certain species shows that the most northern points at which they are regularly found is Port Jervis in the Delaware valley, Fishkill in the Hudson River valley, and Portland in the Connecticut River valley. These localities then may be considered as defining the northern limits of the Carolinian Fauna in the valleys in which they are placed. In the more elevated country between these points it is doubtful if the limits of the fauna reach quite as far north, for river valleys, both because they offer a natural pathway for the extension of a bird's range, and because of the higher temperature prevailing in them, tend to carry northward the boundaries of faunas. Eastward, along the Connecticut shore, the Carolinian Fauna may reach the mouth of the Thames. Long Island, although farther south, belongs for the most part in the Alleghanian rather than the Carolinian Fauna. Numbers of species common and even abundant in the Lower Hudson valley are exceedingly rare on Long Island, especially on the southern shore. But along the northern shore, or older part of the island, where deciduous trees abound, there is an evident trace of the Carolinian Fauna shown by the regular occurrence of the Blue-winged Warbler and the Acadian Flycatcher.

The following Carolinian birds are found every summer within 50 miles of the Museum, and all but two or three are known to nest regularly here. Their occurrence as breeding birds northward beyond these limits is, with but few exceptions, rare and irregular.

Clapper Rail.	Blue-winged Warbler.
King Rail.	Louisiana Water-Thrush.
Turkey Vulture.	Kentucky Warbler.
Barn Owl.	Hooded Warbler.
Acadian Flycatcher.	Mockingbird.
Fish Crow.	Carolina Wren.
Cardinal.	Tufted Titmouse.
Rough-winged Swallow.	Carolina Chickadee.
Worm-eating Warbler.	Blue-gray Gnatcatcher.

The southern limit of the Alleghanian Fauna on the coast is less clearly defined. It includes, however, Long Island and northern New Jersey. Its boundaries may be determined by the presence in the breeding season of the following species, few of which are known to nest at sea-level south of our limits:

Carolina Rail.	Purple Finch.
Alder Flycatcher.	Golden-winged Warbler.
Least Flycatcher.	Nashville Warbler.
Bobolink.	Chestnut-sided Warbler.
Savanna Sparrow.	Black-throated Green Warbler.
Rose-breasted Grosbeak.	Wilson's Thrush.

Thus it will be seen that while the region south of our district has the Carolinian species mentioned, and the region to the northward has the Alleghanian species just given, we, in this intermediate strip, have both Carolinian and Alleghanian species.

It is evident, therefore, that from an ornithological standpoint we are most favorably situated, and a comparison of the number of birds found within our limits with the numbers recorded from other districts shows that the causes mentioned have been effective in giving us an unusually rich avifauna. Due allowance must of course be made for the much greater area included in all but one of the regions used in comparison.

Recorded from within 50 Miles of New York City	353
" " District Columbia (Richmond, MS.)	281
" " Ontario, Canada, (McIlwraith)	316
" " Massachusetts (Howe and Allen)	362
" " Illinois (Ridgway)	352
" " Indiana (Butler)	305
" " Michigan (Cook)	332
" " Kansas (Goss)	343

During the course of a year the bird-life of our vicinity is subject to great changes. Some birds are always with us, some come for the summer, others pass us in the spring and fall in traveling to and from their more northern homes, and others still come

only in the winter. Our birds may thus be arranged, according to the season when they are present, in several rather well-defined groups, for which the following names seem most applicable.

I. Permanent Residents.—This class includes species which are with us throughout the year, but it does not follow that the same individuals pass the entire year here. Comparatively few, indeed, of the species in this group are permanent residents in the strict sense of the term. The Bob-white, Ruffed Grouse, and several of the Owls are doubtless literally permanent residents, that is, the same individuals pass their lives in one restricted locality, but it is not probable that the Bluebirds, for example, found here during the winter are the same birds which nested with us in the summer. Doubtless our winter Bluebirds pass the summer farther north, while our summer Bluebirds winter farther south but as a species, the Bluebird is a permanent resident.

List of Permanent Residents.

Bob-white.	Blue Jay.
Ruffed Grouse.	American Crow.
Marsh Hawk.	Fish Crow.
Sharp-shinned Hawk.	Starling.
Cooper's Hawk.	Meadowlark.
Red-tailed Hawk.	House Sparrow.
Red-shouldered Hawk.	Purple Finch.
Broad-winged Hawk.	American Goldfinch.
Bald Eagle.	European Goldfinch.
Duck Hawk.	Song Sparrow.
Sparrow Hawk.	Swamp Sparrow.
Long-eared Owl.	Cardinal.
Barred Owl.	Cedar Waxwing.
Screech Owl.	Carolina Wren.
Great Horned Owl.	White-breasted Nuthatch.
Hairy Woodpecker.	Tufted Titmouse.
Downy Woodpecker.	Chicadee.
Flicker.	Robin.
Bluebird.	

II. Summer Residents.—Summer residents, as the name implies, are birds found here during the summer. They may, however, arrive early in March and remain until December, as do the Blackbirds and the Woodcocks, or they may not come until May and may leave us in August. Summer residents, then, are birds which come to us at varying times in the spring and after nesting here return to more southern winter resorts in the fall.

List of Summer Residents.

Wood Duck.	Henslow's Sparrow.
American Bittern.	Sharp-tailed Sparrow.
Least Bittern.	Seaside Sparrow.
Green Heron.	Chipping Sparrow.
Black-crowned Night Heron.	Field Sparrow.
King Rail.	Towhee.
Clapper Rail.	Rose-breasted Grosbeak.
Virginia Rail.	Indigo Bunting.
Sora.	Scarlet Tanager.
Yellow Rail.	Purple Martin.
Black Rail.	Cliff Swallow.
Woodcock.	Barn Swallow.
Bartramian Sandpiper.	Tree Swallow.
Spotted Sandpiper.	Bank Swallow.
Kildeer.	Rough-winged Swallow.
Piping Plover.	Red-eyed Vireo.
Mourning Dove.	Warbling Vireo.
Osprey.	Yellow-throated Vireo.
Barn Owl.	White-eyed Vireo.
Yellow-billed Cuckoo.	Black and White Warbler.
Black-billed Cuckoo.	Worm-eating Warbler.
Belted Kingfisher.	Blue-winged Warbler.
Red-headed Woodpecker.	Golden-winged Warbler.
Whip-poor-will.	Parula Warbler.
Nighthawk.	Yellow Warbler.
Chimney Swift.	Chestnut-sided Warbler.
Ruby-throated Hummingbird.	Black-throated green Warbler.
Kingbird.	Pine Warbler.
Crested Flycatcher.	Prairie Warbler.
Phoebe.	Ovenbird.
Wood Pewee.	Louisiana Water-Thrush.
Acadian Flycatcher.	Kentucky Warbler.
Alder Flycatcher.	Maryland Yellow-throat.
Least Flycatcher.	Yellow-breasted Chat.
Bobolink.	Hooded Warbler.
Cowbird.	Redstart.
Red-winged Blackbird.	Catbird.
Orchard Oriole.	Brown Thrasher.
Baltimore Oriole.	House Wren.
Purple Grackle.	Short-billed Marsh Wren.
Vesper Sparrow.	Long-billed Marsh Wren.
Savanna Sparrow.	Wood Thrush.
Grasshopper Sparrow.	Wilson's Thrush.

III. Summer Visitants.—Comparatively few birds fall into this group. As a rule the northern limit of their breeding range is not far south of our southern boundaries and they sometimes

visit us in small numbers, generally after their breeding season is over. In this group may also be placed the Shearwaters and Petrels, some of which are known to nest in the Antarctic Regions during our winter. In the spring they migrate northward and pass the summer off our coasts.

List of Summer Visitants.

Gull-billed Tern.	American Egret.
Royal Tern.	Little Blue Heron.
Forster's Tern.	Wilson's Plover.
Sooty Tern.	Oyster-catcher.
Black Skimmer.	Turkey Vulture.
Greater Shearwater.	Red-bellied Woodpecker.
Audubon's Shearwater.	Summer Tanager.
Sooty Shearwater.	Carolina Chickadee.
Wilson's Petrel.	Blue-gray Gnatcatcher.

Mockingbird.

IV. Winter Residents.—Winter residents, like summer residents, may arrive long before and remain long after the season which gives them their name. Our Junco, or Snowbird, for example, comes from the north in September and remains until April, but is a typical winter resident. That is, it arrives in the fall and after passing the entire winter with us returns to its more northern summer home in the spring.

List of Winter Residents.

Holboell's Grebe.	Rough-legged Hawk.
Horned Grebe.	Saw-whet Owl.
Loon.	Horned Lark.
Red-throated Loon.	Prairie Horned Lark.
Razor-billed Auk.	American Crossbill.
Kittiwake Gull.	Redpoll.
Glaucous Gull.	Pine Siskin.
Great Black-backed Gull.	Snowflake.
Herring Gull.	Lapland Longspur.
Ring-billed Gull.	Ipswich Sparrow.
Green-winged Teal.	White-throated Sparrow.
American Golden-eye.	Tree Sparrow.
Buffle-head.	Junco.
Old-Squaw.	Northern Shrike.
King Eider.	Myrtle Warbler.
American Scoter.	Winter Wren.
White-winged Scoter.	Brown Creeper.
Surf Scoter.	Canadian Nuthatch.
Purple Sandpiper.	Golden-crowned Kinglet.

V. Winter Visitants.—Winter visitants are birds which may or may not visit us during the winter. As a rule, their presence

depends upon the severity of the winter. An unusually severe season sometimes forces boreal birds southward and they then may be found in numbers south of their regular winter range.

List of Winter Visitants.

Puffin.	American Eider.
Black Guillemot.	Goshawk.
Brunnich's Murre.	Black Gyrfalcon. (?)
Dovekie.	Hawk Owl.
Iceland Gull.	Snowy Owl.
Kumlien's Gull.	Evening Grosbeak.
Cormorant.	Pine Grosbeak.
Harlequin Duck.	White-winged Crossbill.

Holbøll's Redpoll.

VI. Regular Transient Visitants.—The birds of this class are found here only during the migrations. Their summer homes are north of us, their winter homes are south of us, and we see them only when they pass northward on their spring migration and southward on their fall migration.

List of Regular Transient Visitants.

Pied-billed Grebe.	Tennessee Warbler.
Pomarine Jaeger.	Cape May Warbler.
Parasitic Jaeger.	Black-throated Blue Warbler.
Long-tailed Jaeger.	Dowitcher.
Laughing Gull.	Long-billed Dowitcher.
Bonaparte's Gull.	Stilt Sandpiper.
Common Tern.	Knot.
Roseate Tern.	Pectoral Sandpiper.
Caspian Tern.	White-rumped Sandpiper.
Cory's Shearwater.	Least Sandpiper.
Leach's Petrel.	Red-backed Sandpiper.
Gannet.	Semipalmated Sandpiper.
Double-crested Cormorant.	Western Sandpiper.
Red-breasted Merganser.	Sanderling.
Hooded Merganser.	Greater Yellow-legs.
Black Duck.	Yellow-legs.
Blue-winged Teal.	Solitary Sandpiper.
Pintail.	Willet.
Redhead.	Hudsonian Curlew.
American Scaup Duck.	Black-bellied Plover.
Lesser Scaup Duck.	Golden Plover.
Ruddy Duck.	Semipalmated Plover.
Canada Goose.	Turnstone.
Brant.	Pigeon Hawk.
Great Blue Heron.	Short-eared Owl.
Florida Gallinule.	Yellow-bellied Woodpecker.
Coot.	Magnolia Warbler.
Red Phalarope.	Bay-breasted Warbler.

Northern Phalarope.
 Wilson's Snipe.
 Olive-sided Flycatcher.
 Yellow-bellied Flycatcher.
 Rusty Blackbird.
 Bronzed Grackle.
 Nelson's Sharp-tailed Sparrow.
 Acadian Sharp-tailed Sparrow.
 White-crowned Sparrow.
 Lincoln's Sparrow.
 Fox Sparrow.
 Philadelphia Vireo.
 Blue-headed Vireo.
 Nashville Warbler.

Black-poll Warbler.
 Blackburnian Warbler.
 Palm Warbler.
 Yellow Palm Warbler.
 Water-Thrush.
 Connecticut Warbler.
 Mourning Warbler.
 Wilson's Warbler.
 Canadian Warbler.
 Titlark.
 Ruby-crowned Kinglet.
 Gray-cheeked Thrush.
 Bicknell's Thrush.
 Swainson's Thrush.

Hermit Thrush.

VII. Irregular Transient Visitants.—These birds occur irregularly during the migrations. With certain exceptions they are birds of the interior and breed in the northern United States and British Provinces. Their regular line of migration is down the Mississippi Valley, and their occurrence on the Atlantic coast is more or less infrequent. Here are also included species formerly common near New York, but now practically extinct within our limits, where, however, they are sometimes found.

List of Irregular Transient Visitants.

Least Tern.
 Black Tern.
 Mallard.
 Gadwall.
 American Widgeon.
 Shoveller.
 Canvasback.
 Ring-necked Duck.
 Greater Snow Goose.
 Blue Goose.
 American White-fronted Goose.
 Hutchins's Goose.
 Black Brant.

Whistling Swan.
 Wilson's Phalarope.
 American Avocet.
 Baird's Sandpiper.
 Marbled Godwit.
 Hudsonian Godwit.
 Buff-breasted Sandpiper.
 Long-billed Curlew.
 Eskimo Curlew.
 Passenger Pigeon.
 Golden Eagle.
 Migrant Shrike.
 Orange-crowned Warbler.

Grinnell's Water-Thrush.

VIII. Accidental Visitants.—The homes of the birds included in this class are so far removed from our boundaries that their presence here at any time can be considered only as purely accidental. In most cases it is doubtless due to the agency of storms or high winds which drive migrating birds from their course. One-fourth the number given below are Old World birds, and about one-half the total number have been found here but once.

List of Accidental Vistants.

Black-throated Loon.	Ground Dove.
Ivory Gull.	Black Vulture.
Little Gull.	Swallow-tailed Kite.
Sabine's Gull.	Swainson's Hawk.
Fulmar.	White Gyr Falcon.
Booby.	Great Gray Owl.
White Pelican.	Red-cockaded Woodpecker.
Brown Pelican.	Pileated Woodpecker.
European Widgeon.	Arkansas Kingbird.
European Green-winged Teal.	Raven.
Rufous-crested Duck.	Chestnut-collared Longspur.
Barnacle Goose.	Lark Sparrow.
White Ibis.	Blue Grosbeak.
Glossy Ibis.	Painted Bunting.
Snowy Heron.	Dickcissel.
Yellow-crowned Night Heron.	Louisiana Tanager.
Corn Crake.	Bohemian Waxwing.
Purple Gallinule.	Prothonotary Warbler.
Black-necked Stilt.	Cerulean Warbler.
European Woodcock.	Yellow-throated Warbler.
Curlew Sandpiper.	Townsend's Solitaire.
Ruff.	Varied Thrush.
Lapwing.	Wheatear.

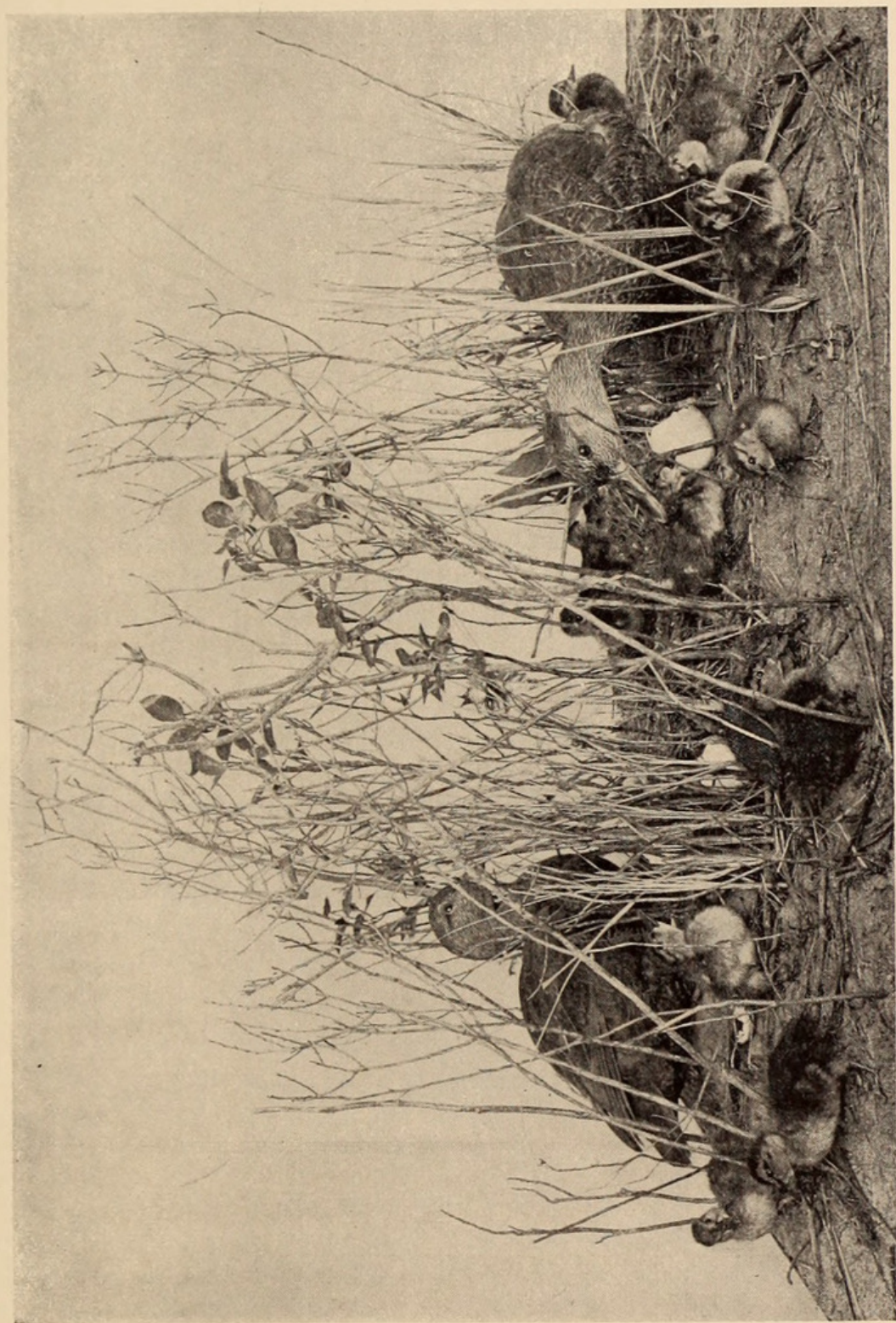
Summary.

Permanent Residents	34
Summer Residents	86
Summer Visitants	19
Winter Residents	38
Winter Visitants	17
Regular Transient Visitants	86
Irregular Transient Visitants	27
Accidental Visitants	46
Total,	353

THE SEASONAL COLLECTION.

The preceding seasonal analysis of our avifauna shows that only a part of the 353 birds which have been recorded from this vicinity are present at one time, and any arrangement of specimens which will, for example, show only the birds of a given month, will of course greatly simplify the problem of identification by excluding from it all species which, for seasonal reasons, we should not expect to find during the month in question.

The Seasonal Collection is made up of the Permanent Residents (Cases Q and O) and Migrants (Case P) and is changed



BLACK DUCK
Group, Hall No. 208

each month. Thus, in February, it is composed of the ever-present Permanent Residents together with the migrants which have come from the north to spend the winter. In March, the March migrants from the south are added, and a month later those which may be expected to arrive in April are included. In due time the winter birds are withdrawn and the transient migrants removed, until in June, the collection consists of the Permanent Residents and birds which have come from the south to spend the summer. A similar treatment is continued throughout the year and the collection always, therefore, represents the bird-life of the month in which it is seen.

The following outline of the bird-life of the year explains more fully the manner in which this Seasonal Collection is arranged, and at the same time, it may be used as a reference check-list in the study of local migration. It should be understood that the dates given represent those of a climatically normal year and that only the commoner water birds are included.

January Bird-Life.—Probably during no other month is there less movement among our birds than in January. The regular winter visitants have come; the fall migrants which may have lingered until December have gone, and the earliest spring migrants will not arrive before the latter part of February or in early March. In fact, January is the only month in the year in which, as a rule, some birds do not arrive or depart. This rule, however, may be broken by such irregular birds as the Pine Grosbeak and the Redpoll, and, south of New York, the Snowflake and the Crossbill, birds which may be wholly absent some winters and abundant others.

The only birds usually to be found in January, therefore, are the permanent residents and the regular winter visitants. Singing, mating, nesting, molting, migrating, events which in their season play so important a part in a bird's life, do not concern the birds of January. With them food is the one important question, and their movements at this season are governed solely by the food supply. Snow may fall and winds blow, but as long as the birds find enough to eat they give small heed to the weather. Food, therefore, rather than temperature, is the most important factor in a bird's life at this season.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Winter Residents, see page 87.

February Bird-Life.—The conditions prevailing in the bird

world during January will be practically unchanged until the latter part of February. Then, should there be a period of mild weather, we may expect to hear the Song Sparrows and Bluebirds inaugurate the season of song. An unusually warm day earlier in the month may have tempted either or both of these birds prematurely to welcome spring, but as a rule we do not hear them until late in February, and then only under favorable conditions.

The songs of these birds bid us keep watch for the earlier migrants, the Robin, the Purple Grackle and the Red-winged Blackbird, birds which pass the winter such a short distance south of us that they appear at the first sign of returning spring. Further confidence in the growth of the new year is shown by the Great Horned Owl, one of our less common species, which begins nesting late in February or early in March.

In spite of these movements among the birds, February is, generally speaking, a winter month, and it is only in exceptional years that we find much change in our bird-life.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Winter Residents, see page 87.

Migrants arriving from the South.

February 15 to 28, in favorable seasons.

Purple Grackle.

Red-winged Blackbird.

Rusty Blackbird.

Robin.

March Bird-Life.—Although March is sure to witness a general northward movement among the birds, the date of their arrival is as uncertain as the weather of the month itself. Continued severe weather prevents an advance, which a higher temperature occasions. It is well, therefore, to watch the weather predictions, since birds will quickly follow in the wake of a warm wave.

When the ice leaves our bays, ponds and rivers, Ducks and Geese will appear. Even before this event, the Grackles, Red-winged Blackbirds and Robins will come in flocks and in song, and singing will become general with the Song Sparrows and Bluebirds, whose numbers will be greatly increased. When successive thaws have rendered the earth soft enough for the Woodcock's probe, we may expect to find him in favorable localities searching for his fare of earthworms. With the advent of insects, we may look for their enemy the Phœbe, and Meadowlarks, Cowbirds and other March Migrants may be found.

The weather which hastens the arrival of birds from the

South, also prompts certain of our Winter Visitants to begin their northward journey, and after March we do not often see Redpolls, Snowflakes or Northern Shrikes.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Winter Residents, see page 87.

Winter Residents leaving for the North.

Horned Lark.

Snowflake.

Redpoll.

Pine Grosbeak.

Northern Shrike.

Migrants arriving from the South.

Appearing when the ice leaves the bays and rivers.

Loon.

Green-winged Teal.

Pintail.

Blue-winged Teal.

Mallard.

Canada Goose.

March 1 to 10.

Purple Grackle.

Rusty Blackbird.

Red-winged Blackbird.

Robin.

March 10 to 20.

Woodcock.

Meadowlark.

Phoebe.

Cowbird.

Fox Sparrow.

March 20 to 31.

Wilson's Snipe.

Mourning Dove.

Kingfisher.

Swamp Sparrow.

White-throated Sparrow.

April Bird-Life.—In early April the developments in the vegetable world, which the most casual observer cannot fail to see, are accompanied by corresponding but less noticed activities in the world of birds. The appearance of the skunk-cabbage, the blossoming of the pussy-willow and the early wild flowers soon become common knowledge; but the arrival of the Vesper, Field and Chipping Sparrows, of Tree Swallows, Myrtle Warblers and Hermit Thrushes, is known to comparatively few. Still, to the bird-lover, the return of these feathered friends is of even greater interest than the blossoming of trees and plants.

