

THE BIRDS
of OHIO

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The Birds of Ohio

THE BIRDS OF OHIO

A COMPLETE, SCIENTIFIC AND
POPULAR DESCRIPTION OF THE 320 SPECIES OF BIRDS
FOUND IN THE STATE

BY
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WITH INTRODUCTION AND ANALYTICAL KEYS BY
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INSTRUCTOR IN ZOOLOGY IN OBERLIN COLLEGE.

ILLUSTRATED BY 80 PLATES IN COLOR-PHOTOGRAPHY, AND MORE THAN 200
ORIGINAL HALF-TONES, SHOWING THE FAVORITE HAUNTS OF THE
BIRDS, FLOCKING, FEEDING, NESTING, ETC., FROM PHOTO-
GRAPHS TAKEN BY THE AUTHOR AND OTHERS.

SOLD ONLY BY SUBSCRIPTION

VOL. II.

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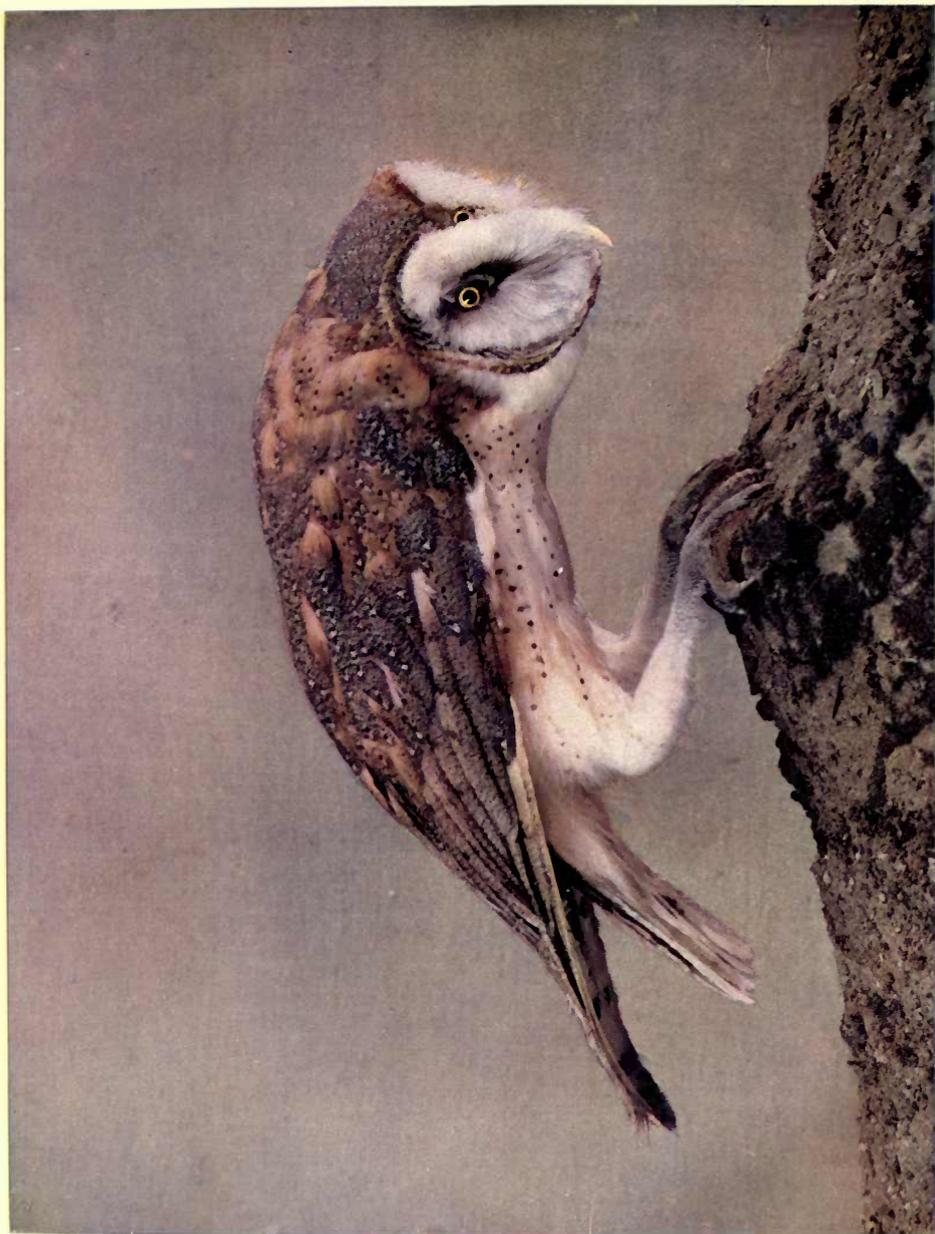
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AMERICAN BARN OWL
Syrinx barthelemyi
 $\frac{1}{2}$ Life-size

Illustration by J. W. Townsend, London.
Bird's habitat is not of the respective population.

No. 161.

CAROLINA PAROQUET.

A. O. U. No. 382. **Conurus carolinensis** (Linn.).**Synonyms.**—CAROLINA PARRAKEET; PARAKEET; PARROQUET.**Description.**—*Adult*: Head and neck all around bright yellow; forehead, lores and cheeks orange-red; remaining plumage bright green, most of the feathers with blackish shafts, variegated with faint bluish and yellow-green on wings; the bend of the wing orange, the edge yellow; the inner webs of wing-quills fuscous; tail regularly graduated, dull yellowish green below; bill white; feet flesh color. *Young*: Plain green. Length 12.00-13.50 (304.8-342.9); wing 7.00-7.60 (177.8-193.); tail 5.25-7.00 (133.3-177.8); bill .90 (22.9).**Recognition Marks.**—Little Hawk size; bright green, with orange and yellow head.**Nesting.**—Not known to have bred in Ohio, but probably did so. *Nest*, formerly described as in hollow trees, but now believed to nest in loose colonies, each nest being placed near the end of a horizontal branch in a cypress or other tree; a loose bunch of sticks, something like a Mourning Dove's. *Eggs*, 2-5, white. *Av. size* 1.40 x 1.10 (35.6 x 27.9).**General Range.**—Formerly Florida and the Gulf States north to Maryland, the Great Lakes, Iowa and Nebraska, west to Colorado, the Indian Territory and Texas, and straggling north-eastward to Pennsylvania and New York. Now restricted to Florida, Arkansas and Indian Territory, where it is only of local occurrence.**Range in Ohio.**—Formerly common, but now extinct.

MANY causes have conspired to bring about the total extermination within our bounds of this once abundant bird, but the chief cause was "Der Fluch der Schönheit" (the curse of beauty). It was not possible that in an age of guns and women a creature of such prominence and beauty should have been spared to grace our landscape with its living green. Brilliant plumage and a dashing figure were alone sufficient to doom their possessor to destruction—and worse, namely millinery appropriation—but when to these were added a strident voice and a fondness for fruits and young grains, the case became quite hopeless.

There are gray-haired men still among us who remember the shrieking companies of "parrots" which used to haunt the bottom lands and go charging about the sycamores like gusts of mad leaves; but to-day only the cunning plume-hunter or thrice-lucky ornithologist may penetrate to the remaining fastnesses of the species in the everglades of Florida.

The flight of the Parrakeets was described as being graceful and very swift, comparable in both respects to that of the Passenger Pigeon. The birds moved about in companies of from fifty to five hundred individuals; and when making extended flights or when coming down to feed, the flock fell into a V-shaped figure, somewhat like that affected by the Canada Geese. Altho

appearing rather awkward in confinement, where their movements were restricted, the birds moved easily through the branches of a tree, now swinging head downward to reach a drooping seed, now regaining the perch by the aid of the powerful beak, which was used as a third (or first) hand.

The birds were very noisy, especially during flight and at meals, screaming and chattering like nothing else in all the wood. But during the middle of the day they rested silently in the dense forest, or cooed tenderly if it were the mating season. Their favorite food was the cockle-burr (*Xanthium canadense*) which grows abundantly in low places. Besides this they ate wild fruit of many kinds,—persimmons, wild grapes, pawpaws,—as well as beech nuts, acorns, and the round seed-ball of the sycamore. When the settlers came, wheat in the milk was found to be very toothsome, and the bounties of the orchard irresistible. If reports are true these gay Philistines did not always stop when their bellies were full but sometimes wantonly destroyed the growing crops of our hard-working fathers.

Toward evening the companies retired to the seclusion of great hollow trees, mostly sycamores, where they "hung out," or rather hung up, for the night. The great beak, which did duty for both hands and face day-times, must needs render additional service, as a hammock-hook, at night. It was in hollow trees also that they nested, according to the most reliable of the accounts which have come down to us. In comparatively recent times Mr. Brewster has established the fact on good authority that they breed, at least in the South, in colonies in cypress trees,—the nest being a mere bunch of sticks placed at the forks of horizontal limbs, and containing, as is supposed, up to four or five white eggs. It is still probable, however, that in the Middle States they once nested as described by Audubon and Wilson.

Many strange stories are told of this bird which, at this late date, it is impossible definitely to discredit or verify. Here is one which has the sanction of recent authority. In the "Birds of Indiana," Prof. A. W. Butler publishes the following paragraph, as supplied to him by Prof. John Collett: "In 1842, Return Richmond, of Lodi (Parke County), Indiana, cut down in the cold weather of winter a sycamore tree some four feet in diameter. In its hollow trunk he found hundreds of Parakeets in a quiescent or semi-torpid condition. The weather was too cold for the birds to fly, or even to make any exertion to escape. Mr. Richmond cut off with his saw a section of the hollow trunk some five feet long, cut out a doorway one foot by two in size, nailed over it a wire screen of his fanning-mill, rolled this cumbersome cage into the house and placed in it a dozen of the birds. They soon began to enjoy the feed of fruit, huckleberries and nuts he gave them, and he had the pleasure of settling absolutely the question of how they slept. At night they never rested on a perch, but suspended themselves by their

beaks, and with their feet on the side of their cage. This was repeated night after night of their captivity."

There is every reason to suppose that the Carolina Paroquet was locally common throughout the state at the beginning of the nineteenth century. In 1831 Audubon notes their marked decrease in numbers: "Where twenty-five years ago they were plentiful, scarcely any are now to be seen. . . . At the present day very few are to be found higher than Cincinnati, nor is it until you reach the mouth of the Ohio that Parrakeets are to be met with in considerable numbers." In 1838 Caleb Atwater writes: "A few years since Parrakeets, in large flocks, lived in the woods along the Ohio River from Miller's bottom downwards, and along the Scioto River, upwards from its mouth to where Columbus now stands. They are still in the bottoms below Chillicothe, near the river, where there is proper food for them to eat, and birds enough for them to torment with their squalling noise." The last authentic record is that made by William S. Sullivan, LL. D., in July, 1862, when he saw a boisterous flock of twenty-five or thirty individuals in the elms of the Capitol Square in Columbus.

No. 162.

AMERICAN BARN OWL.

A. O. U. No. 365. *Strix pratincola* Bonap.

Synonym.—MONKEY-FACED OWL.

Description.—*Adult*: General color of upper parts ochraceous yellow; this lightly overlaid or mottled with gray, the typical mottled gray feathers having dusky centers and white tips; indistinct dusky bars on wing-quills and tail-feathers, clearest centrally; entire under parts white, usually more or less washed with fulvous or tawny, and sparingly but sharply speckled with dusky; facial disk white or whitish or tinged variously with ochraceous-buff, dark brown, or even claret; the edges of the disk rusty and dark brown on the tips of the feathers; bill light; feet light, nearly naked. The folded wing extends to or beyond the end of the tail. *Nestlings* are covered with fluffy white down. Length 14.00-18.00 (355.6-457.2); wing 12.25-14.00 (311.2-355.6); tail 5.25-7.50 (133.3-190.5); tarsus 2.25-3.25 (57.2-82.6); bill along culmen 1.00-1.25 (25.4-31.8).

Recognition Marks.—Crow size; light colors, especially below; strongly marked facial disk; top-heavy appearance.

Nest, in hollow trees or in crevices about towers, pigeon-houses, earth-banks, etc., lined scantily with sticks and trash. *Eggs*, 5-11, white, ovate. Av. size, 1.70 x 1.30 (43.2 x 33.).

General Range.—United States, rarely to the northern border, and Ontario, southward through Mexico; northern limit of breeding range about latitude 41°.

Range in Ohio.—Long considered rare in the State. Now found commonly in the lower valley of the Scioto. Rather rare elsewhere.

AS late as 1880 only five records of the appearance of this bird within the state were known to Dr. Wheaton, and none had ever been seen in Indiana. Soon after that there was a notable increase in numbers north of the Ohio River. Mr. Charles Dury of Cincinnati discovered a small colony in the town hall at Glendale, Ohio, Oct. 18th, 1883, and concluded they must have nested there the previous season. Some idea of the birds' usefulness in the community was conveyed by the "pellets," or little spheres of indigestible matter ejected by the Owls from time to time. "They covered the floor several inches deep in places. I examined many of them and found them made up entirely of the hair and bones of the smaller rodents,



Taken near Circleville.

Photo by Dr. Howard Jones.

A NESTING SITE OF THE BARN OWL.

mostly mice. There must have been the debris of several thousand mice and rats." Captain Bendire is certain that the captures of a single pair of Barn Owls, during the nesting season, exceed those of a dozen cats for the same period.

The species has lately been reported from various points all over the state, including several along the Lake Erie shore; but the only region where it is yet called common is in the lower Scioto Valley. Rev. W. F. Henninger, at Waverly, mounted ten specimens brought in to him at various times from 1898 to 1901. He says the birds are known locally as "White Owls," and that they frequent the bottom lands adjoining the Scioto River, breeding most commonly in the large sycamores which line that stream.

The Barn Owl, as its name indicates, often passes the day in barns or outbuildings, being drawn thither solely by the abundance of mice which such places afford. It is said to be a very quiet, peaceable bird, offering no violence to the poultry, not even to the pigeons which often share its quar-

ters. When disturbed during its slumbers it makes a hissing noise, or clicks its mandibles in a threatening way. It has besides a "peevish scream," and some querulous notes hard to characterize further. Its very odd appearance arouses in the average farmer's boy who discovers him a curiosity which is too seldom satisfied until the old musket has been discharged and the best mouser in seven counties is reduced to a mere heap of feathers.

Of the breeding habits, Captain Charles Bendire says:¹ "The Barn Owl, strictly speaking, makes no nest. If occupying a natural cavity of a tree the eggs are placed on the rubbish that may have accumulated on the bottom; if in a bank they are laid on the bare ground and among the pellets of fur and small bones ejected by the parents. Frequently quite a lot of such material is found in their burrows, the eggs lying on and among this refuse. Incubation usually commences with the first egg laid, and lasts about three weeks. The eggs are almost invariably found in different stages of development, and young may be found in the same nest with fresh eggs. Both sexes assist in incubation and the pair may sometimes be found sitting side by side, each with a portion of the eggs under them."



Taken near Circleville.

Photo by Dr. Howard Jones.

A NEARER VIEW.

NEST OF BARN OWL IN NATURAL CAVITY
OF TREE.

¹ "Life Histories of North American Birds," Vol. I., p. 327.

No. 163.

AMERICAN LONG-EARED OWL.

A. O. U. No. 366. *Asio wilsonianus* (Less.).

Description.—*Adult*: Above finely mottled white and dusky, with apparently half-concealed ochraceous on subterminal margins of feathers; the design broadened on wings,—ochraceous, white, and dusky in patches; the wing-quills and tail distinctly barred,—dusky with ochraceous basally, dusky with gray terminally; ear-tufts conspicuous, an inch or more in length, black centrally, with white and ochraceous edges; facial disk tawny, gray centrally, and blackish about eyes on inner side, the edges finely mottled black and white; tibiae, tarsi, and feet pale tawny, immaculate; remaining under parts white, ochraceous, and dusky, in bold, free pattern, the upper breast distinctly and heavily streaked, the sides and flanks distinctly barred, the belly exhibiting a combination of the two types; lining of wing pale tawny, unmarked basally, save for a dusky patch on tips of coverts, heavily barred distally; bill and toe-nails blackish. The folded wings exceed the tail, and the bill is nearly concealed by black and white bristles. Length 13.00-16.00 (330.2-406.4); wing 11.25-12.00 (285.8-304.8); tail 5.75-6.25 (146.1-158.8); tarsus 1.50-1.80 (38.1-45.7); bill from nostril .63 (16.).

Recognition Marks.—Little Hawk to Crow size; a strongly marked and unmistakable species; the "horns" taken in connection with its size are sufficient to identify it.

