

The RED BOOK OF BIRDS OF AMERICA



A
BIRD
GUIDE

Containing Diving Birds, Swimmers, Herons, Storks, Ibises, Marsh
Dwellers, Shore Birds, Pigeons and Doves, Birds of
Prey, Cuckoos and Woodpeckers.

BIRD GUIDE

The Three Books in this series:

The Red Book consisting of orders of Diving Birds, Swimmers, Herons, Storks, Ibises, Marsh Dwellers, Shore Birds, Pigeons and Doves, Birds of Prey, Cuckoos, Woodpeckers.

The Blue Book containing the orders of Goatsuckers, Swifts, etc., and Perching Birds including the Tyrant Flycatchers, Larks, Crows and Jays, Starlings, Icteridae and Finches.

The Green Book containing the orders of Perching Birds including Tanagers, Swallows, Waxwings, Shrikes, Vireos, Warblers, Pipits, Dippers, Mimic Thrushes, Wrens, Nuthatches and Creepers, Titmice, Wren Tits, Kinglets, Gnatcatchers, and Thrushes.

Joyce C Bielzelt

THE RED BOOK of BIRDS OF AMERICA

by
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Illustrations by PAUL MOLLER
This is One of a Series of Three Books

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PREFACE

Birds are beautiful and graceful creatures. Not only do birds satisfy our esthetic sense through their handsome plumage and their sweet voices, but they are marvelously adapted to their respective fields of activity. They are a valuable asset because they depend largely for their food on insects which are injurious to plant life. No other creatures are so well fitted to capture flying insects as swallows, swifts, and night hawks. The wrens, trim of body and agile of movement, creep in and out of the holes and crevices and explore rubbish heaps for hidden insects. The woodpecker, whose whole body exhibits wonderful adaptation of means to end, is provided with strong claws for holding firmly when at work, a chisel-like bill driven by powerful muscles to dig out insects and drag forth the concealed larvae safe from other foes. The game birds furnish sport for great numbers of people who love to go afield with dog and gun. Certain kinds of game birds such

as quail, pheasants and ducks are raised in considerable numbers on preserves and on farms for commercial purposes.

This book is designed to furnish some knowledge of birds and to encourage more interest in their habits. Sixty-four birds that inhabit various parts of the country are described. A colored illustration of each is given so as to enable the reader to identify the bird. The descriptions of the birds are necessarily brief, but they are believed to be sufficient to acquaint the reader with the most prominent characteristics.

Special acknowledgment is due the Bureau of Biological Survey, the National Association of Audubon Societies and the American Ornithological Union for the liberal use which has been made of their publications. Much material has also been taken from the two volumes entitled "Birds of New York."

Every picture represents a male of the species, the measurements being given from the tip of bill to tip of tail.

PIED-BILLED GREBE (*Podilymbus podiceps*)

Length, 13 inches

The pied-billed grebe is the most widely distributed of the American grebes. "Water-witch" and "Hell-diver" are other names applied to this bird. It is a splendid swimmer, diving and swimming under water when pursued. Each toe has one or more separate membranes which are joined only at the base. The bill, which is cone-shaped, is about the length of the head. The wings are short and the tail is invisible. The plumage is compact, smooth, and rather hair-like. The color above is brownish-black; below, lighter brown and white. The crown back of the head and neck is grayish-black streaked with lighter gray. The nest consists of a floating structure of dead grass, reeds, mud, and vegetable matter, unattached or fastened to living rushes. The eggs, usually six in number, are white or tinged with green. On leaving the nest the grebe pulls the water-soaked material over the eggs so that they are hidden.



PIED-BILLED GREBE



LOON

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LOON

(*Gavia immer*)
Length, 28 to 36 inches

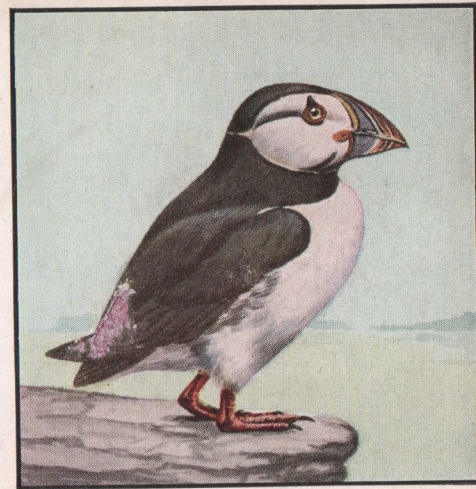
You may become acquainted with the loon through the medium of its voice which sends abroad weird and unearthly cries. It is a beautifully plumaged bird that spends its life on and about the water. No more powerful swimmers and expert divers can be found in the bird world. They have a peculiar faculty of sinking gradually in the water without apparent effort. They take to the wing with considerable difficulty, but when in the air their flight is swift. The prevailing colors are black or gray above and underneath white. In summer the darker parts become sprinkled with white. These markings do not appear in the young or in winter plumage of the adults. The wings are pointed, short, and rather narrow. The hind toe is small and the front toes are fully webbed. The bill is stout, straight, narrow, sharp-pointed and sharp-edged. The bill serves as a spear in gathering and holding fish, which are the birds' chief diet.

PUFFIN

(*Fratercula arctica arctica*)

Length, 13 inches

The puffins resemble soldiers standing in erect attitude with the black backs, collars, crowns, and white faces and underparts. The large, tri-colored, flattened beak is a curiosity. The puffin is a skillful swimmer and expert diver. It often descends to a great depth and it is exceedingly quick in its motions under water. When the bird is on the wing, the flight is rapid, but labored. On returning to its nest with fish it utters a peculiar sound—a deep-throated, mirthless laughter. The nest is generally a burrow in the ground, one to four feet in length. One egg, white or brownish white, plain or marked with faint spots, is laid at the end of the burrow on a thin layer of grass. The birds show strong affection for one another and it seems probable that they remain mated for life. The natives of the shores of the North Pacific Ocean catch puffins in nets, using their bodies for food and their skins for clothing.



PUFFIN

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POMARINE JAEGER

POMARINE JAEGER

(*Stercorarius pomarinus*)

Length, 24 inches

This bird might be rightfully named the "Hi-jacker" of the bird world. It is a bold maritime robber and selects for its victim a tern which has just caught a fish, and gives chase, and by savage attacks compels it to drop the fish. Then by a spectacular swoop the robber seizes the plunder in mid air. It also is a scavenger. The flight of the jaeger is graceful, skillful, and powerful although the wings are only moderately long. The tail is also relatively short. The claws are strong, sharp, and curved. There is a general tendency toward sooty-blackish coloration of the upper parts in the older birds with a gilding of the head and hindneck and a whitening of the shafts of the feathers toward their bases.

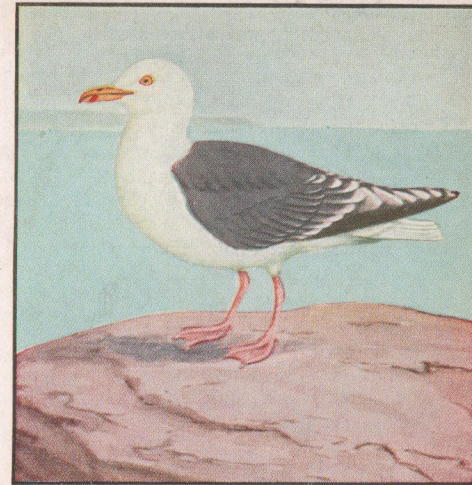
The nest is built of grass and moss on the ground in northern marshes. The eggs, two or three in number, are pale olive green, spotted with dark brown. The jaeger is an Arctic-breeding bird not nesting in colonies like the gulls.

GREAT BLACK-BACKED GULL

(*Larus marinus*)

Length, 30 inches

These gulls show considerable variation in color, and some seasonal changes in plumage which have caused confusion in identifying species. The predominating color of the adult birds is white with a gray mantle, varying in shade from the most delicate pearl-gray to dark blackish-slate or nearly black. The great black-backed gull is white with a deep slate-colored mantle. Some authorities claim that four years are required for this gull to attain maturity. It is frightened more easily at your presence than any of the other gulls. This beautiful and dignified bird is frequently seen as a winter visitor off the shores of Long Island and on the Great Lakes. It is very shy but exceedingly noisy. The nest is large and bulky and is built usually on a small island. It is constructed of dry grasses and is usually well-cupped. The eggs are generally three in number and are pale olive gray, blotched with dark brown and black. Its breeding places are on the Atlantic coast.



GREAT BLACK-BACKED GULL

HERRING GULL

(*Larus argentatus*)

Length, 24 inches

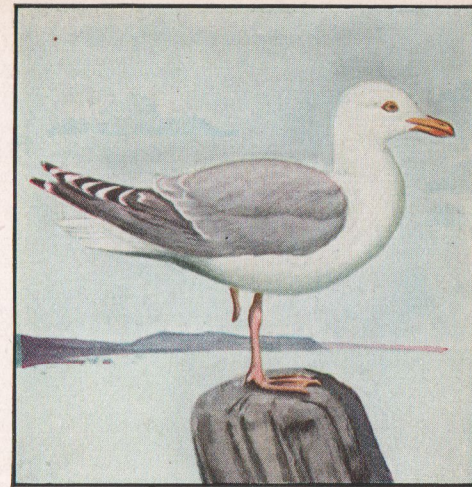
The herring gull is the familiar bird that follows the steamboats to pick up scraps of food that may be thrown overboard. Much of its time is spent on mud flats in the river and on piers and docks. It is the most abundant gull along the Atlantic coast and the Great Lakes of the United States and Canada and is generally known as "common gull" or "harbor gull." This bird is web-footed and swims readily but shows little skill in diving. On the wing it shows perfect ease and remarkable quickness and cleverness in maneuvering, especially in the wind. Its food consists for the most part of fish, and it is not particular as to how fresh this is, for carrion is a delicacy to this gull. The herring gull breeds on

the rocky islands off the coast of Maine and thence northward. The nests are often hidden in clumps of grass or in mere depressions on the ground in which may be found three light or greenish white eggs.

Flocks of gulls resting lightly on the waters of our harbors or following the wake of water craft are a familiar sight to most of us. As sea scavengers they welcome as food dead fish, garbage, and offal of various sorts, and their services in cleaning up such material are not to be regarded lightly. The State of Utah has not been unmindful of the gull, for there stands in the city of Salt Lake a monument surmounted by bronze figures of two gulls erected by people of that

Herring Gull—Continued

city "in grateful remembrance" of the service rendered by these birds. The herring, or winter gull, is the species of gull which we usually see flying along the shore or perhaps lying on the sand bars or on the water some distance off the shore, both on inland lakes and on the sea coast. Continually, they circle about the harbors or follow garbage scows in flocks of thousands. Not only that, but they follow ships waiting to feed on refuse cast overboard by the cooks. Eager as these birds are for food, constantly on the watch for it, you cannot fool them for a minute. Throw a cigar stub into the water, and not a bird appears to take the slightest interest in the performance. But throw a cracker or anything else that can be eaten and immediately there is an eager scrimmage.



HERRING GULL



RING-BILLED GULL

RING-BILLED GULL

(*Larus delawarensis*)

Length, 20 inches

Gulls like to live together and this instinct is especially in evidence during the breeding season, when several species may congregate on favorite nesting ledges by the thousands. The ring-billed and the California gulls generally nest together in large colonies on the island lakes through the western part of the United States. The gull is a versatile bird, for he can take up an abode on the water or in fields miles from the sea. This gull often gets his living from grasshoppers and from mice in the irrigated sections of the West. In this manner these gulls have rendered an important service to agriculture by helping the farmer in his battle against these pests.

In California they have been observed eating garbage with the pigs and they seem to delight in doing so. After the nesting season, large flocks of ring-billed and California gulls often collect along the southern coasts to spend the winter.

BLACK TERN

(*Hydrochelidon nigra surinamensis*)

Length, 9 inches

All terns are exceedingly graceful and expert on the wing and some show wonderful endurance in flight. They are smaller than the gulls and their bodies are elongated, but in coloration they resemble them. The black tern has so many swallow habits that it is sometimes called the "aquatic swallow" of the sloughs of the Northwest. It is a dark-gray bird with blackish underparts, which may be seen flitting about over the prairies, especially in the vicinity of wet grounds or sloughs, pursuing insects like any swallow. In late summer and in early winter these birds gather into large loose flocks, and are very much in evidence. The nest is carelessly constructed on dead reeds in marshes. Two or three pale brownish-olive eggs spotted with light brown and sepia are laid. After the young are hatched, they do not remain long in the frail nest but quickly take to the water. Though feeding on insects, the black tern subsists mainly on minnows and shrimp.