The migratory movement grows rapidly in strength, and during the latter part of the month one may expect to see newcomers almost daily. It will be noted that the earlier migrants of the month are all seed-eaters, while the later are certain insectivorous birds which catch their prey in the air, for example, Swallows, Swifts and Nighthawks.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Winter Residents, see page 87.

Winter Residents leaving for the North.

Junco.	Brown Creeper.
Tree Sparrow.	Red-breasted Nuthatch.
Winter Wren.	Golden-crowned Kinglet.

Migrants arriving from the South.

April 1 to 10.

Pied-billed Grebe.	Field Sparrow.
Great Blue Heron.	Chipping Sparrow.
Black-crowned Night Heron.	Tree Swallow.
Osprey.	Myrtle Warbler.
Vesper Sparrow.	American Pipit.
Savanna Sparrow.	Hermit Thrush.

April 10 to 20.

American Bittern.	Barn Swallow.
Green Heron.	Yellow Palm Warbler.
Clapper Rail.	Pine Warbler.
Yellow-bellied Sapsucker.	Louisiana Water-Thrush.
	Ruby-crowned Kinglet.

April 20 to 30.

Spotted Sandpiper.	Purple Martin.
Semipalmated Sandpiper.	Cliff Swallow.
Whip-poor-will.	Bank Swallow.
Chimney Swift.	Rough-winged Swallow.
Least Flycatcher.	Black and White Warbler.
Towhee.	Black-throated Green Warbler.
Blue-headed Vireo.	Brown Thrasher.

May Bird-Life.—As the season advances, marked changes in temperature are less likely to occur, and the migration becomes regular and continuous. In February and March there may be two weeks or more variation in the times of arrival of the same species in different years; in May we expect to find a given species within a day or two of a certain date. We shall, nevertheless, find the force of the migratory current still closely dependent on the weather, and under the encouragement of a high temperature we may be visited by "bird waves," flooding the woods with migrants. Birds are then doubtless more abundant than at any other season. As many as ten species may be noted as arriving on the same day, and sixty or seventy species may be observed within a few hours.

After May 15, birds begin to decrease in number, the Transient Visitants passing farther north, and by June 5 we have only Permanent Residents and Summer Residents.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Summer Residents, see page 86.

Migrants arriving from the South.

May 1 to 10.

Common Tern.	White-eyed Vireo.
Solitary Sandpiper.	Nashville Warbler.
Semipalmated Plover.	Blue-winged Warbler.
Yellow-billed Cuckoo.	Parula Warbler.
Black-billed Cuckoo.	Black-throated Blue Warbler.
Nighthawk.	Magnolia Warbler.
Ruby-throated Hummingbird.	Yellow-breasted Chat.
Crested Flycatcher.	Chestnut-sided Warbler.
Kingbird.	Prairie Warbler.
Baltimore Oriole.	Small-billed Water-Thrush.
Orchard Oriole.	Hooded Warbler.
Bobolink.	Yellow Warbler.
Grasshopper Sparrow.	Maryland Yellowthroat.
Indigo Bunting.	Oven-bird.
Rose-breasted Grosbeak.	Redstart.
Scarlet Tanager.	House Wren.
Red-eyed Vireo.	Catbird.
Warbling Vireo.	Wood Thrush.
Yellow-throated Vireo.	Veery.

May 10 to 20.

Wood Pewee.	Black-poll Warbler.
Acadian Flycatcher.	Wilson's Warbler.
Yellow-bellied Flycatcher.	Canadian Warbler.
White-crowned Sparrow.	Long-billed Marsh Wren.
Golden-winged Warbler.	Short-billed Marsh Wren.
Tennessee Warbler.	Olive-backed Thrush.
Worm-eating Warbler.	Gray-cheeked Thrush.
Cape May Warbler.	Alder Flycatcher.
Blackburnian Warbler.	Mourning Warbler.
Bay-breasted Warbler.	Bicknell's Thrush.

June Bird-Life.—After June 5 we may be reasonably sure that, with a few exceptions, every bird seen has or has had a nest in this vicinity. Several of the birds which began nesting in April will rear second broods in June, while the young of other April-nesting birds may not leave the nest until June. All the birds that began nesting in May will still be occupied with household affairs in June, and when we add to these the late-breeding species that wait for June before settling their domestic arrangements, it will be seen that among birds June is the home month of the year.

Nest-building, egg-laying, incubating and the care of the young now make constant and exceptional demands on birds which, in response, exhibit traits which at other times of the year they give no evidence of possessing. Singing now reaches its highest

development, and certain call-notes are heard only at this season. The numberless actions incident to courtship, the intelligence displayed in nest-building, the choice of special food for the young, the devotion which prompts the parents recklessly to expose themselves in protecting their offspring,—all these manifestations of the bird-mind may be observed in June.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Summer Residents, see page 86.

July Bird-Life.—The full development of the bird year is attained in June, and as early as the first week in July the season begins to wane, when, among some migratory birds, there are evidences of preparation for the journey southward.

The young of certain species which rear but one brood a year have now left the nest, and, accompanied by the parents, wander about the country. In localities which we had thoroughly explored in June, we may now find species not met with then. In some cases these families join others of their kind, forming small flocks, the nuclei of the great gathering seen later. Examples are Grackles, Red-winged Blackbirds and Tree Swallows. The last named increase rapidly in number, and by July 10 we may see them flying over late each afternoon *en route* to their roosts in the Hackensack marshes.

During the first week in the month we shall also find that certain birds have concluded their season of song. Bobolinks and Red-winged Blackbirds are rarely heard after the 10th of the month; their young are reared, the cares of nesting-time are passed, and with other one-brooded birds they begin to renew their worn breeding plumages by molting. After the 15th we miss the voices of the Veery, Orchard and Baltimore Orioles, Chat, Brown Thrasher and other birds.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Summer Residents, see page 86.

August Bird-Life.—With the majority of our nesting birds, family cares are ended in August, and at this season they completely renew their worn plumages by molting. When molting, birds are less in evidence than at any other time. What becomes of many of our birds in August it is difficult to say. Baltimore Orioles, for example, are rarely seen from August 1 to 20, but after the latter date they reappear clad in full plumage, and they are then in nearly full

song. So apparently complete is the disappearance of birds in August, that before the fall migration brings new arrivals daily from the north, one may spend hours in the woods and hear only the Red-eyed Vireo and the Wood Pewee, August's own songsters.

Late in the month, migrants from the north travel through the woods in small companies, but the characteristic bird-life of August is in the marshes. There the Swallows come in increasing numbers to their roosts in the reeds, while Red-winged Blackbirds and Bobolinks, under the alias of Reedbird, are abundant where the wild rice grows.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Summer Residents, see page 86.

Migrants arriving from the North.

August 1 to 15.

Sora.	Golden-winged Warbler.
Semipalmated Sandpiper.	Chestnut-sided Warbler.
Semipalmated Plover.	Canadian Warbler.
Yellow-bellied Flycatcher.	Small-billed Water-Thrush.

August 15 to 31.

Olive-sided Flycatcher.	Black-throated Green Warbler.
Tennessee Warbler.	Black-throated Blue Warbler.
Nashville Warbler.	Magnolia Warbler.
Parula Warbler.	Blackburnian Warbler.
Cape May Warbler.	Wilson's Warbler.

Red-breasted Nuthatch.

September Bird-Life.—The student whose patience has been sorely tried by the comparative scarcity of birds in August will find that in September his observations in the field will be attended by far more interesting results. The first marked fall in the temperature is sure to be followed by a flight of migrants which, like the "bird waves" of May, will flood the woods with birds. By far the larger number will be Warblers; indeed, September, like May, is characterized by the abundance of these small birds.

Birds of the year will outnumber the adults, and in most cases their plumage will be quite unlike that worn by their parents in May. In many instances, even the adults themselves appear in a changed dress. As a rule, fall plumages are less striking than those of spring, and when, in addition, it is remembered that birds are not in song, and that the foliage is much denser, the greater difficulty of identifying birds in the field will be appreciated.

About September 25 our more common Winter Visitants arrive from the north, but afterward birds decrease rapidly in number.

BIRDS OF THE MONTH.

*Permanent Residents, see page 85.**Summer Residents, see page 86.**Summer Residents leaving for the South.*

September 1 to 10.

Acadian Flycatcher.

Rough-winged Swallow.

Orchard Oriole.

Worm-eating Warbler.

Blue-winged Warbler.

September 10 to 20.

Baltimore Oriole.

Yellow Warbler.

Purple Martin.

Yellow-breasted Chat.

September 20 to 30.

Common Tern.

Rose-breasted Grosbeak.

Green Heron.

Yellow-throated Vireo.

Hummingbird.

Warbling Vireo.

Kingbird.

Hooded Warbler.

Crested Flycatcher.

Louisiana Water-Thrush.

Wood Pewee.

Veery.

Migrants arriving from the North.

September 1 to 10.

Lincoln's Sparrow.

Black-poll Warbler.

Connecticut Warbler.

September 10 to 20.

Wilson's Snipe.

Olive-backed Thrush.

Blue-headed Vireo.

Bicknell's Thrush.

September 20 to 30.

Herring Gull.

Myrtle Warbler.

Green-winged Teal.

Yellow Palm Warbler.

Blue-winged Teal.

Brown Creeper.

American Coot.

Golden-crowned Kinglet.

Junco.

Ruby-crowned Kinglet.

White-throated Sparrow.

Winter Wren.

White-crowned Sparrow.

Gray-cheeked Thrush.

October Bird-Life.—Early October generally brings the first killing frost, depriving insectivorous birds of a large part of their food and forcing them to journey southward. Flycatchers, Warblers, Vireos and Swallows now take their departure, and after the 15th of the month few insect-eating birds remain, except those which, like Woodpeckers, feed on insect's eggs or larvæ.

This is the season of Sparrows. In countless numbers they throng old stubble, potato and corn fields, doing untold good by destroying the seeds of noxious weeds. With these birds will be the lately arrived Juncos, Tree Sparrows and Fox Sparrows. When disturbed, all seek shelter in the nearest hedgerow, and their mingled notes produce a twittering chorus in which it is difficult to distinguish the voices of individual birds.

This, however, will not be the only bird music of the month. Certain species now have a brief second song period, and on the brighter days of the month we may hear Song, White-throated and Fox Sparrows, Phœbes and Ruby-crowned Kinglets singing.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Summer Residents, see page 86.

Summer Residents leaving for the South.

October 1 to 10.

Black-crowned Night Heron.	Scarlet Tanager.
Yellow-billed Cuckoo.	Cliff Swallow.
Black-billed Cuckoo.	Barn Swallow.
Chimney Swift.	Bank Swallow.
Least Flycatcher.	White-eyed Vireo.
Bobolink.	Black and White Warbler.
Grasshopper Sparrow.	Oven-bird.
Indigo Bunting.	Redstart.

Wood Thrush.

October 10 to 20.

Spotted Sandpiper.	Catbird.
Whip-poor-will.	Brown Thrasher.
Nighthawk.	House Wren.
Red-eyed Vireo.	Short-billed Marsh Wren.
Maryland Yellowthroat.	Long-billed Marsh Wren.

October 20 to 31.

Pied-billed Grebe.	Towhee.
Phœbe.	Tree Swallow.

Migrants arriving from the North.

October 1 to 10.

Loon.	Bronzed Grackle.
Pintail.	Rusty Blackbird.
Mallard.	American Pipit.
Canada Goose.	Hermit Thrush.

October 10 to 20.

Fox Sparrow.

October 20 to 31.

Horned Lark.	Snowflake.
Pine Finch.	Redpoll.
Tree Sparrow.	Northern Shrike.

November Bird-Life.—It is an interesting fact that the last migrants to leave in the fall are the first to arrive in the spring. The bird-life of November, when the fall migration is practically concluded closely resembles, therefore, that of March, when spring migration is inaugurated. The reason for this similarity is to be found in the fact that both months furnish birds with essentially the same kind of food. Thus the Loon, Grebes, Ducks, Geese and

Kingfisher remain until the forming of ice in November or early December deprives them of food and forces them to seek open water; while Woodcock and Snipe linger until they can no longer probe the frost-hardened earth. The thaws of March, however, will bring all these birds back to us by restoring their food. Certain Sparrows stay with us until the weed-bearing seeds on which they feed are covered by snow, when they are compelled to retreat farther southward, only to return, however, when the March sun lays bare the earth. Few birds' songs are heard in November. In some sheltered spot Song and White-throated Sparrows may continue in voice, but the characteristic bird-note of the month is the scatter-call or fall whistle of Bob-White.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Migrants leaving for the South.

Wood Duck.

American Bittern.

Great Blue Heron.

Woodcock.

Mourning Dove.

Belted Kingfisher.

Cowbird.

Red-winged Blackbird.

Purple Grackle.

Vesper Sparrow.

Chipping Sparrow.

Field Sparrow.

Swamp Sparrow.

December Bird-Life.—The character of the bird-life of December depends largely upon the mildness or severity of the season. Should the ponds and streams remain open, the ground be unfrozen and little or no snow fall, many of the migrant species of November will linger into December.

The comparative scarcity of food now forces birds to forage actively for provisions, and when a supply is found, they are apt to remain until it is exhausted. Their wanderings in search of food lead them over large areas, and our dooryards and orchards may often be visited by species which, when food is more abundant, do not leave their woodland haunts. An excellent means of attracting them is to provide suitable food. Crumbs and seeds scattered in some place where they will not be covered by snow or blown away will bring Juncos and Tree Sparrows; an old seed-filled sunflower head may prove a feast for Goldfinches, while bits of meat, suet or ham bone hung from a tree will be eagerly welcomed by Chickadees, Nuthatches and Downy Woodpeckers.

BIRDS OF THE MONTH.

Permanent Residents, see page 85.

Winter Residents, see page 88.

LIST OF BIRDS FOUND WITHIN FIFTY MILES OF THE AMERICAN
MUSEUM OF NATURAL HISTORY, NEW YORK CITY.¹

ORDER PYGOPODES. DIVING BIRDS.

FAMILY COLYMBIDÆ. GREBES.

Holbæll's Grebe (*Colymbus Holbælli*). A rather uncommon spring and fall migrant and less common winter resident.

Horned Grebe (*Colymbus auritus*). A common spring and fall migrant and not uncommon winter resident.

***Pied-billed Grebe ; Diedapper ; Dabchick ; Hell Diver** (*Podilymbus podiceps*). Occurs chiefly as a migrant. In northern New Jersey and the Lower Hudson Valley it is common, but on Long Island is of "comparatively rare and infrequent occurrence" (Dutcher, MS). During favorable seasons a few pass the winter here. I know of no definite instance of its breeding. (See group, second floor of Museum).

FAMILY GAVIIDÆ. LOONS.

Loon (*Gavia imber*). A common migrant and less common winter resident. (See group, second floor).

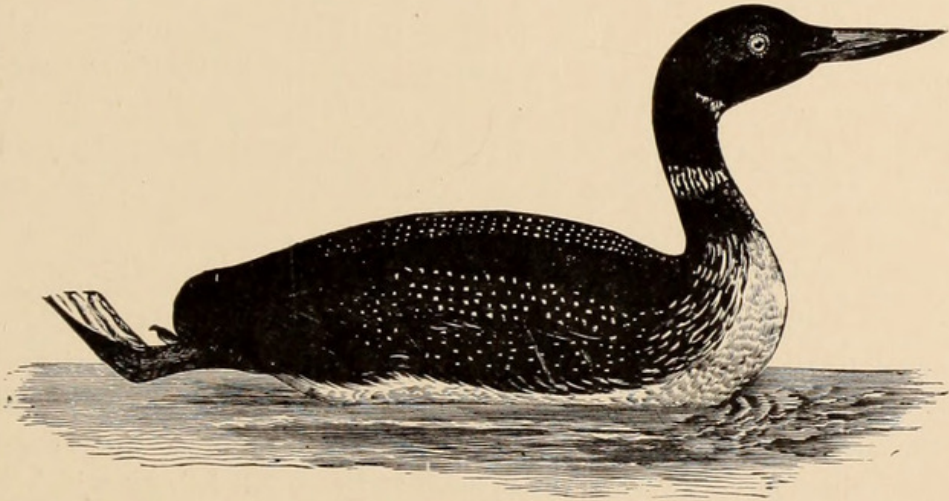


FIG. I. LOON.

Black-throated Loon (*Gavia arctica*). Breeds in the far north, migrating southward to southern Canada. The only record of its occurrence near New York is based on an adult male (Coll. Am. Mus. No. 64,610) taken April 29, 1893, between Sands Point and Execution Lighthouse, L. I. (Dutcher, Auk, X, 1893, p. 265).

Red-throated Loon (*Gavia lumme*). A not uncommon winter resident, but more frequently found during the migrations.

¹Issued also in separate form as **Guide Leaflet, No. 22.**

FAMILY ALCIDÆ. AUKS, MURRES AND PUFFINS.

Puffin (*Fratercula arctica*). There is but one recent record of its occurrence, December 15, 1882, Center Moriches, L. I. (Dutcher, Auk, V, 1888, p. 171).

Black Guillemot (*Cepphus grylle*). Breeds from the Bay of Fundy northward; in winter migrates southward, regularly to Massachusetts. It has been found but once in Connecticut (Stony Creek, Dec. 1887.—Sage, Auk, VII, 1890, p. 283), and the only Long Island record, given by Lawrence, is apparently based on a specimen in the Lawrence Collection labeled "Long Island" (Coll. Am. Mus. No. 64,614).

Brünnich's Murre (*Uria lomvia*). Breeds from the Magdalen Islands northward; in winter migrates southward as far as New Jersey. On the western end of Long Island it is as a rule uncommon; at the eastern end it occurs more frequently, but is irregular (Dutcher, Auk, II, 1885, p. 38). During some seasons, however, the bird becomes common in our waters (Averill, Auk, VIII, 1891, p. 307). Giraud's record of "*Uria troile*" doubtless refers to this species. Specimens in the Lawrence Collection originally labeled "*U. troile*" are *U. lomvia*. Records of the occurrence of this species on Long Island during the winter are given by Braislin (Auk, XX, 1903, p. 51).

Razor-billed Auk (*Alca torda*). Breeds from the Magdalen Islands northward; in winter migrates southward, regularly to Long Island and rarely to Virginia and North Carolina.

Dovekie (*Alle alle*). A species of the far north, migrating southward in winter, more or less regularly to New Jersey. With us its numbers vary during different winters. It is considered by Dutcher to be generally a rare bird on Long Island (Abst. Linn. Soc. No. 4, 1892, p. 6), but is given by Scott as a regular winter visitant on the New Jersey coast (Bull. Nutt. Orn. Club, IV, 1879, p. 228).

ORDER LONGIPENNES. LONG-WINGED SWIMMERS.

FAMILY STERCORARIIDÆ. SKUAS AND JÆGERS.

Pomarine Jaeger (*Stercorarius pomarinus*). Passes the nesting season chiefly within the Arctic Circle and migrates southward from July to late October, during which period it is sometimes not uncommon off our coast, its presence depending largely on the abundance of the small fish on which it feeds (Baird, Auk, IV, 1887, p. 71).

Parasitic Jaeger (*Stercorarius parasiticus*). Occurs off the coast in this vicinity as a regular migrant with the preceding species.

Long-tailed Jaeger (*Stercorarius longicaudus*). During its migration it is sometimes not uncommon off our coast.

FAMILY LARIDÆ. GULLS AND TERNS.

Ivory Gull (*Pagophila alba*). A boreal species of which there appears to be but one record, that of an adult taken at Sayville, L. I., January 5, 1893 (Dutcher, Auk, XII, 1895, p. 290).

Kittiwake Gull (*Rissa tridactyla*). A common late fall transient visitant and a comparatively rare winter resident, occurring generally some distance off-shore (Dutcher, MS).

Glaucous Gull; Burgomaster (*Larus glaucus*). Several specimens have been killed on the Lower Hudson River, and off Long Island it is found regularly in small numbers (Dutcher, MS).

Iceland Gull (*Larus leucopterus*). A northern species of which but one valid record exists for this vicinity, Rye, N. Y. March 3, 1894 (Porter, Auk, XII, 1895, p. 76; see also Dwight, Auk, XXIII, 1906, p. 37, where a second specimen reported by Porter, and incorrectly recorded by Chapman as *leucopterus*, is given as *L. kumlieni*).

Kumlien Gull (*Larus kumlieni*). There are two records of this rare Gull for this vicinity, one is based on an immature male shot March 8, 1898, at Rockaway Beach, L. I. (Braislin, Auk, XVI, 1899, p. 190 and XXII, 1905, p. 168, where the specimen is definitely identified), the other an immature female taken February 16, 1894, at Stamford, Conn. (Porter, Auk, 1895, p. 76; see also Dwight, Auk, XXIII, 1906, p. 37, where this specimen incorrectly identified by Chapman is re-determined).

Great Black-backed Gull (*Larus marinus*). A regular winter resident not uncommon along the coast, but rarely ascending our rivers.

***Herring Gull** (*Larus argentatus*). This is the common winter Gull of our harbor and coast. It arrives from the north in September and is abundant until April. The adults are pearl gray; the immature birds, or young born the previous summer, are grayish brown. There has been an evident increase in the numbers of this species since certain of its breeding grounds have been protected. Braislin states that non-breeding birds are now common on the south shore of Long Island during the summer (Auk, XXII, 1905, p. 168).

Ring-billed Gull (*Larus delawarensis*). A rather uncommon spring and fall migrant and winter resident (Dutcher, MS). Braislin (Auk, XXII, 1905, p. 168) states that this species is not uncommon on Long Island in the summer, that it occurs in large numbers in October, but that he has no record later than November 17.

Laughing Gull (*Larus atricilla*). Formerly a common summer resident on Long Island, but now known to nest only on Great South Bay, where it is rare. (See group, second floor).

Bonaparte's Gull (*Larus philadelphia*). A regular spring and fall migrant, sometimes seen in winter.

Little Gull (*Larus minutus*). This is a European species; the only satisfactory records of its occurrence in North America are those of immature birds taken on Fire Island, Long Island, September 15, 1887 (Dutcher, Auk, V, 1888, p. 172), and Rockaway Beach, L. I., May 10, 1902 (Braislin, Auk, XX, 1903, p. 52).

Sabine's Gull (*Xema sabinii*). A circumpolar species breeding in the Far North and rarely coming as far south as northern United States. Giraud records a specimen shot at Raynor South, Long Island, "July, 1837."

Gull-billed Tern (*Gelochelidon nilotica*). A southern species breeding as far north as Virginia, and wandering occasionally to Maine. There are several Long Island records, the most recent being two specimens taken at South Oyster Bay, July 4, 1882 (Dutcher, Auk, I, 1884, p. 34), and one shot from a flock of five on Shinnecock Bay, July 8, 1884 (Dutcher, Auk, II, 1885, p. 38).

Caspian Tern (*Sterna caspia*). A rather uncommon fall migrant. There appears to be but one spring record, that of two adult males taken at Amityville, L. I., May 12, 1898 (Braislin, Auk, XVI, 1899, p. 191).

Royal Tern (*Sterna maxima*). There is but one instance of its occurrence on Long Island, a specimen taken at Raynor South, August 27, 1831, by J. F. Ward (Am. Mus. No. 46,008, Lawrence Coll.).

Forster's Tern (*Sterna Forsteri*). More common in the interior than on the Atlantic coast, where it is not known to breed north of Virginia. It wanders irregularly northward and is sometimes found in this vicinity.