Nest, usually a deserted nest of Crow, Magpie, Heron, etc.; sometimes in rock-rifts or even on the ground. *Eggs*, 3-6, subspherical, white (or not infrequently red-spotted with nest-marks). Av. size, 1.60 x 1.29 (40.6 x 32.8).

General Range.—Temperate North America, south to the tablelands of Mexico. Breeds throughout its range.

Range in Ohio.—Not uncommon in winter, but of somewhat irregular occurrence. Rare summer resident.

AUTHORITIES cannot agree as to the real abundance of this species in various eastern states. Being strictly nocturnal in its habits it is seldom observed except in winter, when it is largely deprived of its cover, and when, moreover, its numbers are very materially increased by a northern influx. Unlike the larger Barred and the smaller Owls, the Long-eared Owl does not resort, to any considerable extent, if at all, to hollow trees, but secretes himself by day in the midst of heavy foliage. His favorite retreats are the willows of swamp thickets, evergreen timber and small upland groves.

If one is so fortunate as to surprise one of these Owls during the nesting season, or when the foliage is reasonably dense, he may get a good view of a slim bird standing straight and tense, with glowing yellow eyes and erect ear-tufts, or perhaps with beak defiantly snapping; but in winter when there is nothing to be gained by the bird's bravery, a hundred yards is a near approach.

Since there are no recent accounts of the nesting of the Long-eared Owl

in Ohio, altho they certainly bred here in Audubon's time, I may perhaps be pardoned for drawing upon my experience in a region where they are now much more plentiful, namely, in Eastern Washington. There nests containing eggs were found indifferently in April, May, or June, altho those found in June probably contained second broods. Deserted nests of the Magpie or Crow were invariably used by the Owls, and then only those to be found at moderate heights in swamp willow thickets. The eggs, from four to six in number, are normally a delicate, clear white, but they soon become nest-stained and are often blood-marked. Both parents are usually at home and actively interested in their nest. One instance will suffice. Having noticed a likely looking Crow's nest about ten feet high in a willow clump I made toward it. Upon my approach the female slipped noiseslessly from the nest and left me to plan the ascent through an ugly tangle. As I started in I heard the preliminary notes of a caterwauling contest, just as when Thomas remarks, "*We-a-o-o-a-ow*," and nature catches her breath to hear what Maria will say. I paused and canvassed the morale of my contemplated action; then I hastily reviewed the chances of wild-cats; and then—I reached for my gun. Not until I had actually seen the mother bird emitting one of those gruesome squalls could I believe that the noise came from an Owl. Even after doubt was set at rest the cry seemed not less like the snarl of an angry feline. To add to the terrors of the defensive, the husband and father came up and literally proceeded to spread himself. Wings and tail were spread to the utmost and every feather was ruffled to its fullest extent,—all in a manner calculated to strike terror to the boldest heart. The bird-man managed to control his nerves long enough to note five eggs resting upon the accumulated refuse of a last year's Crow's nest; then hurriedly sought more congenial company.

At another time while I was picking my way across a willow-skirted brook in the Yakima country I became aware of, rather than discovered, a wee, shrivelled, craven, ill-fed Owl, a bird which evidently, at the time, desired nothing so ardently as to be able to find a ready-made hole in the atmosphere and to crawl into it. I debated with myself whether it might really be an under-sized Long-eared Owl. There was nothing but the ear-tufts to show for it, for the very face of the bird was pinched and wizened. I gazed until the bird made sure of detection. Presto, change! The India rubber creature resumed her natural appearance and made off with a great clatter, only to fall upon the ground in the well known "last stages." The interest of the bird-man always lies in the opposite direction from that being pursued by a self-wounded bird. The *owlet* sat about ten feet back of me in a clump of willows. Tho only half-grown, its countenance bore an expression of imperturbable gravity. After I had had my laugh out at his absurd solemnity, I approached the little fellow. Psst! Instantly there were about six of him. Every feather stood on end,—wings extended, eyes blazing, bill snapping. Goodness gracious! Suppose

he had been about forty times bigger yet! He wore my cap gracefully enough until we got down on the ground where we could hobnob in the open. There he nibbled meditatively at the vizor of his cap-cage, and mumbled incoherent little bad words between his teeth. Anger is always amusing—except perhaps in the case of one's own irate parents—the younger and more helpless the embodiment of it, the more ridiculous it is.

The food of the Long-eared Owl is largely mice and other rodents. Altho it does make an occasional levy on the small-bird population, it deserves the strictest protection on account of its overbalancing services.

No. 164.

SHORT-EARED OWL.

A. O. U. No. 367. *Asio accipitrinus* (Pall.).

Description.—*Adults*: Ear-tufts very short—scarcely noticeable; entire plumage, except facial disk, nearly uniform buff, ochraceous-buff or cream-buff, striped or mottled with dark brown,—heavily above and on breast, the stripes becoming more narrow on belly and disappearing altogether on legs and crissum; edge of wing white; the wing-quills and tail-feathers broadly barred with brownish dusky; the facial disk gray centrally, with black around each eye and on the bridge; bill and toe-nails dusky blue; eyes yellow; ear-opening enormous, but fully concealed; the wings fold just beyond the tail. *Immature*: Dark brown with ochraceous tips above; brownish-black face, and unstriped under parts. Length 14.00-16.75 (355.6-425.5); wing 12.00-13.00 (304.8-330.2); tail 5.50-6.25 (139.7-158.8); bill (chord of culmen) about 1.00 (25.4); tarsus 1.75 (44.5). Adult female larger than male. The preceding measurements include both sexes.

Recognition Marks.—Little Hawk to Crow size; general streaked appearance, dark brown on buff; inconspicuous ear-tufts; semi-terrestrial habits.

Nest, on the ground or at the end of a short, under-ground tunnel; a few sticks, grass, and feathers mark the spot, or else the bird lays on the bare earth. *Eggs*, 4-6, sometimes 7, white, subspherical. Av. size, 1.57 × 1.23 (39.9 × 31.2).

General Range.—Throughout North America; nearly cosmopolitan. Breeds somewhat irregularly and locally, from about latitude 39° northward.

Range in Ohio.—Not common resident, and northern visitor; locally abundant in winter. A few have been known to breed.

AN equitable distribution of territory has been made between this bird and his kinsman, the Long-eared Owl. The latter has chosen the woods and the thickets for his hunting ground, while the Short-eared Owl roams the meadows and open fens. Moreover, the other bird hunts by night, while this one is abroad regularly and chiefly in the daytime. Let no one suppose that because the bird under consideration has abbreviated ear-tufts, he is

"short" on hearing. On the contrary, his ear-parts are enormously developed. Part the feathers on the side of the head, bringing the ear-coverts forward, and you will see it, an ear opening some two inches long—as long, in fact, as the skull is high, and proportionately broad.

It is more than a coincidence that these marsh-prowlers, the Harrier and the Short-eared Owl, together with the latter's cousin, *A. wilsonianus*, should be provided with such a remarkable auditory apparatus. When one considers the circumstances of their life, the reason for this common provision is very plain. In a thicket of reeds, especially if they are dry, one hears a great deal more than he is able to see. Movement through grass or tules without noise is almost an impossibility, even for the tiniest bird or mouse. Hence it becomes important to locate any creature in the tangle by hearing. Surely a Short-eared Owl could hear a bird-tick browsing at a hundred yards.

Short-eared Owls are somewhat hawk-like in their appearance, whether moving softly to and fro across the meadows, or watching from a convenient post. They frequently gather in companies, and Mr. I. A. Field of Granville tells me that he has seen as many as fifty in the air at once over the cat-tail swamps of the Licking Reservoir.

The species is not uncommon in winter, but its nesting in the state was not positively determined until Dr. Howard E. Jones found it breeding near Circleville. Of this discovery he gives the following account in his "Nests and Eggs of the Birds of Ohio": "The first nest of the Short-eared Owl that I ever found was on March 23rd, 1878. It was in a piece of marshy land two miles from Circleville. I had just killed a snipe, and was looking for the dead bird when, right at my feet, a Short-eared Owl flew up and soared in the air high above me. Having recovered from my surprise I looked down, and there were four eggs lying in a little depression, where the grass had been eaten away by some cattle that were grazing in the field. A few feet away the ground was some inches lower and very wet. Having done the eggs up in my handkerchief, I remained some minutes to watch the owl, which continued circling around the spot, some hundred feet overhead. Finally she alighted in a distant part of the prairie, and I proceeded on my way. Several more Owls were flushed during the next half hour, each of which made long-continued circular flights before alighting. The following day I hunted for Owl-nests over the same ground and found a second one in a burrow, about a foot within the entrance, containing three eggs."

No. 165.

BARRED OWL.

A. O. U. No. 368. *Syrnium varium* (Barton).

Synonym.—Hoot Owl (sharing the name with *Bubo virginianus*).

Description.—*Adult*: No ear-tufts; above dark umber-brown, heavily barred with pale tawny or white,—each feather crossed subterminally by a light band, and having one or two more on concealed base; wing-quills and tail-feathers more broadly barred, the white spots on external webs of the former more or less confluent in bars reaching across the wing; below, on the breast, heavily barred with a paler brown and white, the latter predominating; the belly and sides whitish or fulvous, not barred, but sharply and sparingly *streaked* with brown; facial disk gray, with indistinct, dusky, concentric circles about each eye, the eyes bordered by black on the inner margin; a dark brown area on the forehead; bill yellow; iris yellow or brown. *Immature*: Like adult, but barred instead of streaked on the belly; bars on upper parts broader, and appearing more white-spotted. Length 18.50-24.00 (469.9-609.6); wing 13.00-14.00 (330.2-355.6); tail 9.00 (228.6); tarsus about 2.50 (63.5); bill 1.40 (35.6).

Recognition Marks.—Crow to Brant size; general barred appearance; the absence of "horns" will immediately distinguish it from the Horned Owl, with which it is comparable in size.

Nest, a deserted Hawk's or Crow's nest, or in a hollow tree. *Eggs*, 2-4, white, subspherical. Av. size, 1.96 x 1.66 (49.8 x 42.2).

General Range.—Eastern United States west to Minnesota, Nebraska, Kansas, and Texas, north to Nova Scotia and Quebec. Breeds throughout its range.

Range in Ohio.—Common resident; the most universally distributed Owl except *Megascops asio*.

AFTER the Screech Owl this large round-headed bird is the commonest of the Owl kind in the state. Altho necessarily somewhat reduced in numbers with the decline in timber area, the species is well distributed; and almost any considerable stretch of woods, or a deep rocky ravine, will boast a pair of "Hoot Owls." The birds hunt mainly by night, but often avail themselves of cloudy days, and do not appear so nearly dazed as some in broad daylight. It is not unusual for the early bird-man to see the Owl coming in from the meadows just before sunrise, and making rapidly for the woods with that smoothly alternating flap and sail, which is characteristic of the bird.

The nightly predatory expeditions are directed mainly against moles, gophers, and rabbits; but many insects are added on the one hand and birds not a few on the other. The proportion of poultry or game birds eaten is very small, and never equal in value to the vermin riddance accomplished; but this is matter of opportunity rather than conscience with the Owl. In a series of ninety-five stomachs examined by Dr. C. Hart Merriam, only three contained poultry but twelve others contained birds, among which were found two Screech Owls, and one Saw-whet Owl.

Concerning the notes of this Owl much has been written. It is credited with a varied assortment of hoots, besides much demoniacal laughter, and occasional blood-curdling screeches. In comparing former accounts, and those written in comparatively unsettled sections of the country, with the bird's present habits and its known abundance, I am strongly inclined to the opinion that the birds have undergone recently an important change in this respect; that in fact, because of the increasing danger attendant upon the process, they have largely left off hooting and screeching. Negative evidence in this matter must be attentively considered, and such I believe we possess. The ordinary challenge notes, delivered in a deep bass voice, consist of the theme, *who-who*, variously modified. *Who-who*, *who-who-who*, is a common form and one which may readily be imitated by blowing into the hands held conch-shaped.

Barred Owls mate in February and nest either during the last week of that month or early in March. Usually some hollow tree in the depths of the wood is utilized, but not infrequently, deserted nests of Hawks and Crows are pressed into service. In either case no additional lining is supplied. Occasionally the birds build a nest, and a site in some dense thicket of saplings or evergreens is then chosen. A nest placed thirty feet high in one of a cluster of hemlocks, on the side of the Chance Creek gorge, in Lorain County, we had every reason to suppose was built by the owner.

The female attends chiefly to the duties of incubation, while soon after the young are able to leave the nest the male takes himself off to some hollow tree, there to gloom in sullen solitude for another year.

No. 166.

GREAT GRAY OWL.

A. O. U. No. 370. *Scotiaptex nebulosa* (Foster).

Description.—*Adult*: No ear-tufts; general plumage mottled, dusky, grayish brown, and dull whitish, darker above, lighter below, where the dusky markings are indistinctly longitudinal on breast and belly, and transverse on flanks, the whitish impure and with a fulvous element on the margin of the facial disk, hind neck, wings, tail, etc.; wing-quills and tail indistinctly barred; facial disk about six inches across, dusky gray, with numerous dusky lines imperfectly concentric about each eye; the edge of the disk dark brown and fulvous, and with more white below; the eyes bordered by black on the inner margin; iris yellow; bill pale yellow; feet and toes heavily feathered. Length 25.00-30.00 (635.-762.); wing 16.00-18.00 (406.4-457.2); tail 11.00-12.50 (279.4-317.5); bill with cere 1.40 (35.6).

Recognition Marks.—Size largest,—Brant size; gray face; absence of ear-tufts will immediately distinguish it from the great Horned Owl.

Nesting.—Does not breed in Ohio. *Nest*, of sticks and moss, lined sparingly with down, placed high in trees, usually coniferous. *Eggs*, 2-4, white. *Av. size*, 2.16 x 1.71 (54.9 x 43.4).

General Range.—Arctic America, straggling southward in winter to southern New England, New York, New Jersey, Ohio, Illinois, Idaho, and northern Montana.

Range in Ohio.—Very rare; two or three records believed to be authentic, but no specimens.

ONE autumn day some thirty years ago Charles Dury, of Cincinnati, was out quail-hunting with some farmers' boys in Clark County, near South Charleston. While in pursuit of a scattered covey in a dense thicket, he came suddenly upon a monster Owl, the like of which he had never seen alive. A quick shot fired full in the bird's face, blinded it, but did not inflict a mortal wound. Spreading its ample wings it fluttered away, regardless of a second shot fired after it, the gun being only a light muzzle-loader charged with fine shot. Realizing that he had lost a prize, the young collector scoured the neighboring woods in search of it, but without avail.

This very rare northern visitor has not since been seen within the state, and it will hardly pass again the broadening belt of civilization which separates us from the Laurentian wilds, in which it makes its home. The bird is not really so large as it appears, but has long fluffy feathers within which the "meat" bird is almost lost. Its eggs are not larger than some laid by the Barred Owl.

No. 167.

SAW-WHET OWL.

A. O. U. No. 372. *Nyctala acadica* (Gmel.).

Description.—*Adult*: Without ear-tufts; upper parts dull reddish brown, the crown and lateral edges of disk narrowly streaked, and the remaining upper parts more or less broadly but sparingly *spotted* with white; below white, broadly and heavily streaked with cinnamon-rufous; legs, feet, and crissum tawny white or ochraceous, unmarked; facial disk white above, fulvous and brown below, the eyes black-margined, and the disk brown-edged below, contrasting with narrow pectoral white; iris yellow; bill black. *Immature*: Like adult, but without white spotting above; breast, like back and belly, ochraceous. Length 7.25-8.50 (184.2-215.9); wing 5.00-5.90 (127.-149.9); tail 2.80-3.25 (71.1-82.6); bill including cere .66 (16.8).



SAW-WHET OWL
Nyctale acadica
♂; Life-size

Recognition Marks.—Smallest of Eastern Owls,—Chewink size, but appearing larger; no ear-tufts; pattern of coloring much more simple than in *Megascops asio*. Lighter in color than *N. t. richardsoni* (which may possibly occur in Ohio), streaked instead of spotted on crown, and with unbarred feet and legs.

Nest, in hollow trees, deserted Woodpecker holes, etc., *Eggs*, 4-7, white, subspherical. Av. size, 1.20 x 1.00 (30.5 x 25.4).

General Range.—North America at large, breeding from the Middle States northward, and in mountainous regions of the West southward into Mexico.

Range in Ohio.—Resident. Probably not uncommon, but little observed.