BLACK TERN

COMMON TERN

(*Sterna hirundo*)

Length, 15 inches

The common tern is a familiar visitor to the North Atlantic coast. It is a very active bird and seems to have a careless flight. This tern is a great diver and a good fisherman. The large fish when feeding drive the small ones to the surface of the water, and the tern, with the ability to see the commotion, instinctively plunges for food. Commercial fishermen take advantage of this characteristic habit of the tern to locate schools of edible fish. The tern feeds largely on small fish, shrimps, and other small crustaceans but also at times on grasshoppers and many flying insects. The bird arrives from the South about April and departs for its winter home late in the fall. When flying in their apparently careless way, the

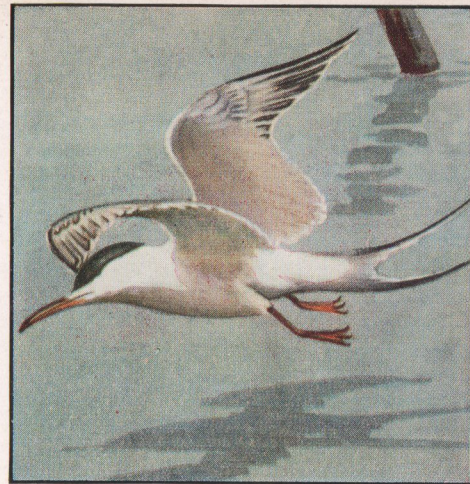
terns carry their bills inclined downward instead of pointing forward in the axis of the body as is the habit of gulls.

The head and neck of this bird are black and the upper parts generally are ashy-gray. The underparts are white, the legs, feet, and bill are red. The common tern resembles other terns, the Arctic and the Forster, for instance, but it may be distinguished from the Arctic by the color of its bill, which is black at the tip for one third of its length; its tarsi are longer, its primaries have less white and the white line of feathers along the base of the upper mandible scarcely extends to the feathered point. It is distinguished from the Forster tern by the color

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Common Tern—Continued

of its streamers, which are white on their inner webs and gray on the outer, while the reverse is the case in the Forster. A hollow in the sand, a few bits of grass and dry seaweed, and the nest is ready for the three eggs, greenish-white or deep brown spotted with brown, black and lavender. When hatched, the young are covered with down of a mottled pattern, and although they will sometimes enter the water of their own accord and swim about, they are dependent upon their parents until they acquire the power of flight. A colony of terns may lay many eggs in this manner on the bare sand. These birds have, however, nearly disappeared from the eastern shores of the United States owing to careless persecution in their breeding places by egg and plume hunters.



COMMON TERN

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WILSON'S PETREL

(*Oceanites oceanicus*)

Length, 7 inches

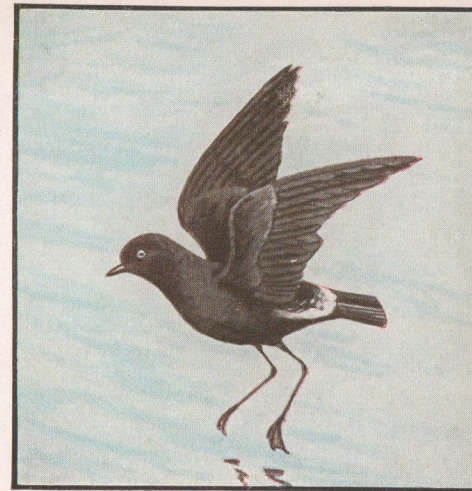
Almost every one who has crossed the Atlantic or made a coastwise voyage must have noticed this tiny dark-colored bird about the size of a swallow with a conspicuous patch of white at the tail head. They circle about the vessel on rapidly fluttering wing. Sailors call these petrels "Mother Carey's Chickens." The body of the Wilson petrel is a very sooty black, getting lighter below. The upper tail coverts are best described as white, the shorter ones are mixed with black. The under tail coverts are mixed with white, the wing coverts tend to gray and are margined with white. The bill and legs are black and the feet have yellow webs. Except during breed-

ing season the petrel never voluntarily comes on land, and seldom even approaches the shore but remains out at sea even during the severest storm. This bird breeds in large communities in localities adjoining the sea, forming its nest in burrows or cavities. It is not often seen near shore in the day time, remaining hidden in the nest and going abroad for food at night. It flies rapidly and generally close to the water; and when in pursuit of food they suspend themselves by extending their wings, and appear to run on the surface of the water. It is from this circumstance that they are called petrels after the apostle Peter, who walked on the water. The

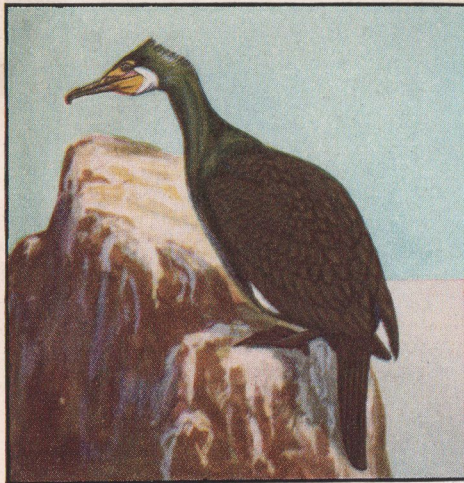
Wilson's Petrel—Continued

appearance of these birds is considered by seamen to presage a storm—hence the common name known as the "stormy petrel"—and it is thought peculiarly unlucky to kill one of them.

The marvel of this bird is its ceaseless activity where waves rage and break, they evidently remain on the wing day and night. A truly marvelous bird bespeaking energy and restless desire to keep moving. In many ways, the Wilson petrel is much like the sailor, seldom on land; and when there, anxious to go to sea again. From its habits we are inclined to think that it reverses the usual normal migration. While it summers in the vicinity of North America, when September comes it makes for the Southern seas and makes its nest in the far away Antarctic.



WILSON'S PETREL



CORMORANT

CORMORANT

(*Phalacrocorax carbo*)

Length, 3 feet

The cormorant is found generally throughout almost all of the northern hemisphere. It is a good diver and excellent swimmer under water. The skillful operations of the bird under water, aided by its powerful hooked bill, effect the capture of the fish on which it feeds. The body is elongated and powerfully muscled, which is useful in assisting the bird in diving to considerable depth. The neck is rather long and the legs are short and stout, and set far back. The wings are comparatively short, extending but slightly beyond the base of the tail. The plumage is very dense and is generally dark in color, with greenish and bluish sheen. The cormorant builds a rough nest, composed mostly of seaweeds, and placed on or near the ground. The eggs are from three to five, of a greenish-blue tinge, and covered with a lime-like crust. The young feed by thrusting their heads down the throats of the parents to extract partly digested fish.

WHITE PELICAN

(*Pelecanus erythrorhynchos*)

Length, 5 feet

This huge-billed bird was formerly found in the eastern as well as the western part of the United States, but now it is hardly seen on the Atlantic coast. The distinctive feature of the pelican is the great pouch which hangs from its lower bill. The bill may be eighteen inches long and the capacity of this pouch, six inches or more in depth, is considerable. The pelican uses this as a net by swimming around in the water and catching small fish. On land the pelican is very ungainly, its uncouth appearance being due in part to the awkward kink in its neck. Its flight is a combination of flapping and sailing alternately. A long line of these birds in flight is an interesting spectacle. The natural home of this bird is on some sandy or tule island, where a large number of them nest together. This showy bird would soon have been extinct had not their ancestral breeding places been located and set aside as Federal wild-bird reservations.



WHITE PELICAN

MERGANSER (*Mergus americanus*)

Length, 25 inches

The merganser or fish duck, as it is commonly called, is distinguished by the slender cylindrical bill. The upper part terminates in a strong hooked "nail" and the margins present the appearance of rows of tooth-like processes. This enables the merganser to seize and devour fish of considerable size which it dives after with great ease and dexterity. It feeds mainly on fish that are not of much value to man, such as minnows, chubs, and suckers. Because of a fish diet, its flesh is rank and strong.

The merganser is essentially northern in its distribution and breeds in the far north and migrates southward on the approach of the colder season. The dark green glossy head of the male, and the

crested head of the female identify them as mergansers, for this is the only American duck the female of which is crested while the adult male is not. It is a fresh-water bird, rarely seen on salt water except when driven there by very severe freezing weather.

This bird is also called the red-breasted merganser, sawbill, Indian, or pied sheldrake. It is very much like the American merganser. In the case of the latter, the female is larger, the crest is single where it is double in the red-breasted. In the red-breasted, too, the feathers on the side of its mandible extend forward, forming a decided angle. The position of the nostril, however, is the best mark, being nearer the base of

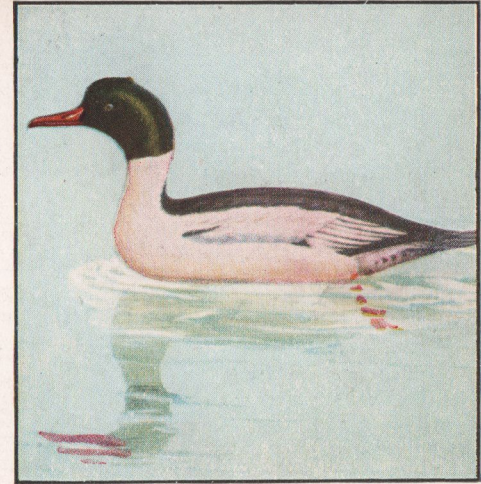
Merganser—Continued

the bill in the red-breasted merganser.

The mergansers are often observed to hunt in company, a flock often advancing with wide, extended front, driving the fish before them and diving simultaneously so that whichever way their prey may go, there is a merganser there ready for it.

The nest is built of grass and roots and is lined with down. It is usually placed in a hollow of the bank near water; but some species prefer the greater security of a hollow tree. The female alone hatches the eggs and the male watches near the nest. From eight to fourteen eggs are laid, and the young enter the water as soon as they are hatched.

This species breeds from the Northern states to the Arctic regions, and it winters from the Great Lakes as far south as the Gulf of Mexico.



MERGANSER

MALLARD

(*Anas platyrhynchos*)

Length, 22 to 24 inches

The mallard is commonly known as the "wild duck" of the world. Nearly all varieties of the domestic duck have been derived from this species. Other ducks are numerous in certain lands but the mallard occupies most of the northern hemisphere and is abundant wherever it has not been destroyed or reduced in numbers by man. Wild mallards have furnished mankind with countless tons of food from time immemorial and domesticated mallards have provided us with vast quantities of eggs, flesh and feathers for thousands of years.

The description of the mallard is as follows: The head and upper neck are glossy green, there is a white ring around the neck just below the green. The

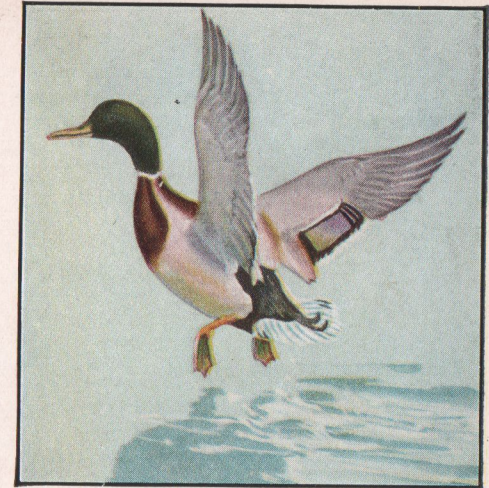
lower neck and breast are purplish chestnut; under parts and scapulas are grayish white. The back is grayish brown. The rump, crissum, and tail coverts are rich black. The female has a head and neck which are buff in color, streaked with fuscous, darkest on the crown, and a line on the side of head through the eye; under parts ocherous buff. The bill is orange ocher. In summer the male resembles the female.

The mallard is a wise, handsome and strong duck. It is the noisiest of ducks when in security and its loud quack has become typical of the duck the world over. It is a hardy duck, remaining in the north until the ponds and rivers freeze, when it begins its southward journey, and

Mallard—Continued

spends the winter mainly in the Gulf States in northern Mexico, and along the Pacific coast.

Like all fresh-water ducks the mallard is largely a vegetarian, but it prefers soft, succulent, vegetable matter when such is to be found, and probably cannot thrive without a considerable portion of animal food as well. The nest is usually placed on the ground near a marsh or in a tussock of grass, and, more rarely, among the bushes on some near-by hillside. The female nests very early in the season, lines the nest and covers the eggs with down, and rarely leaves them until the young are hatched. The eggs are six to ten in number, smooth, of a pale greenish white, or yellowish drab. The young soon take to the water, where they are watched over and defended by the female.



MALLARD



GREEN-WINGED TEAL

GREEN-WINGED TEAL (*Nettion carolinense*) Length, 14 inches

The teal is sometimes referred to as the bantam of the duck tribe on account of its smallness. The swiftness with which it flies is marvelous and it is astonishing how quickly it can vault into the air when frightened. It is a graceful and charming bird. The green-wing and the blue-wing are the two teals of North America which are well known and widely distributed. Of the two the green-wing is the hardier, lingering in the northern states late in the fall and even at times well into winter, as long as there is any open water at all in ponds.

The green-winged teal is fond of wild oats and rice, and eats seeds of various grasses and weeds. It also eats insects, crustaceans, worms and small snails.