Common Tern; Sea Swallow (*Sterna hirundo*). Inhabits the greater part of the Northern Hemisphere; in North America breeds locally from the Arctic regions to the Gulf of Mexico. This was formerly an abundant bird along our coasts, but the relentless persecutions of millinery collectors have so reduced its numbers that it is now found in only a few isolated localities. Not many years ago it bred more or less commonly all along the Long Island coast, but until recently almost the only surviving large colony inhabited Big Gull Island. Even in this remote locality it was constantly persecuted by nest-robbing fishermen and egg collectors. Through the efforts of a number of bird-lovers, who raised a sum of money for the purpose, permission was obtained from the Lighthouse Board to have the lightkeeper on Little Gull Island appointed a special game-keeper to protect the Terns on Big Gull Island. The birds rapidly increased under this guardianship, but the subsequent use, by the United States Government, of Gull Island for the erection of fortifications has caused the Terns to abandon it. Colonies are now found at both the northern and southern ends of Gardiner's Island.

Roseate Tern (*Sterna dougalli*). "Temperate and tropical regions." In north America formerly breeding along the Atlantic coast northward irregularly to Maine; now rare north of southern New Jersey. A few pairs lived on Big Gull Island with the colony of Common Terns above mentioned, but I have not observed the species in either of the Gardiner's Island colonies.

The Arctic Tern (*Sterna paradisæa*) is included by Lawrence without remark. I know of no record of its occurrence near New York City, and Mr. Dutcher has but one specimen from Long Island, a male taken on Ram Island Shoals, July 1, 1884.

Least Tern (*Sterna antillarum*). Formerly a common summer resident in suitable places on the coasts in this vicinity, but now occurs only as a rare migrant.

Sooty Tern (*Sterna fuliginosa*). A southern species, not breeding north of North Carolina, but occasionally straying farther up the coast. It has been recorded from Lake Ronkonkoma, L. I. (Dutcher, Auk, III, 1886, p. 433), and Highland Falls, N. Y. (Mearns, Bull. Essex. Inst. XII, 1879, 87).

Black Tern (*Hydrochelidon nigra surinamensis*). A species of the interior, breeding from Kansas and Illinois to Alaska. Occurs on the Atlantic coast as an irregular migrant, usually in the fall, sometimes in considerable numbers.

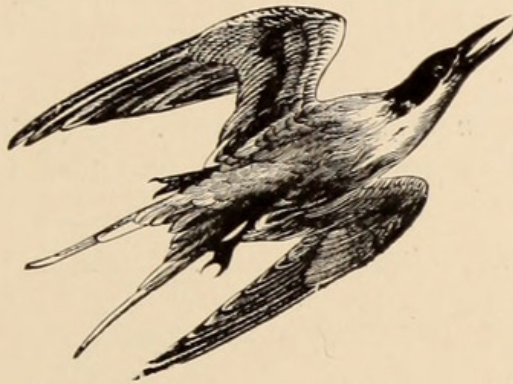


FIG. 2. TERN.

FAMILY RYNCHOPIDÆ. SKIMMERS.

Black Skimmer (*Rynchops nigra*). A southern species, not breeding north of Maryland, but occasionally wandering up the coast after the breeding season. There are several records of its occurrence on Long Island during the summer.

ORDER TUBINARES. TUBE-NOSED SWIMMERS.

FAMILY PROCELLARIIDÆ. FULMARS AND SHEARWATERS.

Fulmar (*Fulmarus glacialis*). An arctic species which sometimes wanders southward to Massachusetts. One was found in an exhausted condition at Ridgewood, New Jersey, December, 1892, after a storm (Hales, Orn. and Oöl., XVII, 1892, p. 39).

Cory's Shearwater (*Puffinus borealis*). A pelagic species, sometimes not uncommon off our coasts from August to November. It has been recorded from Amagansett (Dutcher, Auk, V, 1888, p. 5). to Cape Cod, Massachusetts, but doubtless occurs along our coast to the southward. Braislin records two specimens shot off Fire Island Inlet, October 4, 1902 (Auk, XXI, 1904, p. 287).

Greater Shearwater (*Puffinus gravis*). A pelagic species, found on the Atlantic Ocean from Cape Horn to Greenland. Its breeding place is unknown. It appears off our coasts in early June and is irregularly common until November.

Audubon's Shearwater (*Puffinus lherminieri*). A southern species, breeding in the Bahamas and Bermudas, and rarely wandering northward to Long Island (Dutcher, Auk, V, 1888, p. 173).

Sooty Shearwater (*Puffinus griseus*). Known from the North Atlantic southward to South Carolina. It is found off our coasts associated with the Greater Shearwater, but is much less common.

The Stormy Petrel (*Procellaria pelagica*) is included by Lawrence in his "Catalogue of Birds Observed on New York Island" etc., but the record is not accompanied by data, nor is there a specimen of the bird from this vicinity in the Lawrence Collection.

Leach's Petrel (*Oceanodroma leucorhoa*). Breeds from Maine northward, and in the winter ranges southward to Virginia. It is rather uncommon in this vicinity.

Wilson's Petrel (*Oceanites oceanicus*). Nests in the islands of the Southern Seas (Kerguelen Island) in January and February and migrates northward after the breeding season, reaching the waters of our coasts in May and remaining until late September. It sometimes enters the Lower Bay of New York harbor in numbers.

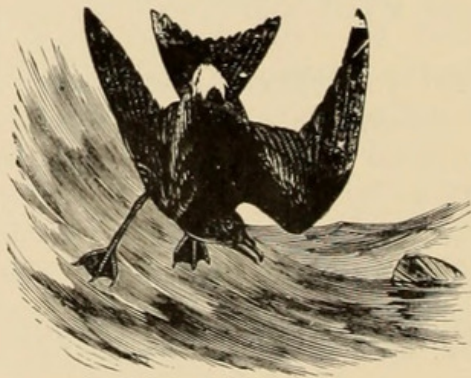


FIG. 3. PETREL.

ORDER STEGANOPODES. TOTIPALMATE SWIMMERS.

FAMILY SULIDÆ. GANNETS.

Booby (*Sula leucogaster*). Coasts and islands of tropical and sub-tropical America, north of Georgia. Accidental on Moriches Bay, L. I. (Dutcher, Auk, X, 1893, p. 270).

Gannet (*Sula bassana*). A spring and fall migrant, usually occurring well off shore.

FAMILY PHALACROCORACIDÆ. CORMORANTS.

Cormorant (*Phalacrocorax carbo*). It is not common south of Maine, and is rare in this vicinity.

Double-crested Cormorant (*Phalacrocorax auritus*). A common spring and fall migrant.

FAMILY PELECANIDÆ. PELICANS

White Pelican (*Pelecanus erythrorhynchos*). Now rare or accidental on the Atlantic coast. Two specimens have been taken in this vicinity, one at Canarsie Bay, L. I. (Dutcher, Auk, X, 1893, p. 270), the other, a male, at Roslyn, May 11, 1885 (Forest and Stream, XXIV, 1885, p. 328).

Brown Pelican (*Pelecanus occidentalis*). Breeds as far north as South Carolina and occasionally strays up the coast as far as Massachusetts. DeKay records a specimen from Sandy Hook.

ORDER ANSERES. LAMELLIROSTRAL SWIMMERS.

FAMILY ANATIDÆ. DUCKS, GEESE AND SWANS.

American Merganser; Shelldrake (*Merganser americanus*). Not common from November to April.

Red-breasted Merganser; Shelldrake (*Merganser serrator*). On Long Island it is a very common spring and fall migrant (Dutcher, MS).

Hooded Merganser (*Lophodytes cucullatus*). A not common migrant and occasional winter visitant.

Mallard (*Anas boschas*). An irregular transient visitant, occurring in spring, winter and fall.

***Black Duck** (*Anas obscura*). Breeds from New Jersey to Labrador and winters from Massachusetts southward. It formerly nested in this vicinity, but now is found chiefly as a migrant, and less commonly in the winter. It still nests at some points on the Jersey coast and in a few localities on Long Island, (Dutcher, MS). (See group, second floor).

The Red-legged Black Duck, a supposed race of the Black Duck has been recorded from Long Island by Braislin (Auk, XXI, 288), but the status of this form is as yet too unsettled to make it desirable definitely to introduce it here.

Gadwall (*Chaulelasmus streperus*). A very rare migrant in this vicinity.

European Widgeon (*Mareca penelope*). An Old World species which occurs rarely on our coast. It has been taken at Leonia, N. J. (Chapman, Auk, VI, 1889, p. 302).

Baldpate; American Widgeon (*Marcca americana*). An irregular transient visitant.

European Green-winged Teal (*Nettion crecca*). An Old World species of rare occurrence on our coasts. It is recorded from Trenton, N. J. (Abbott, Geology of New Jersey, 1868, p. 792), Hartford, Conn. (Treat, Auk, VIII, 1891, p. 112), and from Merrick, L. I., where two specimens were captured in December, 1900 (Braislin, Auk, XIX, 1902, p. 145).

Green-winged Teal (*Nettion carolinensis*). A rather uncommon spring and fall migrant and winter resident.

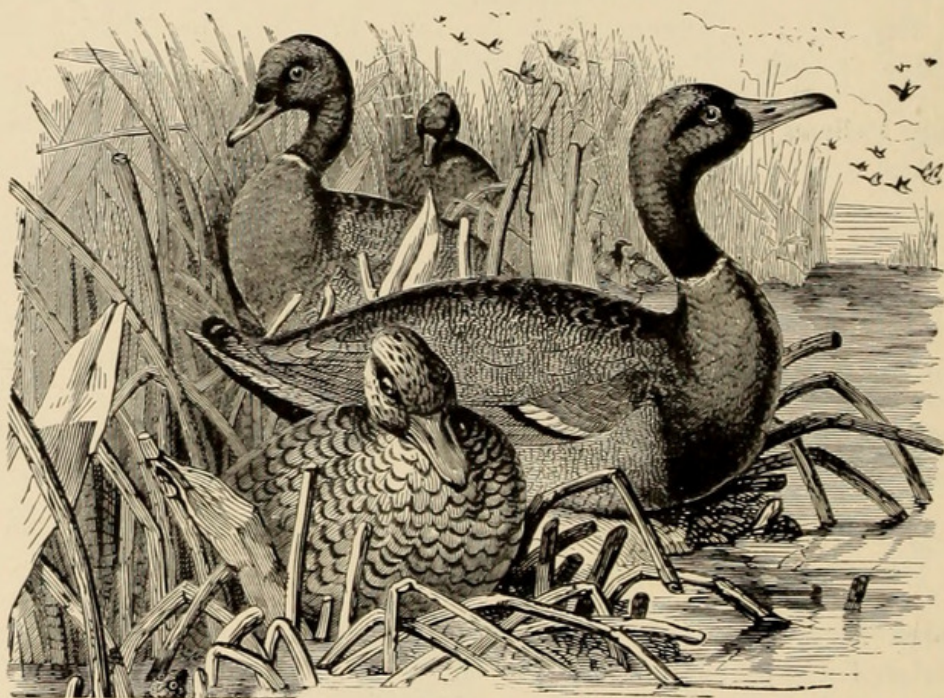


FIG. 4. MALLARDS.

Blue-winged Teal (*Querquedula discors*). A not common spring and common fall migrant.

Shoveller; Spoonbill (*Spatula clypeata*). A rare and irregular transient visitant.

Pintail; Sprigtail (*Dafila acuta*). A common migrant.

***Wood Duck; Summer Duck** (*Aix sponsa*). The Wood Duck is a rare summer resident on some of our more retired, wooded streams and becomes more common during the migrations.

The Rufous-crested Duck (*Netta rufina*) is an Old World species which is known as North American only from one specimen found in Fulton Market, New York City, and supposed to have been shot on Long Island.

Redhead (*Aythya americana*). On Long Island this species occurs as a regular migrant, in varying numbers, and is occasionally found in the winter (Dutcher, MS).

Canvasback (*Aythya vallisneria*). Occurs here as a not common migrant.

American Scaup Duck; **Broad-bill**; **Blue-bill**; **Black-head**; **Raft Duck** (*Aythya marila*). The commonest Duck of our bays, where it is sometimes seen in great numbers. It appears from the north about October 1 and remains until its feeding grounds are frozen over, returning as soon as the ice breaks in the early spring.

Lesser Scaup Duck; **Little Blue-bill**; **Creek Broadbill**; **Raft Duck** (*Aythya affinis*). Not as common as the preceding, with which its range in the main agrees.

Ring-necked Duck (*Aythya collaris*). North America, breeding only in the interior from Iowa northward. It is here a very rare, irregular transient visitant. The last record is that of Braislin (*Auk*, XVI, 1899, p. 191) who mentions a specimen from Great South Bay.

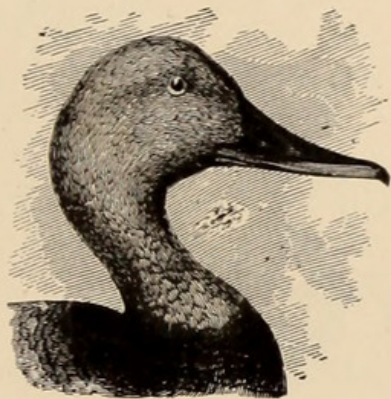


FIG. 5. CANVAS-BACK.

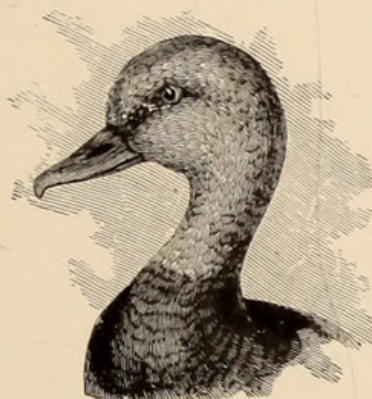


FIG. 6. REDHEAD.

American Golden-eye; **Whistler** (*Clangula clangula americana*). In favorable localities within our limits the Whistler is a not common migrant and winter resident.

Bufflehead; **Butterball** (*Charitonetta albeola*). A not uncommon migrant and winter resident.

Old-squaw; **Old-wife**; **South-southerly** (*Harlelda hyemalis*). A common winter resident.

Harlequin Duck (*Histrionicus histrionicus*). Breeds from Newfoundland northward, and winters southward to New Jersey. A very rare winter visitant off our coast (*Dutcher*, *Auk*, III, 1886, p. 434; VI, 1889, p. 134).

The **Labrador Duck** (*Camptolaimus labradorius*), which formerly inhabited the Atlantic Coast, breeding from Labrador northward and wintering southward to New Jersey, is doubtless now extinct. The Labrador Duck was apparently once a not uncommon winter bird on Long Island. In a paper by William Dutcher (*Auk*, VIII, 1891, p. 201; see also *Auk*, XI, 1894, pp. 41, 175, 176.) summarizing our knowledge of its life-history and enumerating the extant specimens, Mr. George N. Lawrence is quoted as saying: "I recollect that about

forty or more years ago it was not unusual to see them in Fulton Market, and without doubt they were killed on Long Island; at one time I remember six fine males, which hung in the market until spoiled for want of a purchaser." Only forty-two of these Ducks have been recorded as existing in collections. Of this number seven are in the American Museum. (See group, second floor).

American Eider (*Somateria dresseri*). A rare winter visitant.

King Eider (*Somateria spectabilis*). Breeds from Labrador to the Arctic Regions, migrating southward regularly as far as eastern Long Island (Dutcher, Auk, V, 1888, p. 175).

American Scoter; Black Coot (*Oidemia americana*). A more or less common migrant and winter resident.

White-winged Scoter; White-winged Coot (*Oidemia deglandi*). A common migrant and winter visitant off our coasts.

Surf Scoter (*Oidemia perspicillata*). Found here with the preceding species.

Ruddy Duck (*Erismatura jamaicensis*). A not uncommon migrant, occurring in varying numbers.

Greater Snow Goose (*Chen hyperborea nivalis*). An irregular transient visitant.

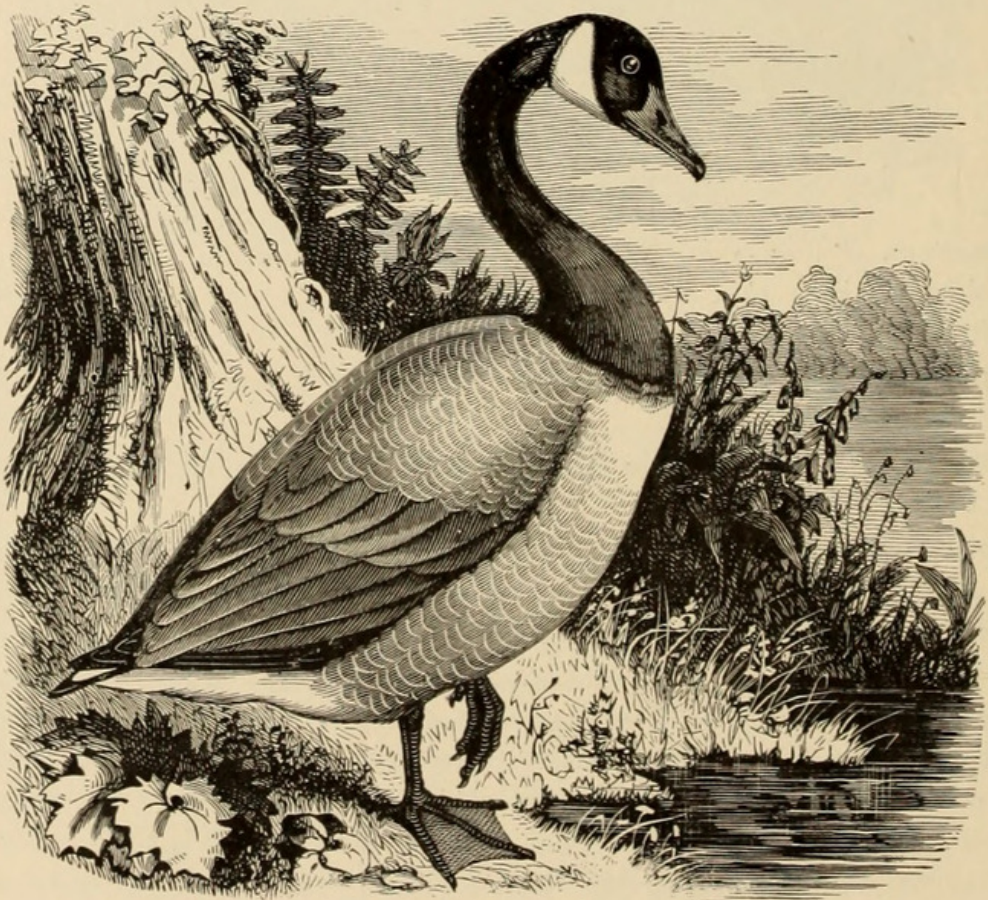


FIG. 7. CANADA GOOSE.

American White-fronted Goose (*Anser. albifrons. gambeli*). North America, breeding far northward; in winter, south to Mexico and Cuba. Rare on the Atlantic Coast. It has been recorded on Long Island from Babylon (Giraud), Great South Bay Islip and Montauk (Dutcher, Auk, X, 1893, p. 271).

***Canada Goose** (*Branta canadensis*). A common migrant, appearing in November and remaining until our bays are frozen. In the spring the last birds pass on their northward journey as late as early May.

Hutchins's Goose (*Branta Canadensis hutchinsi*). A rare migrant in this vicinity.

White-bellied Brant (*Branta bernicla glaucogaster*). A common bird, appearing from the north in October and remaining until our bays are frozen, when it retreats farther southward. In April it returns, and the migration is not concluded until May.

Black Brant (*Branta nigricans*). This is a western species which is occasionally found on our coasts. It has been recorded from Egg Harbor, N. J. (Lawrence), Babylon and Islip, L. I. (Dutcher, Auk, 1893, pp. 266, 271).

Barnacle Goose (*Branta leucopsis*). An Old World species, occurring accidentally on our coasts. A specimen was killed on Jamaica Bay, L. I., in October, 1876 (Lawrence, Bull. Nutt. Orn. Club, II, 1877, p. 18).

Whistling Swan (*Olor Columbianus*). Breeds in the far north, and winters as far south as the Gulf of Mexico. It is an exceedingly rare bird on the Atlantic coast north of the Chesapeake. A recent record is that of a bird killed at Flatlands, L. I., within the limits of Greater New York, on Dec. 24, 1901. (Braislin, Auk, XX, 1903, p. 52).

ORDER HERODINES. HERONS, STORKS, IBISES, ETC.

FAMILY IBIDIDÆ. IBISES.

White Ibis (*Gura alba*). A bird of the Southern States, which has been recorded twice from this vicinity (Raynor South and Moriches, L. I., Giraud).

Glossy Ibis (*Plegadis autumnalis*). An Old World species of "irregular distribution in America." It has been recorded once from Southampton L. I., and once from Canarsie Bay, L. I. (Dutcher, Auk, X, 1893, p. 271).

FAMILY ARDEIDÆ. HERONS, EGRETS, BITTERNS, ETC.

***American Bittern** (*Botaurus lentiginosus*). "Temperate North America, south to Guatemala and the West Indies"; breeds but rarely south of Virginia. In this vicinity it is not common during the summer.

Least Bittern (*Ardetta exilis*). A locally common summer resident.

Great Blue Heron (*Ardea herodias*). With us it is a common migrant, and is probably found as a summer resident in a few localities. It is generally known by the name of "Crane."

American Egret (*Herodias egretta*). A southern species, breeding as far north as Virginia, and after the breeding season wandering northward in small numbers. It is here a rare and irregular summer visitant, occurring between August 1 and the last of September (Dutcher, Auk, X, 1884, p. 32). Comparatively recent records of the occurrence of this species are those of Braislin (Auk, XVII, 1900, p. 69; XIX, 1902, p. 145) and Owen (Auk, XV, 1898, p. 51).

Snowy Heron (*Egretta candidissima*). One of three individuals seen near Sayville, L. I., May 30, 1885, by William Dutcher and L. S. Foster was "carrying a long stick in its bill" (Dutcher, Auk, III, 1886, p. 435), and possibly was preparing to breed. Now an exceedingly rare bird breeding in a few isolated localities in Florida. Birds identified in life as this species are more apt to be the young of the Little Blue Heron (Braislin, Auk, XIX, 1902, p. 145).

Little Blue Heron (*Florida carulea*). This southern species, like the preceding, wanders northward in small numbers after the breeding season, and a few are sometimes found near New York. (See group, second floor).

***Green Heron** (*Butorides virescens*). One of our commonest Herons and known under a great variety of names. It haunts the banks of streams and ponds and places its nest of sticks in a bush or the lower branch of a tree.

***Black-crowned Night Heron; Quawk** (*Nycticorax nycticorax nævus*). A locally common summer resident. There is a colony containing about 500 pairs not far from New York City. The popular name "Quawk," is derived from the call of the bird.

Yellow-crowned Night Heron (*Nyctanassa violacea*). Breeds from South Carolina southward and occasionally strays up the coast as far as Massachusetts. There is but one definite record for this region, that of a specimen taken in April, near Freeport, Queens County, L. I. (Dutcher, Auk, X, 1893, p. 286).

ORDER PALUDICOLÆ. CRANES, RAILS, ETC.

FAMILY RALLIDÆ. RAILS, GALLINULES AND COOTS.

King Rail (*Rallus elegans*). Breeds as far north as Connecticut and has been known to stray to Maine. It is a rare summer resident of our fresh-water marshes (Dutcher, Auk, V, 1888, p. 176).

Clapper Rail; Meadow Hen; Marsh Hen (*Rallus crepitans*). This is an exceedingly common summer resident of the salt marshes of our coasts. Occasionally it winters in our region. (See group, second floor).

Virginia Rail (*Rallus virginianus*). A locally common summer resident, a few remaining during the winter.

Sora; Carolina Rail; Rail-bird (*Porzana carolina*). A rare summer resident in this vicinity, but in the fall it becomes common, feeding on wild rice of our marshes where, however, it is yearly becoming less numerous.

Yellow Rail (*Colurnicops noveboracensis*). Little is known about the nesting habits of this bird. It haunts grassy marshes and seeks safety by hiding or running, and for this reason is rarely seen. Several have been taken during the fall migration in this vicinity, and it is doubtless more common than is generally supposed. (See group, third floor.)