BECAUSE of its very retiring and strictly nocturnal habits, this little Owl has long been considered rare, and the sets of eggs taken within the United States would probably number not above a score. Carroll County, Indiana, is given by Bendire as the southernmost limit of its breeding, but Davie records the taking of a brood of young birds at Worthington, by Mr. J. E. Gould, May 28, 1889. This past season the writer encountered two family groups, one of four birds, June 19th, on the banks of the Licking Reservoir, and the other of six, July 7-11th, in the hollow near the Siebert Spring, on the State University grounds.

The note heard in both cases bore only the most distant possible resemblance to the "fling of a cross-cut saw," which is the classical comparison. It was rather a rasping, querulous *sa-a-a-ay*, repeated by old and young with precisely the same accent, and inaudible at any distance above a hundred feet. Uncertain in the first instance, since the hour was late dusk, whether the dark silhouettes before me had horns or not, I tried the Screech Owl cry and was greeted with a perfect chorus of *says* from the youngsters, while the parents whined in a mystified way and flew back and forth near my head snapping their mandibles together fiercely. In the second instance, in the large willows and poplars near the University spring, I succeeded in rousing one old bird and five owlets at an unusually early hour, viz., about twenty minutes after sunset. The smaller song birds were still astir and scolded vigorously at the appearance of these grim night watchmen, but the Owls gave no heed to their clamor, and were only intent upon discovering the whereabouts of their cousin Screech Owl, who had summoned them. The parent bird was the first to discover the deception and she bent forward peering earnestly at me, and uttered a low mellow *cook* of comprehension, twice, after which the party withdrew. There could be little doubt that the young had been raised in one of the hollow trees in the immediate neighborhood.

Nesting and roosting are preferably in deserted Woodpecker holes, but in default of these dense foliage is said to furnish cover for the birds during the day. Dr. William L. Ralph of Utica, N. Y., finds that under such circumstances they are not at all suspicious, and has even stroked them with his hand as they were roosting sleepily in bush or tree.

No. 168.

SCREECH OWL.

A. O. U. No. 373. *Megascops asio* (Linn.).

Description.—*Adult*: With conspicuous ear-tufts; dichromatic. *Rufous phase*.—Above cinnamon-rufous, substantially uniform, or with black central stripes on the feathers, the latter always(?) present on forehead; considerable white on scapulars, wing-coverts, and margins of primaries; wing-quills and tail finely and rather indistinctly dusky-banded; below white, heavily blotched with rufous, and black-streaked on breast and sides, fading posteriorly; middle line of belly usually immaculate; feet and legs completely feathered, more or less rufous spotted; facial disk grayish and rufous, not highly differentiated from surrounding parts; iris yellow; bill yellow or dull gray, light tipped. *Gray phase*.—Similar to preceding, but gray or pinkish gray instead of rufous; pattern much more complex; each feather with dusky or rich brown central stripe, and cross-banded with the same color in fine wavy lines; this pattern beautifully carried out on the breast and sides of the belly; the ground color of the upper parts ochraceous-buff, and of under parts white. Between these two phases there exists every gradation. They occur quite independently of age, sex, or season, both phases being sometimes represented in the same brood. *Young*: Heavily banded with dusky gray or rufous and dull whitish; no longitudinal markings. Length 8.00-10.00 (203.2-254.); wing 6.39 (162.3); tail 3.44 (87.4); bill .81 (20.6).

Recognition Marks.—Smaller,—“Robin size,” horns, with diminutive size, distinctive.

Nest, in hollow trees, Woodpecker holes, etc. *Eggs*, 4-6, or even 8 and 9, white, subspherical. Av. size, 1.40 x 1.20 (35.6 x 30.5).

General Range.—Temperate eastern North America, south to Georgia and west to the plains. Accidental in England.

Range in Ohio.—Abundant resident.

PROBABLY nine persons out of every ten shudder when they hear the weird and tremulous notes of the Screech Owl; but to the tenth man they come like a welcome draught into which has been instilled the essence of all wild things, a flavor of mystery and dark deeds, and the authentic tang of sorrow which still is joy. It is easier for most people to imagine a use for these strange notes similar to that of the catamount's serenade, viz., to terrify intended victims; but only the elect,—lady owls and some others—see in them the true likeness of a love song. It is comparatively easy to reproduce this quavering song, especially if one cultivates a palatal trill, and it will be found an exceedingly useful assembly-call in the woods.

The truth of the matter is that every bird's bill is against this bird, and there are none so poor to do him reverence—by daylight. This is not alone because he appears stupid and sleepy, or because he regards his tormentors with the fixed gravity of a round-eyed gaze, varied only by “that forlorn.

almost despairing wink" peculiar to it, but because they have an ancient and well-grounded grudge against this bird of silent wing and cruel claw. All but the Blue Jay—he is a villain himself, and he leads the persecution of owls from sheer love of mischief. Whenever a Blue Jay's voice is lifted high and there is an under-chorus of bird babble beneath it, it is time for the bird-man to slip rapidly forward from tree to tree and investigate.

One such din I heard on a winter's day, in a little wood north of town. The center of attraction proved to be a certain hole or crevice about twenty-five feet high in an ash tree. The Blue Jays retreated as I advanced to the shelter of a commanding tree-bole; but the rest of the birds held their ground. I watched while Red-headed Woodpeckers took turns peeping into the hole and shuddering. Once a Red-head yelled, "Ouch!" and jumped a yard or more. Chickadees clamored, "Let me see! Let me see!" while Titmice and Cardinals sputtered their indignation. A pair of White-breasted Nuthatches inspected the locality minutely. One murmured, "Horrible! The hypocritical old cut-throat!" and the woods quanked and shivered assent.

Of course I knew what was up and I came forward to take a hand in the game. A couple of smart raps from a stick brought a weary and somnolent Screech Owl to the mouth of the hole. He blinked aimlessly about for a moment and then sank back. "Well," thought I, "he's slow, I'll go up and interview him." The tree was of considerable girth and almost bare of limbs. I tried to keep an eye on the hole, but somehow, when I got there, panting fiercely, the hole contained "nothing but leaves." Sir Owl had flitted, chuckling noiselessly in his silken sleeve.¹

Screech Owls are not really more numerous in winter, as has been sometimes supposed, but are only more in evidence at that season, because of the comparative scarcity of the staple food, mice and insects. Then they are driven also to seek shelter in barns and outbuildings, and not infrequently fly in at open windows. Small birds are captured to much greater extent than during the warmer seasons, and the bird is evidently cultivating a weakness for English Sparrows; for which he deserves a vote of thanks.

Eggs of this species are to be found the last week in March or the first in April, in deserted Woodpeckers' nests, natural cavities in trees, or holes and crannies about buildings. Of the incubation, Professor Lynds Jones says:² "Both parents are generally found near the nest, and not infrequently sitting on the eggs at the same time. In a number of instances I have taken the two from well incubated eggs, but have never flushed both from a fresh set. Between the interval when the first egg is laid and the set is completed, the male may be found in a hollow tree near by and cannot be flushed, while the female watches the nest and flushes easily. When incubation begins the male will flush readily for a time, the female, however, remaining. Later, both birds must be dislodged by force. If the cavity is large enough

¹ Reproduced here by courtesy of "The Wilson Bulletin."

² Communicated to Capt. Bendire. See "Life Histories of N. A. Birds," Vol. I., p. 357.

to admit of it, both birds will lie over the eggs; if, however, it be small, the female covers the eggs and the male either wedges himself down by her side or lies on top of her, and sometimes finds a lodgment higher up in the hole, which, however, is rarely the case."

Incubation is completed in about three weeks, and the young when hatched require an enormous amount of food. This is collected by night and a surplusage stored for consumption during the day. The birds remain in a family group for some weeks after leaving the nest, and it is not an unusual thing to come across them standing as motionless as statues on some horizontal limb at a low level in the woods. In one such group seen during the season of 1903, both parents were of the red phase and the four owlets gray.

No. 169.

GREAT HORNED OWL.

A. O. U. No. 375. *Bubo virginianus* (Gmel.).

Synonyms.—HOOT OWL (par excellence); CAT OWL; VIRGINIA OWL.

Description.—*Adult*: Ear-tufts conspicuous, two inches or more in length, black, bordered with ochraceous; entire upper parts dusky or blackish, finely mottled with whitish and ochraceous, the latter color predominant on each feather basally; wing-quills and tail faintly broad-barred; facial disk ochraceous, sharply bordered by blackish laterally; feathers whitish with black tips centrally; a broad white space on chest; feathers of remaining under parts tawny at base, changing to white on terminal portions, finely and heavily barred with dusky-brown; the sides of the breast heavily spotted with the same color; iris bright yellow; bill and toe-nails bluish black. *Young*: Above and below ochraceous barred with dusky. Length 18.00-25.00 (457.2-635.); av. of eight Columbus specimens: wing 15.06 (382.5); tail 9.60 (243.8); bill including cere 1.66 (42.2). Female averages two or three inches longer than males.

Recognition Marks.—Largest, except for the two very rare species. "Horns" and size distinctive.

Nest, in a hollow tree, or in a deserted Hawk's or Crow's nest. *Eggs*, 2-3, rarely 4, white, subspherical. Av. size, 2.20 x 1.82 (55.9 x 46.2).

General Range.—Eastern North America west to the Mississippi Valley, and from Labrador south to Costa Rica.

Range in Ohio.—Resident; no longer common. Occasional winter visitor.

BUBO horribilis should have been the name of this feathered demon of the woods, this grizzly of the midnight air. He loves the darkness because his deeds are evil, and after the protecting sun has set, woe betide the mole



GREAT HORNED OWL
Bubo virginianus
♂: Life-size

or rabbit, Bobwhite, Jay or Chanticleer, who dares to stir where this monster is a-wing. When captured in a trap, as he often is by aggrieved poultry fanciers, the ruffling of the feathers, the alternate hissing and fierce snapping of the mandibles, and the greenish yellow light which comes flashing from the great saucer eyes, all give fair warning of what one may expect from the free foot once it gets a chance to close upon a victim.

Wheaton wrote "common resident," but in most parts of the state this unwelcome bird neighbor is greatly reduced in numbers, and in some altogether wanting, except it be casually in winter. The only one seen recently in Lorain County was found March 9th, 1899. In the heart of a deep wood a mob of twenty Crows bayed the quarry like a pack of hounds, while two Red-shouldered Hawks, diving and screaming overhead, gave character to the shifting assemblage. The Owl was visibly annoyed by these attentions, but was holding his own until the humans appeared, when he fled incontinently at a hundred yards. It required a chase of two miles, during which only the Hawks accompanied us, to overhaul and turn the grim death's-head so as to get a square sight of him.

The notes of the Horned Owl are much less frequently heard than formerly, and this is not only because of greater scarcity, but because the birds have learned caution. They are known to nest in places where a single full-voiced *hoot* would draw the fire of the country-side. The mating song (save the mark!) is a succession of resonant bellowings in a single key.—*Who, whoo, hoo-hoo, who*—quite variable as to length and form. Besides this the bird occasionally indulges in a sepulchral laughter, *hoo, hoo, hoo, hoo, hoo, hoo, hoo*, which arouses anything but mirthful feelings in the listener. Nothing short of awful is the nocturnal serenade to which these big owls sometimes treat the camper-out. "Cat-call" is a faint word to express this midnight terror—"panther screech" were fitter. Once in the city of Tacoma the writer was aroused from a sound slumber by a great commotion upon an adjoining roof, which the chamber overlooked. After the first shock of somnolent fright was over, it seemed as if a dozen



Taken in Colorado.

Photo by E. R. Warren.

YOUNG HORNED OWL.¹

The form is *Bubo virginianus subarcticus*.

¹ Courtesy of the Wilson Bulletin.

Shanghai roosters and a cage of parrots were closing in for a life and death struggle, but the music suddenly ceased before the bird-man could command his gun—and his nerves. Some nights later the shivaree was repeated, from the chimney of a neighboring church; and there I saw the Owl, clearly outlined against the moonlit sky. The tension of mystery was relieved but the concrete awfulness of that first occasion haunts me yet like a voice from the Inferno.

The Great Horned Owl is the earliest nester in the state. Fresh eggs are usual the last week in February, and January records are not unknown. Eggs are deposited in old Crows' or Hawks' nests, or, less commonly, in hollow trees. They are laid at intervals of two or three days, and incubation, beginning with the first egg, is kept up about four weeks. The owlets are thrifty young knaves, and their maintenance costs many a hecatomb of rats and rabbits, with now and then a juicy quail.

No. 170.

SNOWY OWL.

A. O. U. No. 376. *Nyctea nyctea* (Linn.).

Description.—*Adult male*: Without plumicorns; entire plumage pure white, sometimes almost unmarked, but usually more or less spotted or indistinctly barred above with pale brownish or fuscous,—perhaps heaviest on middle of back and wing-coverts; wing-quills and tail-feathers irregularly and sparingly spotted with dusky; below still fainter indications of dusky barring; legs and feet immaculate, heavily feathered; bill and claws black; iris yellow. *Adult female*: Similar to male, but much more heavily barred with brownish black,—only face, fore breast and feet unmarked; top of head and hind neck spotted with dusky. Length 20.00-27.00 (508.-685.8); wing 15.50-18.75 (393.7-476.3); tail 9.00-10.50 (228.6-266.7); bill 1.10-1.40 (27.9-35.6).

Recognition Marks.—Large size (Brant size); snowy white with dusky bars; no ear-tufts.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3-10, white. Av. size, 2.24 x 1.77 (56.9 x 45.).

General Range.—Northern portions of the Northern Hemisphere. In North America breeding wholly north of the United States; in winter migrating south to the Middle States, straggling to South Carolina, Texas, California, and Bermuda.

Range in Ohio.—Formerly common; now rare winter visitor in northern Ohio. Casual elsewhere.

DURING January and February of 1902 there occurred a remarkable invasion by Snowy Owls, which was reported from localities as diverse as

Southern Michigan and Long Island. They were especially abundant in Ontario, and were much sought after for their plumage. According to Mr. Ruthven Deane, "a Mr. Owens, taxidermist, living near Mooresville, Middlesex County, received and mounted twenty-two specimens during the winter, and commented on the fact that thirteen years ago he prepared exactly the same number, not having handled a single specimen in the interim." Mr. Deane collected information of more than 430 of these Owls that were killed during this one flight.¹ No specimens were reported for Ohio, but it is altogether probable that the birds might have been found along the Lake Érie shore at that time.

"The home of the Snowy Owl is on the immense moss and lichen covered tundras of the boreal regions, where it leads an easy existence and finds an abundant supply of food during the short Arctic summers. It hunts its prey at all hours and subsists principally upon the lemming, and it is said to be always abundant wherever these mammals are found in any numbers. Small rodents are also caught, as well as Ptarmigan, Ducks, and other water fowl, and even the Arctic hare, an animal fully as heavy again as these Owls, is said to be successfully attacked and killed by them" (Bendire).

No. 171.

AMERICAN HAWK OWL.

A. O. U. No. 377a. *Surnia ulula caparoch* (Müll.).

Synonym.—DAY OWL.

Description.—*Adult*: Without ear-tufts; above dark grayish brown or fuscous, finely and heavily spotted with white on head and upper back; with larger quadrate spots or bars of the same on middle back and wings; upper tail-coverts distinctly, and tail indistinctly or brokenly, barred with white; tail rounded, the outer pair of feathers about an inch shorter than the central pair; a crescentic patch behind the ear-coverts, another on the side of the neck behind, and one on the upper throat, pure dark brown; facial disk—so far as indicated—and chest, white; breast irregularly barred or streaked with fuscous on white ground, sometimes almost solid fuscous; remaining under parts closely and evenly barred with reddish brown and white in about equal proportions; legs, fully feathered to the claws, tawny, spotted, or lightly barred with light reddish brown; bill yellow. Length 14.50-17.50 (368.3-444.5); wing 9.00 (228.6); tail 7.00 (177.8); bill .85 (21.6).

Recognition Marks.—Crow size; small head, slender build; strictly diurnal habits; general hawk-like appearance.

Nesting.—Does not breed in Ohio. *Nest*, of sticks, mosses, and feathers, in coniferous trees, or in holes of decayed trees, or even on a rock or stump. *Eggs*, 3-7, white. Av. size, 1.53 × 1.24 (38.9 × 31.5).

¹ The Auk, Vol. XIX., pp. 271-283.

General Range.—Arctic America, breeding from Newfoundland northward, and migrating in winter to the northern borders of the United States. Occasional in England.

Range in Ohio.—Very rare, or casual in winter.