The nest of a teal is difficult to locate. It is on the ground, usually in a thick growth of grass or among willows. It is constructed of dry grass and lined with feathers and down. There are generally eight to eleven pale buff eggs in the nest.

BLUE-WINGED TEAL (*Querquedula discors*) Length, 16 inches

The blue-winged teal resembles the green-winged teal in many ways. One difference is that it is less able to endure the cold. Before the heavy frosts of late autumn arrive, it is well to the southward. Many of these birds remain all summer to breed in Louisiana. It is quite common to find them in the summer on the open prairie regions of the Northwest. The blue-winged teal does not go so far away from the water to select its nesting place as the green-winged teal. It generally selects a thick growth of prairie grass of the preceding year's growth, only a few rods back from the shallow marshy sloughs. Sometimes the nest is placed half a mile away from water. It is constructed of grass and weed stems and lined with feathers and down. The eggs are eight to twelve in number and pale buff in color.



BLUE-WINGED TEAL

PINTAIL (*Dafila acuta*)

Length, 24 to 30 inches

This duck has been termed the grayhound among waterfowl because of its agility and swiftness in flight. The pintail becomes readily accustomed to man and the young are easy to rear and grow up very tame. It is hardy and arrives early in the spring hardly before the ice is out of the lakes. Shallow ponds are preferred by the pintail and it is fond of marshy areas where grass and sedge grow from the water. It is a beautiful creature and ranks near the mallard in popularity and abundance. Its slender form and long neck give an air of grace to its movements. The description of the pintail is as follows: The head and upper neck are rich brown, turning to black on the nape. It is glossed with green and

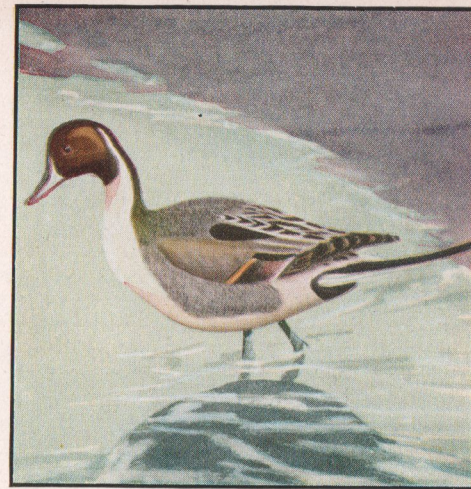
reddish brown on the sides of the back head. The upper parts in general are waved with grayish white. There is a white patch on sides of rump and the tail feathers are gray except the longer central pair which are black. The female's head is dingy white, the upper parts are brownish black, the feathers are grayish white, the under parts are also dingy white. In the sloughs and streams, near where these wild ducks breed, the mated pairs seen swimming about are beautiful to behold. The nest is usually in dry grass or in a clump of weeds. Small dry islands are favorite locations. Seven or eight eggs are commonly found. The females are good mothers; when they have hatched the young ones, they

Pintail—Continued

lead them to water and teach them how to feed, dive, and hide among the water plants. Ducks are fond of various kinds of vegetable food, but they particularly like grain, especially wild rice. Many persons prefer the meat of this duck to any others.

It usually arrives for the spring and summer in March. It begins its southward trend in November. It makes its winter home in Mexico and Central America. In the spring the drake often gives voice to soft low notes which seem to float from deep down in the throat. These are its courting notes.

The mallard and pintail are numerous in most parts of the northern hemisphere except where man has reduced their numbers.



PINTAIL

CANVAS-BACK

(*Marila valisineria*)

Length, 24 inches

The canvas-back is one of the favorite ducks of the hunters who like to shoot waterfowl, for it is both handsome and tasty. Although it has acquired a great reputation for the flavor of its flesh, it is probable that this characteristic taste depends upon the local supply. The canvas-back feeds on various water plants besides the spicy wild celery and therefore the flesh may acquire other flavors.

Wonderfully agile, graceful and speedy in flight, this fascinating duck can also dive leaving one to guess where it may reappear. The canvas-back breeds in marshes and sloughs of the Northwest and up into the wilds of Canada. Its nest is a semi-floating pile of dead stems, hidden among a clump of reeds or rushes,

always in vegetation growing from water. It resembles a deep wicker basket lined with dark gray down. The eggs are usually eight to eleven in number and are lead-bluish in color with some olive tinge. The ducklings are of a decided yellow-olive color.

The description of this species for the male: The head and neck are reddish chestnut, the crown, foreface, and chin strongly tinged with a sooty color; the lower neck and foreparts of body are black, the back, scapulas, wing coverts, and under parts are grayish white. In the case of the female, the upper parts are grayish brown, sides of head and neck are tinged with reddish brown, the throat mostly gray.

Canvas-back—Continued

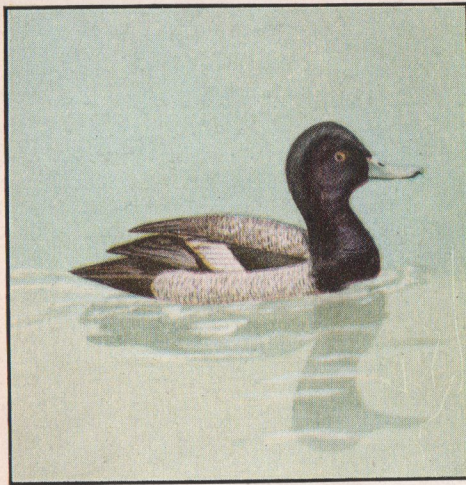
One of the principal lines of migration of the canvas-back is southeast across the country from the breeding grounds of the Northwest out to the Atlantic coast at Chesapeake Bay. This is a famous hunting ground for them and a noted winter resort of the species.

The breeding place of the canvas-back is from North Dakota and Minnesota northward to Alaska. It winters near the Great Lakes, to Chesapeake Bay, and even as far south as Texas.

There is no duck better known than the canvas-back, none which the hunter is more eager to go a-hunting for. Yet this duck is shrewd and is not easily made victim. However, there is no question but that this species is not as abundant as in years gone by, and it is probably but a question of time when the canvas-back will be hard to find in the wild.



CANVAS-BACK



LESSER SCAUP DUCK

LESSER SCAUP DUCK (*Marila affinis*)

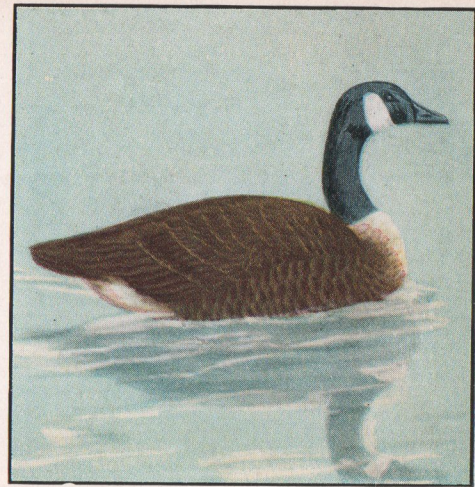
Length, 17 inches

This marine duck can be seen in great flocks just off shore in harbors or bays in winter and early spring all along the Atlantic coast from Long Island to Florida. It feeds largely on mollusks and sluggish fish which are obtained by diving. When a flock of lesser scaup ducks settle on the water over some mussel bed or clam-flat, they are soon diving actively. Other flocks see them and join in until there may be many thousands. The purple iridescent heads of the male and the white penciled backs glisten brilliantly in the sunshine. The nest is built in either weeds or grass on a dry shore and not over water like the nest of the canvas-back. It is generally so near the water that the female can slip into it from the nest. The first young are seen swimming about in the middle of July.

CANADA GOOSE (*Branta canadensis canadensis*)

Length, 35 to 40 inches

The V-shaped bands of these birds high in the sky, as they migrate southward in autumn, is a familiar sight to nearly every one. Owing to their great powers of flight they cover immense distances in their annual migrations, nesting well within the Arctic circle, and ranging far to the south in winter. In the East large numbers of Canada geese assemble on the favorite feeding grounds in the Chesapeake Bay and in the sounds of North Carolina. Their food is almost wholly vegetable. In water they consume seeds and roots of aquatic plants. On land they feed on grain obtained in the stubble fields. The nest is invariably found on the ground and is generally lined with down and soft grasses. The eggs are dull white and from four to eight are generally laid. Shortly after the young are hatched the parents shed their feathers, this moulting becoming frequently so extensive that they lose the power of flight.



CANADA GOOSE

WHISTLING SWAN (*Olor columbianus*)

Length, 4½ feet

Like the goose the swan is very widely distributed, the range including much of the Arctic region. On the coasts and islands in the far north the whistling swan builds its huge nest of reeds in which are deposited about six dull white eggs. When the female leaves the nest she covers the eggs carefully with the mossy nest lining to insure warmth and safety. The eggs are hatched by the last of June and the young are led to the water where they feed and swim. After the eggs are hatched, the parents molt and then are unable to fly. At this time the natives hunt them and kill large numbers. When the swan migrates it makes few stops and flies so high that it is not noticed. There seems to be

no safety for the swan in this country unless it flies very high or far out in open water. Such refuges are found on the broad waters of the south and some of these swans still winter in large numbers on the Carolina coast.

The plumage of the whistling swan is entirely white, with a rusty tinge at times about the head and breast. The bill is black, there is a yellowish spot in front of the eye. The feet are black, the iris is brown. The young are ashy gray, with brownish heads and upper necks.

The whistling swan is also called the American swan.

This swan is one of many of species of wild birds such as the duck, swan,

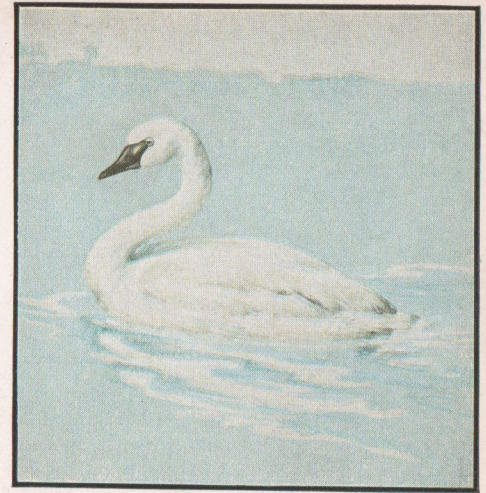
Whistling Swan—Continued

and goose, which are the desire and the dream of many hunters. Especially has life been exceedingly difficult for the whistling swan. Mention has been made above of the ruthless slaughter by natives during the molting stage.

Its cousin, the trumpeter, is larger and heavier, the latter having twenty-four tail feathers as against the twenty of the whistling swan.

Its food consists mainly of the seeds and roots of water plants, though it is accused of destroying great quantities of fish-spawn.

The song of a dying swan has been regarded as a pleasing myth for many years. Some persons claim to have heard the plaintive and musical song of a mortally wounded swan.



WHISTLING SWAN

FLAMINGO (*Phoenicopterus ruber*)

Length, 4 feet

There are among the wild birds, as among the common birds, some that are favorites. This is true of the flamingo. Much has been written about this species, for it is one of the favorite birds of poets and writers and fits into descriptions and scenes. Though apparently awkward, especially when one sees the stork similarity, yet in flight it is a gorgeous creature and its coloring lends to what has been termed "a poem in flight." Like the ducks and geese, the flamingo is a group creature, and is almost always seen as one of a large flock. Sailors have spoken of the flamingo, as the sight of one has become a rare occurrence worthy of mention.

It is like the heron in its mode of liv-

ing but differs in that it has shorter neck and legs and is smaller in size.

This beautiful rosy pink bird is rare in the United States but occasionally it is seen at the extreme south end of Florida. The flamingo, a peculiar web-footed bird, may be regarded as an intermediate between the storks and the ducks, the long legs and neck giving it a resemblance to the former, while the webbed feet connect it with the latter. This bird has an extraordinary bill, which is large, swollen and bent upon itself so that the upper half is turned downward when the bird feeds. With its head twisted and crown downward the bill is thrust into the mud in an inverted position, the point being directed backwards. In this way the bird

Flamingo—Continued

seeks its food, which consists of frogs, shellfish, mollusks, and aquatic plants, strained from the mud by a sieve apparatus in the bill. The flamingo lives and migrates in large flocks, warning one another of danger by a loud trumpeting note, which is the signal for the flock to take wing. It lives in mud-flats or inundated marshes, where it spends most of its time wading about. It builds an unusual nest about a foot or more in height out of mud and marl scraped together and patted into shape with both bill and feet. In this nest one or two chalky-white eggs are laid and the flamingo sets on this high nest and doubles its legs under it while incubating the eggs. The young do not fly until they attain their full growth, though they can run rapidly and swim with ease shortly after birth.