Black Rail (*Creciscus jamaicensis*). This bird, though much rarer, has as far as known the same habits as the preceding species and like it is very difficult to observe. It has been taken in the spring at Jamaica Bay and doubtless breeds in this vicinity, since its nest has been found at Saybrook, Conn. (Clarke, Auk, I, 1884, p. 394). (See group, third floor.)

Corn Crane (*Crex crex*). This is an Old World species which sometimes strays to Greenland and our Atlantic coast. In this region there are records for Sag Harbor, L. I. (Dutcher, Auk, III, 1886, p. 435), Oakdale, L. I. (Dutcher, Auk, V, 1888, p. 177), and Saybrook, Conn. (Clark, Orn. and Oöl., XIII, 1888, p. 45).

Purple Gallinule (*Ionornis martinica*). Tropical America, breeding as far north as South Carolina, and straying casually to Maine. There are but two definite records for this region, Middle Island, L. I. (Helme, Orn. and Oöl., VII, 1882, p. 118) and Indian Pond, near Flatlands, L. I. (Dutcher, Auk, X, 1893, p. 272).

Florida Gallinule (*Gallinula galeata*). Temperate and tropical America, breeding as far north as Maine, and wintering from Florida southward. It breeds only locally in the northeastern part of its range, frequenting the borders of ponds or streams surrounded by marshy grounds. Its nest has not been found in the immediate vicinity of New York City, where it is known only as a rare migrant.

***Coot; Mud-hen; Crow-duck** (*Fulica americana*). The Mud-hen is a not uncommon bird during migration, but it is recorded as breeding only near Morristown, N. J. (Thurber, True Democratic Banner, newspaper, Nov. 10, 1887).

ORDER LIMOCOLÆ. SHORE BIRDS. FAMILY PHALAROPODIDÆ. PHALAROPES.

Red Phalarope (*Crymophilus fulicarius*). The Phalaropes are pelagic birds, not often coming to our coasts unless driven shoreward by storms. There are both August and May records for this species on Long Island.

Northern Phalarope (*Phalaropus lobatus*). This bird occurs with us as a regular migrant, and after severe storms it is sometimes common in flocks. (Dutcher, Auk, 1884, p. 33).

Wilson's Phalarope (*Steganopus tricolor*). Interior of North America, breeding from northern Illinois northward. With us it is a very rare and irregular migrant.

FAMILY RECURVIROSTRIDÆ. AVOCETS AND STILTS.

American Avocet (*Recurvirostra americana*). A bird of the interior, breeding from Texas to the Saskatchewan. Giraud mentions it as casual on Long Island, and says that a few bred at Egg Harbor, N. J. (Dutcher records four individuals seen by Col. Nicholas Pike on Long Island as follows: Pon-quogue, 1844; Canarsie Bay, 1847; Southampton, two, no date (Auk, X, 1893, p. 272).

Black-necked Stilt (*Himantopus mexicanus*). A southern species, breeding in the Gulf States and locally in the Mississippi Valley and westward; rare on the North Atlantic coast. Giraud mentions it as "unfrequent," and Dutcher records two specimens taken by Colonel Pike on Great South Bay, one of them in 1843 (Auk, X, 1893, p. 272).

FAMILY SCOLOPACIDÆ. SNIPES, SANDPIPERS, ETC.

European Woodcock (*Scolopax rusticola*). The only record for the occurrence of this species in this vicinity is based on a specimen found in Washington Market, December 6, 1859, which was said to have been killed near Shrewsbury, N. J. (Lawrence, Ann. Lyc. Nat. Hist., VIII, 1866, p. 223).

***Woodcock** (*Philohela minor*). The woodcock is a not uncommon summer resident and more numerous fall migrant. Owing to the clearing of timber areas, draining of lands and demands of sportsmen, it is however, yearly decreasing in numbers in the vicinity of New York. It arrives early in March, and does not leave us until the ground is frozen. (See group, second floor).

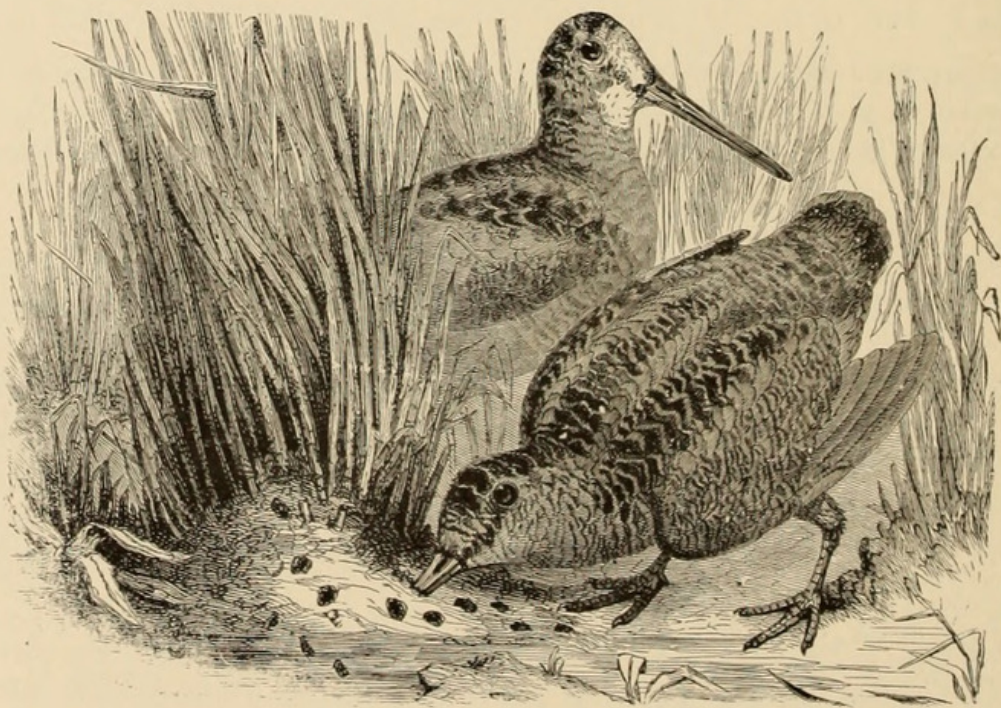


FIG. 8. WOODCOCK.

Wilson's Snipe; English Snipe (*Gallinago delicata*). A not uncommon migrant, and crippled birds are said to have nested on several occasions near Chatham, N. J. (Herrick, Forest and Stream, XII, 1879, p. 165). During mild seasons a few pass the winter here (Dutcher, MS).

Dowitcher (*Macrorhamphus griscus*). A common migrant, arriving from the south about May 1 and returning from the north between July 10 and August 15.

Migrating Snipe, Sandpipers and Plovers fly, as a rule, some distance off the land and if the weather is calm and clear, very few birds are found on our shores. If, however, during their migrations storms from the right quarter, or fogs occur, many birds are driven shoreward and there results what among sportsmen is known as a "flight."

Long-billed Dowitcher (*Macrorhamphus scolopaceus*). This western representative of our common Dowitcher is a rare but regular late fall migrant along the Atlantic coast.

Stilt Sandpiper (*Micropalama himantopus*). A not common but by no means rare migrant, occurring chiefly during the fall migration from the middle of July to the middle of September.

Knot; Robin Snipe (*Tringa canutus*). A common migrant, passing northward during May and returning from the middle of July to the first of October.

Purple Sandpiper (*Arquatella maritima*). A rare but regular winter resident.

Pectoral Sandpiper; Krieker (*Actodromas maculata*). A common and sometimes abundant fall migrant in this vicinity; less frequently seen in the spring. It returns from the north in early August, and its migration is concluded about the last of October.

White-rumped Sandpiper (*Actodromas fuscicollis*). A not uncommon spring and fall migrant.

Baird's Sandpiper (*Actodromas bairdi*). Casual on the Atlantic coast. There are several records for this vicinity, as follows: Rockaway, L. I., August, two specimens, and September, two specimens (N. T. Lawrence, Forest and Stream, X, 1878, p. 235), and Far Rockaway, L. I., August, one specimen (N. T. Lawrence, Auk, II, 1885, p. 273).

Least Sandpiper; Peep; Meadow Oxeye (*Actodromas minutilla*). This is one of our commonest Sandpipers, and shares the names "Peep" or "Oxeye" with the Semipalmated Sandpiper. It is seen in small flocks running along our shores and beaches. It passes northward during May and returns about July 10, the fall migration being concluded about September 1.

Red-backed Sandpiper; Lead-back (*Pelidna alpina sakhalina*). A very common migrant on our coasts, less common in the spring than in the fall. It migrates northward in early May and returns about September 1, remaining until November.

Curlew Sandpiper (*Erolia ferruginea*). "Old World in general, occasional in eastern North America." There are several records of its occurrence on Long Island.

Semipalmated Sandpiper; Peep; Sand Oxeye (*Ercunetes pusillus*). This is our most common Sandpiper, and during its fall migration it is abundant along our shores in small flocks. It migrates northward during May, returns about July 10, and the fall migration is not concluded until about October 1.

Western Sandpiper (*Ercunetes mauri*). This is the western representative of the preceding species. It is not infrequently found on our coast, generally associated with *E. pusillus*. Braislin (Auk, XVI, 1899, p. 191) records it as abundant on Long Island in the fall of 1897.

Sanderling; Surf Snipe (*Calidris alba*). An abundant migrant along our coasts, where, as a rule, it is found on the outer beaches. It passes northward during May and returns on its southward journey about July 10, from which date until October it is more or less numerous.

Marbled Godwit; Brown Marlin (*Limosa fedoa*). This is a rare bird on the Atlantic coast, where it occurs only as an irregular fall visitant.

Hudsonian Godwit; Ring-tailed Marlin (*Limosa hamastica*). In this vicinity the Ring-tailed Marlin is an irregular fall migrant (Dutcher, Auk, III, 1889, p. 437). Kobbe (Auk, XXI, 1904, p. 79) records a flight of this species as occurring at Quogue, L. I., August 31, 1903.

***Greater Yellow-legs** (*Totanus melanoleucus*). A common migrant, arriving in the spring about the latter half of April and returning in the latter half of July, the migration not being concluded until November.

Yellow-legs; Summer Yellow-legs (*Totanus flavipes*). Very rare in the spring, but abundant during its southward migration, which begins about July 15 and ends in September.

***Solitary Sandpiper** (*Helodromas solitarius*). A not uncommon migrant passing northward in May and returning in July. It is not a true Shore-bird, but is more frequently found near fresh-water ponds and streams.

Willet (*Catoptrophorus semipalmatus*). In this vicinity it occurs only as a rare fall migrant. It is probable that the Western Willet (*C. s. inornata*) is also occasionally found on our coasts.

Ruff (*Pavoncella pugnax*). "Northern parts of the Old World, straying occasionally to eastern North America." There are three specimens of this bird in the American Museum from North America, two of which, in the Lawrence Collection, are labeled "Long Island," while the third is in the Elliot Collection and is labeled "Barnegat, N. J." (For record of the occurrence of this species in America, see Deane, Auk, XXII, 1905, p. 411; and Palmer, Auk, XXIII, 1906, p. 99.)

Bartramian Sandpiper; Upland Plover; Field Plover (*Bartramia longicauda*). A rather rare migrant and still rarer summer resident. It arrives about the middle of April and frequents fields and pastures.

Buff-breasted Sandpiper (*Tryngites subruficollis*). A bird of the interior, breeding in the far north and wintering in South America. It is very rare on the Atlantic coast. Giraud records "a party of five" as seen in August and September (N. T. Lawrence, *Forest and Stream*, X, 1879, p. 235); one was taken in August at Montauk Point (Berier, *Bull. N. O. C.*, VI, 1880, p. 126); Dutcher mentions an August specimen from Suffolk County and a midsummer bird from Shinnecock Bay (*Auk*, VI, 1889, p. 136); and Braislin records a male taken August 30, 1903 at Rockaway Beach (*Auk*, XXII, 1905, p. 169).

***Spotted Sandpiper; Tip-up** (*Actitis macularia*). This is the common Sandpiper so frequently seen on our ponds, streams and beaches, and is one of the few members of this family which breeds here. It arrives about April 25 and remains until October.

Long-billed Curlew; Sickle-bill (*Numenius longirostris*). A rare and irregular fall visitant.

Hudsonian Curlew; Jack Curlew (*Numenius hudsonicus*). The Jack Curlew, as it is locally known, is a not uncommon migrant in this vicinity. It passes northward in May, and the southern migration occurs between the middle of July and the first of October.

Eskimo Curlew; Dough-bird; Fute (*Numenius borealis*). This species has decreased in numbers during recent years and is believed by some ornithologists to be on the verge of extinction. There is but one record of its recent occurrence, that of a male shot by R. L. Peavey at Rockaway Beach, L. I., September 14, 1902 (Braislin, *Auk*, XXI, 1904, p. 289).

FAMILY CHARADRIIDÆ. PLOVERS.

Lapwing (*Vanellus vanellus*). An Old World species, of accidental occurrence in America. The only record for eastern North America south of Greenland is that of a specimen shot at Merrick, L. I., December, 1883, (Dutcher, *Auk*, III, 1886, p. 438).

Black-bellied Plover; Beetle-head (*Squatarola squatarola*). A common migrant, more numerous in the fall. It passes northward from about April 15 to June 1, and the return migration occurs between August 1 and November 1.

Golden Plover; Green-back (*Charadrius dominicus*). A rare spring and common fall migrant, occurring chiefly in September.

Kildeer (*Oxyechus vociferus*). In the neighborhood of New York City the Kildeer is a rare summer resident and not uncommon migrant. It arrives in March and remains with us until November.

Semipalmated Plover; Ring-neck (*Ægialitis semipalmata*). The Ring-neck is one of our most common shore-birds. It passes northward in May and returns about July 15, the fall migration not being concluded until October 1.

Piping Plover (*Ægialitis meloda*). It is here a rare local summer resident and more common migrant, arriving in April and remaining until September.

Wilson's Plover (*Ochthodromus wilsonius*). Breeds as far north as Virginia, and strays casually to Nova Scotia. There are several records for Long Island (Dutcher, Bull. N. O. C., IV, 1879, p. 242; Auk, III, 1886, p. 438, Shinnecock Bay), and one for Bridgeport, Conn. (Averill, List of Birds found in the vicinity of Bridgeport, 1892, p. 9).

FAMILY APHRIZIDÆ. SURF BIRDS AND TURNSTONES.

Turnstone; Brant-bird; Calico-back (*Arenaria morinella*). With us it is a common migrant passing northward in May, returning about August 1 and remaining until September.

FAMILY HÆMATOPODIDÆ. OYSTER-CATCHERS.

Oyster-catcher (*Hæmatopus pallitus*). Breeds as far north as Virginia and occasionally strays to Nova Scotia. It is here of rare and irregular occurrence (Dutcher, Auk, X, 1893, p. 272).

ORDER GALLINÆ. GALLINACEOUS BIRDS.

FAMILY TETRAONIDÆ. GROUSE, PARTRIDGES, ETC.

***Bob-white; Quail** (*Colinus virginianus*). Quail are not uncommon in the vicinity of New York, but they are so eagerly hunted, that, as the country becomes more thickly settled, only the most rigid enforcement of the game-laws will preserve them from extermination. Recent severe winters have greatly decreased the numbers of this species, virtually exterminating it in some localities, and were it not for the liberation of southern birds by sportsmen, it is probable that the species would be exceedingly rare if not indeed extinct throughout most of the region surrounding New York City. (See group, second floor).

***Ruffed Grouse; Partridge** (*Bonasa umbellus*). Partridges are much less common with us than Quails. They are birds of the woods, and for this reason disappear with the forests, while Quails, on the contrary become more numerous as the country is cleared. (See group, second floor).

In the early part of the nineteenth century Pinnated Grouse or Heath Hens (*Tympanuchus cupido*) were abundant in some parts of Long Island, but they have been extinct for about sixty years (Giraud, Birds of Long Island, p. 195, and Dutcher, Auk, X, 1893, p. 272). As late as 1860 odd this species occurred in numbers on the Plains of the Jersey Pine Barrens west of Barnegat, where it was exterminated by indiscriminate shooting at all seasons (Chapman, Bird-Lore, V, 1903, p. 50).

The Wild Turkey (*Meleagris gallopavo silvestris*) is still found in small numbers in the wilder, more mountainous portions of Pennsylvania, but has

long been extinct in this vicinity. De Kay (Zoölogy of New York, II, Birds, 1844, p. 200) writes that he had not met with the species in New York State, but was informed at the time he wrote it was found in the counties of Sullivan, Rockland, Orange, Alleghany and Cattaraugus. This species is not mentioned by either Giraud or Lawrence.

ORDER COLUMBÆ. PIGEONS.

FAMILY COLUMBIDÆ. DOVES AND PIGEONS.

Passenger Pigeon ; Wild Pigeon (*Ectopistes migratorius*). Fifty years ago the Wild Pigeon was an abundant bird in the vicinity of New York, but here, as elsewhere throughout its range, it has become very rare. In place of the thousands that used to visit us it is now observed irregularly and rarely. (Lawrence, Auk, VI, 1889, p. 196, and Dutcher, Auk, X, 1893, p. 274). There appears to be but one definite record since 1894 of the occurrence of the Wild Pigeon near New York, that of an immature male shot at Englewood, N. J., June 23, 1896, by C. I. Wood (Chapman, Auk, XIII, 1896, p. 341).

***Mourning Dove** (*Zenaidura macroura*). A common summer resident, under favorable circumstances passing the winter.

Ground Dove (*Columbigallina passerina terrestris*). This is a species of the South Atlantic and Gulf States. It has been once taken in this vicinity (Grinnell, Bull. N. O. C., III, 1878, p. 147), but its occurrence is purely accidental, and it is possible that the specimen captured was an escaped cage-bird.

ORDER RAPTORES. BIRDS OF PREY.

FAMILY CATHARTIDÆ. AMERICAN VULTURES.

Turkey Vulture ; Turkey Buzzard (*Cathartes aura septentrionalis*). Of more or less regular occurrence in New Jersey as far north as Plainfield in the interior and Sandy Hook on the coast. It is also occasionally seen on Long Island. One record notes the occurrence of a flock of eight birds of this species in Orange County, N. Y. (Reynolds, Forest and Stream, XVIII, 1894, p. 181).

Black Vulture (*Catharista urubu*). Breeds from North Carolina southward, and occasionally strays as far north as Maine. There are records for Sandy Hook, N. J. (Robt. B. Lawrence, Bull. N. O. C., V, 1880, p. 116), and Coney Island, L. I. (Berier, Bull. N. O. C., VI, 1881, p. 126).

FAMILY FALCONIDÆ. FALCONS, HAWKS, EAGLES, ETC.

Swallow-tailed Kite (*Elanoides forficatus*). In this vicinity it has been recorded from Raynor South, L. I. (Giraud, Birds of Long Island, p. 13), "South shore of Long Island" (Berier, Bull. N. O. C., VI., 1881, p. 126), Chatham, N. J. (Herrick, Forest and Stream, XII, 1879, p. 165), and Piermont, N. Y. (Nicholas, Auk, XVII, 1900, p. 386).

***Marsh Hawk** (*Circus hudsonius*). A permanent resident, common except during the winter.

***Sharp-shinned Hawk** (*Accipiter velox*). It is here an uncommon summer and rare winter resident.

***Cooper's Hawk** (*Accipiter cooperi*). With us a not uncommon summer and rare winter resident. This bird, the Sharp-shinned Hawk and the rare Duck Hawk and Goshawk, are the only species of our Hawks which habitually live on birds. The others feed largely on insects and small field-mice, and being thus actually beneficial, should be protected by law.

Goshawk (*Astur atricapillus*). A rare winter visitant.

***Red-tailed Hawk** (*Buteo borealis*). The Red-tail is one of our commonest Hawks and is resident throughout the year.

***Red-shouldered Hawk** (*Buteo lineatus*). A permanent resident. It is probably our most common Hawk and with the Red-tail is the one to which the name "Chicken," or "Hen Hawk," is generally, but incorrectly, applied.

Swaision's Hawk (*Buteo swainsoni*). A western species of rare occurrence on the Atlantic coast. There is apparently but one record of its capture near New York City, that of a specimen shot near Cornwall, N. Y., October 14, 1892 (Dutcher, Auk, X, p. 83).

***Broad-winged Hawk** (*Buteo platypterus*). A rather uncommon summer resident.

Rough-legged Hawk (*Archibuteo lagopus sancti-johannis*). A rare winter resident.

Golden Eagle (*Aquila chrysaetos*). North America, of rare occurrence east of the Mississippi. It has been recorded from Islip, L. I. (Giraud), Canarsie, L. I. (Dutcher), Gravesend, L. I. (Johnson), Long Branch, N. J. (Chapman, Auk, XV, 1898, p. 54), and Highland Falls, N. Y. where Mearns states, it is occasionally observed and was formerly known to nest.

***Bald Eagle** (*Haliaetus leucocephalus*). This Eagle is here a rather rare bird; it is said by Mearns to nest in the Highlands of the Hudson. On Long Island it is a not uncommon resident and breeds in several localities (Dutcher MS).

Gyr Falcon (*Falco rusticolus gyrfalco*). An arctic species, rarely visiting the United States. The only record for this vicinity is that of a specimen killed on Long Island in the winter of 1856 (Lawrence, Ann. Lyc. Nat. Hist., New York, VIII, 1866, p. 280; see also Brewster, Auk, XII, 1895, p. 180).

Black Gyr Falcon (*Falco rusticolus obsoletus*). "Labrador, south in the winter to Maine and New York." There is but one record of its occurrence in this vicinity, viz., a specimen shot in the fall of 1875, near Flushing, L. I. (Berier, Bull. N. O. C., VI, 1881, pp. 126, 247).

Duck Hawk (*Falco peregrinus anatum*). This Falcon, the "noble Peregrine" of Falconry, is a not uncommon migrant, especially along our coast, and is a rare summer resident along the Palisades and Highlands of the Hudson, where it is known to breed. (See group, second floor).



DUCK HAWK
Group, Hall No. 234

Pigeon Hawk (*Falco columbarius*). A common migrant, occurring chiefly on our coasts.

American Sparrow Hawk (*Falco sparverius*). With us it is a not common resident but abundant migrant along the coasts.

American Osprey; Fish Hawk (*Pandion haliaetus carolinensis*). A locally abundant summer resident arriving early in April and remaining until October. At certain localities along our coasts, the Fish Hawk is found nesting in colonies.