THIS rare winter visitor looks and acts like a Hawk, and is strictly diurnal in its habits, but it has the soft noiseless plumage which marks the Owls. When seen southerly it is most frequently at look-out upon the top of a stub. If frightened, it dives down almost to the ground before taking rapid flight.

Its food consists chiefly of insects and rodents, but it is a spirited bird and quite equal to despatching game of good size.

The nest is said to be frequently made upon the top of broken stubs. Others are in natural cavities in trees, and others still are placed in the thick foliage of pine trees, well up.

The note is a shrill cry which is uttered generally while the bird is on the wing" (Fisher).

No. 172.

PEREGRINE FALCON.

A. O. U. No. 356. *Falco peregrinus anatum* (Bonap.).

Synonym.—DUCK HAWK.

Description.—*Adult*: Above dark bluish ash, or slaty black with a glaucous "bloom," the feathers lighter edged, and the larger ones obscurely barred; top of head appreciably darker,—almost black; wings long, and pointed by the second quill, the first notched about two inches from the end; primaries distinctly barred on the inner webs with ochraceous; tail and upper tail-coverts narrowly barred with ashy-gray and blackish, whitish-tipped; area below eye, produced downward as broad "moustache," sooty black; throat and chest white or buffy, immaculate or nearly so; remaining under parts white or buffy heavily spotted on breast with blackish crescentic marks, lengthening into braces and bars below; tarsus feathered two-fifths of the way down; toes and claws lengthened; bill blue-black, but with cere and much of base yellow; feet yellow; claws black. *Immature*: Above sooty brown, plain or with some glaucous bloom with advancing age; feathers not barred, but more broadly and distinctly edged with ochraceous buff; top of head lighter than back by reason of ochraceous and whitish admixture; bars of tail obsolete on central feathers; below heavily *striped* with sooty brown, or if barred, only on flanks; chest never immaculate,—narrowly streaked with sooty brown; prevailing color of under parts deeper buffy or ochraceous than in adults. Adult male length 15.50-18.00 (393.7-457.2); wing 11.50-13.00 (292.1-330.2); tail 6.00-7.75 (152.4-196.9); culmen .77 (19.6). Adult female length 18.00-20.00 (457.2-508.); wing 13.50-14.75 (342.9-374.7); tail 7.00-9.25 (177.8-235.); culmen .95 (24.1).

Recognition Marks.—Crow size; dark coloration; black "moustache"; long pointed wings; swift, easy flight.

Nest, on cliffs or in hollow limbs of the tallest trees. *Eggs*, 3 or 4, creamy-white, buffy, light hazel, or rich cinnamon-brown, in the latter cases sometimes plain, otherwise spotted and blotched with reddish brown or chocolate. Av. size, 2.05 x 1.65 (52.1 x 41.9).

General Range.—North America at large and south to Chili. Breeds locally throughout most of its United States range.

Range in Ohio.—Not common visitor. Probably less common than formerly. May have bred in the State.

THE name Duck Hawk is really a tribute to the skill and prowess of this highly endowed bird, but it is belittling, nevertheless, to institute a comparison, however remote, between the noble Peregrine and the multitudinous "Hen Hawk" of the vulgar conception. This is the Peregrine Falcon, the American bird being not different save for a somewhat whiter breast (which only enhances its beauty) from the falcon gentil of song and story, the most courageous, the most spirited of all birds of prey. It secures an intended victim either by striking it from above and bearing it down to earth by its acquired momentum, or else by snatching it from the ground with incredible swiftness. Many stories are told of its seizing and making off with wounded game from under the very nose of the hunter, and it is especially fearless in its pursuit of wild ducks, which it is said to follow systematically for days at a time during the migrations.

The Peregrine Falcon is only occasionally noted within the limits of this state. In the fall of 1901 a specimen was taken alive in a room of one of the State University buildings, which it had evidently entered in pursuit of game, and it was kept for a while in a cage before being mummified in the interests of science. Early the following spring, March 6th it was, another bird was seen, hunting low over the north end of Columbus. The dark plumage and long pointed wings, with the easy, graceful, or dashing flight, furnish good recognition marks in the field. On a windy day the bird rises against the wind, kite fashion, to immense heights, where it careers about or plunges madly down and up again, apparently for sheer love of sport.

While it has not been found nesting in the state, it may do so, since Mr. Robert Ridgway, in the spring of 1878, found nests in the Wabash Valley, as far south as Mount Carmel, Illinois. "Three nests were found in the immediate vicinity of the town. All were placed in cavities in the top of very large sycamore trees, and were inaccessible. One of these trees was felled, however, and measurements with a tape line showed the nest to have been eighty-nine feet from the ground, its location being a shallow cavity, caused by the breaking off of the main limb, the upper part of which projected over sufficiently to form a protection from the sun and the rain."

No. 173.

PIGEON HAWK.

A. O. U. No. 357. **Falco columbarius** Linn.

Description.—*Old male*: Above bluish gray or dark slaty blue; feathers with black shafts and pale or rusty edges; general color usually interrupted by outcropping white or buffy on nape; tip of wing formed by second primary; first shorter than third; first and second sharply notched on the inner web; the second and third slightly emarginate on the outer web; inner webs of all quills barred or spotted with whitish; outer webs with traces of ashy markings; tail darkening posteriorly, white-tipped, and crossed by four narrow, whitish bars, the anterior one concealed; below white or whitish, nearly immaculate on throat, darkening posteriorly to tawny or ochraceous, heavily streaked with dark umber, sometimes changing to bars on the flanks; sides of throat and cheeks finely penciled with umber; iris brown; bill and claws blue-black; feet yellow; cere and base of bill greenish yellow. This high plumage is quite rare. *Adult female and male in usual dress*: Above dark umber-brown, glaucous or not, the head varied by much buffy or rusty edging, with blackish central streaks; wing-spots ochraceous-buff; tail with pattern as before, but blackening toward tip, and with ochraceous-buff cross-bars; below darker buffy all over, or tawny medially as well as posteriorly; streaking of variable intensity. *Immature*: Perhaps lighter above, and with more ochraceous-buff edging; otherwise not appreciably, or at least constantly, different from adult. Adult male length 10.00-11.50 (254.-292.1); wing 7.00 (177.8); tail 4.90 (124.5); bill .48 (12.2). Adult female length 12.00-13.00 (304.8-330.2); wing 8.50 (215.9); tail 5.40 (137.2); bill .57 (14.5).

Recognition Marks.—"Little Hawk" size; swift flight; sharp wings; stout proportions otherwise; heavily umber-streaked lower parts.

Nest, in hollow limbs of trees or in crannies about cliffs. *Eggs*, 4 or 5, creamy-white, spotted and blotched with reddish brown or chocolate, or else cinnamon-brown sprinkled and dotted with heavier shades of the same color. *Av. size*, 1.62 x 1.22 (41.2 x 30.9).

General Range.—North America at large, south to the West Indies and northern South America. Breeds chiefly north of the United States.

Range in Ohio.—Not common winter visitor, or spring and fall migrant throughout the state. Formerly bred in northern part of the state but no recent records.

IF a careful scrutiny of all little hawks is maintained throughout the winter and early spring, the search will be rewarded now and then by the sight of a bird whose movement is a little more rapid and dashing than that of the ubiquitous Sparrow Hawk. The wings seem to reach forward with a stroke like that of a strong swimmer, and altogether there is an indefinable air of quality and power about the diminutive Pigeon Hawk, which does not pertain to his less spirited cousin. Not content with the humble quarry which



AMERICAN SPARROW HAWK

Falco sparverius

$\frac{2}{3}$ Life-size

usually satisfies the resident Falcon, the little winged terror makes havoc among the Blackbirds and smaller songsters. Himself not larger than a full-sized Pigeon, the Hawk sometimes pursues a Mourning Dove with relentless fury, and easily overtakes this fleet bird, unless it seeks cover or the protection of man.

Now and then also one finds the Pigeon Hawk seated, for it is less suspicious than most, and it hails from northern wilds which do not know the fear of man. At such times one is struck by the quaint, almost unique appearance of the tawny breast with its heavy umber streaks; and the glaucous bloom of the upper parts might have come from my lady's cheek, when she went hawking centuries ago. In the hand the round white spots which sprinkle the tawny feathers lining the wings make them seem still more like objects of curious mediæval art.

No. 174.

AMERICAN SPARROW HAWK.

A. O. U. No. 360. *Falco sparverius* Linn.

Synonym.—RUSTY-CROWNED FALCON.

Description.—*Adult male*: Top of head slaty blue, with a rufous crown-patch; sides of head and throat white, a black stripe from the lower eye-lid anteriorly, proceeding obliquely downward; a similar transverse bar on the side of the neck, and a dab on either side and sometimes in the middle of the cervix; back, scapulars, and tail rich rusty red; strong black bars in variable quantity across the middle of the back and lower scapulars, or rarely reaching cervix; a heavy subterminal black band on tail, the central feathers tipped with rufous and the others with white; the wing-coverts and inner quills (including secondaries) slaty blue, the former black-spotted and the latter crossed by a heavy black bar; primaries blackish, the point of wing formed by the second; the first sharply emarginate on the inner web, the second slightly so; all the wing-quills heavily spotted with white on the inner webs, these spots confluent in bars on the under surface; below whitish or slightly tinged, immaculate on lower belly, flanks, and crissum; elsewhere (save on throat, as noted above) lightly tinged or heavily shaded with rufous,—the fore breast usually but not always unmarked, the sides and middle belly very lightly or quite heavily spotted with black. Bill bluish black; cere and feet yellow. *Young male*: Similar to adult, but lower scapulars and wing-quills lightly tipped with white; not so heavily shaded with rufous below. *Adult female*: Subsimilar, but wings like the back; the black barring regular and continuous over entire back, wings (except quills), and tail,—the tail having ten to twelve bars, but the subterminal bar often larger; barring indicated narrowly across upper tail-coverts; below not tinged with rufous, but streaked instead with rusty brown; the sides sometimes barred with blackish. *Young female*: "Similar to adult, but colors softer, deeper, and more blended" (Ridgway). Adult male

length 8.75-10.50 (222.3-266.7); av. of nine Columbus specimens: wing 7.24 (183.9); tail 4.63 (117.6); bill .50 (12.7). Adult female length 9.00-12.00 (228.6-304.8); av. of eight Columbus specimens: wing 7.50 (190.5); tail 5.06 (128.5); bill .52 (13.2).

Recognition Marks.—Robin size, but appearing larger. The black markings about head, and rufous of upper parts distinctive.

Nest, in hollow trees, often in deserted Woodpecker holes. *Eggs*, 4-6, sometimes 7, creamy, buffy, or vinaceous, sprinkled and spotted with deeper shades of the ground color, or darker reddish browns. Av. size, 1.38 x 1.14 (35.1 x 29.).

Range in Ohio.—North America east to the Rocky Mountains, and from Great Slave Lake south to northern South America.

Range in Ohio.—Quite common resident. Less frequent in winter, especially in the northern counties.

THE handsome appearance of this little Falcon, together with its comparative fearlessness and gratifying abundance, make it rather the best-known bird of prey throughout the state. It is to be found almost anywhere, and pays us frequent visits in town, but its favorite perch is a dead tree-top or stub at the edge of the woods, or a telegraph pole commanding an unobstructed view. From these points of vantage the birds attentively watch the



Taken near Oberlin. A FAVORITE PERCH. Photo by the Author.

happenings on the ground and dive down whenever they think their presence is needed by mouse or grasshopper. Much time is spent also on the wing, passing rapidly from wood to field, or flying slowly across a promising meadow, and pausing frequently at a good height to study a suspicious movement in the grass below. A Hawk will flutter over one spot for a minute at a time, and then pass on disappointed, or else pounce suddenly upon its prey and bear it off to some elevated perch for quiet consumption. When the wind is blowing strong the bird no longer flutters at its critical stops, but only balances on the wind, so nicely, indeed, that its wings are almost motionless.

Always graceful, the Sparrow Hawk is seen to best advantage during

the courting season, when the male reaffirms his fondness for his life-long mate by circling about her as she sits upon the tree-top; or he measures the height of his devotion by ascending to the clouds before her, and dashing himself at her feet again with shrill cries of *Killy, killy, killy*. To hear the snarling clamor of the birds, one would think that they were not getting on nicely, but this is a mistake, for the high-pitched conversation is really very amiable in character, and neither bird would think of parting from its consort for however brief a space of time without a screamed farewell of unquestionable tenderness.

The eggs, which seldom have any softer resting place than the chips or rotten wood which the Woodpeckers have left them, are among the hand-somest of oological treasures. The lime of the shell, still plastic, has been generously sprinkled with cinnamon, and a warm glow imparted to the whole. Incubation lasts three weeks, and the young, when hatched, are covered with a thick white down which gives them a rather tidy appearance, in spite of their enormous eyes.

The food of the Sparrow Hawk consists largely of insects, of which grasshoppers and spiders are the most noteworthy. Mice and shrews are also eaten, and in winter, when the Hawks are much less common, small birds. The Sparrow Hawk has cultivated a discriminating taste for English Sparrows, and has, I believe, almost left off preying upon other sorts. It deserves rigid protection everywhere, both in village and field.

No. 175.

SWALLOW-TAILED KITE.

A. O. U. No. 327 *Elanoides forficatus* (Linn.).

Description.—*Adult*: Head and neck all around, rump, basal portion of tertials, and entire under parts including lining of wings, white; remaining plumage *black*,—lustrous, with purplish reflections on back and scapulars, with a glaucous or chalky cast on contiguous portions, bronzy or various elsewhere; tail deeply forked, graduated; bill bluish-black; edges of mandibles, cere, and feet pale blue; claws light. *Young*: Similar, but black not so lustrous; wing and tail-feathers tipped with white; head and neck streaked narrowly with blackish shaft-lines. Length 20.00-26.00 (508.-660.4); wing 15.50-17.75 (393.7-450.9); tail (outer feathers) 11.00-14.50 (279.4-368.3); bill from nostril .76 (19.3).

Recognition Marks.—Not readily comparable in size. Black and white in masses; long wings and forked tail; exceedingly graceful flight.

Nest, at great heights in trees, near extremity of branch, composed of sticks and abundant green moss. *Eggs*, 2-4, white, greenish- or yellowish-white, spotted, marbled, or clouded with hazel, chestnut, or mahogany. Av. size, 1.85 x 1.46 (47. x 37.1).

General Range.—United States, especially in the interior, from the Carolinas and Minnesota southward, throughout Central and South America; westward to the Great Plains. Casual eastward to southern New England, and northward to Manitoba and Assiniboia. Breeding range irregularly coincident with general distribution in the United States. Accidental in England.

Range in Ohio.—Formerly abundant. Now rare and casual. Two records since 1858.

NOTHING can compensate us for the loss of this exceedingly graceful and highly beneficial bird, or atone for the criminal stupidity which has decreed the extermination of it simply because of its size and hawk-like appearance. Poultry raising is an important business, and requires rigid protection, but more ornithological crimes have been committed in its name than in that of any other, save fashion. The Swallow-tailed Kite feeds largely upon snakes, lizards, toads, and insects—the latter caught almost exclusively upon the wing. In the South it renders inestimable service through the destruction of the cotton worm. On the other hand, it has never been known to molest poultry, altho its chance appearance above a chicken coop naturally causes indiscriminating fowls some needless alarm.

Described by Wilson as abundant on the extensive prairies of Ohio and the Indian Territory, it has rapidly decreased in numbers until now it is only "accidental." In 1838, Dr. Kirtland noted its failure to appear in its accustomed haunts in Portage and Stark Counties. In 1858, Mr. Karkpatrick noted its decrease in Crawford County, but says "Occasionally a specimen may be found there still." In 1878 a specimen, killed in Licking County, was presented to Dr. Wheaton. In 1898, Rev. W. F. Henninger records the capture of a last specimen near Chillicothe. *Sic transit gloria coeli.*

No. 176.

MARSH HAWK.

A. O. U. N. 331. **Circus hudsonius** (Linn.).

Synonym.—MARSH HARRIER.