FLAMINGO



BITTERN

BITTERN
(*Botaurus lentiginosus*)
Length, 24 to 34 inches

The bittern is a bird of the heron family and is often referred to as the genius of the bog. It differs from the heron in its lesser size, shorter neck, comparative shortness of the legs, and superior length of toes. Its haunts, food, and manner of life closely resemble those of the heron. The plumage is tawny brown of various shades, excessively variegated everywhere; the neck is striped with dull yellow and has on each side a dark patch. The voice of this bird is a droning, thumping noise, which has been likened frequently to the working of an old-fashioned pump handle. The bittern is a past master at concealment and can stand unnoticed among the grasses and reeds with its bill cocked up at an angle. It feeds on frogs, crawfish and other small aquatic life which it catches in shallow water. The nest is loosely constructed of dead grass and rushes and is located on the ground in the swamp. Three to five brownish-gray eggs are laid.

GREAT BLUE HERON
(*Ardea herodias herodias*)
Length, 42 to 50 inches

The great blue heron is the largest of the truly American herons and it inhabits all parts of North America. It is a stately, dignified and interesting bird with a wing-spread of nearly six feet. Its color is beautiful slate blue with black flowing plumes. It can be found by the side of streams, lakes, and the seashore, usually alone. Fish form the bulk of its food, but it also eats frogs, small reptiles and insects. It roams most in the morning and evening in search of food. The heronry, or breeding place, is usually found among high trees, and the same breeding place is used by successive generations if they are unmolested; frequently several species of herons congregate at a favorite breeding place. The large nest is made of twigs and sticks, lined with rushes or grass. The eggs, usually three or four, are of a fairly uniform greenish-blue color. The cry is sort of a "crank, crank" uttered in a hoarse voice.



GREAT BLUE HERON

GREEN HERON

(*Butorides virescens virescens*)

Length, 18 inches

This gawky, stupid-looking bird is one of the best-known members of the family in the United States. The name refers to the beautiful deep bronze-green color of the upper parts. At a distance the little green heron does not appear to be green, in fact, the older birds are more likely to show a bluish cast from the plumbeous shading of the back and wing quills. This species may be distinguished from the bitterns, one of the other small herons, by the difference in color, the bitterns being of a yellowish brown or ochereous blue. Most people think it very awkward because when seen the bird has just uttered a harsh cry and fluttered clumsily along in attempting to start a flight that ends shortly as it alights on a

near-by perch. Its habits are quite different when looking for food, for the green heron also loves fish and is just as expert in catching them as its relative, the great blue heron. The little green heron or "fly-up-the-creek," ranges throughout temperate North America and southward somewhat breeding nearly everywhere. It usually nests in pairs or small communities and mostly in thick brushes or clear trees; in other localities it sometimes breeds with large species in heronries. The nest is a slovenly affair constructed of small sticks and is considerably smaller than the nest of a crow. It is so loosely put together that the eggs can often be seen from the ground. The voice of this bird is shrill,

Green Heron—Continued

much shriller than the voice of other herons. It is less harsh, too, than those of others in the family—it has been described as a guttural *qua-qua*. The species is not hard to observe because of its diurnal habits. In the central states, the arrival of this species is in April. It leaves for its winter home in September and October. The pale greenish elliptical eggs are from three to six in number. Its food consists chiefly of small frogs, minnows and snakes, for which it searches by day as well as by night along the shallows of streams, where its harsh cry of alarm is often the first intimation of its presence. When flushed to a perch, it has a curious habit, if it sees it is observed, of suddenly becoming absolutely rigid, or "freezing" to use the common term.



GREEN HERON

BLACK-CROWNED NIGHT HERON

(*Nycticorax nycticorax naevius*)

Length, 26 inches

The black-crowned night heron or squawk is common throughout the United States and Canada in summer, and in the winter it migrates far into South America. The squawk is a little over two feet long. The young are brownish, the adults deep green and blue-gray above with two or three very long filamentous white plumes coming from the head. The night heron is more active after dark than any other species and is seldom seen abroad except in the dusk of the evening or on cloudy days. As twilight deepens it may be seen making its way to its favorite feeding place which may be a shallow tidal creek, the edge of a pond, a swamp or a pool in a swamp. Here it hunts for food usually alone and carries it far away

to the young ones. It does not stand rigid and knee deep in water like the great blue heron when hunting for food. It moves about briskly, holding its head down and its neck curved, all ready for a quick stroke at a fish or a frog. This night heron collects in large colonies during the nesting period and the heronries are usually located in an isolated part of the woods. The nest is located in a tree and is a loosely constructed affair of branches and twigs. In the nest are usually three to six pale sea-green eggs. A pair of night herons will frequently raise two broods of young in one season.

The black-crowned night heron is of medium size and is similar to the common bittern. It is, however, shaped differently

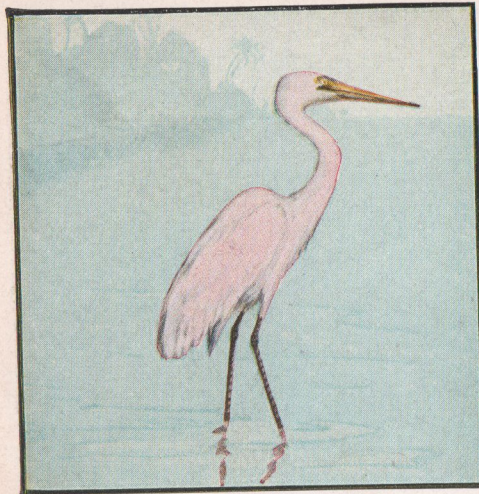
Black-crowned Night Heron

—Continued

than the other herons. The body is stouter and the neck and legs are comparatively shorter than those of other herons. A full description of these birds is fitting here. The top of the head, back, and scapulas are a glossy greenish black. The front and sides of head and lower parts generally are white. The rump, wings and tail are ashy gray. The bill is also black, the lores greenish, the legs are yellow, and the eyes red. The young are grayish brown above and are spotted with tear-shaped spots of buffy white. The under-parts of the young are grayish white streaked with brown and the legs are a dull grayish green, while the iris is a grayish brown.



BLACK-CROWNED NIGHT HERON



EGRET

EGRET (*Herodias egretta*) Length, 41 inches

This white heron has been brought to the verge of extinction by plume hunters. The long silky filaments of the back are hardly to be seen, except about the mating and nesting season, which varies from early spring to mid-summer according to climate; both sexes possess this train, and many were shot to obtain these feathers for ornamental purposes. They were highly esteemed by the feather-trade and were known by the French trade name "aigrettes." These feathers are a foot or more in length and are straight. The entire plumage of the bird is white or partly creamy color. Formerly the egret was found breeding from Florida to New York and along the shores of the Mexican Gulf to Texas. Its food consists of small quadrupeds, small fishes, frogs, lizards, snakes, and insects. It breeds like other herons. Egrets often associate with other herons and build their nests of twigs in the tops of bushes or on the limbs of cypress trees.

SANDHILL CRANE (*Grus mexicana*) Length, 4 feet

This bird when standing erect is nearly as high as a man. Most of the cranes have singularly loud and resonant cries, this being especially true of the sandhill crane. When in flight a crane may be distinguished from a heron by the habit of carrying the neck extended at full length. It is similar to the heron in having the head more or less bare, while it differs from it in that the plumage is dense and compact, rather than loose. The sandhill crane is skillful, strong and quick to use its long and dagger-like bill in defending itself. This crane spends much of its time on dry land and gets there much of the food it seems to relish. It is often found on plains and prairies, sometimes in small flocks but oftener in pairs or singly. Its diet includes a large percentage of roots, bulbs, and grains. It is also fond of frogs, lizards, snakes, and mice. The cry of the sandhill crane has the uncanny quality of the loon but is even more pronounced.



SANDHILL CRANE

SORA
(*Porzana carolina*)

Length, 9 inches

The sora or Carolina rail is a bird of mystery and little is known about this common bird. It is one of the most abundant birds of North America and has been sold in the markets by the thousands for more than a century.

The upper parts of the body are olive-brown, the feathers have blackish centers, the back and scapulas are streaked with white. The forepart of the head, the chin, and the throat are black, the sides of head and neck, together with the breast, are bluish gray. The wings are dusky brown, the belly and under tail coverts are white, the sides and flanks are barred with a slaty black and white. The bill is light greenish yellow, and the legs are greenish, while the iris is brown.

In the young, there is no black on face, nor blue slate on foreparts. The throat and belly are whitish and the neck and breast light olive brown.

It is a curious bird and resembles a tiny bantam hen. It has short wings, long toes which afford support on the mud, and its narrow compressed body enables the bird to move swiftly among the stems of grasses and weeds. Hence the expression "thin as a rail." It seldom flies, as its wings are too short but it can run rapidly. Its nest is built in an elevated clump of grass, and over it large stems of grass are twisted in a way to form a canopy. The eggs vary from six to fifteen in number, and are buffy white, but deeper in shade than those of the

Sora—Continued

Virginia rail and are heavily spotted with brown and purple. Rails make for themselves dark and winding passages through the weeds, grasses, and rushes, along which they may run swiftly to escape an enemy, and at the same time remain concealed from winged foes. They are very curious, however, and have been known to approach a man when he was lying still.

The rail is fond of many kinds of insects and worms and it eats snails and other kinds of aquatic life; also parts of water-plants. The sora, like many other swamp-birds, feeds largely in autumn on the seeds of wild rice. The migrations of this bird are quite mysterious. Some frosty mornings the meadows suddenly are found to be alive with them. Then the gunners get plenty. Their peculiar flight makes them easy targets for gunners.



SORA

COOT (*Fulica americana*)

Length, 16 inches

Many people think that the coot is a duck, because it is usually seen swimming alone or with ducks. It belongs to the rail tribe. The coot is very versatile with its feet and can run, walk, swim and "skitter." The coot's favorite haunts are the shallow ponds or bogs, where reeds and rushes grow from the water. In these places the nest is built as a platform of dead stems woven together in wicker-basket fashion, partly supported by the stems of the water plants. The eggs, generally from eight to fourteen in number, are distinguishable by the small "pepper-spot" markings evenly sprinkled over them. One egg is laid each day and incubation starts with the first egg, and one by one they hatch.

The young promptly leave the nest and swim off to be cared for by the other parent. The young are covered with a sort of black down with orange-colored hairs projecting from the neck and head. The head is bald and the bill red. The under plumage of the coot is very dense for a water bird. The toes have large rounded flaps or lobes on each joint. The general color of the coot is dark slate, the head and neck are almost black, and the back is tinged with olive. The marginal under tail coverts, edge of wing, and tips of secondary wings are white, the feet are olive green, and the bill whitish. The eyes are red, and the frontal shield and spot near the tip are deep reddish brown.

Coot—Continued

The coot is known by the following names: the mud hen, meadow hen, water hen, crow bill, hen bill, and crow duck. Its flesh, though palatable, is inferior to that of the sora and our better ducks.

When in the water, the coot is usually silent, but it sometimes utters a low *cluck*, when gathered in numbers, a group sometimes engages in a confused gabbling and clattering. When the coots migrate, they may be seen in small colonies or often singly. They breed from the northern states, north, and in winter are abundant in the swampy parts of the southern states where they gather in large flocks.

The diet of the coot includes insects, worms, seeds, and tender grasses, as well as small fishes, snails, and aquatic insects.



COOT



RED PHALAROPE

RED PHALAROPE

(*Phalaropus fulicarius*)

Length, 8 inches

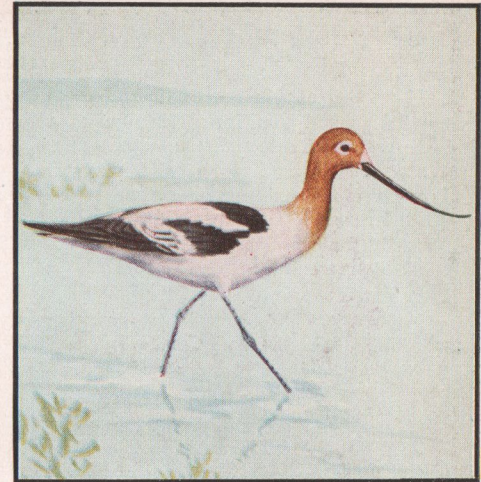
A peculiar and interesting feature of the phalarope family is that the usual difference between the sexes of most species is reversed in the case of the phalarope. The females are not only larger and have the more striking plumage, but they are the aggressors in the courtship performances and the males do the nest-building and incubate the eggs. The red phalarope is comparatively a small bird, with noticeably thick duck-like plumage to protect its body from the freezing waters in which it is often found. The bill is generally as long or longer than the head with a hardened and pointed tip. The toes are equipped with marginal webs. The legs are long and slender. The wings are long, flat, and pointed, and the tail short, stiff, broad and rounded. The nest is merely a depression in the ground thinly lined with grass. Three or four eggs are laid but generally about two are hatched and raised. Its food is worms, insects and crustaceans.