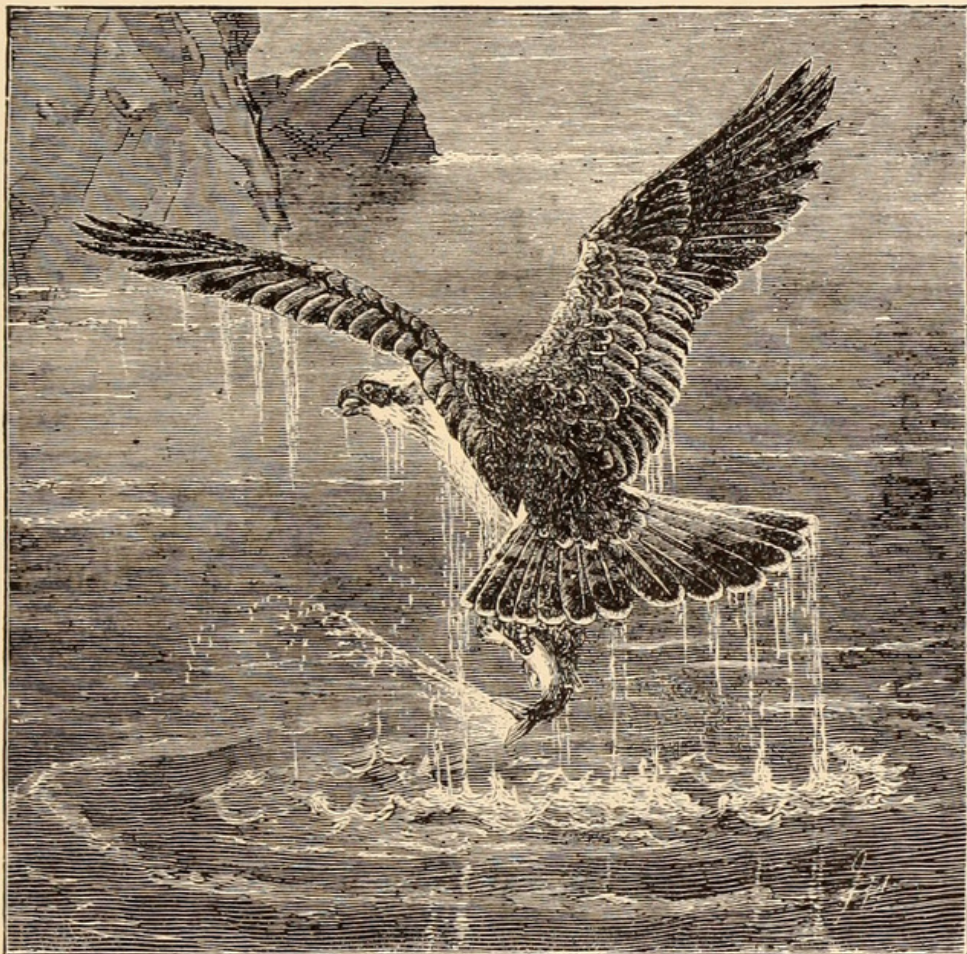


FIG. 9. AMERICAN OSPREY.

FAMILY STRIGIDÆ. BARN OWLS.

American Barn Owl (*Strix pratincola*). Occasionally found as far north as Massachusetts, and breeds from Long Island southward through Mexico. The Barn Owl is here a rare permanent resident. There are numerous records of its nesting, and it appears to have increased in numbers during recent years.

FAMILY BUBONIDÆ. HORNED OWLS, ETC.

***American Long-eared Owl** (*Asio wilsonianus*). A rather uncommon resident.

Short-eared Owl (*Asio accipitrinus*). Common during the migrations, and while a few probably breed, there is no definite record of their doing so.

***Barred Owl** (*Syrnium varium*). Next to the Screech Owl this is our commonest Owl. Its loud, sonorous hooting, *whoo, whoo, whoo, too-who, too whoo-ah*, is heard in the spring and again in late summer and is familiar to many who are not acquainted with its author.



FIG. 10. SHORT-EARED OWL.

Great Gray Owl (*Scotiaptex nebulosa*). In winter to the northern border of the United States. An individual shot near Mendham, N. J., is the only one which has been recorded from near New York City (Thurber, True Democratic Banner, newspaper, Morristown, N. J., Nov. 10, 1887).

***Saw-whet Owl** (*Cryotoglaux acadica*). A regular and, in some localities, a not uncommon winter resident.

Screech Owl (*Megascops asio*). The Screech Owl is the commonest and best known of our Owls. It is present throughout the year. (See group, second floor).



SCREECH OWL
Group, Hall No. 208

Great Horned Owl (*Bubo virginianus*). A rather rare resident. This is the only one of our Owls which habitually preys upon poultry, the others feed largely on field-mice and shrews.

***Snowy Owl** (*Nyctea nyctea*). An irregular winter visitant, sometimes occurring in considerable numbers.

Hawk Owl (*Surnia ulula caparoch*). There is apparently but one record of its capture in this vicinity, that of a specimen shot near Bay Ridge, L. I. (Dutcher Auk, X, 1893, p. 275).

ORDER COCCYGES. CUCKOOS, ETC.
FAMILY CUCULIDÆ. CUCKOOS, ANIS, ETC.

***Yellow-billed Cuckoo** (*Coccyzus americanus*). A common summer resident, arriving about May 10 and departing the last of September. (See group, third floor).

***Black-billed Cuckoo** (*Coccyzus erythrophthalmus*). A common summer resident arriving and departing at about the same time as the preceding species.

FAMILY ALCEDINIDÆ. KINGFISHERS

***Belted Kingfisher** (*Ceryle alcyon*). A common summer resident, arriving the latter part of March and remaining until the streams and ponds, from which it obtains its food, are frozen.

ORDER PICI. WOODPECKERS.

FAMILY ALCEDINIDÆ. KINGFISHERS.

***Hairy Woodpecker** (*Dryobates villosus*). A rather uncommon resident.

***Downy Woodpecker** (*Dryobates pubescens medianus*) next to the Flicker, the Downy is our commonest Woodpecker.

Red-cockaded Woodpecker (*Dryobates borealis*). Southern United States, westward to Indian Territory, and northward to Tennessee and Virginia. This bird is accidental near New York, the only record of its occurrence being based on a specimen taken at Hoboken, N. J. (Lawrence, Ann. Lyc. Nat. Hist., VIII, 1866, p. 291).

***Yellow-bellied Woodpecker** (*Sphyrapicus varius*). A common spring and fall migrant.

Pileated Woodpecker (*Ceophlaeus pileatus abieticola*). "Formerly whole wooded region of North America; now rare or extirpated in the more thickly settled parts of the Eastern States." This large Woodpecker occurs near New York only as a very rare straggler; there are no recent records.

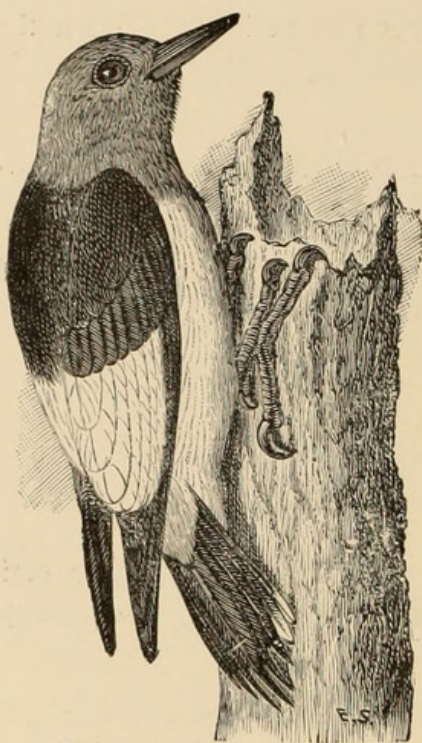


FIG. 11. RED-HEADED
WOODPECKER.

***Red-headed Woodpecker** (*Melanerpes erythrocephalus*). A summer resident of local distribution and a not uncommon and sometimes abundant migrant. Occasionally it is found in winter.

Red-bellied Woodpecker (*Centurus carolinus*). Eastern United States breeding from Florida to Virginia, and in the interior, to Ontario and Southern Dakota; occasionally strays to Massachusetts; winters from southern Ohio southward. Giraud speaks of this bird as breeding on Long Island, but it now occurs here only rarely and irregularly.

***Flicker: High-hole; Clape** (*Colaptes auratus luteus*). Our commonest Woodpecker. It is resident, but is much more common in the summer than in the winter, and is particularly numerous during its migrations in September and October.

ORDER MACROCHRIES. GOATSUCKERS, SWIFTS, ETC.

FAMILY CAPRIMULGIDÆ. GOATSUCKERS.

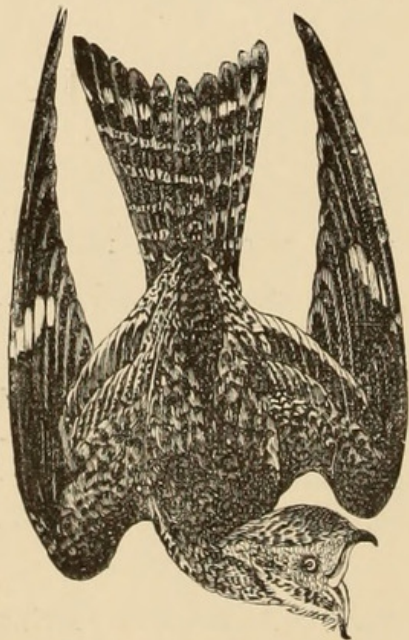


FIG. 12. NIGHTHAWK.

***Whip-poor-will** (*Antrostomus vociferus*). In some localities near New York City the Whip-poor-will is a common summer resident. It arrives about May 1 and leaves about October 1.

***Nighthawk** (*Chordeiles virginianus*). The Nighthawk is here a more or less common local summer resident. Even in New York City, where it has been known to lay eggs on the house-top, its characteristic note, *peent, peent*, uttered while it is coursing for food, is not infrequently heard. It arrives early in May and migrates southward in September and October, sometimes occurring at this season in large flocks.

FAMILY MICROPODIDÆ. SWIFTS.

***Chimney Swift** (*Chætura pelagica*). An abundant summer resident, arriving the latter part of April and remaining until October. (See group, second floor).

FAMILY TROCHILIDÆ. HUMMINGBIRDS.

***Ruby-throated Hummingbird** (*Trochilus colubris*). This, the only species of Hummingbird found in eastern North America, is here a common summer resident, arriving early in May and remaining until October.

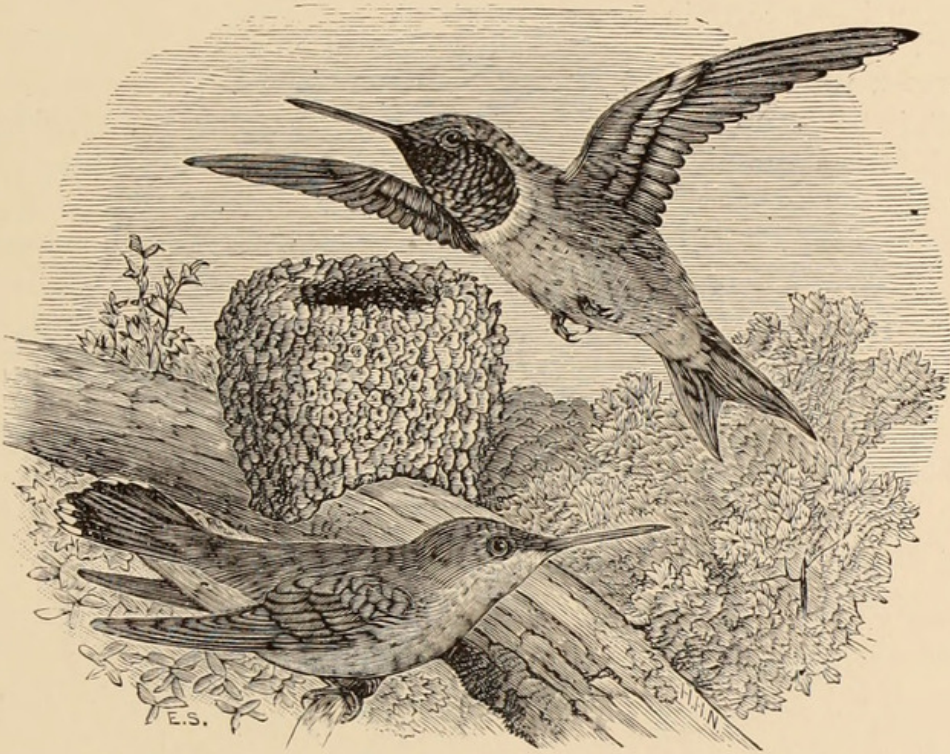


FIG. 13. RUBY-THROATED HUMMINGBIRDS AND NEST.

ORDER PASSERES. PERCHING BIRDS.

FAMILY TYRANNIDÆ. TYRANT FLYCATCHERS.

***Kingbird** (*Tyrannus tyrannus*). A common summer resident, arriving early in May and remaining until October. (See group, third floor).

Arkansas Kingbird (*Tyrannus verticalis*). A western species; the only records for this vicinity are those of a young male taken at Riverdale, N. Y., October 19, 1875, (Bicknell, Bull. N. O. C., IV, 1879, p. 60), and a specimen taken at Princeton, N. J., Sept. 29, 1894 (Phillips, Proc. D. V. O. C., II, p. 14).

***Great-crested Flycatcher** (*Myiarchus crinitus*). A common summer resident, arriving early in May and remaining until September.

***Phœbe** (*Sayornis phæbe*). A common summer resident arriving about March 20 and leaving early in November.

***Olive-sided Flycatcher** (*Nuttallornis borealis*). A migrant passing north in May, when it is apparently rare, and returning between the latter part of August and late September, when it is not uncommon.

***Wood Pewee** (*Horizopus virens*). A common summer resident of our woods, arriving about May 15 and remaining until the latter part of September.

***Yellow-bellied Flycatcher** (*Empidonax flaviventris*). A rather rare spring and not uncommon fall migrant, arriving in May and returning from its northern home early in August.

***Green-crested Flycatcher** (*Empidonax virescens*). A common summer resident of the Lower Hudson River Valley as far north as Sing Sing. On Long Island it apparently breeds on the north shore, while there are but two records for Connecticut, an adult taken at Suffield, June 24, 1874 (Merriam, Birds, Conn., p. 58) and a nest with young at Greenwich, June 25, 1893 (Voorhees, Auk, XI, 1894, p. 259). A rare summer resident in the vicinity of Plainfield, N. J. (Miller, MS). (See group, third floor).

Alder Flycatcher (*Empidonax trailli alnorum*). A rather rare migrant and a local summer resident. A nest and eggs, not fully identified, but with little doubt that of this species, was found by C. L. Brownell at Nyack, N. Y. At Plainfield, N. J., W. DeWitt Miller has found this species a locally common breeding bird (Auk, XVIII, 1901, p. 108; XX, 1903, p. 68).

***Least Flycatcher** (*Empidonax minimus*). A common summer resident; it arrives about May 1 and remains until late in September.

FAMILY ALAUDIDÆ. LARKS.

Skylark (*Alauda arvensis*). Individuals of this species have from time to time been liberated near New York City. In 1887 a small colony became established near Flatbush, L. I., where a nest containing young was found (Dutcher, Auk, V, 1888, p. 180). Without apparent increase these birds evidently manage to hold their own (Braislin, Auk, XVI, 1899, p. 191; Bildersee, Bird-Lore, VI, 1904, p. 204).

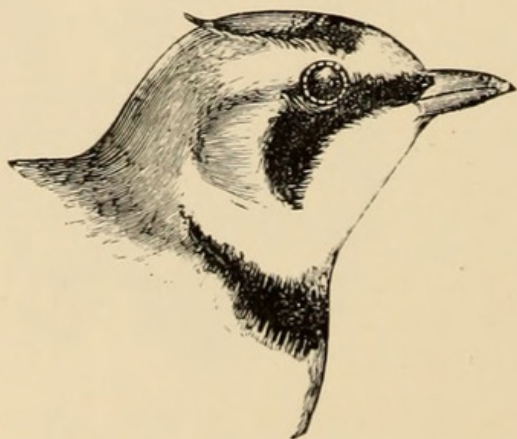


FIG. 14. HORNE LARK.

Horned Lark; Shore Lark (*Otocoris alpestris*). A common winter resident along the coasts; less common or very rare in the Hudson Valley.

Prairie Horned Lark (*Otocoris alpestris praticola*). This small race of the Horned Lark is of rather rare occurrence in this vicinity. It is apparently extending its range eastward and there is one record of its having prob-

ably bred on Long Island (Dutcher, Auk, V, 1888, p. 180), where it also occurs during the winter.

FAMILY CORVIDÆ. CROWS, JAYS, MAGPIES, ETC.

***Blue Jay** (*Cyanocitta cristata*). A common resident, more numerous during the fall migration than at other times of the year.

The Canada Jay (*Perisoreus canadensis*), a northern species, is included by Lawrence in his "Catalogue of Birds" on the basis of an individual killed in July near Manhattanville, New York City. This specimen is now in the American Museum (No. 42,253). Its plumage is much worn and its toe-nails are abnormally long, facts which, taken in connection with the place and date of the bird's capture, induce me to believe that it had escaped from confinement.

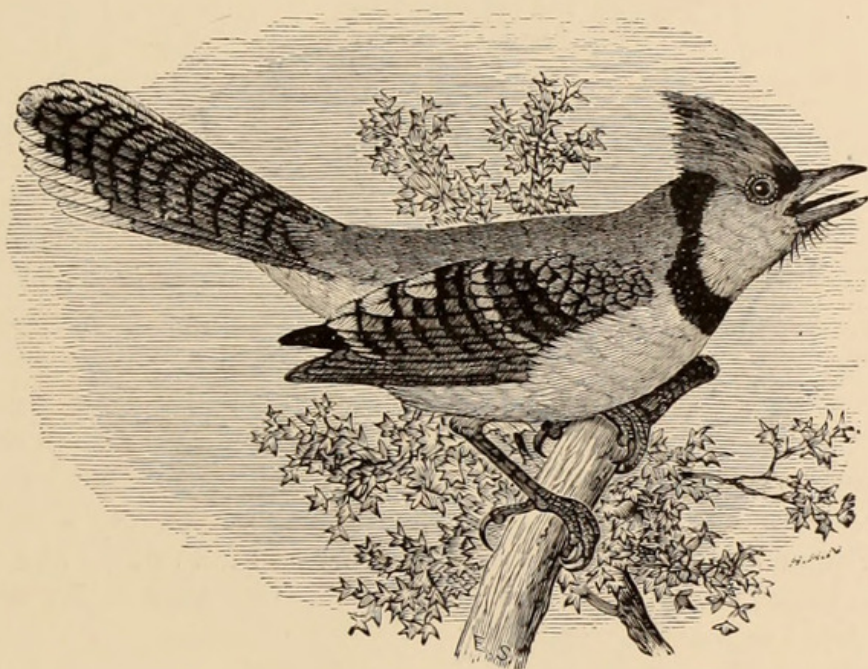


FIG. 15. BLUE JAY.

American Raven (*Corvus corax principalis*). Now of very rare occurrence in this vicinity. It is said to have been formerly common on the northern New Jersey coast (Lawrence), and is still uncommon along the southern coast of the State (Stone, Auk, XI, 1894, p. 137).

***American Crow** (*Corvus brachyrhynchos*). The Crow is here an abundant resident, but, as in the case of other species which are present the year round, it is probable that the individuals which summer with us pass the winter farther south, while our winter birds come to us from the north.

***Fish Crow** (*Corvus ossifragus*). A common inhabitant of the Lower Hudson River Valley as far north as Sing Sing and occasionally reaches Highland Falls. In Connecticut it is of regular occurrence as far east as Stratford (Eames, Auk, VI, 1889, p. 338), while on Long Island its exact status appears to be unknown, though it is probably not uncommon. A few remain on the coast during the winter.

FAMILY STURNIDÆ. STARLINGS.

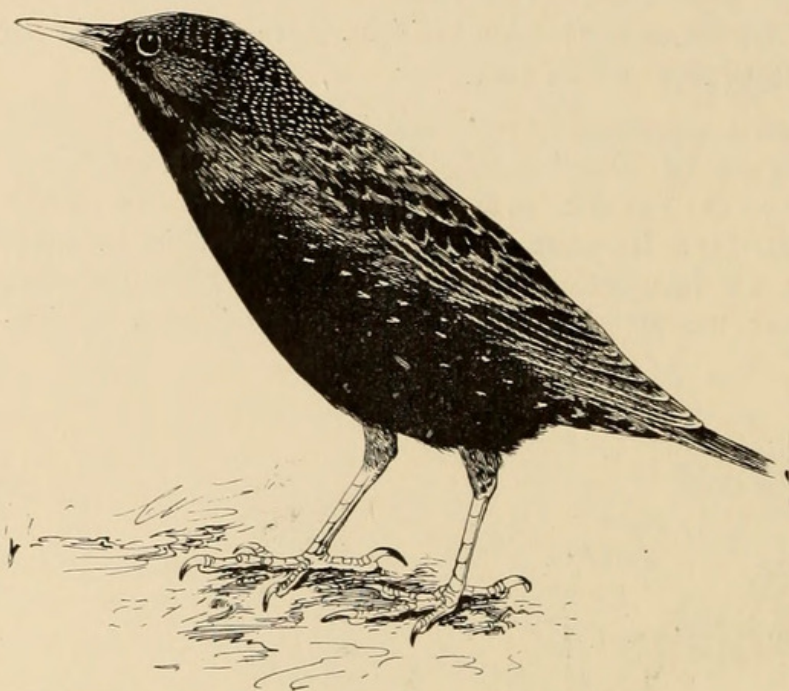


FIG. 16. STARLING, (SUMMER PLUMAGE).

*Starling (*Sturnus vulgaris*). This Old World species has been introduced into this country on several occasions, but only the last importation appears to have been successful. The birds included in this lot were imported and released in Central Park, under the direction of Eugene Schieffelin of this city. They seem to have left the Park and to have established themselves in various places in the upper part of the city.

A pair have bred for three successive seasons in the roof of this Museum. S. H. Chubb reports a pair nesting in a church at 122nd st. and Lenox avenue, and they also have nested at 100th st. and Riverside Drive. C. B. Isham tells me he has found their nest at Kingsbridge, New York City, and that he repeatedly observed a flock of fifty birds in the same locality during the late summer and fall of 1893 and 1894.

To the above statement, which stands as it appeared in the first (1894) edition of this List, may be added the further information, obtained from Mr. Schieffelin, that 80 Starlings were released on March 6, 1890, and 40 more on April 25, 1891. So far as I am aware the present (1906) boundary of the range of this species in America is marked by New Haven, Conn., on the east, Ossining, N. Y., on the north and Red Bank and Princeton, on the south. It is resident throughout the year, but gathers in flocks, sometimes containing several hundred birds, in the fall, when it wanders, about the country. Its economic status remains to be determined, but from the bird-



FIG. 17. STARLING, (WINTER PLUMAGE).

lover's point of view the Starling is a decided acquisition to the bird-life of our cities where its long-drawn, cheery whistle is in welcome contrast to the noisy chatter of House Sparrows.

FAMILY ICTERIDÆ. BLACKBIRDS, ORIOLES, ETC.

***Bobolink; Reedbird** (*Dolichonyx oryzivorus*). A locally distributed summer resident, arriving in early May and remaining until October. In August the males assume the Reedbird plumage and resort to our wild-rice marshes, where they are joined by large numbers from the north, which pause to feed on the wild-rice.

Twenty-five years ago the Bobolink was an abundant and generally distributed summer resident in this vicinity. Since that date it has rapidly decreased in numbers and is now entirely wanting in localities where it was formerly of regular occurrence.



FIG. 18. BOBOLINK.

***Cowbird** (*Molothrus ater*). A common summer resident arriving late in March and remaining until November. It has been recorded as occurring in winter (Foster, Abst. Proc. Linn. Soc., No. 5, 1893, p. 2).

***Red-winged Blackbird** (*Agelaius phæniceus*). A common summer resident, abundant during the migrations when it occurs in large flocks. It is one of the first birds to reach us in the spring, frequently arriving before March 1, and it remains until December.

***Meadowlark** (*Sturnella magna*). A common summer resident, occurring in reduced numbers during the winter, when it is largely confined to the extensive marshes near the coast.

***Orchard Oriole** (*Icterus spurius*). A common summer resident, arriving early in May and remaining until September. (See group, third floor).

***Baltimore Oriole** (*Icterus galbula*). A somewhat more common summer resident than the preceding species. It arrives early in May and remains until September. (See group, third floor).

***Rusty Blackbird** (*Euphagus carolinus*). A common migrant, passing northward in March, returning in September and sometimes remaining during the winter.