Description.—*Adult male*: Head and neck all around, chest, and upper parts light bluish gray or ashy, the hind head darker, with much partially concealed white, and tinged with ochraceous; five outer primaries mostly black; upper tail-coverts pure white; tail silvery gray, barred irregularly with blackish, the subterminal band largest, tipped with whitish, the inner webs whitish or rusty-tinged; remaining under parts, including under side of wing (except terminal third of primaries), white,—the belly, flanks and tibiae sparsely spotted or barred with rufous or pale dusky, and the lining of the wing with a few dusky spots and bars; wings, tail, and shanks, greatly lengthened; tip of wing formed by third

and fourth primaries, wing when folded falling an inch or more short of tail, and sometimes not reaching to end of feet. Iris bright yellow; bill blackish; feet yellow; claws black. *Adult female*: Of different coloring; upper parts dusky brown, the head and neck streaked and the lesser wing-coverts spotted or margined with cinnamon-rufous; longer upper tail-coverts white, the shorter ones brown, tipped with rufous; tail brown, becoming paler at tip, and crossed by six or seven distinct, blackish bands; remaining feathers barred with ochraceous and blackish; under parts ochraceous or buffy, streaked broadly on the breast, and narrowly on the belly with light brown or dusky. *Immature*: Similar to adult female but darker,—rich, chocolate-brown above, and on sides of neck and cheeks; the under parts darker, cinnamon-rufous,—the belly unmarked. Males show every gradation between immature and adult plumage, and indeed the perfect adult male plumage is rarely found. Adult male length 17.50-20.00 (444.5-508.); wing (13.00-14.00 (330.2-355.6); tail 8.50-10.00 (215.9-254.); bill from nostril .65 (16.5). Adult female length 19.00-24.00 (482.6-609.6); wing 14.00-16.00 (355.6-406.4); tail 9.50-10.50 (241.3-266.7).

Recognition Marks.—Crow size; white upper tail-coverts make the best field mark; long tail; marsh-haunting habits.

Nest, on the ground in marshes, of twigs and dry grasses and moss. *Eggs*, 3-6, pale bluish white, usually unmarked but sometimes spotted or blotched with pale rufous. Av. size, 1.78 x 1.40 (45.2 x 35.6).

General Range.—North America in general, south to Panama and Cuba. Breeds throughout its North American range.

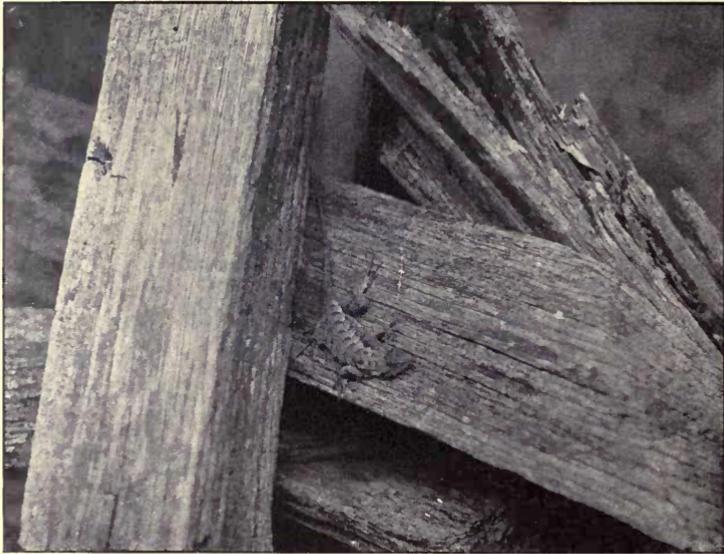
Range in Ohio.—Formerly abundant, now rare throughout the state. Breeds. Sparingly resident in winter in southern portion.

HUMILITY is the leading characteristic of this "ignoble" bird of prey, whether we regard its chosen paths, its spirit, or the nature of its quarry. Pre-eminently a bird of the meadows and marshes, it usually avoids the woods entirely, and is to be seen coursing over the grass and weed-tops with an easy gliding flight. Since it flies at such a low elevation as neither to see or be seen over the limits of an entire field, it often flies in a huge zigzag course, "quartering" its territory like a hunting dog. Now and then the bird pauses and hovers to make a more careful examination of a suspect, or drops suddenly into the grass, seizes a mole or a cricket, and retires to a convenient spot—a fence-post or a grassy knoll—to devour its catch. The food of the Marsh Hawk consists almost entirely of meadow mice, gophers, garter snakes, frogs, lizards, grasshoppers and the like. Only in the winter is it driven to prey to any large extent upon birds, and then only such northern birds as frequent weedy bottoms and swampy tangles, Tree Sparrows, Juncoes, etc.

This Hawk is the most unwary, as it is the most useful, of its race. It is no achievement to assassinate one from behind the cover of a convenient haycock, or even to arrest its easy flight in an open field. The tillers of the soil have done nothing more foolish or more prejudicial to their own interests than to allow and encourage the slaughter of this innocent and highly useful

member of the agrarian police. A farmer would have as just cause to be indignant at some interloper who shoots a Marsh Hawk on his premises as at another who breaks up his gopher traps.

As the breeding season approaches, the male Harrier, feeling the impulse of the ennobling passion, mounts aloft and performs some astonishing aerial evolutions for the delectation of his mate. He soars about at a great height screaming like a Falcon, or he suddenly lets go and comes tumbling out of



Taken in Morgan County.

Photo by the Author.

ON THE LOOKOUT FOR SIR HAWK.

space head over heels, only to pull up at a safe distance from the ground and listen to the admiring shrieks of his spouse. "At other times," says Mr. Ernest E. Thompson, "he flies across the marsh in a course which would outline a gigantic saw, each of the descending parts done in a somersault and accompanied by the screeching notes, which form the only love song within the range of his limited vocal powers." This operation is not necessary in order to win his mate, for he is supposed to have won her "for keeps," but after all, it is well enough to remind her now and then that he is a very good fellow, for she is a size larger than he and a little exacting in matters of courtesy.

Not only are the Marsh Hawks wedded for life, but the male is very devoted to his family. He assists in nest building, shares the duty of incubation, and is assiduous in providing for his brooding mate. During the last week in April or the first week of May a nesting site is selected, usually in the tall grass adjoining a swamp. If the ground is wet, sticks are first laid down, but otherwise only grass, dead leaves, and weed-stems, with a little hair and moss or feathers, are used to build up a low platform, broad and slightly hollowed on top. Here four or five eggs are commonly laid, but six is not unusual, and two sets of eight are recorded, one from Washington and one from Iowa. In the former state I once found a nest on the ground in a little opening of a poplar grove, the birds having probably retired to the woods to avoid the winds prevalent at that season.

Incubation is accomplished in about three weeks, or if it has commenced with the laying of the first egg, as is often the case, then the last egg may not hatch for a week longer. While the female is brooding the young, she is frequently fed by the male from a considerable height. Mr. Lynds Jones relates one such instance where an element of sportiveness seemed to enter in: "Once during the breeding season I saw a male catch a large garter snake and fly up with it several hundred feet, then drop it to the female who just then came flying along near the ground; she caught and carried it to the nest, followed by the male."

The young after leaving the nest hunt for several months with their parents, and the last and costliest lesson which they learn is fear of man. If these most excellent mousers had half the gratitude shown them which we manifest to cats, they might be abundant where they are now rare. Doubtless some scores of pairs, all told, might be mustered within the state, but I have record of only three specific instances of their nesting.

No. 177.

SHARP-SHINNED HAWK.

A. O. U. No. 332. *Accipiter velox* (Wils.).

Description.—*Adult*: Above slaty gray, dark plumbeous, or chocolate-brown, with a glaucous cast, darker but not black on head; occipital feathers, scapulars, and inner quills with concealed white at base; primaries banded with two shades of fuscous above, contrasting dusky and whitish below; tail, nearly square, slightly emarginate, crossed by five dusky bands, and narrowly whitish at tip, the basal band concealed and nearly obsolete; auriculars rusty, with black shaft-lines; throat whitish or pale buffy with blackish shafts; remaining under parts white, heavily barred on breast, belly, sides, axillaries, and shanks with pale cinnamon-rufous,—feathers of breast with blackish shaft-lines; lining of

wings rusty-tinged, finely and irregularly barred with dusky; crissum unmarked, or merely touched with rufous; iris, cere, and feet yellow; bill and claws blackish. Females are perhaps less blue above, and duller or paler below. *Immature*: Above dusky brown margined with rufous, concealed white cropping out in streaks on forehead and hind neck, and in spots on scapulars, etc.; below streaked and spotted instead of barred, with pale browns (Vandyke brown, Prout's brown, etc.) and dusky, narrowly on cheeks and throat, more broadly on breast and sides,—markings pandurate on sides of breast, cordate, tear-shaped, or various below, sometimes transverse on flanks and shanks. Between this and the typical adult plumage every gradation exists. Rather variable in size. Adult male length 10.00-12.00 (254.-304.8); wing 6.60 (167.6); tail 6.00 (152.4); bill from nostril .40 (10.2). Adult female length 12.50-14.25 (317.5-362.); wing 8.00 (203.2); tail 7.25 (184.2).

Recognition Marks.—Little Hawk size; adult transversely barred, young heavily streaked, below; barring of under wing surface conspicuous in flight; the distinction between the breast patterns of adults and young must be borne clearly in mind to avoid confusion. Like next species, but considerably smaller; tail not rounded.

Nest, of sticks, twigs, and dried leaves; in trees at any height, or in hollow trees and cliff crannies. *Eggs*, 2-5, bluish-, greenish-, or grayish-white, lightly or heavily spotted, blotched, marbled, or clouded with various shades of brown. Av. size, 1.53 x 1.18 (38.9 x 30.).

General Range.—North America in general, south to Panama. Breeds throughout its North American range.

Range in Ohio.—"Common resident in Northern, less common in Middle and Southern Ohio" (Wheaton).

THE Hawks proper, of which this bird is a typical representative, may lack the spectacular wing feats and noble bearing of the Falcons, but they are still very bold and rapacious birds. Indeed, it would be hard to picture a more alert and blood-thirsty creature than this sharp-taloned little Hawk as it scours the brush patches or open fields in search of feathered prey. The flight of the Sharp-shin is at times as swift as an arrow and as direct, but it is skilled in doubling and twisting, and no bird in the open escapes it except by the merest chance. Coming upon a flock of blackbirds, the Hawk makes instant choice of a victim and pounces like a flash upon it, either snatching it in midair or bearing it to the ground and transfixing it with claws which pierce the vitals and cause instant death. If unsuccessful in its first attack, the Hawk will retire quickly to thick foliage and await with the patience of a statue the first stirrings of the frightened quarry. The prey when caught is held at "arm's length" until quite dead, and then either eaten upon the spot or else carried up to some elevated perch.

Occasionally one gets a perfect view of a Sharp-shinned Hawk as it comes unexpectedly upon you in some woodland opening and takes a curious

turn about overhead, displaying as it sails the fine barred pattern of its wing-linings and its long square-ended tail; but oftener the bird is aware of your presence in advance and keeps warily out of range. It is not infrequently seen in the neighborhood of the poultry-house, and then quick action is required to prevent its seizing a chick or a young pullet and carrying it off to feed other than the rightful owner thereof.

It is idle to try to speak a good word for this gory little Hawk; rodents and insects are eaten only occasionally, while birds of every size up to pigeons and quails are its regular diet. According to Dr. Fisher, of 107 stomachs examined containing food, six held poultry or game birds, "99 other birds; 6 mice; 5 insects."

No. 178.

COOPER HAWK.

A. O. U. No. 333. *Accipiter cooperii* (Bonap.).

Synonym.—CHICKEN HAWK.

Description.—*Adult*: Similar to preceding species, but decidedly larger; the top of head deeper slate, or blackish; the tail slightly or considerably rounded; sides of breast often tinged with bluish gray. *Immature*: Similar to preceding species; streaking of under parts less abundant, more sharply defined, and of darker shades; belly and sometimes throat immaculate, or tending to become so. Differences between adult and young rather more clearly marked than in *A. velox*. Very variable in size. Adult male length 14.00-17.00 (355.5-431.8); wing 8.50-9.50 (215.9-241.3); tail 7.00-8.50 (177.8-215.9); bill from cere .60-.65 (15.2-16.5). Adult female length 18.00-20.00 (457.2-508.); wing 9.75-11.00 (247.6-279.4); tail 8.50-10.00 (215.9-254.); bill from cere .70-.80 (17.8-20.3).

Recognition Marks.—Crow size; adult heavily barred below with cinnamon-rufous; young heavily striped on breast and sides with dark brown or dusky; top of head blackish, tail long, rounded. Almost always distinguishable from *A. velox* by greater size.

Nest, of sticks and green leaves, high in trees. Sometimes a deserted Crow's nest is used. *Eggs*, 3-6, pale bluish white, sometimes spotted with light brown; subspherical. Av. size, 1.92 x 1.52 (48.8 x 38.6).

General Range.—North America from southern British America south to southern Mexico. Breeds throughout its range.

Range in Ohio.—Common resident in middle and southern Ohio. Summer resident in northern Ohio.

THIS is the real culprit. This is the "Chicken Hawk" par excellence. Punish him who will! Of larger size than the preceding, this bird with the rounded tail is more secretive in its habits, and its evil deeds are laid to the

Buteos, who, with good conscience sail about in the open and are shot for it. The Cooper Hawk is seldom seen except in the shelter of the woods, or as he is making a quick dash into some populous chicken-yard. The audacity of the bird on these occasions is particularly exasperating, and his movements are often so quick that identification is impossible, except as one reasons from facts already known. If you take his advances in good part (or if you don't, unless you are very handy with a gun), the bird will come back day after day until the chicken supply is exhausted.

Of the bird's "way in the air" Captain Bendire says: "The flight of Cooper's Hawk is both easy and graceful, and ordinarily not especially swift.



Taken near Danville.

YOUNG COOPER HAWKS.

Photo by J. B. Parker.

He may most often be seen skimming along close to the ground, in rather a desultory manner, usually skirting the edges of open woods or clearings; but once in sight and in active pursuit of its selected prey, it darts in and out through the densest thickets with amazing swiftness, where it would seem impossible for it to follow successfully; especially is this the case when chasing some small bird that generally tries to take refuge in such places. It manages, however, with the assistance of its long tail, which helps it very materially, to turn suddenly and double with remarkable ease, even in dense

undergrowth, arresting its flight instantly, and darting off, perhaps at a right angle the next second to capture its intended victim."

In the woods the Cooper Hawk resents intrusion and advertises your presence by an irritated *kek, kek, kek*, delivered from some safe distance. This sound is also indicative of the vicinity of a nest, present or intended. In this state the birds almost invariably select a beech tree for a nesting site, and place a large and orderly platform of sticks and twigs at a point where the major limbs diverge, or else where some horizontal support is offered. Old Crow's nests and even deserted sites of *Buteos* are occasionally used, but generally the bird does for itself, either repairing the old nest year by year, or else building a new one in the immediate neighborhood.

The Cooper Hawk is rather a late nester for a Hawk, but fresh eggs may be found the first week in May. The female performs most of the duties of incubation, which lasts about twenty-four days, but the male supplies her with food. Both birds are unusually courageous in defense of their nest, and an unguarded climber may receive injury at their hands.

Young Cooper Hawks are said to make very docile and interesting pets. Dr. Jones tells of one which he raised from the nest and which, altho allowed perfect freedom, "was very fond of buggy riding, and would sit on the dashboard for hours, manifesting the greatest interest in the objects passed."

No. 179.

AMERICAN GOSHAWK.

A. O. U. No. 334. *Accipiter atricapillus* (Wils.).

Synonym.—BLUE HEN HAWK.

Description.—*Adult*: Above slate-gray with darker shaft-lines; darker, almost black on head; white lines over and behind eye loosely connected by ill-concealed basal white of cervical feathers; auriculars blackish; tail with four dusky bands, plain, or almost obsolete; inner webs of wing-quills mottled,—dusky and whitish; entire under parts white, finely and heavily marbled with slaty gray, in fine wavy or zigzag lines, falling into fine bars on flanks and tibiae, with blackish shaft-lines on throat and breast; iris light yellow; bill dark blue; feet yellow, claws black. *Immature*: Following the usual *Accipiter* fashion; above dark brown, spotted with buff and whitish and margined with rusty; tail with narrow white tip and four distinct dusky bands; below whitish or buffy, *striped* narrowly with dark brown,—the markings guttate on belly, broader on sides and flanks. Adult male length about 22.00 (558.8); wing 12.00-13.50 (304.8-342.9); tail 9.50-10.50 (241.3-266.7); bill from nostril .75 (19.1). Adult female length about 24.00 (609.6); wing 13.25-14.25 (336.6-632.); tail 11.00-12.50 (279.4-217.5).

Recognition Marks.—Crow to Brant size; adult slaty blue above, white mottled with slaty gray below; rather short, rounded wings; white line over eye distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, high in trees, usually coniferous, of sticks, twigs, and grass, lined with bark-strips and grass. *Eggs*, 2-5, "white or glaucous white, sometimes very faintly marked with pale brownish." Av. size, 2.32×1.79 (58.9×45.5).