AVOCET

(*Recurvirostra americana*)

Length, 18 inches

The avocet is comparatively a large bird, with exceedingly long legs, long neck and a long slender bill, curved more or less upward. It has a rudimentary hind-toe and the front toes are webbed, in which latter respect it differs from other wading birds. The wings are rather short and the tail short and square. The plumage is thick and duck-like. The hunters call this bird "blue shanks" because of its long bare legs. The avocet's nest is a depression in the ground in the vicinity of water and is lined with grass. The young upon emerging from the spotted eggs are able to run almost at once. The wading bird searches for food by moving its head to and fro sideways while its bill is passing through the soft mud. It can also catch flying insects by running rapidly for them with outstretched wings. Like several other shore birds the avocet is very useful in destroying diving beetles, which prey on insects that serve as natural food to young fish.



AVOCET

WOODCOCK (*Philohela minor*)

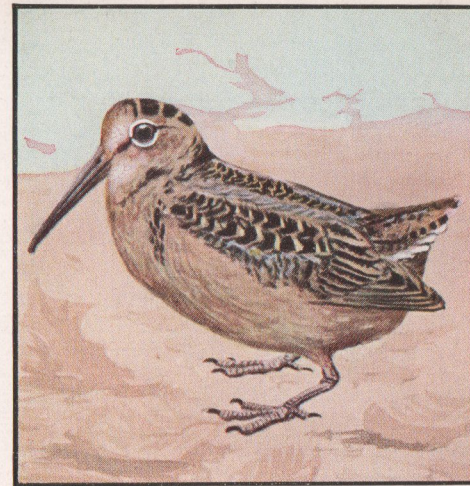
Length, 11 inches

The woodcock is greatly prized as a game bird and to this fact is due, to a large extent, the decrease in its numbers. When the bird is properly cooked and brought to the table, there seems to be no difference of opinion among epicures. This bird loves to sit quietly in a shadowy retreat during the day. It is generally found in the swamps, but often in open upland woods. "Big-eyes," as it is sometimes called, is by no means confined to these retreats but is often found nesting well up in the hills. The woodcock forages for its food at night. It loves angle worms and is also fond of grasshoppers, army worms, cutworms, cabbage worms, cotton worms, horse-flies, and mosquitoes. The development

of land for agricultural purposes has restricted the breeding grounds, and this is an indirect, but, nevertheless, another cause for their lessening numbers. The woodcock is brown on top and pale orange brown below. The head is large and the neck short. The eyes are also large and set far back and high on the head. The bill is very long and compressed and the lower section is shorter than the upper into which it fits at the tip. The nest is usually located on the ground, on bushy bottoms, or in open woods not far from water. It is often just a depression in the leaves without even a lining. The eggs, three or four in number, are buff or grayish-white thickly spotted with pale reddish brown.

Woodcock—Continued

It is during the mating season and until the period of incubation is almost finished that the cock performs his very peculiar song and evolutions during the earlier part of the evening and sometimes in the early morning. He springs from the ground and ascends in a spiral course, whistling, piping, or chipping as he mounts in the air, until a considerable height is reached, when he sweeps about in a wide circle and descends. All this time he is uttering a mellow and rapidly increasing chipper or warble until he reaches the ground again, at which time he lowers his head and cocks his tail and utters a harsh, nasal, *peenk, peenk*, accompanied by an uncouth waving motion of the body. He then looks about expectantly. Should his mate not appear, he repeats the serenade until quite late in the evening.



WOODCOCK

WILSON'S SNIPE (*Gallinago delicata*)

Length, 12 inches

The Wilson snipe is easily identified. The dark, striped back of the snipe combined with its long bill and white belly can be seen by a quick eye as the bird springs from its grassy coverts in the swamp.

When there is no enemy in sight, its walk is nimble, it holds its head erect as well as its body, the bill pointing downward. Often it assumes the attitude of a sandpiper. Should its foes appear, it crouches low and remains motionless, and is perfectly concealed in the grasses.

Sportsmen are very fond of this bird, and refer to it familiarly as "Jack Snipe." It is justly a favorite game-bird and presents qualities which fully test the skill of the sportsman. From the culinary

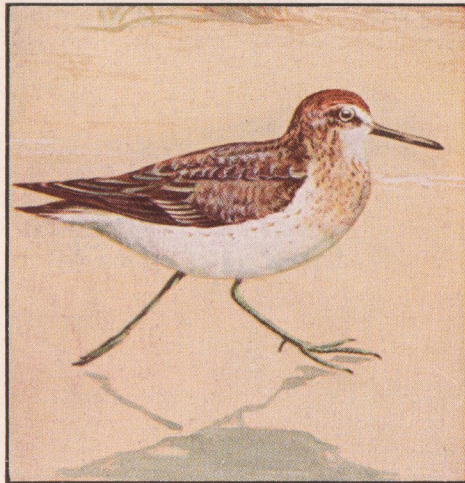
standpoint it is truly a delicacy. Its color is a mottled mixture of various browns, black and white giving a dark effect above and white below. Like most species of the family, it breeds northward, from the extreme northern United States to beyond the Arctic Circle. It arrives there in May or thereabouts, dependent on how far north the location may be. Some time in October and even as late as November, it begins to be too cold for these birds, and they start on their way southward. There have been instances where these birds have not departed southward for the winter, but this was usually where the weather was not too severe. It frequents open marshes, both fresh and salt and is consequently chiefly

Wilson's Snipe—Continued

an inland bird. Night is its chief season of activity, when it flies and migrates and to a great extent feeds. The soft ground in its haunts is probed in all directions for worms, insects, larvae, and similar creatures which, with snails and slugs, are consumed in great quantities. When flushed the snipe utters a loud, rather harsh note and flies rapidly and very irregularly for twenty or thirty yards before setting a direct course. During the mating and nesting periods these birds are said to perform remarkable aerial evolutions, often dropping swiftly from a height with a peculiar drumming sound caused by the air rushing through the wings. The nest is a mere depression in the ground lined by a few grasses or leaves, usually in the shelter of a tussock or bush in a bog. The eggs are generally four in number, grayish olive, tinged and blotched with brown.



WILSON'S SNIPE



LEAST SANDPIPER

LEAST SANDPIPER

(*Pisobia minutilla*)

Length, 6 inches

The tiniest of its tribe, the least sandpiper, is also known as the stint or peep and cavorts with the semi-palmated sandpiper which it resembles closely. The least sandpiper is more apt to be found on marshes, while the other prefers the beach. This bird is common in May and again in August and the first part of September quite generally over the country, wherever there are large bodies of water. The least sandpiper breeds in the far northwest and on the eastern coasts, well to the north. It wings its way to Sable Island and elsewhere in Nova Scotia and on the Magdalen Islands in the Gulf of St. Lawrence. In migration is it found over the entire continent. This sandpiper is smaller than the semi-palmated sandpiper and has a reddish-brown tint in its plumage, while the other tends rather to gray. This bird is a gleaner rather than a scavenger and its food consists of larvae, worms, minute shellfish and insects.

SEMIPALMATED SANDPIPER

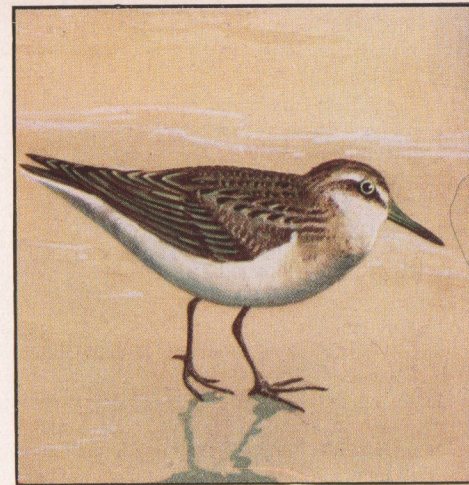
(*Ereunetes pusillus*)

Length, 6½ inches

This small, alert, speedy-looking bird is the semipalmated sandpiper. This bird frequents the shores of the ocean, lakes, and rivers where it probes the mud with slender, sensitive bill and extracts from it various kinds of worms, larvae and crustaceans. It is more of a sand bird and less of a mud bird than the least sandpiper. A constant associate of the least sandpiper is the semipalmated sandpiper, which it resembles in distribution, habits and appearance, so closely that the two are frequently confused.

This bird will run on the sand in great haste, stop abruptly and then hurry off again. It is constantly on the move, but notwithstanding its great activity, it becomes very fat when food is abundant.

The larger shore-birds have been pretty well shot off, and in most parts of the country are found in small numbers. The least and semipalmated sandpipers are now the commonest of their family being the least attractive to hunters.



SEMIPALMATED SANDPIPER

GREATER YELLOW-LEGS

(*Totanus melanoleucus*)

Length, 11 inches

The yellow-legs is another very popular shore-bird. It is greatly prized as a game-bird and has been hunted to such an extent that its numbers have been greatly depleted. This bird is still very prominent in groups of shore-birds of which the yellow-legs is the largest with the exception of the Hudsonian Curlew. It generally acts as the sentinel of shore-bird assemblies and keeps a sharp lookout all the time. It is the first bird to sound an alarm. With a shrill cry this bird leaps into the air and flies away while many other birds follow. The yellow-legs is extensively hunted, although its flesh does not rank so high as that of some other shore-birds. The hunters generally stick painted wooden models of this bird

in the mud a short distance from the blind. This attracts the birds and they are generally shot over these wooden models. The food of the yellow-legs consists of minnows, insects, and other small forms of life appearing around the water. This bird loves to be around mud flats and bars that are exposed at low tide. It is also found around ponds, lakes, and rivers. The bill of the yellow-legs is longer than the head. It is bent slightly upward from the middle. The legs are very long, the tarsus one or one and one-half times the middle toe. The legs are yellow, the bill is black, the plumage blackish, white and grayish brown. The rump and tail coverts are white and are imperfectly barred. The tail varies from

Greater Yellow-Legs—Continued

white to gray. In the summer time there is a change, the upper parts are varied with black, gray, and white, the under parts are white spotted and barred with blackish, except on the belly.

The yellow-legs species is wilder and more suspicious than any of the other wild birds. The habit referred to elsewhere in these notes of sounding an alarm has given this bird the name of "Telltale Tattler." The species sometimes gathers in large flocks but usually travels in small companies of six to eight birds. The lesser yellow-legs formerly was one of the most numerous of all the shore-birds of North America, and still holds its numbers better than many other species. Its habits are similar to those of the greater yellow-legs, and it feeds largely on insects, including ants.



GREATER YELLOW-LEGS

SPOTTED SANDPIPER (*Actitis macularia*)

Length, 7 inches

There is no shore-bird more widely and intimately known all over the country than the spotted sandpiper. Like most other shore-birds, it is a great traveller. It is erratic in its movements and desires. It will run on the sand in great haste and then stop abruptly and wag its tail, and then hurry off again. It is easily recognized as it runs along the ground or by the margin of a pool or stream by its characteristic gait. All sandpipers are clad in grays and browns above and in white below. The spotted sandpiper has conspicuous streaks and spots sprinkled over the white plumage of the underparts. It is almost never at rest, for it has a nervous habit of tilting its body incessantly and therefore is nicknamed

"teeter." This sandpiper is not confined to the vicinity of open water, but is often seen in meadows, and even on dry uplands, particularly in cultivated fields where crops are growing. Most shore-birds breed far to the North, but this one species is impartial in its topography. During the mating season, the male struts about before the female swelling up its breast until it finally bursts forth into the shrill pipe which are the more familiar notes of its flight. It is then that they rise several feet in the air and at the end of the song drop down into the meadow again.

The flight of the sandpiper is not like that of other members of the family; it is performed by well-measured wing

Spotted Sandpiper—Continued

beats. The nest may be found in many places, but the preferred place is just up from the shore of a pond or stream under a bunch of grass or a clump of weeds. The nest is generally quite well hidden. The eggs, four in number, are creamy-white sprinkled with dark brown spots, especially at the larger end. The usual food of the spotted sandpiper is insects, but it is not limited to aquatic ones because this bird frequents the field where it consumes grasshoppers and locusts. This bird winters on the southern coast but many of its tribe pass on farther into Brazil and Peru. In summer it is found from Hudson Bay and Alaska south, arriving for the summer as early as April and departing in September and early October.



SPOTTED SANDPIPER



LONG-BILLED CURLEW

LONG-BILLED CURLEW

(*Numenius americanus*)

Length, 26 inches

The long-billed curlew, once abundant, now occupies a rather restricted range in the northwest. It is so large and conspicuous a species that it has been much sought after by gunners, and so diminished in this way. It seems to prefer the prairie regions where the soil has an alkaline tinge and the sloughs are surrounded by typical alkaline flats. It is not only conspicuous in size but in loud high-pitched, trilling cries. The nest is a simple hollow in the prairie, amid rather sparse grass, lined with dry stems. Three or four very large eggs, grayish-buff spotted with brown, are laid. The nest is hard to find because the male bird gives the alarm when an intruder approaches and the pair fly off together. Though the anxious pair are in evidence, flying and trotting about at a distance and whistling, they give no definite clew as to where the nest is located. The long-billed curlew is useful because it eats locusts and grasshoppers.