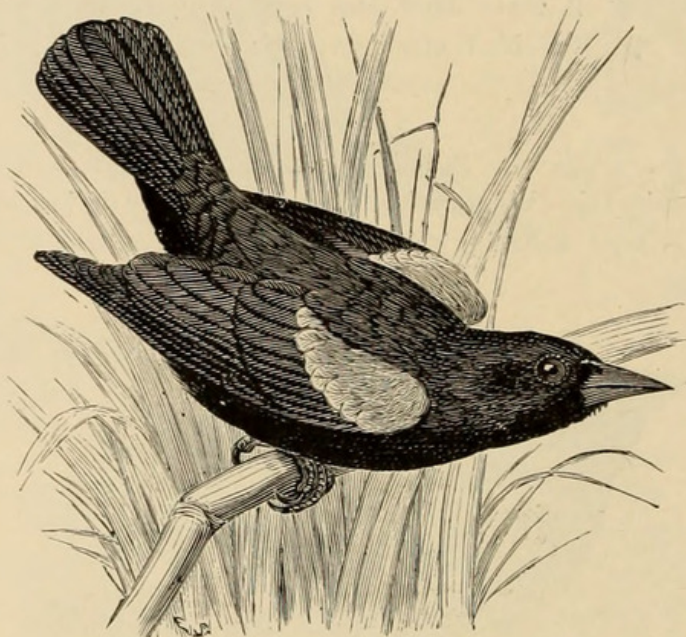


FIG. 19. RED-WINGED BLACKBIRD.

***Purple Grackle: Crow Blackbird** (*Quiscalus quiscula*). A common summer resident of local distribution, nesting in colonies. It is one of our earliest migrants, arriving from the south with the Red-winged Blackbird about March 1. During the breeding season it is not seen far from the vicinity of its nest, but about July 1, when the young are on the wing, the birds gather in small flocks and wander over the country, pausing wherever they find an abundance of food. These flocks gradually coalesce and, in October and November, form enormous gatherings numbering thousands of birds.

***Bronzed Grackle** (*Quiscalus quiscula æneus*). A spring and fall migrant, sometimes not uncommon.

FAMILY FRINGILLIDÆ. FINCHES, SPARROWS, ETC.

Evening Grosbeak (*Hesperiphona vespertina*). During the winter and early spring of 1890 there was a phenomenal incursion of Evening Grosbeaks into the northern United States. The most southern record of their occurrence in the Atlantic States was at Summit, N. J., where, on March 6, Mr. W. O. Raymond observed a flock of eight birds (Orn. and Oöl., XV, 1890, p. 46). No specimens were collected, but Mr. Raymond watched the birds for some time at a distance of about eight feet, and he has since examined skins of the species in this Museum, thus confirming his identification.

***Pine Grosbeak** (*Pinicola enucleator leucura*). This species occurs here in the winter and then only at irregular intervals. It last appeared in numbers during the winter of 1903-4 when it was first observed at Englewood, N. J., Oct. 25 (Chapman, Bird-Lore, V, 1903, p. 199).

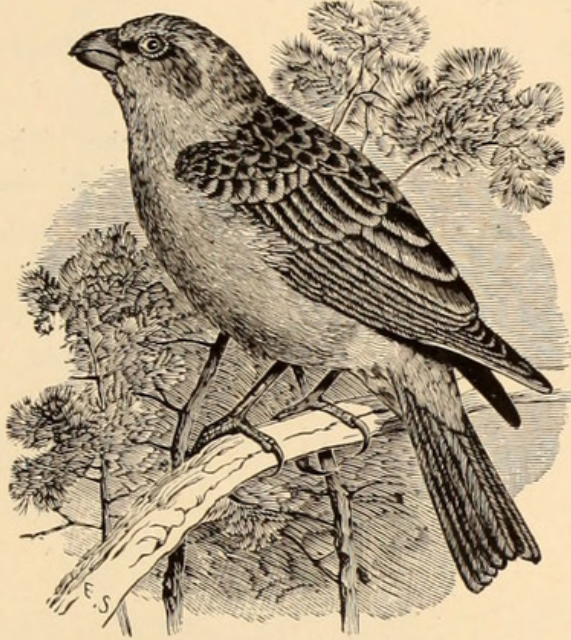


FIG. 20. PINE GROSBEEK.

***House Sparrow; English Sparrow** (*Passer domesticus*). From the report of the Division of Economic Ornithology of the Department of Agriculture (Washington, 1889), we learn that English Sparrows were first introduced into New York City in 1860, when twelve birds were released in Madison Square. In 1864 they were introduced in Central Park, and in 1866 two hundred were set free in Union Park. From these, and one or two other small additional importations of a few pairs each, have descended the countless numbers of Sparrows which to-day inhabit our streets and parks. In this latitude the English Sparrow has been known to rear six broods in a season, and their marvelous rate of increase is graphically given in a table in the report already mentioned, which shows that in ten years the progeny of a single pair might amount to 275,716,983,698.

With the discordant notes of these ubiquitous little pests constantly in our ears we may read with mixed humor and regret the following quotation from Lawrence's Catalogue of New York Birds (Ann. Lyc. Nat. Hist., VIII, 1866, p. 287): "I first observed them in the spring of 1865. A friend, conversant with our local native birds, informed me that he had seen a species in the shrubbery around the church on the corner of 5th avenue and 29th street, with which he was not familiar; on going to ascertain what they were, to my surprise I found them to be House Sparrows; they were domiciled in the ivy which grew on the walls of the church, and were quite gentle and fearless, some alighting in the street and dusting themselves quite near to where I stood."

***The European Chaffinch** (*Fringilla caelebs*), several pairs of which were released in Central Park under the direction of Eugene Schieffelin in 1890, is occasionally observed in Central Park where three individuals appear to exist at present. Whether, however, they are the descendants of the introduced birds or escaped cage-birds is unknown.

***The Greenfinch** (*Chloris chloris*) a European species was observed in Central Park, May 17, 1903, by C. G. Abbott.

***Purple Finch** (*Carpodacus purpureus*). In the vicinity of New York City the Purple Finch is a rather rare summer resident, a very common migrant and irregular winter resident. It is apparently increasing in numbers during the summer on Long Island (Dutcher, MS).

***American Crossbill** (*Loxia curvirostra minor*). A regular winter visitant. This erratic species has on several occasions been found breeding south of its regular breeding range. Such an instance occurred at Riverdale, N. Y., where it was found nesting on April 22, 1874 (Bicknell, Bull. N. O. C., IV, 1880, p. 7).

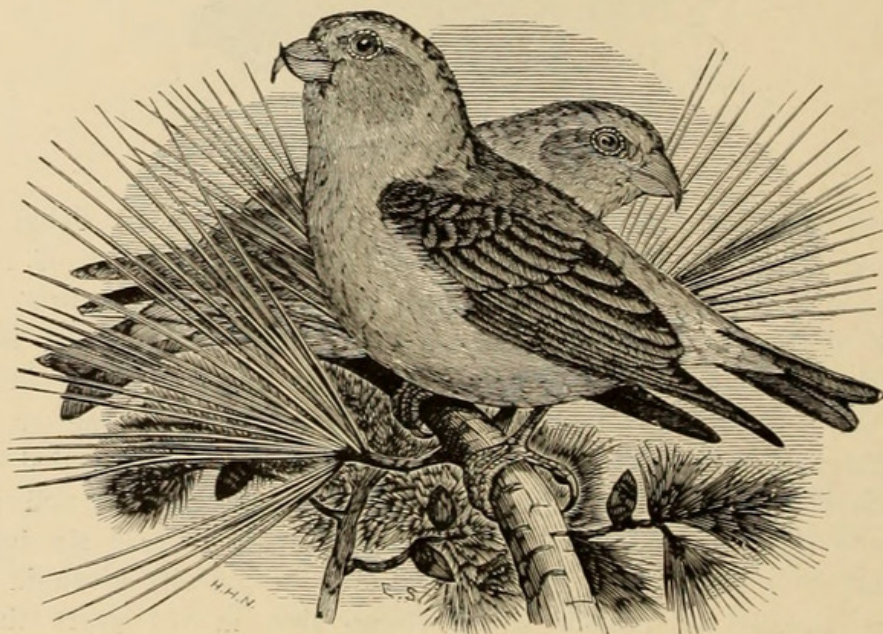


FIG. 21. AMERICAN CROSSBILL.

***White-winged Crossbill** (*Loxia leucoptera*). Of more rare and irregular occurrence in winter than the preceding species. This and the preceding species last occurred in numbers during the winter of 1899-1900 (Chapman Bird-Lore, II, 1900, pp. 25, 59).

Redpoll (*Acanthis linaria*). This species is here an irregular winter visitant, sometimes occurring in considerable numbers.

Greater Redpoll (*Acanthis linaria rostrata*). Two specimens taken at Sing Sing, N. Y., are the only individuals of this species which have been recorded from this vicinity (Fisher, Bull. N. O. C., VIII, 1883, p. 121).

The **European Linnet** (*Acanthis cannabina*) is recorded from Scarboro, N. Y. (G. H. Thayer, Auk, XVII, 1900, p. 389); but the large number of cage-birds of this species annually imported into this country makes it probable that the bird secured was an assisted immigrant.

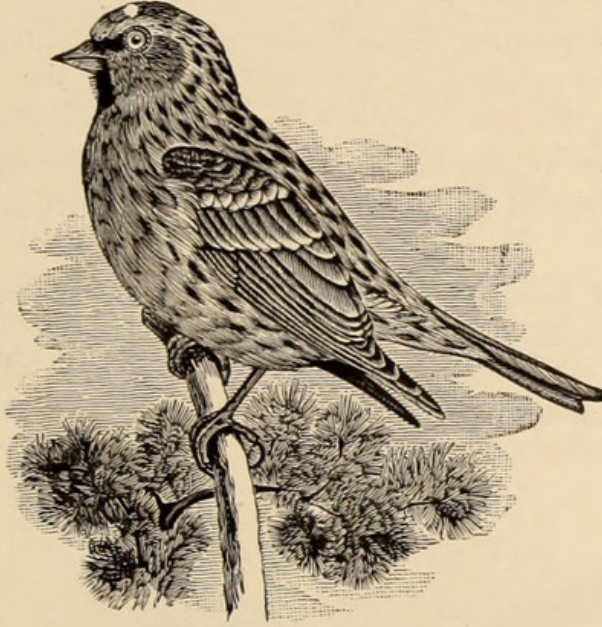


FIG. 22. REDPOLL.

***American Goldfinch** (*Astragalinus tristis*). The Goldfinch, Yellowbird, or Thistlebird, is a common resident here.



FIG. 23. AMERICAN GOLDFINCH.

***European Goldfinch** (*Carduelis carduelis*). A European species which was introduced into this country at Hoboken, N. J., in 1878. The following year it appeared in Central Park and has since spread over the upper parts of the city where in favorable localities it is not uncommon. It is with us throughout the year. (Adney, Auk, III, 1886, p. 409).

***Pine Siskin ; Pine Finch** (*Spinus pinus*). A more or less common fall and winter visitant. On two occasions it has been found nesting in the Lower Hudson Valley, at Sing Sing, May 25, 1883 (Fisher, Bull. N. O. C., VIII, 1883), and at Cornwall-on-Hudson, May 12, 1887 (Allen, Auk, IV, 1887, p. 284). (See group, third floor).

***Snowflake ; Snow Bunting** (*Passerina nivalis*). On Long Island this bird is an abundant winter resident on the sand-flats near the ocean (Dutcher, MS). In the Lower Hudson Valley it is much less common.

Lapland Longspur (*Calcarius lapponicus*). A rare winter resident; sometimes found with flocks of the preceding, but more frequently associated with Horned Larks.

Chestnut-collared Longspur (*Calcarius ornatus*). "Interior of North America, from the Saskatchewan Plains south to Texas." A specimen of this western species was taken at Long Island City, February 16, 1889 (Hendrickson, Auk, VI, 1889, p. 190).

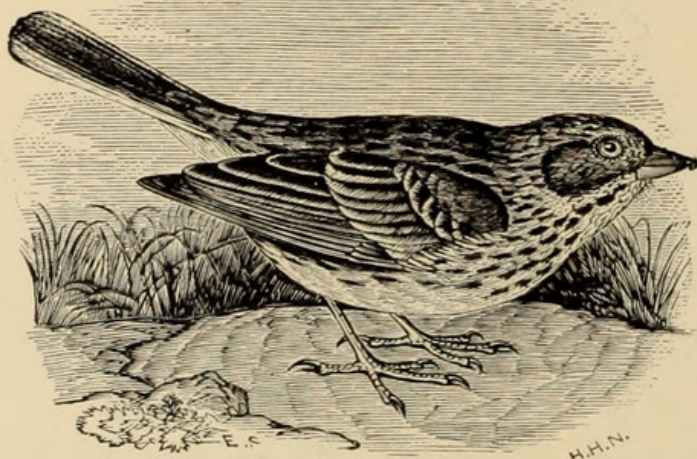


FIG. 24. VESPER SPARROW.

***Vesper Sparrow ; Grass Finch : Bay-winged Bunting** (*Poæcetes gramineus*). A common summer resident, arriving about April 1, and remaining until the latter part of November.

Ipswich Sparrow (*Passerculus princeps*). A common winter resident, confined strictly to the immediate vicinity of the coasts, where it is found from the middle of October to the first of April (Dutcher, Auk, III, 1886, p. 441).

***Savanna Sparrow** (*Passerculus sandwichensis savanna*). This species is here a rare summer resident and abundant migrant, arriving about April 1 and departing in November and December. It breeds at Morristown, N. J. (Thurber) and is said to remain throughout the winter in the salt-marshes at Bridgeport, Conn. (Averill) Braislin, (Auk, XVI, 1899, p. 192) records it from Garden City, L. I., July 17, 1897, and Flatbush, L. I., Jan. 30, 1895.

Grasshopper Sparrow ; Yellow-winged Sparrow (*Coturniculus savannarum passerinus*). Locally a common summer resident, arriving about May 1 and remaining until October.

Henslow Sparrow (*Ammodramus henslowi*). In this vicinity the Henslow sparrow has been found in but few localities where, however, it is apparently not uncommon. It is recorded as breeding at Morristown, N. J. (Thurber), and Boonton, Morris County, N. J. (Judd, Auk, XIV, 1897, p. 326). Summer resident in small numbers near Plainfield, N. J. (Miller, MS).

Sharp-tailed Sparrow (*Ammodramus caudacutus*). An abundant summer resident; with the exception of a colony on the Hudson at Piermont, confined entirely to the salt marshes of our coasts. (See group, third floor).

Nelson Sharp-tailed Sparrow (*Ammodramus nelsoni*). This species is known here only as a rather rare fall migrant in the Hudson River Valley, occurring from the latter part of September to the latter part of October.

Acadian Sharp-tailed Sparrow (*Ammodramus nelsoni subvirgatus*). Occurs with the preceding. (On the distribution of the Sharp-tailed Sparrows see Dwight, Auk, XIII, 1896, p. 275).

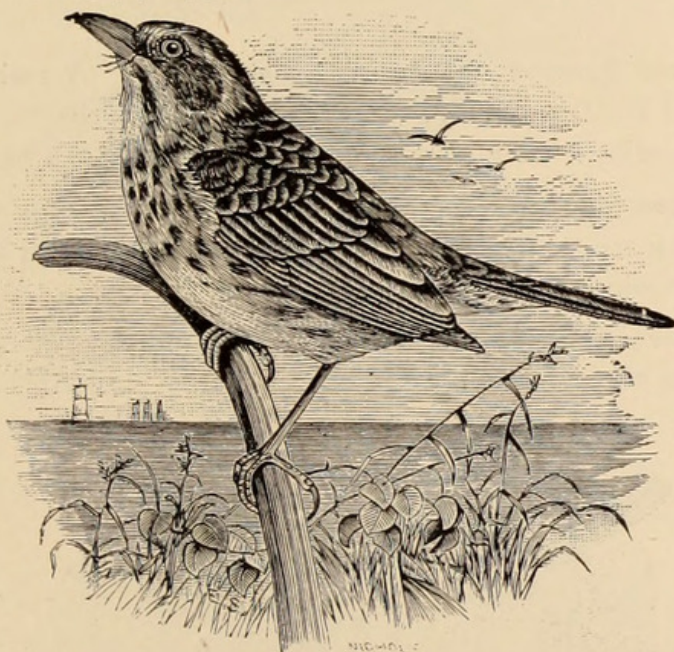


FIG. 25. SEASIDE SPARROW.

Seaside Sparrow (*Ammodramus maritimus*). This is an even more abundant summer resident than the Sharp-tailed Sparrow and, like it, is confined exclusively to our coasts, with the exception of a colony in the Piermont marshes. (See group, third floor).

Lark Sparrow (*Chondestes grammacus*). Interior of North America, eastward to Illinois, breeding from Texas to Manitoba; accidental on the Atlantic coast. There are two records for this vicinity, Sayville, L. I., August 20, 1879 (Earle, Bull. N. O. C., VI, 1881, p. 58) and Schraalenburg, N. J., November 26, 1885 (Chapman, Auk, III, 1886, p. 136).



FIG. 26. WHITE-CROWNED SPARROW.

***White-crowned Sparrow** (*Zonotrichia leucophrys*). A rather rare migrant passing northward in May and returning in October. Braislin (*Auk*, XV, 1898, p. 59) records a specimen taken at Parkville, L. I., April 10, 1897.

***White-throated Sparrow** (*Zonotrichia albicollis*). An abundant migrant and locally common winter resident. It arrives from the north the latter part of September and remains with us until the middle of May.

***Tree Sparrow** (*Spizella monticola*). An abundant winter resident, arriving from the north about November 1 and remaining until April.

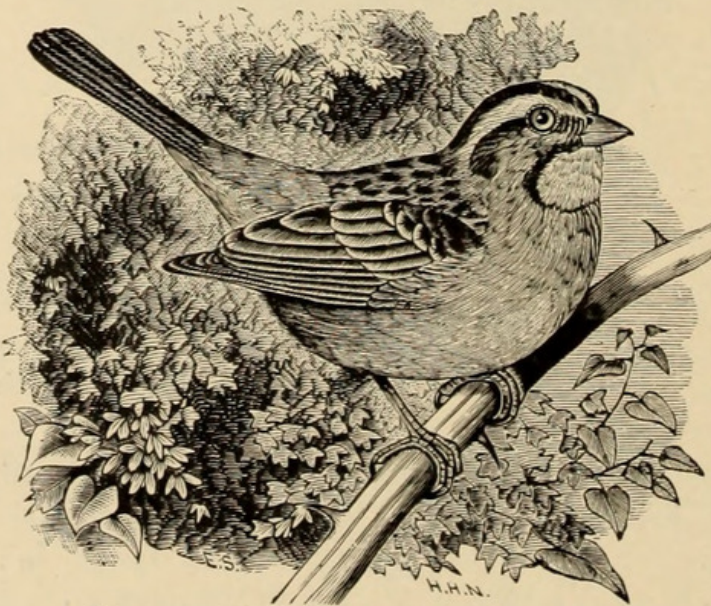


FIG. 27. WHITE-THROATED SPARROW.

***Chipping Sparrow; Chippy** (*Spizella socialis*). An abundant summer resident, arriving from the south about April 1 and remaining until November.

***Field Sparrow** (*Spizella pusilla*). An abundant summer resident, appearing in the spring about April 1 and not departing southward until November or even December. Of rare but regular occurrence in winter at Plainfield, N. J. (Miller, MS). (See group, third floor).

***Junco; Snowbird** (*Junco hyemalis*). The Junco is one of our most abundant winter birds. It comes to us from the north late in September and remains until May.

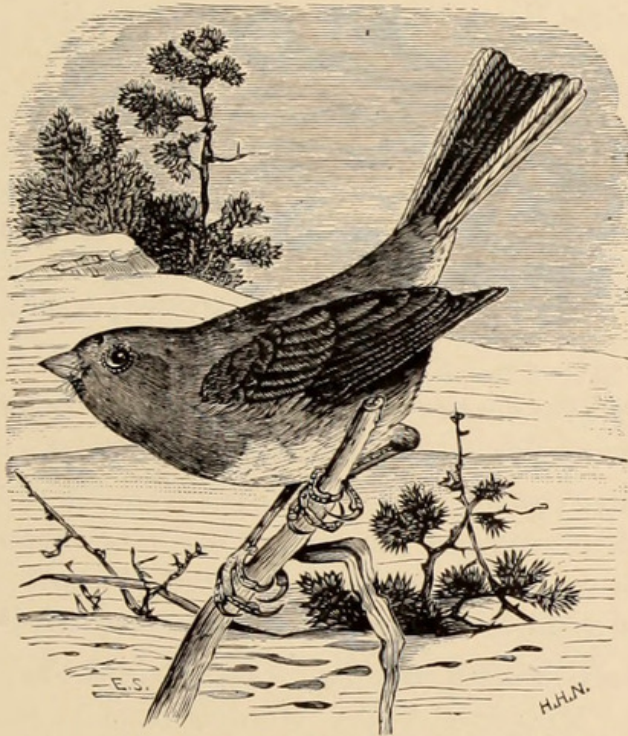


FIG. 28. JUNCO.

***Song Sparrow** (*Melospiza cinerea melodia*). An abundant summer and common winter resident. (See group, third floor).

Lincoln Sparrow (*Melospiza lincolni*). In this vicinity the Lincoln Sparrow is a rare but regular migrant, passing northward in May and southward in September and October.

***Swamp Sparrow** (*Melospiza georgiana*). An abundant summer resident, especially in the great marshes of the Hackensack, and a rare winter resident. (See group, third floor).

***Fox Sparrow** (*Passerella iliaca*). A common spring and fall migrant, passing northward in March and April and southward in October and November. There are several winter records for Princeton, N. J. (Scott, Bull, N. O. C., IV, 1879, p. 82).

***Towhee; Chewink** (*Pipilo erythrophthalmus*). An abundant summer resident, arriving about April 20, remaining until late October, and rarely into the winter. (See group, second floor).

***Cardinal** (*Cardinalis cardinalis*). The vicinity of New York City is about the northern limit of the Cardinal's range on the Atlantic coast. It is here a not uncommon resident of local distribution. In the Hudson Valley it is rarely found north of Hastings and Nyack; it is very rare eastward along the sound, and also on Long Island, but is common in Central Park, New York City, where I have seen nine individuals at one time. (See group, second floor).

***Rose-breasted Grosbeak** (*Zamelodia ludoviciana*). A common summer resident in the Hudson River Valley, arriving about May 1 and remaining until October. On Long Island it is a rare summer resident (Dutcher, MS). (See group, second floor).

***Blue Grosbeak** (*Guiraca carulea*). There are several records of this southern bird's occurrence in this vicinity. It has been taken at Canarsie, L. I., May, 1843 (Dutcher, Auk, V, 1893, p. 276); Morristown, N. J. (Thurber, True Democratic Banner, newspaper, Nov. 17, 1889); Snake Hill, N. J. (Bicknell, Bull. N. O. C., III, 1878, p. 132), and Manhattan Island (DeKay, Birds, N. Y., p. 146).

***Indigo Bunting** (*Cyanospiza cyanea*). A common summer resident in this vicinity, arriving about May 1 and remaining until October 1.

Painted Bunting (*Cyanospiza ciris*). Breeds from the Gulf States northward to Kansas, southern Illinois and North Carolina. The capture of several specimens of this bird in this vicinity has been recorded (Bicknell, Bull. N. O. C., III, 1878, p. 132). It is possible that they were escaped cage-birds.

Dickcissel; Black-throated Bunting (*Spiza americana*). Eastern United States, mostly in the Mississippi Valley, breeding from Texas to Minnesota, and wintering in Central and South America. Breeds east of the Alleghanies now only rarely and locally. About forty years ago this bird was evidently a regular and not uncommon summer resident in this vicinity. (See Giraud, Chapman *apud* Galbraith, Auk, VIII, 1891, p. 395), but it occurs now only rarely and irregularly. Recent records are: Miller's Place, L. I., September 29 and October 10 (Dutcher, Auk, VI, 1889, p. 13) and Blithewood, L. I., August 25 (Johnson, Auk, VIII, 1891, p. 116). In July, 1904, W. De Witt Miller found a pair of this species breeding at Plainfield, N. J. (Auk, XXI, 1904, p. 487). J. Dwight, Jr., records the occurrence of a male Dickcissel at Kingston, N. Y., June 5, 1897 (Auk, XIV, 1897, p. 95).