General Range.—Northern and eastern North America, south in winter to the Middle States and southern Rocky Mountain region; casually west to Oregon. Accidental in England. Breeding range restricted to the Canadian Fauna of the United States and northward.

Range in Ohio.—Not common winter visitor.

THIS intrepid marauder of the north is not seen within the limits of our state often enough to be clearly distinguished from its resident ally, the Cooper Hawk. It is somewhat larger, with short, rounded wings, and a tail comparatively long. Its wings are moved very rapidly in flight, and it is usually wary and restless, tho not unapproachable. The bird is even more venturesome than the Cooper Hawk, and appears at times among the poultry with the quickness of a meteor, carrying off the choicest of the flock before the farmer's face and eyes. There is seldom anyone to call him to account, and during the migrations at least, the "Blue Hawk" has less conscience than a pirate. In former days, when the Ruffed Grouse was more abundant, his tireless pursuit of this valuable game bird earned him the name of Partridge Hawk, while in his native wilds in the far north he still feasts upon Grouse and Ptarmigan, and is ready for anything up to the size of a Goose.

On the 13th of March, 1901, I saw a gunner on the O. S. U. grounds drop one of these birds from the top of an elm tree into the waters of the Olentangy, where it was left to shift for itself. Not suspecting the value of the kill I made a long detour and crossed the river in order to put the Hawk out of its misery. Altho severely wounded, the bird, once rescued from the drift, made a spirited fight, and was not despatched until its beautiful plumage was quite ruined. A year later, within a day, another Goshawk was narrowly observed with binoculars in the same bottom.



RED-TAILED HAWK
Buteo borealis
 $\frac{1}{2}$ Life-size

No. 180.

RED-TAILED HAWK.

A. O. U. No. 337. *Buteo borealis* (Gmel.).**Synonyms.**—HEN HAWK; CHICKEN HAWK; RED-TAIL; RED-TAILED BUZZARD.

Description.—*Adult*: Above dark brown, fuscous, and grayish brown, varied by rusty or ochraceous edgings, and outcropping whitish, especially about head and neck; primaries blackish-tipped, the first four deeply emarginate, the inner ones indistinctly banded; tail deep rufous, crossed near end by a single narrow bar of blackish; lighter from below,—vinaceous or pearly pink; under parts white or buffy white, rufous—and brown-shaded on sides of neck and breast, nearly meeting in center; throat and upper breast with dusky, lanceolate streaks; sides with rhomboidal spots or transverse bars of rufous and dusky in various patterns, nearly meeting across belly; shanks faintly barred with rusty; bill plumbeous; tarsus yellow, very stout; claws black. *Immature*: Similar to adult but more uniform in coloration,—little buffy or ochraceous; markings on sides of breast and belly blackish, clear-cut; tail entirely different,—grayish brown crossed by nine or ten distinct narrow bands of blackish. Such are the typical plumages, but the departures from them are wide and various. In winter resident birds often assume a partial albino plumage, with strongly marked black and white, and pure albinos are not rare. "Melanism" or blackening of plumage in various proportions is not unknown. Adult male length 19.00-22.50 (48.26-571.5); wing 15.25 (387.4); tail 9.25 (235.); culmen from cere about 1.00 (25.4); tarsus 3.00 (76.2). Adult female length 22.50-25.00 (571.5-635.); wing 17.00 (431.8); tail 10.00 (254.); culmen 1.10 (27.9); tarsus 3.30 (83.8).

Recognition Marks.—Brant size; red tail of adult distinctive; otherwise known by large size, lighter under parts, and, with certainty, by stout tarsi.

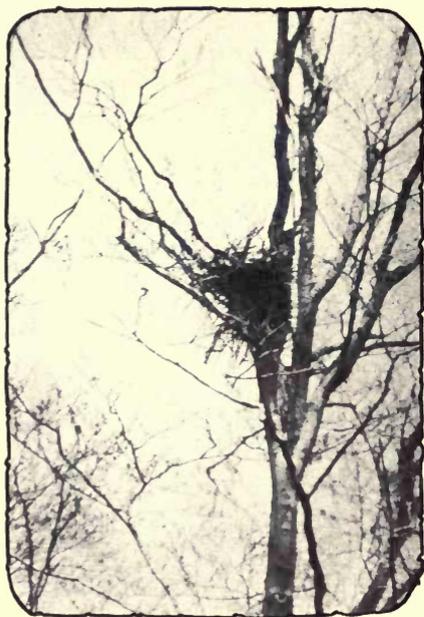
Nest.—At middle or upper heights in trees; of sticks, carelessly lined with corn-pith, drying leaves, etc. Sometimes an old Crow's nest is refitted. *Eggs*, 2-4, bluish white, stained, spotted, or blotched with reddish brown. Av. size, 2.40 x 1.83 (61. x 46.5).

General Range.—Eastern North America west to the Great Plains, north to about latitude 60°, south to eastern Mexico. Breeds throughout its range, except possibly the extreme southern portion.

Range in Ohio.—Still common resident, or summer resident, of universal distribution. Much less common than formerly. There is considerable shifting of the species in winter, but birds are to be found more or less throughout the state at that time.

AMONG the Birds of Prey, this is one of the largest of the Hawks, and stands next to the familiar Sparrow Hawk in ease of identification. Only one of the birds which are commonly called Hawks is larger, and that one, the American Rough-leg, is found only during the winter months in small numbers in northern Ohio. Furthermore, the Rough-leg is a bird of the

twilight, while the Red-tail is most active during bright days. But if you would know the Red-tail certainly you must learn to notice the uniformly colored tail. There may be one dark band near the tip, but the rest of the tail will be some shade of rufous or brown, without bands of any color. One also soon learns to see a certain majestic movement in the soaring flight, a more dignified wing stroke, and withal, a certain appearance of strength and power not manifest among the smaller hawks, particularly the smaller Red-shouldered.



Telephoto x 6

By the Author

A RED-TAIL'S NEST.

not actually strike the human intruder, much as he may deserve punishment, but the angry scream and the booming air beneath the half-closed wings, try the nerves of the bravest, while he is perched in the lofty tree-tops.

Much abuse has been heaped upon this bird's head, the most of it unwarranted. Careful study has proved that chickens are molested only when other food is unobtainable. And when birds have been killed in the act of raiding the poultry-yard they have been young birds, for the most part. On

In spite of the fact that this bird sometimes visits the poultry-yard, and may feast daintily upon sparrow or pigeon, I cannot help admiring him. His sagacity is shown in the selection of a nesting site, which is the taller and less easily accessible trees, and in his habit of showing himself as little as possible in the vicinity of his nest, except high above it. To the initiated the whereabouts of that carefully arranged bundle of sticks may be guessed from the manner in which the high-soaring bird behaves. Unless the nest is actually threatened there is no demonstration of hostility, but a dignified, watchful indifference to an unwarranted meddling with private affairs. But once threaten the nest and the speck in the upper air descends like a bolt out of a clear sky, swerving aside just at the point of contact and sweeping upward again for a renewed attack. Even the fiercest birds will

the other hand, the harmful animals and insects which this hawk destroys far overbalance the depredations upon poultry. It is no more fair that all hawks should be killed because one occasionally destroys chickens than it is to kill all cats because one sometimes becomes a chicken killer.

The cry of Red-tail is unlike that of any other of the hawks, and may become a certain mark of identification during the late winter and early spring weeks. It is a long-drawn scream of warning and defiance, given on a descending scale. It is harsh and piercing, and commanding, uttered when danger threatens, when a rival for his lady's affections appears, and often when the mating season begins. Its character is unmistakable. Blue Jay cannot successfully imitate it, because his lungs lack the capacity.

LYNDS JONES

No. 181.

WESTERN RED-TAIL.

A. O. U. No. 337b. *Buteo borealis calurus* (Cass.).

Description.—*Adult*: Plumage chiefly blackish, sometimes uniform sooty, except tail and its upper coverts; individually variable between form nearly as light as *B. borealis* and deepest sooty brown; breast usually extensively rufous, and lower belly with more or less white, but these colors obliterated in completely melanistic specimens; tail as in *borealis*, with a conspicuous black subterminal bar and often with several more or less complete additional bars. *Immature*: As in *borealis* but darker throughout and more heavily spotted below; the plumage (except tail) sometimes wholly dusky as in adult (Ridgway). Size as in preceding form.

Recognition Marks.—Like *Buteo borealis* but more heavily colored.

Nest and Eggs as in *B. borealis*.

General Range.—"Western North America from the Rocky Mountains to the Pacific, south into Mexico; casual east to Illinois." (A. O. U.).

Range in Ohio.—Accidental. One record.

A specimen in the O. S. U. collection is labelled "*Buteo calurus*, Red-tailed Blackhawk, Adult male, November 20, 1875, Franklin County, Ohio." and bears the signature of Dr. Jasper. The bird is a handsome and strongly marked example but lacks the additional barring of the tail which is usually present or at least indicated. Nothing further is known of the circumstances attending its occurrence.

No. 182.

RED-SHOULDERED HAWK.

A. O. U. No. 339. *Buteo lineatus* (Gmel.).

Synonyms.—CHICKEN HAWK; HEN HAWK; RED-SHOULDERED BUZZARD.

Description.—*Adult*: Above rich chocolate-brown, fuscous and grayish brown, varied by rufous and ochraceous, especially on head and back, and by whitish on scapulars and inner quills; lesser wing-coverts extensively rufous, forming a red "shoulder"; wing-quills and greater coverts dusky-barred and white-spotted and -tipped, forming irregular bars; ends of primaries and tail principally blackish, the latter crossed by four or five narrow, white bands, and tipped with white; upper tail-coverts barred and tipped with white, affording occasional suggestion of white rump; four outer primaries deeply emarginate; below cinnamon-rufous, paler or whitish on throat and crissum, heavily streaked with dusky brown on sides of neck, throat and breast, heavily cross-barred with whitish on lower breast, belly, and sides; tibiae tawny, indistinctly cross-barred with darker rufous; cere and feet chrome yellow; bill blackish; claws black. *Immature*: Different; dark brown or fuscous above, only traces of rufous,—on lesser wing-coverts, etc.; wings grayish- or ochraceous-spotted, instead of white; quills extensively ochraceous on concealed portions; tail dusky, with seven or eight grayish bars, which become more ochraceous and gradually obsolete basally; below dull white or buffy, heavily streaked and striped, or longitudinally spotted with dusky brown; throat and sides of neck dark brown, streaked as in adult but with less ochraceous. Plumage subject to considerable variation,—fading, albinism, melanism, etc. Adult male length 17.50-20.00 (444.5-508.): wing 12.00-13.50 (304.8-342.9); tail 7.50-9.50 (190.5-241.3); culmen from cere .80 (20.3). Adult female length 19.00-22.00 (482.6-558.8); wing 13.25-14.25 (336.6-362.) tail 8.50-10.00 (215.9-254.).

Recognition Marks.—Crow size; rufous shoulder distinctive; smaller than preceding species, more heavily marked below. The young of this species require careful distinction from the young of *borealis* and *platypterus*. From the former they are distinguished by smaller size, and by being more continuously marked below, including shanks (tawny-washed and darker-barred); from the latter by larger size and by ochraceous or grayish spotting on primaries.

Nest, in trees, of sticks, sometimes lined with corn-pith and the like. *Eggs*, 3-5, sometimes 6, pale bluish white, with a rough or chalky surface, and spotted or blotched with rufous or yellowish brown; occasionally unmarked. Av. size, 2.14 x 1.67 (54.4 x 42.4).

General Range.—Eastern North America to Manitoba and Nova Scotia; west to Texas and the Plains; south to the Gulf States and Mexico. Breeds throughout its range.

Range in Ohio.—Common resident. Retires from the northern portion of the state in winter.

THE common names of the Birds of Prey are sadly confused in America. We seldom use the noble word Falcon, altho it strictly applies to many

of our species; we call our Vultures, Buzzards; and our proper Buzzards (Latin, *Buteo*, old French *Busart*) are merely "Hawks" or "Hen Hawks." The Red-shouldered Buzzard is, after the Sparrow Hawk, the commonest bird of prey in the state. It is well distributed, since it is content to occupy, if need be, a very small piece of woodland, but it does insist upon having undivided possession of that little, at least so far as other birds of the same species are concerned.

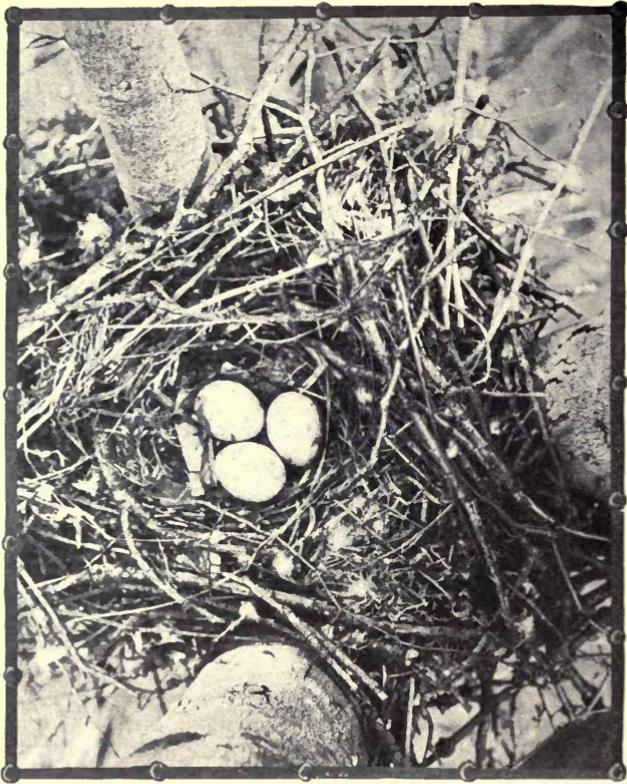
From this little stretch of woodland, however humble, the Buzzard sallies forth at intervals to view the landscape o'er, moving forward vigorously to a well accustomed haunt, or else circling aloft above the home woods to an immense height, and then drifting away across the country in great, lazy, sun-burned circles, until the sight of game calls it down. Altho its station is so lofty, the prey it seeks is usually of the humblest,—moles, mice, gophers, lizards, and insects. Poultry is rarely taken and then only under extenuating circumstances, as when a chick has disobeyed its mother's injunctions and gone too far afield.

Red-shouldered Hawks winter regularly from about the middle of the state southward and casually to the Lake shore, but everywhere in diminished numbers. The winter birds are probably from the extreme northern limits of the range, in Ontario; and I have fancied that it was on this account that they showed a tendency to temporary albinism, or seasonal whitening of plumage. The return journey is accomplished late in February or early in March, and by the middle of the latter month most of the Hawks are mated. This has not been accomplished without considerable aerial evolutions, and much affectionate screaming, such as does credit to these 'ignoble' birds of prey.

For the nest an old domicile of the Crow is often pressed into service, but where the birds have little to fear *in propria persona*, they rear an unre-



Taken near Youngstown. Photo by Geo. L. Fordyce.
NEST AND EGGS OF THE RED-SHOULDERED
HAWK



ANOTHER NEST.

Photo by R. F. Griggs.

the middle of April. Only one brood is regularly raised in a season, but in case the first eggs are destroyed the birds will make one or two more attempts. Incubation lasts about four weeks and is attended to by both birds. As the operation progresses feathers drop out increasingly from the birds' breasts, so that a well feathered nest means eggs nearly ready to hatch. When disturbed the parent birds keep up a pitiful complaining, but usually from a safe distance.

The eggs, varying in number from two to six, are among the best known of Hawks' eggs and present interesting variations both in size, in shape, and

tentious structure of their own where spreading branches of beech or oak or elm offer secure lodgment, close to the trunk or a little way removed. In case a Crow's nest is used its undesirable concavity is filled up with additional bark-strips, corn husks, or dead leaves, so that the eggs of the Hawk occupy only a slight depression. Fresh eggs may be looked for about

in the amount of pigmentation. It is time, however, to call a halt upon the indiscriminate gathering of Hawks' eggs. The museums are loaded down with them, and nine-tenths of those which are annually levied upon in the name of boyish curiosity are destined to find their way into mouse nests or discarded boxes of sawdust. In spite of its occasional pilfering, the Red-shouldered Hawk is a very useful bird, and should receive rigid protection at the hands of every farmer.

No. 183.

BROAD-WINGED HAWK.

A. O. U. No. 343. *Buteo platypterus* (Vieill.).

Synonym.—BROAD-WINGED BUZZARD.