KILLDEER

(*Oxyechus vociferus*)

Length, 10 inches

The killdeer is rather noisy and its common cry, which resembles "killdee," may be heard in its perfection when the bird is being annoyed or chased. On the ground it runs about rapidly and in somewhat nervous manner, frequently uttering its somewhat petulant cry. Perhaps you have frightened a killdeer off her nest and have noticed her endeavor by various means to lead you away from her nest, which is simply a depression in the ground. The killdeer is found in open country many miles from the ocean as well as along the coast, for it is frequently seen feeding in plowed fields on worms and grubs. It is active on the ground and is swift in flight. There can be no doubt as to the economic value of the killdeer because it feeds regularly on mosquitoes, the fever tick, crane flies, and many other insects damaging to crops.



KILLDEER

BOB-WHITE

(*Colinus virginianus virginianus*)

Length, 10 inches

No bird is better known to the boys and girls of the country than the bob-white. The quail, as it is generally called in New England, lives on partially open land, where thickets, woodland borders, or fence rows offer suitable cover. The upper parts of the bob-white are varied with chestnut, gray, rusty and black. The throat is white, margined all around with a blackish tint. There is a white line from the forehead over the eye and down the sides of the neck. The under parts are grayish white, the sides broadly streaked with brownish red. The tail feathers are bluish gray. The female is somewhat smaller than the male and its colors are duller. The throat is brownish yellow, the bill of blackish tint,

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and the feet are brown. Throughout most of the year it feeds on berries, seeds and pines and other mast, but also frequents the grain fields, especially after harvest, to glean the fallen kernels. Most of its life is spent on the ground, where it scratches about for a living much like the barnyard chicken. Sometimes when whistling the bird will perch upon fences or trees; but when alarmed it usually runs or flies to cover. The bob-white is cheerful, active, industrious and brave. Both sexes are devoted parents and the male often takes the female's place on the nest. In captivity, the male has been known to hatch, brood, and care for the young. A mere cavity for a nesting place is hollowed from the soil under a bush or

Bob-white—Continued

fence, or in the woods, under a log. The female while laying covers the eggs with leaves when she leaves the nest. From eight to eighteen eggs are laid. The eggs are glossy white and sharply pointed at one end. Two broods are sometimes reared in a season. The young follow their mother from the nest a day or two after hatching. They learn from the very beginning the art of concealment as perfected by the parent bob-whites. The bob-white is so clever in the art of concealment that it seems to disappear before one's very eyes. So many things about the quail are attractive that every one loves it. It is an ideal game-bird and is one of the most sought and generally appreciated game-birds in the country.

The bob-white seldom migrates except for short distances in search of food.



BOB-WHITE

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RUFFED GROUSE

(*Bonasa umbellus umbellus*)

Length, 18 inches

After once having heard a ruffed grouse, one is not likely ever to forget the characteristic sound made by it. This drumming noise is a weird sound in the woods. The partridge, as it is sometimes called, is unlike the bob-white, and does not prefer open country. The wilder traits of this bird take it to the dense woods, far away from man. When approached unexpectedly in its haunt the grouse may rise from under one's feet with the whiz and almost the speed of an airplane. The ruffed grouse spends most of its time on the ground, where it gets the greater part of its food and builds its nest.

It seems strange that this bird should build its nest on the ground where it is

easily accessible to prowlers of the forest. The female covers the eggs and so closely does she resemble the surroundings that even the keen-eyed hawk passes her unawares. Often the nest is sheltered under a log, stump or tree. The female takes good care of the young and follows them watchfully for any enemy. The young scatter through the woods in search of insects. In about a week from the time they are hatched they can use their wings and later learn to fly considerable distances. The mother grouse when frightened from her brood flutters about pretending she is injured, a habit indulged in to attract an enemy away from her young and thus protect her little ones.

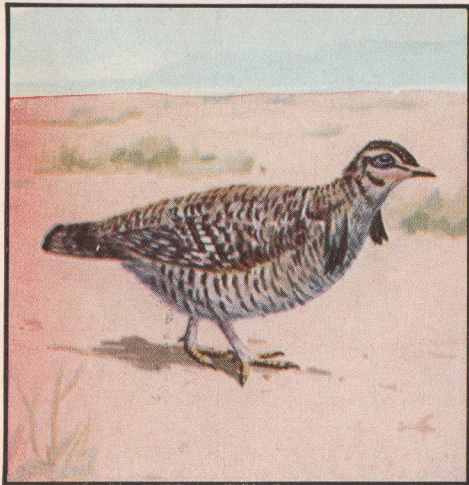
Ruffed Grouse—Continued

Sportsmen are well aware of the fondness of the grouse for wild grapes and apples, and they often find them in places where grapes are plentiful and in old fruit orchards, especially on abandoned farms.

This bird is especially fond of rough country and neither heat nor cold seem to trouble it. The ruffed grouse is seldom seen except by sportsmen and real woods-lovers, for its life is spent chiefly in thick woods. When it is much pursued it becomes very wary, walking noiselessly away out of sight as it hears an approaching step. The ruffed grouse is so persistently shot that in the East there are now few districts where good shooting exists. In the less thickly populated districts, however, this bird is fairly abundant. Some attempts have been made to propagate the ruffed grouse in captivity to restock depleted areas, but these efforts have not yet proved successful.



RUFFED GROUSE



PRAIRIE CHICKEN

PRAIRIE CHICKEN

(*Tympanuchus americanus americanus*)

Length, 18 inches

The prairie chicken or grouse is a beautiful game-bird. The plumage is plain, various browns and yellows with white and black, finely mottled above and more boldly barred below. There are patches of yellow skin on each side of the neck and beneath these patches are air sacs connected with the respiratory system, which can be inflated until the skin is extended to the size and form of half an orange. During the mating season, the males of certain areas gather in the early morning and indulge in queer antics before the females, which are suggestive of a dance. The feather-tufts on either part of the neck are erected like horns, the tail raises and spreads, the wings droop and the bird rushes forward a few steps, pauses, inflates the orange-like air sacs, and with a violent jerking produces the startling boom.

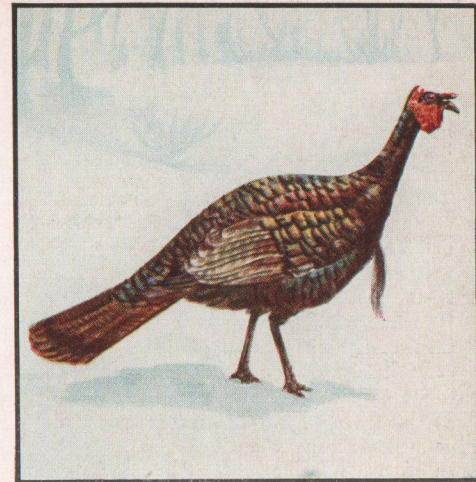
The nest is built of grass and weeds in a concealed spot on the ground. The eggs, gray in color, number twelve to twenty.

WILD TURKEY

(*Meleagris gallopavo silvestris*)

Length, male, 4 feet; female, 3 feet

The wild turkey is a close relative of our domestic turkey. It is a very beautiful bird of trim form and stately hues marked and varied by the blue and black lustre of the plumage. A peculiar tuft of hairlike feathers is suspended from the breast, and the head and neck are furnished with wattles and erectile structures, which under excitement exhibit varying tints and hues. The wild turkey is a bird of the forests, where it lives in small flocks which enter clearings only to feed. They live on the ground mainly and are swift on foot. They scratch on the ground for the nuts, seeds, and insects on which they feed. They are strong on the wing when forced to fly. At night they roost on the trees and are always keen-sensed and alert. The nest is simple and built on the ground, generally beside a fence. It is lined with dry leaves and in it are deposited from ten to twenty-five eggs, which are dirty white with reddish spots.



WILD TURKEY

MOURNING DOVE

(*Zenaidura macroura carolinensis*)

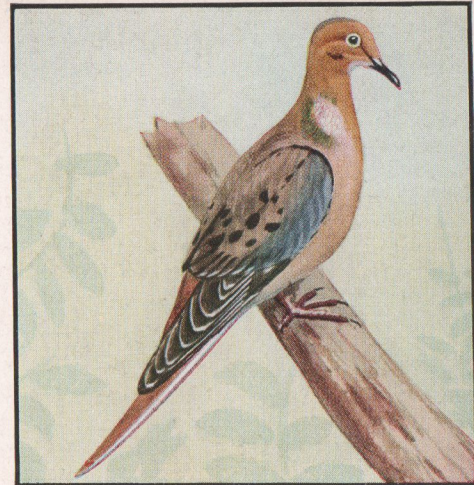
Length, 12½ inches

The mourning dove is frequently mistaken for the extinct passenger pigeon. Its best-known characteristic is its call, which can hardly be considered a song. The dark spot on the side of the neck distinguishes this bird from all other native doves and pigeons except the white winged dove. It may also be identified by the sharp whistling of its wings while it is in flight. The latter has the upper third of the wing white. Perhaps a more complete description of this bird will help to identify it to those who are not already acquainted with it. The tail is long and pointed, and the wings are also pointed. In general form and color it is much like the passenger pigeon, but it is built quite differently. In the male, the upper parts,

including the central tail feather, are bluish gray. The head and neck are overlaid with blue, the sides of the neck with shining iridescence. A bluish black spot is under the ears, the tail feathers, except the middle ones, are grayish blue, somewhat banded with black and tipped with white. The bill is black, the angle of mouth is carmine and the eyes are brown, while the feet are red. The female, as has been said, is smaller and the color is considerably duller. The mourning dove breeds throughout the United States and in Mexico, Guatemala, and southern Canada and winters from the central United States to Panama. Its nest is a poor makeshift, composed chiefly of a handful of twigs thrown together so

Mourning Dove—Continued

loosely that the eggs are in danger of rolling out of it or falling through. This dove is one of the earliest spring arrivals, its appearance being about the same as that of the robin, bluebird and meadow lark. The eggs are hatched within two weeks and three or four broods are reared in a season. The female feeds the young by regurgitation, that is, the young take their food, mixed with a light-colored fluid called "pigeon's milk," from the crop of the parent. The young are slow to develop their power of flight and the mother bird may be seen sitting crosswise the young on the nest with their heads and tails protruding on either side of her body. The mourning dove is a very useful bird, for it feeds extensively on weed seeds and frequently eats insects, especially grasshoppers, but on the whole it prefers a vegetable diet.



MOURNING DOVE

TURKEY VULTURE

(*Cathartes aura septentrionalis*)

Length, 2½ feet

The head of the turkey vulture and the upper portion of the neck are bare. Perhaps they can be best described as a dull crimson. The color becomes bright red on base of bill. The plumage is black and the feathers of the upper parts are margined with grayish brown. The bill is dull white, the iris is grayish brown. This species inhabits tropical and temperate America.

Almost every one has looked in the sky and discovered the dark form of this bird gracefully soaring through the air. No land bird of our country can fly more gracefully and yet few birds seen near at hand are more homely than the turkey "buzzard" as it is commonly called. This bird soars in the sky looking for food

and may discover a dead sheep and then alight to partake of what to it is a good meal. Others of its kind will no doubt discover that the "buzzard" may have left the sky for food and will land and partake of its find as is the general custom among these creatures. Turkey vultures for many miles around may come to the feast. You have often seen these large black birds circling in the sky and soaring on motionless outstretched wings. They are beneficial to the extent that they protect our health by removing birds and animals that have died. Although they are not pleasant birds to see or think about, nature has found it necessary to have such creatures created for the purpose of the all-enveloping viewpoint.

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Turkey Vulture—Continued

The strong, hooked bill and claws enable this bird to tear the flesh and eat it. On the ground these bald, red-headed creatures walk lazily instead of hopping about. They do not build nests, and the female lays her eggs on the ground or in rock cavities, caves, hollow trees or stumps. The eggs are one to three in number, nearly plain and spotted with chocolate. The turkey vulture is famed for its majestic and sustained flight. Its motionless outstretched wings high in the distance may even be mistaken for the wings of an airplane. The bird can soar for hours at a time without flapping its wings.

Turkey buzzards roost usually on dead branches, and sometimes, especially in winter, congregate in large numbers.



TURKEY VULTURE

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MARSH HAWK

MARSH HAWK

(*Circus hudsonius*)

Length, 19 inches

The marsh and red-tailed hawks are considered more beneficial than harmful. They eat great numbers of meadow mice, snakes, lizards, and frogs and very seldom raid a chicken coop. The marsh hawk is a bird of very wide distribution in the United States, being found in nearly all open localities. Slowly, with partly flapping flight, it may be seen going back and forth over marshes and fields in search of food. When it spies its prey its flight is abruptly stopped and the bird plunges to the ground to catch it with its claws, and to devour it on the spot. In the spring marsh hawks are generally seen in pairs and after the young are hatched the birds sometimes hunt for food in family parties. Both parents take part in rearing the young and are very courageous in defending the home from intruders.