FAMILY TANAGRIDÆ. TANAGERS.

Western Tanager (*Piranga ludoviciana*). Western North American north to British Columbia. The only record of the occurrence of this western species in this vicinity is that of a young male taken at Fort Montgomery, N. Y., December 21, 1881 (Mearns, Auk, VII, 1890, p. 55).

***Scarlet Tanager** (*Piranga erythromelas*). A common summer resident, arriving early in May and remaining until about October 1. (See group, third floor).

Summer Tanager (*Piranga rubra*). Eastern United States, breeding from Florida to southern New Jersey, wandering casually to Nova Scotia, and wintering in Central and South America. This species is of rare and irregular occurrence in this vicinity. (Hendrickson, Auk, I, 1885, p. 290; Dutcher, Auk, III, 1886, p. 412; XIX, 1902, p. 291; V, 1888, p. 181; Mearns, Auk, VII, 1890, p. 55; Braislin, Auk, XIX, 1902, p. 147).

FAMILY HIRUNDINIDÆ. SWALLOWS.

***Purple Martin** (*Progne subis*). This bird breeds in colonies and is of local distribution during the breeding season. It was formerly not uncommon in the vicinity of New York City, but the English Sparrows have taken possession of its nesting-houses, and at present it is found in but few places.

***Cliff Swallow**; **Eave Swallow** (*Petrochelidon lunifrons*). Like most of the Swallows it nests in colonies, and in this region generally places its mud nests beneath the projecting eaves of a barn. It appears to be less common during the summer than it was twenty or more years ago, but is a common migrant particularly in the fall. According to Mearns, it arrives as early as April 16. (See group, second floor).

***Barn Swallow** (*Hirundo erythrogaster*). A common summer resident and abundant fall migrant. It arrives about April 20 and remains until October 1.

***Tree Swallow** (*Iridoprocne bicolor*). Arrives from the south early in April. There are a few recorded instances of its breeding near New York City, but, generally speaking, it passes northward to more distant nesting grounds. July 1 the birds begin to return from the north, making their home in the marshes of the Hackensack, where, by July 20, they may be found in countless numbers. In the morning they leave their roosts in the "cat-tails" and fly out over the adjoining country to feed. At night they return. Their numbers increase until about September 1, then decrease, and by October 20 only a few stragglers remain.

***Bank Swallow** (*Riparia riparia*). A locally common summer resident, breeding in colonies where the conditions are favorable. It arrives about May 1 and remains until October. (See group, second floor).

Rough-winged Swallow (*Stelgidopteryx serripennis*). This Swallow is locally common in the Lower Hudson River Valley, at Riverdale (Bicknell), Hastings-on-the-Hudson (Rowley), Sing Sing (Fisher); at Highland Falls, which seems to be near the northern limit of its range in the Hudson Valley, it is a rare summer resident (Mearns). I have seen it near Ramapo, N. Y., and with J. Dwight, Jr., found a small colony breeding at Port Jervis, N. Y. It breeds near New Haven, Connecticut, in small numbers, and is rare as far north as Hartford (Sage). On Long Island it is of rare and irregular occurrence (Dutcher).

FAMILY AMPELIDÆ. WAXWINGS, ETC.

Bohemian Waxwing (*Ampelis garrulus*). This species occurs here only as an exceedingly rare and irregular winter visitant. There are no recent records.

***Cedar Waxwing**; **Cedarbird** (*Ampelis cedrorum*). A common summer resident; occurring irregularly in the winter.

FAMILY LANIIDÆ. SHRIKES.

***Northern Shrike**; **Butcherbird** (*Lanius borealis*). A more or less regular but rather uncommon winter resident.

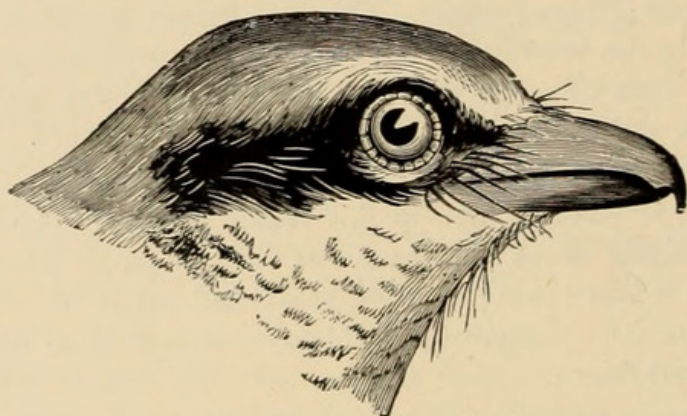


FIG. 29. NORTHERN SHRIKE.

Migrant Shrike (*Lanius ludovicianus migrans*). The Migrant Shrike is found here is a rare but regular migrant during April, the latter part of August and in September, and, rarely, until December. It has been known to breed but once, at Sing Sing, N. Y., where a fledgeling was taken June 16, 1877 (Fisher, Bull. N. O. C., IV, 1879, p. 61).

FAMILY VIREONIDÆ. VIREOS.

***Red-eyed Vireo** (*Vireosylva olivacea*). This is one of our abundant summer residents. It arrives from the south about May 8 and remains until October. (See group, third floor).

Philadelphia Vireo (*Vireosylva philadelphica*). A very rare migrant.

***Warbling Vireo** (*Vireosylva gilva*). A common summer resident of local distribution, arriving early in May. (See group, third floor).

***Yellow-throated Vireo** (*Lanivireo flavifrons*). A common summer resident, arriving about May 7 and remaining until the latter part of September.

***Blue-headed Vireo** (*Lanivireo solitarius*). A not uncommon migrant, passing northward during the latter part of April and first part of May, and returning late in September.

***White-eyed Vireo** (*Vireo noveboracensis*). A common summer resident about New York City. It reaches us from the south about May 7, and remains until early October. (See group, third floor).

FAMILY MNIOTILTIDÆ. WOOD-WARBLED.

***Black and White Warbler** (*Mniotilta varia*). A rather common summer resident and common migrant. It appears the latter part of April and is with us until the first part of October. (See group, third floor).

Prothonotary Warbler (*Protonotaria citrea*). Eastern North America, breeding from the Gulf States to southern Illinois and Virginia, and wintering in the tropics. Its occurrence near New York City is accidental; there are but two records, viz., a male shot at Jamaica, L. I. (Dutcher, Auk, X, 1893, p. 276), and a male seen by E. P. Bicknell near the northern limit of New York City, June 2, 1895 (Auk, XII, 1895, 306). Dutcher has recorded a specimen which struck the Montauk Point Lighthouse, August 27, 1886 (Auk, V, 1888, p. 182).

***Worm-eating Warbler** (*Helminthos vermivorus*). This bird is one of our rarer summer residents, though it is not uncommon some years in the early fall migration. In the Hudson River Valley it is regularly found as far north as Highland Falls (Mearns) and occurs at Fishkill (Stearns). In Connecticut it breeds at Saybrook and New Haven, but is not common, and at Portland it has been taken only twice (Sage). On Long Island it is considered exceedingly rare (Dutcher).

***Blue-winged Warbler** (*Helminthophila pinus*). This species arrives early in May and remains until September 1. It is a common summer resident of the Lower Hudson Valley, at least as far north as Highland Falls (Mearns). In Connecticut it is common at Saybrook and New Haven, but is rare as far north as Portland, where but one or two pairs breed each season (Sage). On Long Island it is known to breed only along the north shore, where it is probably not uncommon in favorable localities. Mrs. E. G. Britton records the occurrence of an individual of this species in Bronx Park in January, 1900 (Bird-Lore, II, 1900, p. 26; see also Noble, Bird-Lore, II, 1900, p. 59). (See group, third floor).

Brewster's Warbler (*Helminthophila leucobronchialis*) with us is a rare but regular summer resident in northern New Jersey, the Lower Hudson Valley and southern Connecticut, but has been taken only once on Long Island (Howell). Specimens have been recorded from Morristown (Thurber), Maplewood (Riker), and Englewood, N. J., where it has been found nesting (Chapman, Auk, IV, 1887, p. 348; IX, 1892, p. 302). Farther north in the Hudson Valley it has been found at Nyack (Bicknell), and at Sing Sing five specimens have been secured (Fisher, Bull. N. O. C., IV, 1879, p. 234; VI, 1881, p. 245; Auk, II, 1885, p. 378). In the Lower Connecticut Valley this bird seems to be more frequent than in any other part of its range. It has been found at Saybrook, Seymour, New Haven, Portland and other localities, the principal records being as follows: Eames, Auk, V, 1888, p. 427; VI, 1889, p. 305; Bishop, Auk, VI, 1889, p. 192; Sage, Auk, X, 1893, p. 208. Probably not more than one-third of all the specimens recorded are typical *leucobronchialis*, the remaining two-thirds presenting every stage of intergradation between this bird and typical *H. pinus*.

Lawrence's Warbler (*Helminthophila lawrencei*) is a much rarer bird than the preceding. There are records for only six specimens from the immediate vicinity of New York City, viz. Chatham, N. J. (Herrick), Hoboken, N. J. (Lawrence), Rye, N. Y. (Vorhees, Auk, V, 1888, p. 427), Greenwich, Conn. (Vorhees, Auk, XI, 1894, p. 259), Cold Spring Harbor, L. I. (Braislin, Auk, XX, 1903, p. 53), and New York Zoological Park, where a male was found breeding with a female *pinus* (Bildersee, Bird Lore, VI, 1904, p. 131; Beebe, Auk, XXI, 1904, p. 387).

The status of both Brewster's and Lawrence's Warblers is still unsettled. They are generally considered to be hybrids between *H. pinus* and *H. chrysoptera*, and it has also been suggested that dichromatism may play a part in producing their coloration. Their relationship will be found discussed under the following references: Brewster, Bull. N. O. C., VI, 1881, p. 218; Ridgway, Auk, II, 1885, p. 359; Manual N. A. Birds, 1887, p. 486; Birds of North and Middle America, II, 1902, pp. 452, 453; Thayer, Auk, XIX, 1902, p. 401; Bishop, Auk, XXII, 1905, p. 21).

***Golden-winged Warbler** (*Helminthophila chrysoptera*). In the immediate vicinity of New York City, this bird occurs as a rather rare spring migrant, but in the early southward migration, in August, it is sometimes not uncommon. It has been found nesting at Nyack, N. Y. (Brownell) and probably breeds regularly from that point northward.

***Nashville Warbler** (*Helminthophila rubricapilla*). This species is here a rather common migrant and a rare summer resident as far south as Highland Falls. It arrives about May 10 and returns on its southward journey during late August, the last migrants being seen about September 25. A breeding female was taken by Chapman at Englewood, N. J., June 16, 1887, (Auk, VI, 1889, p. 304).

Orange-crowned Warbler (*Helminthophila celata*). This Warbler occurs here as an exceedingly rare migrant. There are records of only six specimens, all but one of which occurred in the fall. (Howell, Auk, X, 1893, p. 91).

***Tennessee Warbler** (*Helminthophila peregrina*). With us this bird is a rather rare spring migrant but is sometimes not uncommon in the fall. It passes northward early in May and returns on its southward journey in September.

***Northern Parula Warbler** (*Compsothlypis americana usneæ*). The Parula Warbler is here a more or less abundant migrant and local summer resident. It arrives from the south about May 7 and the last individuals are observed in early October.

***Cape May Warbler** (*Dendroica tigrina*). This is one of our rarest spring migrants, passing northward about May 15. In the fall migration immature birds are sometimes not uncommon.

***Yellow Warbler** (*Dendroica æstiva*). A common summer resident. It arrives from the south about May 5 and remains until September. (See group, third floor).

***Black-throated Blue Warbler** (*Dendroica caerulescens*). A common migrant, passing northward early in May and returning in September.

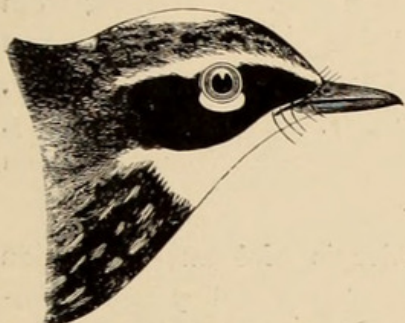


FIG. 30. MYRTLE WARBLER.

***Myrtle Warbler ; Yellow-rumped Warbler;** (*Dendroica coronata*). An abundant migrant in our vicinity and in favorable localities where bayberries are abundant, it passes the whole winter. Migrants begin to arrive in early April, and the southward migration takes place during the latter part of September and October.

***Magnolia Warbler** (*Dendroica maculosa*). In this vicinity it is a common migrant, passing northward early in May and returning late in August and in September.

Cerulean Warbler (*Dendroica cerulea*). Breeds in the Mississippi Valley as far north as Minnesota, and eastward as far as Cayuga Co., N. Y., and winters in the tropics. Its occurrence here is accidental, and there are but three records of its capture, one of a male taken in Kings County, L. I., (Dutcher, Auk, X, 1893, p. 277), of a male taken at Highland Falls, May 17, 1875 (Mearns, Birds Hudson Highlands, p. 154), and one of a specimen taken at Boonton, Morris Co., N. J., in September, 1887 (Judd, Auk, XIV, 1897, p. 326).

***Chestnut-sided Warbler** (*Dendroica pensylvanica*). With us it is a common migrant, and, in recent years, has become a locally common summer resident. It arrives early in May, and the return migration occurs between August 10 and October 1.

***Bay-breasted Warbler** (*Dendroica castanea*). As a rule the Bay-breasted is one of our rarest transient Warblers but during some seasons it is found in numbers. It passes northward about the middle of May and returns in September.

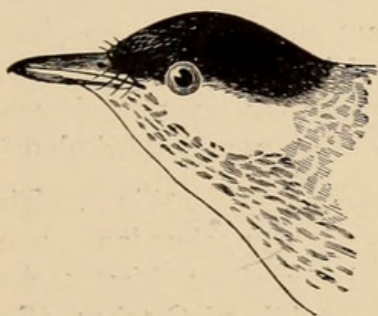


FIG. 31. BLACKPOLL WARBLER.

***Blackpoll Warbler** (*Dendroica striata*.) The Blackpoll is one of our most abundant migrants and is the last of the transient Warblers to pass northward in the spring. It arrives from the south about May 7 and returns on its southern journey in September.

***Blackburnian Warbler** (*Dendroica. blackburniae*). A rather uncommon spring migrant, passing northward during the first of May, but is not uncommon some year during its return migration in September.

Yellow-throated Warbler (*Dendroica domina*). Southern United States, breeding as far north as Virginia and wintering from Florida southward. There is but one record of the occurrence of this southern species near New

York City. It is based on the capture of a male in Kings County, L. I. (Dutcher, Auk, X, 1893, p. 277).

***Black-throated Green Warbler** (*Dendroica virens*). In the immediate vicinity of New York City this bird is found chiefly as a migrant, arriving from the south late in April and returning about the middle of August. It is known to breed at Highland Falls, N. Y. (Mearns), Bridgeport, Conn. (Averill), Millers Place, L. I. (Dutcher, MS), and at Demarest, N. J., where on June 5, 1904. B. S. Bowdish found a nest built in a skunk cabbage about fourteen inches from the ground (Auk, XXIII, 1906, p. 17).

***Pine Warbler** (*Dendroica vigorsi*). This Warbler is of local distribution in this vicinity. In northern New Jersey, the Lower Hudson Valley and southern Connecticut it occurs only as a rare migrant, but on certain parts of Long Island, where the scrub pines afford it congenial surroundings, it is not uncommon and breeds.

Palm Warbler (*Dendroica palmarum*). This species is of rather rare but regular occurrence here. One specimen was taken at Sing Sing, N. Y., April 29, 1882 (Fisher, Bull. N. O. C., VII, 1882, p. 249), two at Riverdale, N. Y., in the spring of 1877 (Bicknell, Bull. N. O. C., V, 1880, p. 182), and one struck the Fire Island Lighthouse, September 23, 1887 (Dutcher, Auk, V, 1888, p. 182). Braislin (Auk, XIX, 1902, p. 149) records it as "common" near Brooklyn between September 25 and October 7, 1895, and Miller (Bird-Lore, V, 1903, p. 199) states that it was rather common near Plainfield, N. J., between September 22 and October 4, 1903.

***Yellow Palm Warbler ; Yellow Redpoll** (*Dendroica palmarum hypochrysea*). A common migrant arriving from the south about April 10, and returning late in September and in October.

***Prairie Warbler** (*Dendroica discolor*). The distribution of the Prairie Warbler in this vicinity is much like that of the Pine Warbler. It is rare in northern New Jersey and the Lower Hudson Valley, where however, it has been found breeding once (Highland Falls, Mearns), but is not uncommon on some parts of Long Island. At Bridgeport, Conn., it is a common migrant and may breed (Averill). (See group, third floor).

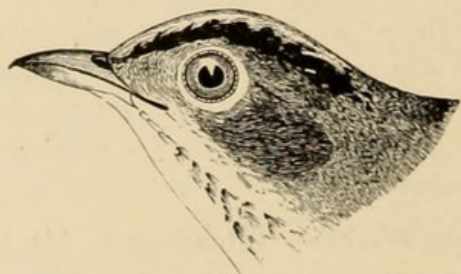


FIG. 32. OVENBIRD.

***Ovenbird** (*Seiurus aurocapillus*). The Ovenbird is one of our abundant summer residents, arriving about May 1 and remaining until the middle of October. (See group, third floor).

Northern Water-thrush (*Seiurus noveboracensis*). A common migrant, passing northward during May and returning about September 1. Cherrie (Auk, XIX, 1902, p. 210) records the probable breeding of this species at Cold Spring Harbor, L. I.



LOUISIANA WATER THRUSH
Group, Hall No. 308

Grinnell's Water-thrush (*Seiurus noveboracensis notabilis*). Western North America; eastward during the migrations to Virginia and South Atlantic States. This western species has been recorded only from Raritan, N. J., May 30, 1889 (Southwick, Auk, IX, 1892, p. 303), and Princeton, N. J. Sept. 10, 1879 (Babson).

Louisiana Water-thrush (*Seiurus motacilla*). It is a common summer resident in the lower Hudson Valley, where it has been found as far north as Lake George (Fisher), and is not uncommon in the lower Connecticut Valley. There are two records for Massachusetts and two for Rhode Island. On Long Island it is very rare (Dutcher). (See group, third floor).

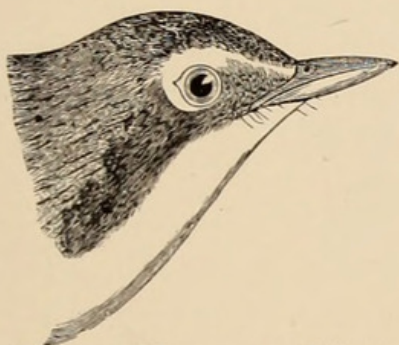


FIG. 33. KENTUCKY WARBLER.

***Kentucky Warbler** (*Opornis formosa*).

This is a common summer resident on the banks of the Lower Hudson River and has been recorded from Fort Lee and Riverdale (Bicknell), Englewood (Chapman), and Sing Sing (Fisher), beyond which point it is as yet unknown. In Connecticut there are but three records, viz: at Suffield where a male was taken August 16, 1876 (Merriam), at Greenwich, where a pair and a fledgeling were seen and the male taken July 10, 1892 (Vorhees, Auk, X, 1893, p. 86) and at West Stratford, where a male was shot May, 30, 1888 (Lucas, Orn. and Ool., XIV, 1889, p. 62). On Long Island it is very rare, there being but one recent record of its occurrence (Dutcher). It is wholly absent in the vicinity of Plainfield, N. J., (Miller) and at Princeton (Babson).

Connecticut Warbler (*Oporornis agilis*). This species is an exceedingly rare spring migrant east of the Alleghanies, and I know of no record of its occurrence here at that season; in the fall, however, it is not uncommon, and sometimes is abundant, arriving as early as September 3 and remaining until the latter part of the month.

***Mourning Warbler** (*Oporornis philadelphia*). This species is one of our rare Warblers; it passes northward during the latter half of May.

***Northern Yellowthroat** (*Geothlypis trichas brachidactyla*). One of our most abundant summer residents. It arrives about May 5 and remains until October. (See group, third floor.)

Yellow-breasted Chat (*Icteria virens*). A common summer resident, arriving about May 5 and remaining until September.

***Hooded Warbler** (*Wilsonia mitrata*). The Hooded Warbler is here near the northern limit of its range. At Englewood, N. J., it is an abundant summer resident, arriving about May 5 and remaining until the middle of September. At Riverdale, N. J., it is locally common (Bicknell), at Sing Sing it is not common (Fisher), but at Highland Falls it is "very common" (Mearns). It has been taken at Fishkill, the most northern point in the

Hudson River Valley from which it has been recorded. In Connecticut it is common at Saybrook and New Haven, but is rare north of these points (Sage). In Massachusetts it has been found only twice. On Long Island it is rare. At Plainfield and Princeton, N. J., it is a rare migrant.

***Wilson's Warbler** (*Wilsonia pusilla*). This bird is here a rather uncommon spring migrant, passing northward from the 12th to the 30th of May, but is not uncommon at times during its return journey, which takes place between August 15 and September 15.

***Canadian Warbler** (*Wilsonia canadensis*). A common migrant, passing north from May 10 to June 10 and returning between August 5 and September 10.

***American Redstart** (*Steophaga ruticilla*). A common summer resident of our woodland; it arrives about May 5 and remains until early October. (See group, third floor.)

FAMILY MOTACILLIDÆ. WAGTAILS.

***American Pipit; Titlark** (*Anthus pensilvanicus*). The Titlark is a generally common, and, along our coasts, an abundant migrant. It travels northward from the latter part of March to early May and returns on its southern journey during October and November.

FAMILY MIMIDÆ. MOCKINGBIRDS, THRASHERS, ETC.

***Mockingbird** (*Mimus polyglottos*). Breeds from the Bahamas and Mexico to southern Illinois and northern New Jersey, rarely to Massachusetts, and winters from North Carolina southward. The Mockingbird is of rare occurrence in this vicinity and doubtless many of the specimens reported are escaped cage-birds. It has, however, been found breeding at several localities, and at Tenafly, N. J., a pair returned to the same locality for several years (Auk, VI, 1889, p. 305). On several occasions Mockingbirds have been found here during the winter and have shown their ability to withstand our coldest weather as long as they can obtain an abundance of food.

***Catbird** (*Galeoscoptes carolinensis*). An abundant summer resident, arriving about May 3 and remaining until October 20. (See group, third floor.)

***Brown Thrasher** (*Toxostoma rufum*). A common summer resident, appearing about April 20 and remaining until the middle of October and occasionally later. (See group, second floor.)

FAMILY TROGLODYTIDÆ. WRENS.

***Carolina Wren** (*Thryothorus ludovicianus*). Eastern United States, breeding from the Gulf States to southern Iowa, northern Illinois, and southern Connecticut; resident, except at the northern limit of its range. Generally speaking the Carolina Wren is a rather rare bird in this vicinity but on the

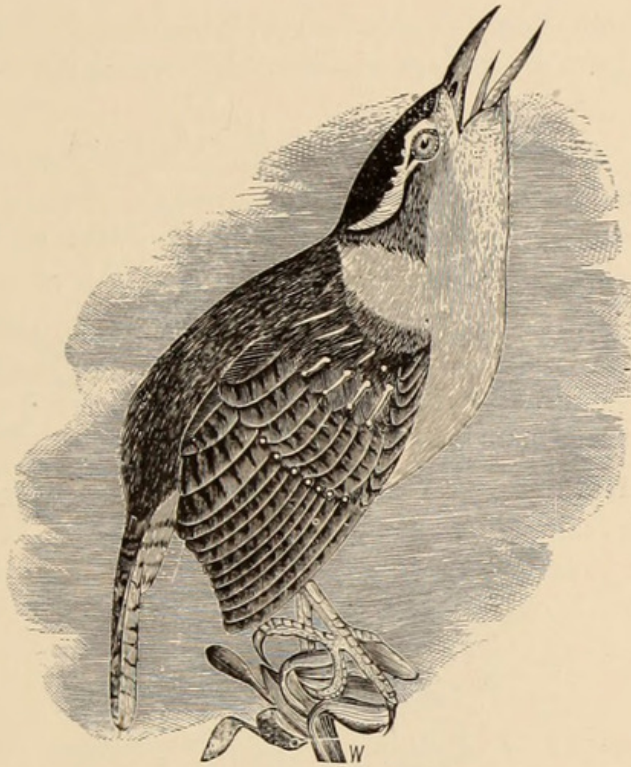


FIG. 34. CAROLINA WREN.

eastern slope of the Palisades, as far north as Piermont, N. Y., it is common during the summer (Chapman, Auk, X, 1893, p. 87). It has been found on Long Island in the winter (Dutcher, MS). Since the above was written, in 1894, this species appears to have increased in numbers, locally.