Description.—*Adult*: Above sooty brown and fuscous, with much ill-concealed or hidden white on head, hind neck, wing-coverts, and inner margin of wings; some ochraceous margining of feathers, but less than in the two preceding species; wing-quills plain-colored externally; primaries blackening on tips, broadly white on inner webs; the three outer primaries deeply emarginate; tail black with two decided white or light gray bars, beside narrow terminal gray and basal white; cheeks finely streaked with dusky and fulvous on whitish ground; throat white narrowly streaked with blackish; remaining under parts whitish or pale fulvous, heavily and widely barred and streaked with yellowish brown or dusky ochraceous; sometimes nearly solid colored on breast; lower belly and crissum nearly immaculate; shanks sparingly fine-barred; axillars barred, but under surface of wing nearly white, black-tipped; bill dark, or yellow-spotted below; feet yellow; claws black. *Immature*: Like adult, but tail grayish brown crossed by five to seven narrow dusky bands; under parts white or buffy, streaked and spotted with dusky; longitudinal pattern more distinct than in adult. Adult male length about 14.00-16.00 (355.6-406.4); wing about 10.50 (266.7); tail about 6.75 (171.5); culmen from cere .75 (19.1); tarsus 2.50 (63.5). Female from two to three inches longer and proportioned accordingly.

Recognition Marks.—Typical Crow size; the white under surface of wing, with black primary tips, affords quickest field recognition mark; wings rounded; bird shorter and more compact in build than *Accipiter cooperii*, with which it is most likely to be confused.

Nest, of sticks, in trees; often a deserted Crow's nest. *Eggs*, 2-4, buffy white, spotted and blotched with reddish brown or ochraceous. Av. size, 2.00 x 1.58 (50.8 x 40.1).

General Range.—Eastern North America from New Brunswick and the Saskatchewan region to Texas and Mexico, and thence southward to northern South America and the West Indies. Breeds throughout its United States range.

Range in Ohio.—Not common summer resident.

PROFESSOR Jones is right in calling this a little-known Hawk in Ohio. Its fondness for the deeper woods, together with its small size, leaves one little opportunity to distinguish it clearly from the more abundant Cooper Hawk on the one hand or the rare Sharp-shin on the other. On only one occasion have I positively identified it in Ohio. On March 5th, 1898, a male bird with black primary-tips contrasting sharply with the white of the remaining under-wing surface, flew low overhead as I stood in the street in Oberlin. The bird held a straight course north, and moved with the alternating flap and sail so characteristic of the Buteos.

According to Dr. William L. Ralph,¹ who has studied the species closely in northern New York: "When one is driven from its nest it at once utters a shrill call which soon brings its mate to the spot, and together they will keep up their noise as long as there is anyone in the vicinity. They are very tame in this locality (Utica), and frequently when one is started from its nest it will not even leave the tree, but alight on a limb near by. They are gentle in disposition and never attempt to strike at a person, altho they are very solicitous about their eggs and young. For days after they have been robbed these birds will utter their complaints when anyone approaches their homes."

"Their food consists to a great extent of small rodents, such as mice, gophers, and squirrels; shrews, small snakes, frogs, grasshoppers, beetles, larvæ of insects, and very rarely small birds. It is one of the most harmless of our Raptores and of great benefit to the farmer" (Bendire).

No. 184.

AMERICAN ROUGH-LEGGED HAWK.

A. O. U. No. 347a. *Archibuteo lagopus sancti-johannis* (Gmel.).

Synonyms.—AMERICAN ROUGH-LEG, or simply ROUGH-LEG.

Description.—*Adult, normal (light) phase:* Head and neck all around white or flaxen, narrowly streaked with dark brown, sparingly on throat; remaining upper parts dark brown or brownish fuscous, varied by ochraceous or ochraceous-buffy, marginal brownish gray and outcropping white; wing-quills not barred, at least on exposed surfaces, but grayish-edged and with much basal white on inner web; four outer primaries deeply emarginate; upper tail-coverts and basal portion of tail (usually for more than half its length) white; terminal portion of tail crossed by broad, subterminal band of dusky, and usually by several, narrow, irregular or broken bands anterior to this; under parts whitish, or pale ochraceous-buffy, spotted or broadly streaked, chiefly on breast, with blackish; a loose broken band of dusky across belly; thighs often ochraceous; tarsi feathered to the toes, in front; feet yellow; bill and claws black. *Immature, normal phase:* Similar to adult, but terminal portion of tail

1. Quoted by Bendire, *Life Histories of N. A. Birds*, p. 242 seq.



AMERICAN ROUGH-LEGGED HAWK (on the left)

Archibuteo lagopus sancti-johannis

YOUNG RED-TAILED HAWK (holding Bob-white)

About $\frac{1}{2}$ Life-size

Buteo borealis

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plain, grayish brown; primaries with basal white on *external web*; markings of under parts confluent on belly in a broad, unbroken, abdominal belt of deep brown; thighs spotted with dusky. *Adult and immature, melanistic phase*: Entire plumage black, in any degree, save that the tail is white-barred and primaries exhibit some basal white. This phase is quite common, and seems to be independent of age, sex, or season. Both sexes length 19.50-23.50 (495.3-596.9); wing 15.75-18.00 (400.1-475.2); tail 9.00-11.00 (228.6-279.4); culmen from cere .80-.90 (20.3-22.9). Female about two inches longer than male and correspondingly proportioned.

Recognition Marks.—Brant size; feathered tarsi distinctive; best recognized in the field by its, usually, dark coloration and heavy flight; basal white of tail also distinctive if properly discriminated from that of the upper tail-coverts of the Marsh Hawk.

Nesting.—Not known to breed in Ohio. *Nest*, a bulky affair placed high in trees or on ledges of rock; of sticks, fairly well-lined with bark strips, leaves, and soft materials. *Eggs*, 2 or 3, sometimes 4 or 5, bluish white or dull white, sometimes unmarked, but oftener spotted, blotched, or streaked with reddish brown or chocolate. Av. size, 2.22 x 1.78 (56.4 x 44.7).

General Range.—North America north to Mexico, breeding north of the United States (excepting in Alaska.).

Range in Ohio.—Not uncommon, but irregular winter visitor in northern Ohio. Rare in middle and southern portions.

A large dark-colored bird, "bigger than a Hawk and not as big as an Eagle", seen in winter flying heavily to and fro across the meadow at a low height, or perching for considerable stretches of time on pasture boulders, fence-posts, or low trees, may safely be put down in the note-book as an American Rough-legged Buzzard. The species is largely crepuscular, almost nocturnal, in habit and is to be looked for on dark days rather than bright ones. Its food consists almost exclusively of field mice and the other small rodents, altho an occasional rabbit varies the fare.

As might be inferred from the humble nature of its quarry, the Rough-leg is a peaceable bird, rather sluggish in movement, and, except where persecuted, quite unsuspecting of man.

Altho hopelessly ignoble from a falconer's standpoint, the bird has a fine presence and a bright eye, and would seem to deserve the name 'gentle' rather better than the rapacious Peregrine. Its presence with us in winter is entirely beneficial, and it should receive full protection.

Rev. W. F. Henninger reports the taking of five specimens near Waverly in February and March, 1899, and states that several more were killed the following winter.

No. 185.

GOLDEN EAGLE.

A. O. U. No. 349. *Aquila chrysaetos* (Linn.).

Description.—*Adult*: General plumage rich dark brown, sometimes paling on wing-coverts, etc.; the lanceolate feathers of occiput and cervix buffy-tipped and tawny-edged (scarcely "golden", but the name arises here); wing-quills and tail blackish, the latter clouded or obscurely barred for the basal two-thirds with grayish brown and whitish; tarsi, fully feathered to the toes, paler or whitish. The birds become somewhat gray with age. *Immature*: Like adult, but basal two-thirds of tail plain white contrasting with terminal black; tarsi still paler or white. (Authorities flatly disagree as to whether the white-tailed bird is adult or young; I follow Ridgway. There is a difference but for pity's sake let's not go and kill off the rest of the Eagles for the sake of finding out who is in the right.) Adult male length 30.00-36.00 (762-914.4); wing about 24.00 (609.6); tail about 14.50 (368.3); bill 1.60 (40.6); tarsus 3.75 (95.3). Adult female length 35.00-40.00 (889.-1016.); wing about 26.00 (660.4); tail 15.50 (393.7); bill 1.80 (45.7); tarsus 4.18 (106.2). Extent of wing from six and one-half to seven and one-half feet.

Recognition Marks.—Largest; not easily distinguished at distance from immature Bald Eagle; feathered tarsi, of course, distinctive.

Nest, a bulky platform of sticks, on cliffs, or, more rarely, in trees. *Eggs*, 2 or 3, dull whitish, usually speckled, spotted, blotched or stained distinctly and faintly with reddish brown. Av. size, 2.96 x 2.32 (75.2 x 58.9).

General Range.—North America south to Mexico, and northern parts of the Eastern Hemisphere. Breeding range in the United States practically restricted to the mountainous parts of unsettled regions.

Range in Ohio.—Probably no longer resident, but rare winter visitor only.

BECAUSE of the racial weakness for symbols and striking generalizations, we have been taught that the Golden Eagle is the embodiment of all regal qualities, including courage, magnanimity, and valor in defense of offspring. There is some foundation for all this. In his mountain home the majestic flight of the Eagle truly befits the grandeur of the scene. Cradled on a beetling cliff and schooled in the clouds, it is little wonder that the Eagle should have become for us the symbol of both prowess and aspiration. Even in captivity there is something awful about his piercing eye, and the unrest of the royal captive appeals to all that is chivalrous in our natures.

But the reputation of the Eagle race, quite as in the case of our own, has been made by a few individuals, and their feats are a revelation of the possibilities inherent in the breed rather than chapters from common life. Never shall I forget the pained disappointment of my first Golden Eagle's nest in the Cascade Mountains of Washington. The situation was romantic enough—a ledge of rock some three hundred and fifty feet up on the side of the gulch and seventy-five feet clear of the talus below. At the time of my first visit, May 18th, the nest contained two eaglets about six weeks old. Armed with

a stout birchen staff I worked my way over to a secure footing within a dozen feet of the nest. The remaining distance was a nasty bit of climbing, and I preferred to await the first onslaught of the outraged parents where there would be some chance for defense. Fudge! The fire-eating birds appeared once or twice in the middle distance, but paid no more attention to the peril of their offspring than as if I had been a Magpie, coveting the crumbs from the royal table.

Three weeks later I revisited the nest and put the eaglets to flight. One of the old birds came up and superintended the gliding downfall of the least capable child, but seeing her safely upon the ground immediately went away marmot-hunting in perfect unconcern. If there is one bird above another of a gentle and unsuspecting nature, I judge the Golden Eagle to be that bird. But doubtless this also is a hasty generalization.

On the cliffs of Eocene formation near Fossil, Wyoming, I once located a Golden Eagle's nest. The material of which these hills are composed is a kind of volcanic ash, very friable, and the birds had chosen for their eyrie a cranny in the very middle of one of the wildest of these fossil-bearing cliffs and at a height of some seventy feet. It was practically inaccessible even by rope, for the cliff is perpendicular and deeply fissured by the action of the weather, so that the flying buttresses thus formed are ready to part and crumble at a breath. A pair of Prairie Falcons (quite similar to our Peregrines) had a nest in the "next block" and they appeared to make a practice of persecuting the Eagles just for sport. I saw one of the Eagles launch out from his nest for a course across the broad valley. A Falcon took after him, altho the Eagle had a big lead. "A race", thought I. Woof, woof, woof, went the Eagle's wings; clip, clip, clip, clip, went the Falcon's. Inside of a mile the smaller bird made up the distance, scratched His Majesty's crown with his noble toes, and was up in the ether a hundred yards before the Eagle could do a thing. This process was repeated until the gentle pair passed from sight, but a few minutes later the Falcon returned to his perch chuckling hugely.

In Ohio the Golden Eagle is surmised to be only a winter visitor. As such it is not infrequently seen in various parts of the state and is occasionally captured in traps or shot while inspecting some poultry yard or pig-pen. The injuries inflicted by the birds are usually trifling, but might become serious if they were at all numerous.

Professor Jones, in his recent catalog, notes four records for Lorain County within the last five years, and, on the authority of Mr. Harry B. McConnell, three captured near Cadiz within the past three years. An apparent exception to the ranks of winter visitors was one seen by myself on the Lake Erie shore near Lorain on the 29th of August, 1898. The appearance is no evidence of a near breeding range, however, since these birds wander far in search of food, and especially after the young are able to shift for themselves.

No. 186.

BALD EAGLE.

A. O. U. No. 352. *Haliaeetus leucocephalus* (Linn.).

Synonyms.—BIRD OF WASHINGTON (young); GRAY EAGLE (second year young); BLACK EAGLE (first year young).

Description.—*Adult*: Head and neck all around, and tail including coverts, pure white; remaining plumage grayish brown to brownish black; with some paler edging of feathers; bill and feet yellow; claws black. *Immature*, first year: blackish with some outcropping white of cottony-based feathers; bill black; feet yellow. Second year: grayish brown or dark brown, mottled somewhat irregularly on wings and tail (centrally) with gray and white; acquiring adult characteristics by end of third year. Second year birds are somewhat larger than adults, "overgrown puppies", and were formerly described as Washington Eagles. Science outgrew this ignorance as the nation outgrew its youth. Adult male length 30.00-36.00 (762-914.4); extent of wings seven feet; wing 21.00-26.00 (533.4-660.4); tail 11.50-15.00 (292.1-381.); culmen about 2.00 (50.8); tarsus about 3.00 (76.2); middle toe and hind claw 2.75 (69.9). Adult female length 34.00-42.00 (863.6-1066.8); extent seven to eight feet; wing 24.00-28.00 (609.6-711.2); tail 13.00-16.00 (330.2-406.4); culmen about 2.20 (55.9); tarsus about 3.50 (88.9); hind claw up to two inches (50.8).

Recognition Marks.—Largest; white head and tail of adult; half-naked tarsus distinctive in any plumage.

Nest, a bulky platform of sticks high in trees, or, rarely, on cliffs, near considerable bodies of water. *Eggs*, 2 or 3, dull white or pale bluish white, unmarked but often nest-stained. Av. size, 2.89 x 2.25 (73.4 x 57.2).

General Range.—North America at large, south to Mexico, northwest through the Aleutian Islands to Kamchatka. Breeds locally throughout its range.

Range in Ohio.—Rare resident. A few pairs breed along the shore of Lake Erie, and one or two in the neighborhood of each large reservoir.

AS I was standing once with a friend upon the dock at Lorain, an Eagle was seen sailing overhead in calm majesty, and when we called the attention of a by-stander to the occurrence, he at once became strangely excited. "An Eagle! Is it? Oh, why don't somebody get after it? Where's a gun?" That's it. That is the typical American attitude toward the bird which is chosen as the national emblem, and which, whatever its faults, is a bird of lofty bearing and of most interesting habits. This man was really distressed to think that any living thing so large as an Eagle should be allowed to pass unharmed. "Here is an Eagle; kill it!" has been the rallying cry since gunpowder was invented, and now we record only the poor remnants of bird life which the mighty shooters of these flying barns have left us.

Bald Eagles are chiefly resident wherever found within the state. The Lake Erie shore and islands in the vicinity of Sandusky constitute the only region where the birds are at all common, but isolated nests occur along the Lake front at considerable intervals both east and west. Eagles appear regularly at the larger reservoirs, and it is probable that a few breed near by, altho their numbers are augmented in winter either by visiting Sandusky birds, or by those which have been compelled to fall back from the northern limits of the British American range.

The bird subsists chiefly upon fish and these it secures by robbing the more expert Fish Hawk, or by independent plunging. More frequently it seizes weak or wounded fish which have come to the surface of the water to die, or else patrols the shore to pick up whatever largess of fish or offal may have been cast up by the waves. Frequently the Eagle may be observed sitting upon some high stub in the center of reservoir island or lake marsh, where it may command a wide sweep of territory, and from which it may descend from time to time for more particular scrutiny of suspected objects. A bird thus seated is one of the most picturesque features of any landscape, and for one who loves the water the sight is well nigh indispensable. In winter, I am told, the Eagles sometimes appear in considerable numbers at Licking Reservoir, where they find sustenance by watching near air-holes in the ice for such fish as occasionally seek the surface.