SHARP-SHINNED HAWK

(*Accipiter velox*)

Length, 13 inches

Although this hawk is but a trifle larger than the robin it is one of the most destructive of the species. Some good can be said in favor of other hawks but not so of this hawk. The sharp-shinned hawk resembles somewhat the sparrow and the pigeon hawk but it is larger, longer and slimmer. The plumage is usually slaty or bluish above, and the underparts are whitish, barred and marked with red. The tail is square tipped and heavily barred. This hawk breeds throughout the United States and Canada. In September, numbers of these hawks may be seen high in the air, migrating southward in a leisurely manner, following the southern flight of the smaller birds on which they prey. The nest is usually placed rather high in an evergreen tree in some sequestered locality. More rarely is it situated in a deciduous tree, in a hollow stub, or on some lofty ledge of rocks. The eggs, four to five, are dull bluish or greenish-white.



SHARP-SHINNED HAWK

BALD EAGLE

(*Haliaeetus leucocephalus leucocephalus*)

Length, 30 to 35 inches

All boys and girls should be familiar with the majestic bald eagle, chosen as our national emblem. The bird is not actually bald, however, for it has no lack of feathers on its head but the effect of baldness is produced by the white feathering. It is of about the same size as the golden eagle but it differs in habits, as it lives mainly on fish seized along the seashore and in lakes and rivers. Frequently the eagle can be seen soaring high in the air in search of food. It has powerful eyesight and even from great heights it will see an object and make a direct line for it. It lives mainly on dead fish but will occasionally catch live ones. Every victim is killed by the bird's sharp claws and is torn to pieces

by the hooked bill and devoured. Both old and young eagles are heavy eaters, and sometimes they will join crows and ravens feeding upon carrion. There has been some objection to the choice of the eagle as the national bird because of its habits and actions, but no doubt the thought behind the choice was the magnificence of its flight, which is truly beautiful.

The eagle's nest is built on a high tree-top or upon a rocky cliff not far from the source of food supply. Year after year the same pair of eagles will occupy the same nest and make repairs and additions each spring. When the baby eagles are hatched they are covered with a whitish down but they get their first full plumage

Bald Eagle—Continued

before they are able to fly. During the first year after the young ones leave the nest they appear larger than their parents though it requires three years for them to become mature birds.

The bald eagle inhabits nearly all of North America north of Mexico. It has a preference for the sea coast and regions of lakes and rivers. The eagle is commonest in spring and summer, but may be seen at any time of the year. When the eagle does not find sufficient supplies of dead fish, it will rob the fishhawk of its booty. In the winter this bird often attacks water fowl successfully. The bald eagle lays its eggs very early in the season; it is the earliest breeder of our diurnal birds of prey. The eggs are two or three in number, dull white in color.



BALD EAGLE

RED-TAILED HAWK

(*Buteo borealis borealis*)

Length, 23 inches

Hawks are primarily birds of prey. Like the vultures they have strongly hooked bills and the claws or talons are long, curved, extremely acute and flexibly jointed to the toes. The leg is well feathered, usually below the knee joint and the long feathers are well-developed. In general appearance these birds are heavy. Their prey is killed by the sharp claws and torn to pieces with the bill. The red-tailed hawk or "hen-hawk" as it is commonly called, is one of the best known of all our birds of prey and is a widely distributed species of great economic importance. It regularly circles the rocky hillsides of its favorite haunts. It is a slow-moving bird and frequently perches on a stump or limb of a tree to

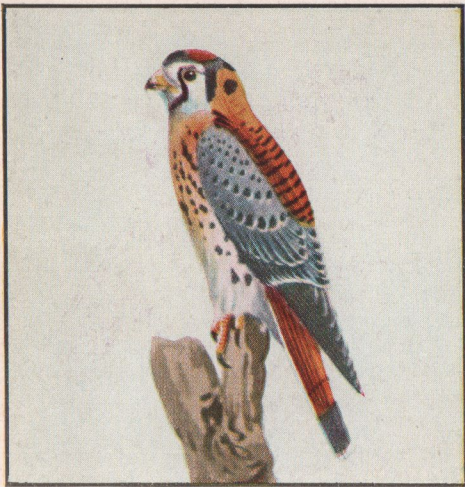
watch for mice or ground squirrels, which are a considerable part of its food. This hawk has gained a very favorable reputation as an aid in keeping down the mouse and rat population. Although it feeds to a certain extent on poultry and birds, it is nevertheless entitled to general protection on account of the insistent warfare it wages against field mice and other small rodents. The red-tailed hawk like many other representatives of this family returns to the same neighborhood and often to the same nest, year after year. The young grow slowly and need a relatively large amount of food. This keeps the parents busy and requires constant foraging on their part to feed the young and satisfy their own appetites.

Red-tailed Hawk—Continued

This hawk inhabits eastern North America from the Gulf states to northern Canada. The nest is placed on the fork of a tall tree such as a maple, beech, hemlock or pine about forty to eighty feet high. If one of the pair is killed, another mate is soon procured and brought back to the long-established site. If the eggs should be taken, a new nest is built, not far from the old one, but the next spring the original nest is almost sure to be again occupied. The nest is a bulky structure composed of sticks and lined with twigs and strips of bark. The eggs are two to four in number, dull white, often with a bluish tint and somewhat spotted with reddish brown and, more faintly, with lavender. The call of this hawk is a sharp scream which sounds like *kerr* or *chirr*.



RED-TAILED HAWK



SPARROW HAWK

SPARROW HAWK

(*Falco sparverius sparverius*)

Length, 11 inches

The sparrow or kitty hawk, as it is sometimes called, is the smallest, handsomest and most sociable of our hawks. It will often build a nest in the hollows of an old orchard tree near the farm house, or in a dead tree along the road. This hawk breeds throughout the United States, Canada, and northern Mexico, and winters in the United States also, and as far south as Guatemala. You may have seen this hawk hovering over fields and pastures remaining almost stationary for some seconds with quickly-beating wings, searching the ground below for grasshoppers and mice. This hawk will also occasionally capture small birds and chickens but the good service it does in destroying insects and mice far outweighs the damage it does to birds. Contrary to the usual habits of the species, individual hawks during the breeding season capture nestling birds for food for their young and create havoc among the songsters of the neighborhood.

OSPREY

(*Pandion haliaetus carolinensis*)

Length, 2 feet

The osprey is another bird of prey. It has very large feet with long, sharp and powerful claws which serve as perfect fish traps. The bill is much hooked. The plumage is oily and overlapping, the quills and tail feathers pointed and rigid. The wings are long and pointed, the tail short. The fish hawk, as it is usually called, has a wide distribution, and its food consists solely of fish taken alive. It has a keen vision and can see fish in the water from a height of many feet. It generally plunges for its prey at about a hundred feet. It always uses its feet to catch its prey and carries its head forward. Since the osprey cannot dive like a duck, the fish it catches are found in shallow water or near the surface. The osprey often nests in colonies. The nest is built of coarse sticks or seaweed either high in a tree or on the ground. The eggs, usually two to four are yellowish or dull white, spotted and blotched with red and different shades of brown.



OSPREY

SCREECH OWL

(*Otus asio asio*)

Length, 10 inches

Owls are nocturnal birds of prey. They work by night while the other birds of prey, the hawks, work by day. The owl captures its prey with its feet. If the victim is not too large, it is swallowed whole, and the hair and bones disgorged afterwards in the form of pellets. Examinations of these pellets have proved that owls should be classified among the useful birds. The screech owl is a small and rather insignificant owl, yet it is one of the best known species despite the smaller size already mentioned. Every one who is familiar with the bird wonders how it came by the name "screech owl" for its cry is actually a trembling mournful sound. The ear tufts of this species are conspicuous. The upper parts

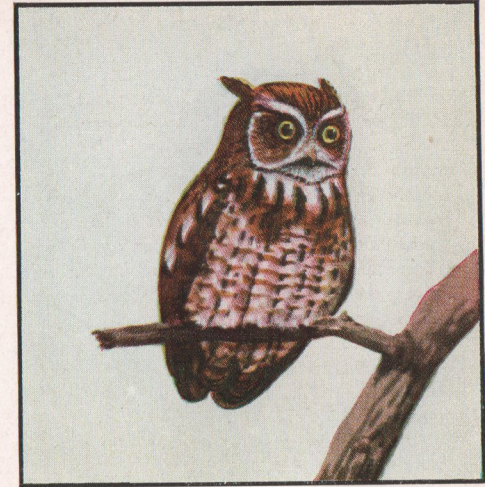
are brownish gray, everywhere mottled with lighter and darker shades. The wings and tail are barred distinctly but not sharply with grayish-brown. The under parts are grayish white with the prevailing color gray. There is a reddish brown tendency in some individuals, especially apparent as against the prevailing gray color of others. The gray-colored, however, far outnumber the others.

The species inhabits eastern North America, from Minnesota and east to New Brunswick and Ontario, and as far south as Georgia and Texas. The mates usually pair in March or April. The eggs are laid on the chips or rubbish in the bottom of the hollow of the nest and are

Screech Owl—Continued

four to seven in number. The eggs are white as is usual with all owls. Another peculiarity of this owl is that the male and female mate for life or at least retain their relationship for several years. A pair of screech owls will resume house-keeping in the same nest year after year unless driven away. These owls are not good housekeepers, in fact their habitations are exceedingly filthy. The little screech owl is well known throughout the United States. It is a diligent mouser and feeds more or less on crawfish, frogs, toads, lizards and fish. As a mouser, it is valuable to the fruit grower, destroying numerous rodents which feed on ripening fruit.

Most of the birds destroyed by the owl are killed either in severe winter weather or during breeding season, when the owl finds it difficult to feed its young.



SCREECH OWL

GREAT HORNED OWL

(*Bubo virginianus virginianus*)

Length, 24 inches

This strange-looking bird with eyes looking straight ahead is the great horned owl. It is sometimes called the "tiger of the air" for it is courageous and powerful. It is bold and persistent in its raids on poultry and is a terror to the poultryman. By night it silently glides through the woods and over meadows in search of prey. Raids upon the poultry yard have demonstrated the blood-thirstiness of the bird, and once it acquires a fondness for such food nothing but death is likely to stop its depredations.

This owl is very large and is conspicuously horned. The upper parts are ochreous and are profusely speckled with black. The wings and tail are barred

with sooty-brown; the under parts are of a lighter ochre, more or less overlaid with white, finely barred with black. There is a necklace of black blotches on breast with a throat patch of white. The bill is blackish, the eyes yellow. The large size, great head, and long ear tufts and the general yellowish-brown color distinguish the great horned owl from any other species.

The breeding habits of this bird are peculiar. It is by no means uncommon to find this owl sitting on the eggs when a thick blanket of snow is lying about. When huddled up in the nest sitting on the eggs this owl has been said to resemble a cat. This species occupies eastern North America, from Wisconsin,

Great Horned Owl—Continued

Quebec, and Newfoundland as far south as Florida and Texas. It is a permanent resident, as it does not migrate for the winter. The species is gradually being thinned out, as it is entirely too destructive for its own good. In addition to small animals such as mice, this owl has been known to attack full-grown fowls and even muskrats and woodchucks. The hooting cry of owls is perhaps as famous as is the note of any bird. Careless listeners apply the term "hoot owl" to any bird which has a hooting call. As a result many persons often confuse the great horned owl and the barred owl though there is a marked difference between the hoots of these two owls.

The "oot-too-hoo, hoo-hoo" call, with the syllables variously divided and differently accented, is the characteristic call of this remarkable and interesting bird.



GREAT HORNED OWL.



BARRED OWL

BARRED OWL

(*Strix varia varia*)

Length, 20 inches

The barred owl, sometimes called the hoot owl and wood owl, loves the deep forests. In low grounds along the rivers or lake shores where there is a dense growth of trees or in almost impenetrable swamps almost as thick as a jungle you will find this owl.

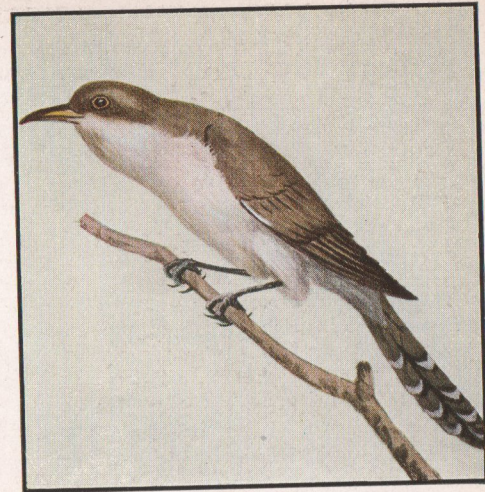
The fore and upper parts of the plumage are broadly and regularly barred with pale buff and deep brown. The breast is also barred with brown and white. When night has fallen, this owl is very busy. It is a most proficient hooter. This owl hardly ever builds a nest of its own but selects a deserted nest of the crow or the hawk. More often it selects the hollow of a tree up quite some distance from the ground and here lays its two white eggs. The food consists of mice, frogs, lizards, crawfish, spiders and various insects. Now and then the barred owl will catch a domestic fowl that has strayed away from the hen house and gone to roost in some tree.