***House Wren** (*Troglodytes aedon*). This common and familiar species comes to us about May 1 and remains until October.

***Winter Wren** (*Olbiorchilus hiemalis*). Just before the House Wren leaves us, or about October 1, the Winter Wren comes from the north and is not uncommon until the House Wren returns in May.

Short-billed Marsh Wren (*Cistothorus stellaris*). This species is here a common summer resident of very local distribution.

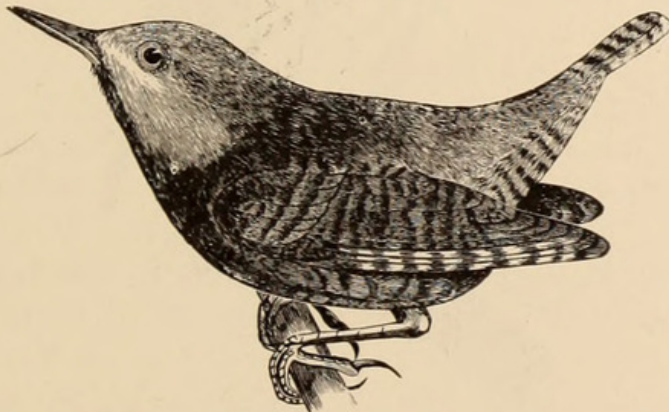


FIG. 35. WINTER WREN.

Long-billed Marsh Wren (*Telmatodytes palustris*). This abundant inhabitant of our reedy marshes arrives in May and remains until October or November.

FAMILY CERTHIIDÆ. CREEPERS.

***Brown Creeper** (*Certhia familiaris americana*). The Creeper is here a rather common winter resident, arriving from the north about October 1 and remaining until April.

FAMILY SITTIDÆ. NUTHATCHES.

***White-breasted Nuthatch** (*Sitta carolinensis*). A common permanent resident.

***Red-breasted Nuthatch** (*Sitta canadensis*). This bird is sometimes common from the later part of August to October and occasionally remains during the winter.

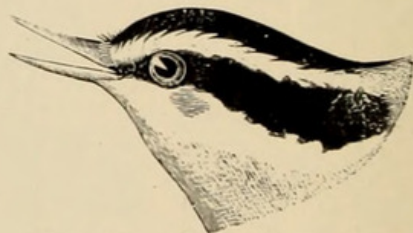


FIG. 36. RED-BREASTED NUTHATCH.

FAMILY PARIDÆ. TITMICE.

Tufted Titmouse (*Bæolophus bicolor*). This bird is resident and breeds as far north as Orange, N. J. (Riker), and Staten Island, N. Y. (Hollick). Beyond these points it occurs regularly but rarely. It is observed yearly in April at Englewood, N. J. (Chapman). There are few records for Connecticut, and although Giraud leads us to believe it was not uncommon and bred on Long Island when he wrote, it is now very rare there. (Braislin, Auk, XIX, p. 148.)

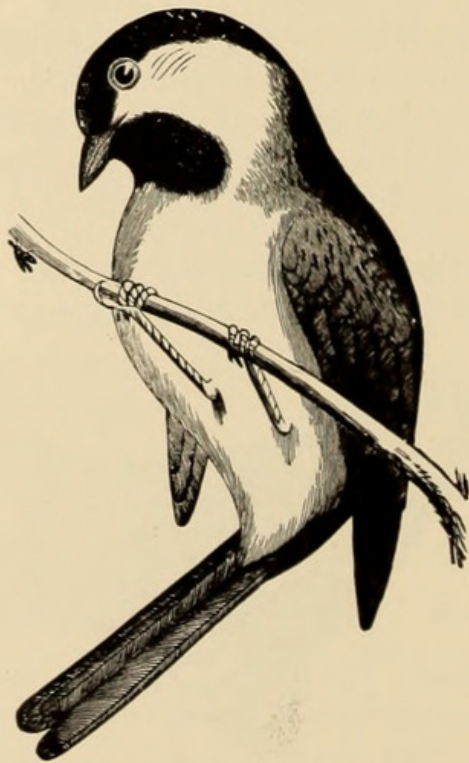


FIG. 37. CHICKADEE.

***Chickadee** (*Penthestes atricapillus*). The Chickadee is here a common permanent resident, but is more numerous during its migration in October than at other times.

Carolina Chickadee (*Penthestes carolinensis*). "Southeastern United States, north to New Jersey and Illinois." This species reaches the southern limit of our district at Princeton, N. J., where it is a not uncommon resident, while *P. atricapillus* is found there only in the winter (Babson).

FAMILY SYLVIIDÆ. KINGLETS AND GNATCATCHERS.

***Golden-crowned Kinglet** (*Regulus satrapa*). A not common winter resident in favorable localities; it arrives from the north about October 1 and remains until May.

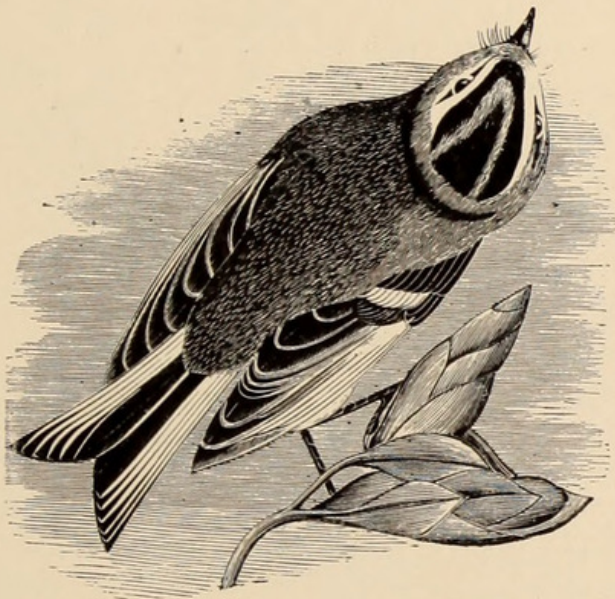


FIG. 38. GOLDEN-CROWNED KINGLET.

***Ruby-crowned Kinglet** (*Regulus calendula*). A common spring, and an abundant fall migrant, arriving from the south about the middle of April and returning late in September.

***Blue-gray Gnatcatcher** (*Polioptila cærulea*). Eastern United States, breeding from the Gulf States to northern Illinois, southern Ontario and northern New Jersey, and wandering rarely to Minnesota and Maine, winters from Florida southward. There are numerous records of capture of this southern species in the vicinity of New York City, but it is not known to occur regularly nearer than Princeton, N. J., where it arrives from "April 25 to May 1" (Scott, *The Country*, I. 1878, p. 354).

Townsend's Solitaire (*Myadestes townsendi*). A male of this species was taken at King's Park, L. I., November 25, 1905, by J. A. Weber (*Dwight, Auk*, XXIII, 1906, p. 105).

***Wood Thrush** (*Hylocichla mustelina*). The Wood Thrush is an abundant summer resident, arriving about May 1 and remaining until early October. It

may rightly claim to rank as the most gifted of our summer songsters. (See group, second floor.)

Wilson's Thrush (*Hylocichla fuscescens*). Wilson's Thrush, or the Veery, as it is better called, is a common summer resident, arriving about May 1 and remaining until September. (See group, third floor.)

Gray-cheeked Thrush (*Hylocichla alicia*). A common migrant, passing northward in May and southward in September and October.

Bicknell's Thrush (*Hylocichla bicknelli*). So far as records go, this is a rather rare migrant, occurring in May and September and October, but careful search will doubtless show it to be more common than is generally supposed.

Olive-backed Thrush (*Hylocichla ustulata swainsoni*). The Olive-backed Thrush is a common migrant in this vicinity. It passes northward in May and southward in September and October.

Hermit Thrush (*Hylocichla guttata pallasi*). An abundant migrant and occasionally is found in small numbers during the winter. In the spring it passes northward between April 10 and May 1; its fall migration takes place between October 1 and November 1. There is a record of its probable breeding at Lake Ronkonkoma, L. I. (Dutcher, Auk, III, 1886, p. 443).

American Robin (*Merula migratoria*). The Robin is our most abundant summer resident, and in favorable localities a few may be found in the winter. Migrants begin to arrive toward the last of February, and the species is abundant until December. (See group, third floor.)

Varied Thrush (*Ixoreus naevius subsp. ?*). The local status of this Pacific coast bird appears to be well stated in Coues' "Birds of the Colorado Valley," where George N. Lawrence is quoted as follows:

"Besides Cabot's New Jersey example, two others have been procured near New York City—one at Islip, Long Island, shot in the fall, in company with Robins, and now in the possession of the person who secured it, the other at Hoboken, New Jersey. Both were received in the flesh by Mr. J. Akhurst, to be mounted; the Hoboken one was subsequently destroyed by fire in the taxidermist's workshop. All the specimen's in my own cabinet came from the Pacific side."

The Cabot specimen mentioned above by Lawrence is possibly the one referred to by Turnbull (Birds of East. Penn. and N. J.), but without data.

Wheatear (*Saxicola ænanthe leucorhoa*). This northern species is of accidental occurrence in this vicinity; it has been twice recorded from Long Island (Lawrence, Ann. Lyc. Nat. Hist., VIII, 1886, p. 282; Dutcher, Auk, X, 1893, p. 277.)

Bluebird (*Sialia sialis*). The Bluebird is here a common summer resident, an abundant migrant, and not infrequent winter resident. Migrants begin to arrive from the south early in March.



THE AMERICAN ROBIN
Group, Hall No. 308

LIST OF
PRINCIPAL PAPERS RELATING TO THE BIRDS OF THE VICINITY
OF NEW YORK CITY.

1844. DE KAY, J. E. Zoology of New York, or the New York Fauna; comprising detailed descriptions of all the animals hitherto observed within the State of New York, with brief notices of those occasionally found near its borders, and accompanied by appropriate illustrations. Part II, Birds. Albany: 1 Vol., 4 to, pp. xii, 380, pll. col'd, 141.
Treats of 308 species. "Though still constantly quoted—and properly to be referred to—it has ceased to be regarded as an authority" (Coues).
1844. GIRAUD, J. P., JR. The Birds of Long Island....New York: published by Wiley & Putnam, 161 Broadway....1 Vol., 8vo., pp. i—xxiv, 1—397.
Treats of 286 species, giving descriptions and extended annotations. Only 200 copies of this work are supposed to have been placed in circulation.
1866. LAWRENCE, G. N. Catalogue of Birds observed on New York, Long, and Staten Island and the adjacent parts of New Jersey. Ann. Lyc. Nat. Hist., New York, VIII, pp. 279—300.
A partly annotated list of 327 species.
1868. ABBOTT, C. C. Catalogue of Vertebrate Animals of New Jersey. Cooke's Geology of New Jersey. Appendix E. Birds, pp. 761—798.
An annotated list of 301 species, abounding in errors and only to be used with discrimination.
1869. TURNBULL, W. P. The Birds of East Pennsylvania and New Jersey. Glasgow, Printed for Private Circulation.
1876. BICKNELL, E. P. Field Notes at Riverdale. Forest and Stream, VI, p. 233; also pp. 133, 148, 386, 402.
Winter and spring notes on numerous species.
1876. STEVENS, W. G. Bird arrivals on the Harlem. Forest and Stream, VI, p. 215.
Notes on 40 species.
1877. MERRIAM, C. HART. A Review of the Birds of Connecticut with Remarks on Their Habits. Trans. Conn. Acad., IV, pp. 1—165.
A fully annotated list of 292 species.
1877. STEVENS, W. B. [Arrivals of Birds at West Farms, N. Y., during the springs of 1874, 1875, and 1876.] Forest and Stream, VIII, p. 400.
Dates of arrival of 32 species.
1878. BENNER, F. Bird Notes from Long Island. Forest and Stream, X, pp. 174, 215.
Notes from Astoria on a number of species.

1878. BICKNELL, E. P. Evidences of the Carolinian Fauna in the Lower Hudson Valley, Principally from Observations taken at Riverdale, N. Y. *Bull. Nutt. Orn. Club*, III, pp. 128—132.
On 13 Carolinian species. (See also Allen, J. A. *ibid.*, pp. 149, 150.)
1878. HUYLER, A. I. Winter Birds on the Hackensack. *The Country*, I, p. 149.
1878. LAWRENCE, N. T. Notes on several rare Birds taken on Long Island. *Forest and Stream*, X, p. 235.
Notes on 24 species.
1878. WINKLE, N. [Spring Birds at Summit, N. J.] *The Country*, II, p. 57.
1879. COUES, G. H. List of Birds observed in the Naval Hospital Grounds, in Brooklyn City. *Bull. Nutt. Orn. Club*, IV, pp. 31—33.
Brief notes on 60 species.
1879. HERRICK, H. Notes on some Birds of Chatham, N. J. *Forest and Stream*, XII, p. 165.
- 1879—80. MEARNS, E. A. A list of the Birds of the Hudson Highlands. *Bull. Essex (Mass.) Inst.*, X, pp. 166—179; XI, 43—52, 154—168, 189—204; XII, 11—25, 109—128; XIII, 75—93.
One of the best and most complete of our local papers, treating fully of 209 species. (See also an Addendum adding 5 species in *The Auk*, VII, 1890, pp. 55, 56; also reviews in *Bull. Nutt. Orn. Club*, V, 1880, p. 175; VI, 1881, p. 172.)
1879. NICHOLS, G. N. Migration of some Warblers through Summit, N. J., during the last spring. *Forest and Stream*, XII, p. 464.
Notes on 18 species.
1879. ROOSEVELT, T. Notes on some of the Birds of Oyster Bay, Long Island. One-page leaflet, published by the author.
Notes on 17 species.
1879. SCOTT, W. E. D. Late Fall and Winter Notes on some Birds Observed in the Vicinity of Princeton, N. J., 1878—79. *Bull. Nutt. Orn. Club*, IV, pp. 81—85.
Notes on 35 species.
- 1879—85. FISHER, A. K. Occurrence of Several rare Birds near Sing Sing, N. Y. *Bull. Nutt. Orn. Club*, IV, pp. 61, 62.
Notes on 5 species. For additional notes by the same author on the rarer birds of Sing Sing, see *ibid.*, III, 1878, pp. 191, 192; IV, 1879, p. 234; VI, 1881, p. 245; VII, 1882, pp. 249, 251; VIII, 1883, pp. 121, 180; *Auk*, II, 1885, pp. 306, 378.
1880. LAWRENCE, R. Notes on some of the Rarer Birds of Long Island, N. Y. *Bull. Nutt. Orn. Club*, V, pp. 116, 117.
Notes on 8 species.
1880. STEARNS, W. A. List of Birds of Fishkill-on-Hudson, N. Y. 8vo., pp. 16. Published by the author.
A briefly annotated list of 138 species. (Review in *Bull. Nutt. Orn. Club*, V, 1880, p. 233.)

1881. BERIER, DE L. Notes on a few Birds Observed at Fort Hamilton, Long Island, N. Y. Bull. Nutt. Orn. Club, VI, pp. 11—13.
Brief notes on 10 species.
1881. BERIER, DE L. Notes on Birds Rare or Accidental on Long Island, N. Y. Bull. Nutt. Orn. Club, VI, pp. 125, 126.
Notes on 11 species.
1882. TOWNSEND, A. L. [Arrival of Birds in spring at Bay Ridge, L. I.] Forest and Stream, XVIII, pp. 305, 346, see also p. 427.
Notes on some 30 species.
1884. BARREL, H. F. Arrivals of Birds in [New Providence], N. J., in 1883. Orn. and Oöl, IX, p. 45.
A chronological list of 73 species.
1884. DUTCHER, W. Bird Notes from Long Island, N. Y. Auk, I, pp. 174—179.
On birds striking the Fire Island and Shinnecock Bay Lighthouses.
- 1884—5. BICKNELL, E. P. A Study of the Singing of our Birds. Auk, I, pp. 60—71, 126—140, 209—218, 322—332; II, 1885, pp. 144—154, 249—262.
On the song-seasons of about 100 species from observations made principally at Riverdale, N. Y.
- 1884—89. DUTCHER, W. Bird Notes from Long Island. Auk, I, pp. 31—35; II, 1885, pp. 36—39; III, 1886, pp. 432—444; V, 1888, pp. 169—183; VI, 1889, pp. 131—139; X, 1893, pp. 265, 266.
A series of papers on the rarer birds of Long Island, treating of, in all, 71 species.
1885. BARRELL, H. F. Birds of the Upper Passaic Valley, New Jersey. Orn. and Oöl, X, pp. 21—23, 42, 43.
A briefly annotated list of 149 species.
1885. HOLLICK, A. Preliminary List of the Birds known to breed on Staten Island. Proc. Nat. Sci. Assoc., Staten Island. Extra No. 4, December.
A nominal list of 67 species.
1885. LAWRENCE, N. T. Long Island, N. Y., Bird Notes. Auk, II, pp. 272—274.
Notes on 18 species.
1886. PAINE, A. G., JR. Dates of the Arrival of Migratory Birds in the spring of 1886, Central Park, New York City. Orn. and Oöl, XI, pp. 109, 125.
A chronological list of 64 species.
1886. WOODRUFF, L. B. AND PAINE, A. G., JR. Birds of Central Park, New York [City]. A preliminary List. Forest and Stream, XXVI, pp. 386, 387; see also p. 487.
A briefly annotated list of 121 species.

1887. THURBER, E. C. A List of Birds of Morris County, New Jersey. *True Democratic Banner* (newspaper), Morristown, N. J., Nov. 10, 17, 24.
An annotated list of 205 species. (Review in *Auk*, V, 1888, pp. 421, 422.)
1888. HALES, H. Bird Notes of Northern New Jersey. *Orn. and Oöl.*, XIII, p. 158.
Notes on the spring migrations at Ridgewood, N. J.
1889. CHAPMAN, F. M. Notes on Birds Observed in the Vicinity of Englewood, N. J. *Auk*, VI, pp. 302—305.
Notes on 19 species.
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A call for information on the occurrence of 52 species.
1889. FOSTER, L. S. Some Nyack Birds. *Nyack Evening Journal*, Aug. 19.
1889. LAWRENCE, G. N. An account of the Former Abundance of some species of Birds on New York Island, at the time of their Migration to the South. *Abst. Proc. Linnæan Society* [No. 1], for the official year 1888—89, pp. 6—8. (See also *Auk*, VI, 1889, pp. 201—204.)
Notes on 13 species, from 1820 to 1850.
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1892. AVERILL, C. K., JR. List of Birds found in the Vicinity of Bridgeport, Connecticut. Prepared for the Bridgeport Scientific Society. Bridgeport, Conn.: Buckingham & Brewer, Printers. 8vo., pp. 1—19.
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Popular account of some species.
1892. HOWELL, A. H. Brief notes from Long Island. *Auk*, IX, pp. 306, 307.
Notes on 5 species.
1893. DUTCHER, W. Notes on some Rare Birds in the Collection of the Long Island Historical Society. *Auk*, X, pp. 267—277.
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1893. EAMES, E. H. Notes from Connecticut. *Auk*, X, pp. 89, 90, 209.
Notes from Bridgeport on 11 species.
1893. FOSTER, L. S. The Winter Birds of the Vicinity of New York City. *Abst. Proc. Linnæan Society*, No. 5, pp. 1—3.
A synopsis mentioning 14 of a list of 127 species.
1893. HOWELL, A. H. On the Occurrence of three Rare Birds on Long Island, New York. *Auk*, X, 1893, pp. 90, 91.
Barn Owl, Orange-crowned Warbler and Bicknell's Thrush.
1894. CHAPMAN, F. M. The Nocturnal Migration of Birds. *Popular Science Monthly*, XLV, pp. 506—511.
Contains an account of observations made at the Statue of Liberty, Bedloe's Island.
1894. STONE, WITMER. The Birds of Eastern Pennsylvania and New Jersey, With Introductory Chapters on Geographical Distribution and Migration; prepared under the direction of the Delaware Valley Ornithological Club.
A complete and fully annotated list of 352 species. Contains also a Bibliography of the Birds of Pennsylvania and New Jersey.
1894. HOWELL, A. H. Notes on Some Long Island Birds. *Auk*, XI, pp. 82—84.
Notes on 5 species.
1895. CHAPMAN, FRANK M. Handbook of Birds of Eastern North America. New York, D. Appleton and Co.
Contains tables giving dates of migration at Englewood, N. J., by F. M. Chapman, and one giving dates at which birds begin to nest in the vicinity of New York City. Also notes under each species showing its status at Sing Sing, N. Y., and on Long Island, by A. K. Fisher and Wm. Dutcher, respectively, constituting complete lists for these localities.
1896. BRAISLIN, W. C. Notes on Long Island Birds. *Auk*, XIII, pp. 87, 88.
Notes on 5 species.
1899. BRAISLIN, W. C. Notes on Long Island Birds. *Auk*, XVI, pp. 190—193.
Notes on 10 species.
1900. BRAISLIN, W. C. Notes on Birds of Long Island. *Auk*, XVII, pp. 69—71.
Notes on 6 species.
1901. BABSON, WM. A. Birds of Princeton, New Jersey, and Vicinity. *Bulletin of The Bird Club of Princeton University*, Vol. I, September, 1901, No. 1. Published by the Club.
A fully annotated list of 231 species.
1902. BRAISLIN, W. C. Notes concerning certain Birds of Long Island. *Auk*, XIX, pp. 145—149.
Notes on 12 species.

1902. CHERRIE, GEO. K. Bird Notes from Long Island, New York. *Auk*, XIX, p. 210.
Notes on 4 species.
1902. STONE, WITMER. Report on the Spring Migration of 1902 in eastern Pennsylvania and New Jersey. *Cassinia*, 1902, pp. 32—48.
Contains notes on various species at Paterson, N. J. (J. H. Clark) and Plainfield, N. J. (W. De W. Miller).
1904. STONE, WITMER. Report on the Spring Migration of 1904 in eastern Pennsylvania and New Jersey. *Cassinia*, 1904, pp. 46—61.
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1904. BRAISLIN, W. C. Notes concerning certain Birds of Long Island, N. Y. *Auk*, XXI, pp. 287—289.
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1905. STONE, WITMER. Report on the Spring Migration of 1905 in eastern Pennsylvania and New Jersey. *Cassinia*, 1905, pp. 53—67.
Contains notes on occurrence of species at Summit, N. J., by La Rue K. Holmes.
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Records 149 species. Briefly annotated.
1905. HOLMES, LA RUE K. Summer Birds of Summit (Union County), New Jersey, and Vicinity. *Wilson Bulletin*, XVII, No. 1, March, pp. 8—12.
An annotated list of 89 species.
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Records 161 species. Annotated.
1906. BOWDISH, B. S. Some Breeding Warblers of Demarest, N. J. *Auk*, XXIII, pp. 16—19.
Notes on breeding of eleven species.

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Chapman, Frank M. 1906. "The birds of the vicinity of New York City." *Guide leaflet* 22, Page 1–96.

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