YELLOW-BILLED CUCKOO

(*Coccyzus americanus americanus*)

Length, 12 inches

This bird with a very long and handsome tail is the yellow-billed cuckoo. The farmer sometimes calls it "raincrow" because he believes that its guttural cry brings rain. The yellow lower part of the bill distinguishes it from its near relative, the black-billed cuckoo. The mysterious and secretive habits of this bird are somewhat peculiar. Although its comings and goings, as well as its general behavior, may be queer, the bird is a desirable citizen and one exceptionally useful. When darting from branch to branch it is often in search of "tent" caterpillars. The cuckoo is rather shy, and prefers the edge of the woodland and groves to open cultivated grounds but is occasionally seen in the shade trees about the houses and lawns in the cities. It has sly, furtive ways as it moves along the bushes or flits from tree to tree. The nest is rather a crude and shabby affair, hardly more than a platform of twigs sufficient to hold the green eggs.



YELLOW-BILLED CUCKOO

BELTED KINGFISHER

(*Ceryle alcyon*)

Length, 12 inches

The belted kingfisher is a handsome, sturdy and self-reliant bird which makes its living by persistent and skillful fishing. This bird is accused of being destructive to game fish, especially brook trout. This, however, is not the case, for it catches and eats chiefly minnows, chubs and other shallow-water fish which are pests to the fisherman. The kingfisher is the graceful "high diver" of the bird world. It dives for its prey from a height of ten or fifteen feet above the water and infrequently plunges from a perch fifty or more feet from the water. Its vision is wonderful to be able to see fish at such distances.

The migration of the belted kingfisher begins in March. When October comes

the southward wending of their way begins. Not all of the belted kingfishers travel as far south as South America, as those which have summered in the extreme north are likely to winter no farther south than Illinois and eastward, wherever there is water in which one may find fish. The kingfisher, which is usually a solitary fisherman, will make its appearance with the advent of spring. It is seldom found far from these localities. Its favorite perch is on a dead limb overlooking some pool well stocked with minnows, from which it darts with a sudden dive after its unsuspecting prey, as the fish rises to the surface. Though the kingfisher usually lives on fish, it will also feed on aquatic insects, small frogs, crayfish, or salamanders.

Belted Kingfisher—Continued

The American kingfishers are a well-marked group of birds. Their heads are large, completely feathered, and more or less crested, though sometimes only the feathers at the back of the head and on the nape are slightly elongated. Their bills are long, strong, straight, and much deeper than wide at the base. The true kingfishers nest in holes which they dig in banks. The work of excavation is shared by the male and female and each takes a turn at it. The five to eight eggs are invariably white. The young are hatched naked and cared for in the same manner as birds that perch in the trees and build nests there.

Sometimes the kingfisher may actually spear fish with its long bill, but it generally seizes the fish with it, and usually flies to a nearby perch where it beats its prey to death. It then swallows the fish head first, an operation which is not generally accomplished without much squirming and writhing.



BELTED KINGFISHER

DOWNY WOODPECKER (*Dryobates pubescens medianus*)

Length, 6½ inches

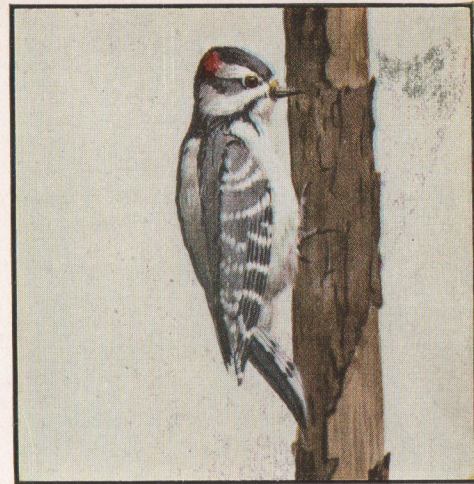
A woodpecker may frequently be seen pecking away at the bark and decayed wood in search of grubs or insects on which it feeds. They cling to the bark of the trees by means of their strong, sharp tail feathers. Their strong beaks, which have chisel-shaped points, enable them to peck into solid wood, and their long, slender tongues easily remove grubs and ants from woody burrows. The woodpeckers locate hidden insects with great accuracy and often peck directly into the burrows of the grubs. Woodpeckers are found in practically all wooded portions of the world. The little black and white woodpecker of eastern North America has been named the downy woodpecker. The downy woodpecker is the smallest of our

woodpeckers. Its color is black and white with white stripes on the side of the head and a white band down the back. The wings and wing coverts are spotted with white, the crown of the head is plain black. The outer tail feathers are white, slightly spotted or barred with black. The under parts are a plain dull white. The male has a scarlet occipital patch.

A strange habit of this bird is that during the winter it does not associate with the other woodpeckers but rather with nuthatches, chickadees, and brown creepers. It is a genial friendly bird which makes friends wherever it goes. It prefers the open woodland to the dense forest. Hardly a maple-shaded village, a

Downy Woodpecker—Continued

park, a woodlot or orchard is without the rattling call of this woodpecker. It is the fruit growers' friend. Besides picking up various pests it locates burrows of the flat-headed apple tree borer and extracts the insects in considerable numbers. It is also an enemy of the codling moth. The downy woodpecker nests in an excavation in a tree which it chisels out itself. Its nest is tiny compared to that of other members of the woodpecker family. The eggs are glossy white and four to six are generally laid on small chips at the bottom of the excavation. No attempt is made to construct anything like a true nest. Both the male and the female help in building the nest, although the actual excavation is ordinarily done by the male. The downy woodpecker, like most of the others, has a wavy, galloping flight.



DOWNY WOODPECKER



HAIRY WOODPECKER

HAIRY WOODPECKER

(*Dryobates villosus villosus*)

Length, 9½ inches

The hairy woodpecker looks like a big brother of the downy woodpecker. Its voice is also stronger but with the same familiar ring. One might easily mistake it for the downy for its manners and coloration pattern are very much like its smaller relative. The hairy is not so common as the downy woodpecker but it is found scattered over about the same area and in the same kind of natural conditions. The crown of its head is a uniform glossy blue black and a band of scarlet on the back of its head. The wings are spotted with white and the center of the back and the belly are white. This bird is very useful to the orchardist and the forester. More than three-fourths of the food of this woodpecker consists of animal matter and less than a fourth of the remainder is fruit and this is mostly wild fruit. In Canada and the northern border of the United States the hairy woodpecker is over three inches longer than the downy.

YELLOW-BELLIED SAPSUCKER

(*Sphyrapicus varius varius*)

Length, 8½ inches

This yellow-bellied is one of the most migratory of all the woodpeckers. It is the only woodpecker that has the top of the head from the base to the bill red, combined with a black patch on the breast. It has been given the name sapsucker because it bores numerous rows of holes through the bark of sap trees. The downy woodpecker is often charged with the wrong doings of the yellow-bellied sapsucker, but the downy woodpecker never makes holes deep enough in trees to draw out the sap and it does not in any way injure the trees. This bird flits from tree to tree and drums away on dry branches and limbs. It produces this drumming sound by bracing itself with tail and feet, and stretching backward as far as it can and letting fly with all force possible, with its head and neck. This is done so rapidly that its head is practically invisible. It must be said that the damage this bird inflicts on trees in eating the sap is very serious.



YELLOW-BELLIED SAPSUCKER

RED-HEADED WOODPECKER (*Melanerpes erythrocephalus*)

Length, 9 inches

The red-headed woodpecker is more often seen perhaps in the open than any other woodpecker. The red, white, and black plumage of this bird are striking marks. In certain lights the black shows a bluish tint and it is not unusual to hear that a red, white and blue bird has been seen. This coloration has earned for it the name of "patriotic bird" and "flag bird." It has been said that it is an unmistakable bird, when you are lucky enough to see it, for it wears the German flag in its red, white, and black feathers. Like all high-colored birds the red-headed woodpecker has paid the usual toll to gunners. The red-headed woodpecker is found throughout most of North America. It winters in the southern states,

coming north about May. Most persons have seen this bird flying from dead tops of forest trees, woodlots or from one telegraph pole to another. It builds a nest in a dead tree, pole or fence post but sometimes in a living tree. The eggs are white and from four to six are generally laid. The red-headed woodpecker is very fond of grasshoppers and flies. It will fly from a perch to capture a grasshopper or follow a fly for some distance through the air and after having caught it will return to the original perch to wait for another. Beech nuts and other mast are also a part of the red-headed woodpecker's diet. This bird has been accused of eating nearly every variety of fruit that grows. On the whole, there seems

Red-headed Woodpecker—Cont.

to be no reason to condemn this woodpecker, for the good it does over-balances its harmful traits. For one thing it destroys immense numbers of grasshoppers, ants, and boring beetles of all kinds which are to be found in branches and trunks of trees. The principal portion of this bird's vegetable diet consists of wild nuts, especially beechnuts; although he does not confine himself to the regions where they are found.

This species does not chisel away at dead wood or pry behind the bark for wood-boring insects nearly as much as the downy and hairy woodpeckers do. Most of this kind of work is done by it during the fall and winter. The red-headed is in the class of the robin and the cherrybird, as a destroyer of ripe cherries.



RED-HEADED WOODPECKER



CALIFORNIAN WOODPECKER

CALIFORNIAN WOODPECKER

(*Nelanerpes formicivorus bairdi*)

Length, $0\frac{1}{2}$ inches

This woodpecker is found in the mountainous sections of the western United States. You can hardly mistake this crow-like figure flying with sweeping, powerful strokes straight over clumps of trees. The wings are wide and the tail is short and these characteristics distinguish it from all other birds as far as it can be seen. The upper parts of this bird are iridescent greenish black except for a gray collar. The throat and chest are gray, changing to soft rose on the belly. The Californian woodpecker prefers the orchards and yellow pine country of the West and it can be found mainly in the mountains after breeding season. It feeds mainly on insects such as grasshoppers, crickets, ants, beetles and flies. Because of its preference for acorns and pine seeds it is called the "acorn bird." The nest is placed high up in tall pines or cottonwoods, or in decayed branches or stumps of oaks. Usually six or seven white eggs are laid.

RED-SHAFTED FLICKER

(*Colaptes cafer collaris*)

Length, $12\frac{1}{2}$ inches

The flickers, no matter what local or racial name they bear, are strikingly forceful birds. As they fly over the field in undulating line there is a flash of red or golden from under their wings. They are least woodpecker-like of the family. Instead of getting their food from the tree trunks or in the air, they live largely on ants which they obtain from the ground. This accounts for the slenderness of their bills and the character of their tongues. The red-shafted woodpecker inhabits the western part of the United States chiefly in the rocky mountain region, west to the coast ranges of Oregon and Washington. The head and body of this bird are brown and the back is barred. Its mustache is red and the underside of the wings and tail is also red. The nest is located from two to fifty feet above the ground in rotten stumps or trees, in holes in banks, in sides of houses and gate posts. Five to ten white eggs are laid.



RED-SHAFTED FLICKER

FLICKER

(*Colaptes auratus auratus*)

Length, 13 inches

Many persons consider the flicker the most interesting of all the woodpeckers. The yellow under the surface of the wing, yellow tail shafts, and white rump are characteristic. This woodpecker loves the open country rather than the forest and delights in park-like regions where trees are numerous and scattered. It nests in any large cavity in a tree and readily appropriates a box. It is possible, therefore, to insure the presence of this useful bird about the farm and to increase its numbers. It is a welcome bird wherever found, though some lawless people shoot it for the small morsel of meat to be had. It is the most terrestrial of our woodpeckers and procures much of its food from the ground. The flicker is beneficial

to the farmer, for it eats large quantities of harmful insects. It differs somewhat from the rest of the woodpeckers in frequently searching for food, especially ants on the ground.

The flicker is somewhat larger than the robin. Its upper parts are brown, barred with black. The rump is white and the crown of head is an ashy gray. There is a bright scarlet crescent on the occiput. The under surface of wings and shafts of the wing feathers are bright yellow and the under surface of tail and shafts of tail feathers are yellow except the tip, which is black. The under parts are grayish white, nearly uniformly spotted with black. There is a black crescent on the breast. The undulating flight and

Flicker—Continued

the conspicuous white patch on the rump and the yellow of the wings which shows in flight are marks which distinguish this species at a great distance.

This flicker occupies eastern North America from the limit of trees in Alaska east to Newfoundland and southward to the Mexican line. While the flicker is not so common as the robin, it is one of the birds best known to all of us. It arrives from the south in March and April and begins to disappear in October when it returns to its winter home.

The flicker, because of its versatility, does not confine itself to chiseling and woodpecking; in fact, little of his time, if any, is given to this. When courting, this bird spreads its wings and tail and bobs about before the admiring gaze of the female. The mating time of the flicker is usually in April or May.



FLICKER

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