That the Bald Eagle is not exclusively piscivorous is attested by Captain Bendire in the following words: "Some of our earlier writers speak in rather uncomplimentary terms of our national bird, stigmatizing it as a robber and tyrant, and as feeding principally on fish stolen from the Osprey, and on carrion. This is not strictly true. According to my observations the Bald Eagle lives to a great extent at least on prey captured by its own exertions, principally on wounded water fowl. When engaged in the chase of a flock of Geese, Brant, Ducks, or other water birds, on which it subsists almost entirely, when such are procurable, it is by no means the sluggish lazy bird some writers would have us believe, but the peer in swiftness, dash, and grace of any of our Raptors." Professor Butler adds that altho the birds sometimes feed upon lambs, small pigs and poultry, mice and other rodents form a more important article of food, and all in all they may be considered "to belong to that class of rapacious birds whose lives are beneficial."

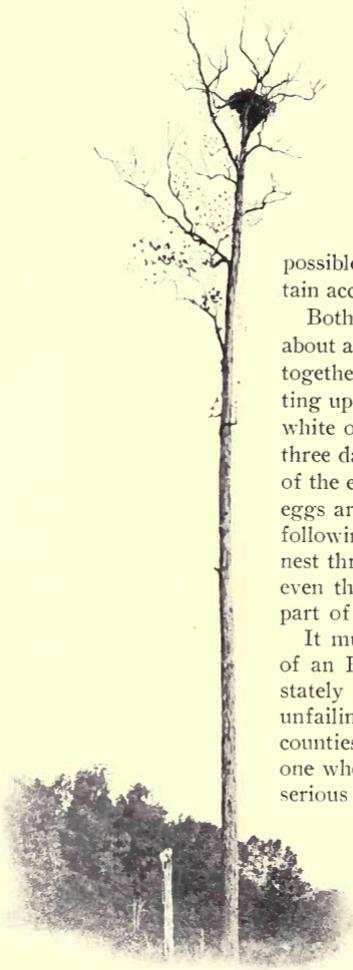
"Nidification begins early. In Florida and other parts of the Gulf Coast eggs are sometimes deposited in the early part of November, but generally from the 1st to the 15th of December. In the Middle States they nest occasionally in the beginning of February, Mr. Thomas H. Jackson taking a full set of

eggs in Lancaster County Pennsylvania, on February 11th. Usually they do not commence to lay until March, and correspondingly later as they advance northward" (Bendire).

The nests, which in this section are always placed well up in good-sized trees, are repaired and added to year by year until they come to be immense and historic structures. Not only are the trees in which they are built usually hard to climb, but it is often difficult, or well nigh impossible, to pass the bulging sides of the nest so as to obtain access to the eggs themselves.

Both sexes share the duty of incubation, which lasts about a month, and the two birds are sometimes to be seen together at the nest, the one standing and the other squatting upon the eggs. The eggs are two, rarely three, pure white or bluish white, and are laid at intervals of two or three days. There is often quite a discrepancy in the size of the eggs, the larger being presumably laid first. If the eggs are destroyed the birds will not nest again until the following year. The young, when hatched, remain in the nest three or four months before they are able to fly, and even then sometimes require considerable urging on the part of their ambitious parents.

It must be evident that those who live in the vicinity of an Eagle's nest become very much attached to these stately birds, and view their comings and goings with unflinching interest. In some parts of Erie and Ottawa counties the Eagles are regarded very highly, and any one who attempted to molest one of them would get into serious trouble with its human neighbors. This is quite as it should be. The people of this state could far better afford to reimburse the owners of poultry and sheep for some trifling losses inflicted upon them, than they could to be deprived of the majestic presence of these symbolic birds. The killing of a Bald Eagle ought to be a penitentiary offense, and the man who would wantonly destroy one of their monumental landmarks is beneath contempt.



Taken near Sandusky.

Photo by R. F. Griggs

A CHERISHED LANDMARK.

No. 187.

AMERICAN OSPREY.

A. O. U. No. 364. **Pandion haliaetus carolinensis** (Gmel.).

Synonym.—FISH HAWK.

Description.—*Adult male*: Upper parts plain fuscous; tip of wing blackish; tail crossed by six or eight dusky bands; head white, heavily but narrowly streaked with blackish; an irregular dusky band proceeding backward from eye; feathers of occiput loosely ruffled, or presenting a crested appearance; under parts white, sometimes rufous-spotted on breast, but usually immaculate; lining of wing mottled,—white and fuscous near edge, remainder white or buffy, dusky-barred distally; bill and claws black; cere and base of bill bluish black; feet bluish gray; iris yellow and red. *Adult female*: Similar but breast heavily marked with yellowish brown or fuscous. *Immature*: Like adult, but feathers of upper parts bordered terminally with white or buffy. The same distinction obtains between the sexes as in case of adults. Length 21.00-25.00 (533.4-635.); wing 17.00-20.50 (431.8-520.7); tail 7.00-10.00 (177.8-254.); culmen 1.20-1.40 (30.5-35.6).

Recognition Marks.—Brant size; extensive white contrasting with fuscous, distinctive; labored flight; river- and lake-haunting ways.

Nest, an immense mass of sticks, broad-topped, lined centrally with bark-strips and soft materials; placed centrally on top of trees of various heights, or on isolated rocks of rivers, etc. *Eggs*, 2-4, dull or buffy white, heavily spotted, blotched, or overspread with chocolate; rarely almost or quite unmarked. Av. size, 2.45 x 1.81 (62.2 x 46.).

General Range.—North America from Hudson Bay and Alaska south to the West Indies and northern South America. Breeds throughout its North American range.

Range in Ohio.—Not uncommon locally,—about the reservoirs and on Lake Erie. Rare or unknown elsewhere. Chiefly summer resident. Sparingly resident in winter in the extreme south.

ALONG the sea coast, up the large rivers, and wherever there are considerable bodies of water, the Fish Hawks are to be found more or less commonly according to the treatment which they have received at the hand of man. They are simple-hearted, honest folk, and deserve protection, if for no other reason, because they are fishermen. They are, however, cruelly persecuted in many sections of the country, and have been almost exterminated in this state; but to my mind it is a mighty mean sportsman who will begrudge a poor bird the taking of a few fish by methods not less sportsmanlike than his own.

The Osprey feeds exclusively upon fish and covers long stretches of water in its tireless search. It flies along at a height of fifty or a hundred feet above the water, and when its finny prey is sighted, pauses for a moment on hovering wings, then drops with a resounding splash, often quite disappearing beneath

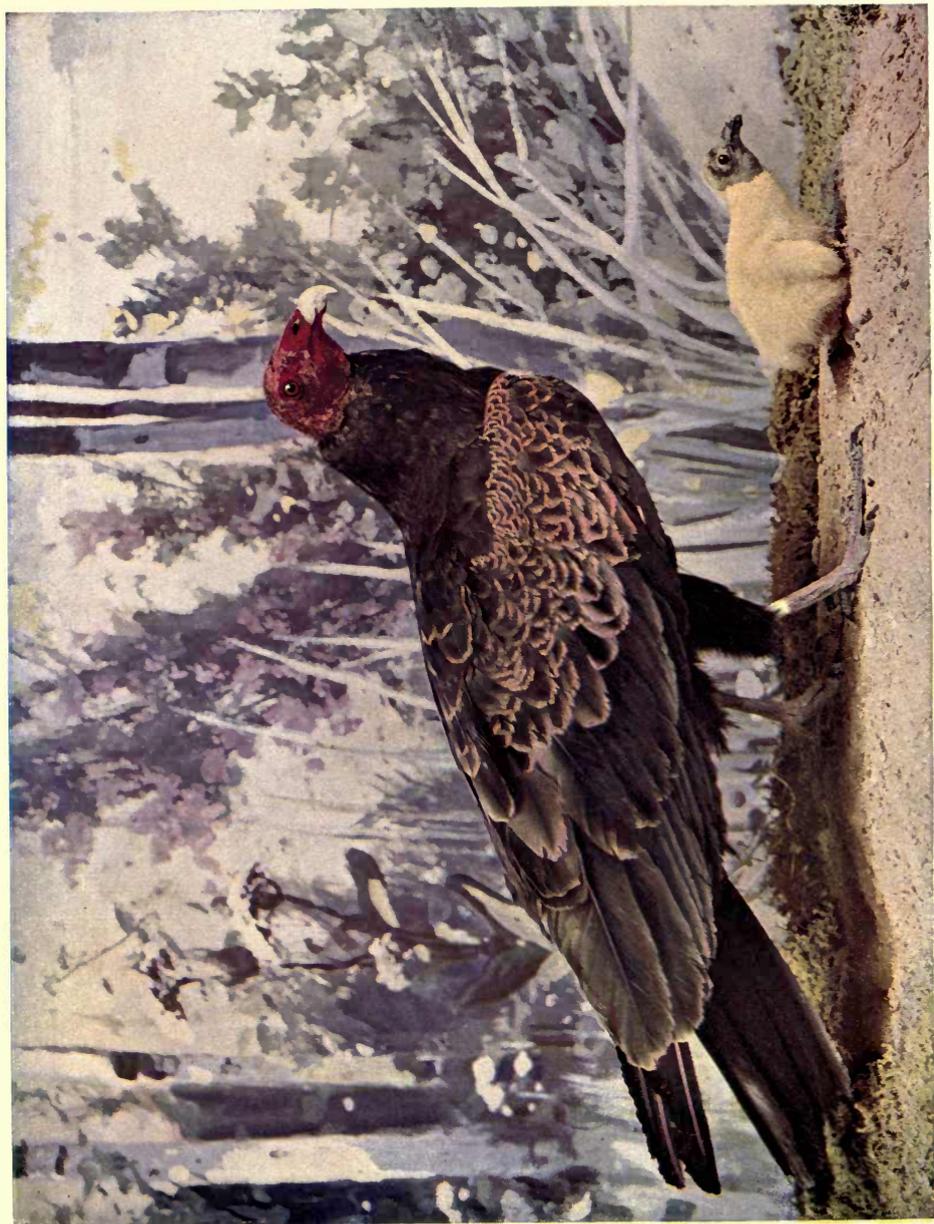
the water, but rising again quickly with a fish firmly secured in its talons. The bird upon rising immediately adjusts the catch, placing it head foremost so that it will offer the least resistance to the air in flight. Not infrequently the Hawk secures a fish which it is barely able to handle, and occasionally it strikes one so large that it is drawn under and drowned before it can disengage its claws.

Besides providing for a hungry family at home, this hard-working bird is purveyor in ordinary to His Majesty, the Bald Eagle, and upon the suggestion of the latter bird meekly drops its catch only to see it eagerly snatched in midair by the lazy tyrant. Pitifully screaming he turns back to the weary chase, for he must not go home empty-handed.

The nest, a huge aggregation of sticks and trash, is placed normally near the water's edge upon the cliffs or upon rocks projecting in mid-stream or else high in a neighboring tree. Persecution, however, will drive it to the deep woods miles from its fishing grounds. A typical nest, found on the banks of the Columbia River, is placed twenty-five feet high in a stout pine tree. It is flat on top, three feet across, but seven feet in depth, the mass representing the successive accumulation of many years, perhaps of generations. Within a little depression in the center, surrounded by soft materials, lie three handsome eggs, rich chocolate on a tinted ground. The female is on while her mate, tired of fishing, is standing by her side. Both rise at our approach and poise in midair above our heads, uttering feeble screams of protest as they suspect our oölogical purpose. A pair of Magpies have made their nest within the hospitable sides of this ancient pile, and these self-appointed camp followers add their voices to the general din.

Eggs are deposited in May and incubation lasts three and four weeks. Unlike the Eagle, the Osprey, if robbed, will make another attempt the same season, but lays usually not more than two eggs the second time.

Of the present breeding range of the Osprey it is difficult to form a just conclusion. No nests are known to me, nor have any been reported definitely within the state. A canoe trip of 150 miles down the Ohio River failed to discover any sign of occupation by these birds. It is pretty certain, however, that one or two pairs breed in the vicinity of the three large reservoirs, and it is very probable that they nest somewhere along the Lake Erie shore.



TURKEY VULTURE

Cathartes aura

$\frac{1}{2}$ Life-size

No. 188.

TURKEY VULTURE.

A. O. U. No. 325. *Cathartes aura* (Linn.).**Synonym.**—TURKEY BUZZARD.

Description.—*Adult*: Head and neck all around naked, livid crimson; above lustrous black with purple and violet reflections, varied by grayish brown edgings of feathers; plumage changing below to more uniform sooty brown, lustrous only on breast; wing-quills and rectrices light dusky below, with whitish shafts; primaries deeply emarginate, the tips considerably separated in flight, very flexible; iris brownish gray; bill dull white; cere bright red. *Young*: Similar, but dusky on head and neck, with downy grayish brown feathers; bill blackish. *Nestlings*: Covered with heavy white down, but head naked,—light bluish black. Length 27.00-32.00 (685.8-812.8); extent about six feet; wing 22.00 (558.8); tail 11.50 (292.1); bill including cere 2.20 (55.9).

Recognition Marks.—Eagle size or less; naked red head; black plumage nearly uniform; soaring flight.

Nest, in hollow trees, stumps or fallen logs, or in crannies of cliffs; unlined. *Eggs*, 2, rarely 3, elliptical-ovate, dull white, greenish or buffy white, spotted and blotched irregularly with rich dark brown. Av. size, 2.80 x 1.95 (71.1 x 49.5).

General Range.—Temperate North America from New Jersey, Ohio Valley, Saskatchewan region and British Columbia southward to Patagonia and the Falkland Islands. Casual in New England.

Range in Ohio.—Fairly common summer resident; breeds throughout the state. Casual resident in central and southern Ohio.

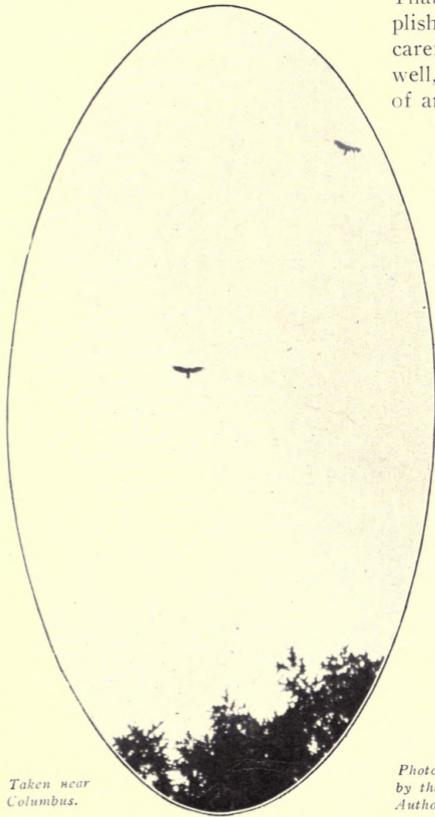
NO summer day is quite complete unless it affords a sight of some half dozen Turkey Buzzards lazily drifting across the middle distance, soaring, shifting, wheeling, weaving endless circles, in restful monotony of midsummer content. As a decorative feature in a landscape the Vulture possesses unqualified value. To this virtue we hastily add recognition of his sanitary services. But there our personal interest and approval is apt to come to a sudden halt. For the rest a book acquaintance, set forth in language carefully culled, will suffice the ordinary man.

But before we treat of the less pleasant things, let us note more carefully that gracefully majestic flight. If caught upon the ground the bird pitches forward, gives an awkward flap or two to clear his footing, rises sharply, almost immediately catching the air in his ample wings, and begins to sail. With motionless pinions he tilts and turns and sweeps about in stately curves, or glides swiftly off at will in any direction. How does he do it? It is easy to see how a bird, moving with the wind and falling sharply, may wheel and breast the wind more sharply still, using its acquired momentum to gain a greater height than the one originally occupied. In this case the momentum

is like the pull of the string which enables the kite to shoot rapidly upward through the air. But what shall we say of a bird which, without momentum, but still on motionless wing, rises steadily *against* the wind? Not only rises, but makes rapid progress forward as well, in a direction contrary to the wind?

That these and other birds do accomplish this feat is a fact patent to all careful observers. How they do it—well, that is another matter. "The way of an Eagle (Vulture) in the air" has puzzled more than wise Agur.

The American Vulture is not a high-flyer like those of the Orient. In his case, however, it is still clearly evident that entire dependence is placed upon the eye-sight in the detection of food. An immense extent of territory is covered by a Buzzard on his daily rounds. No visible corruption escapes his notice, but the odor of half-covered carrion may become almost palpable before it attracts his attention. A possible reason for this inability to locate by the sense of smell alone is disclosed in the words of Coues: "Certain it is that independent of the passing contents of the alimentary canal, permanent foetid, musky odors exhale from the bones and muscles; and the same stench is entangled in the web of the feathers. It is retained for a long while even after the bird is killed and stuffed. So strong is it that one author, an



Taken near
Columbus.

Photo
by the
Author

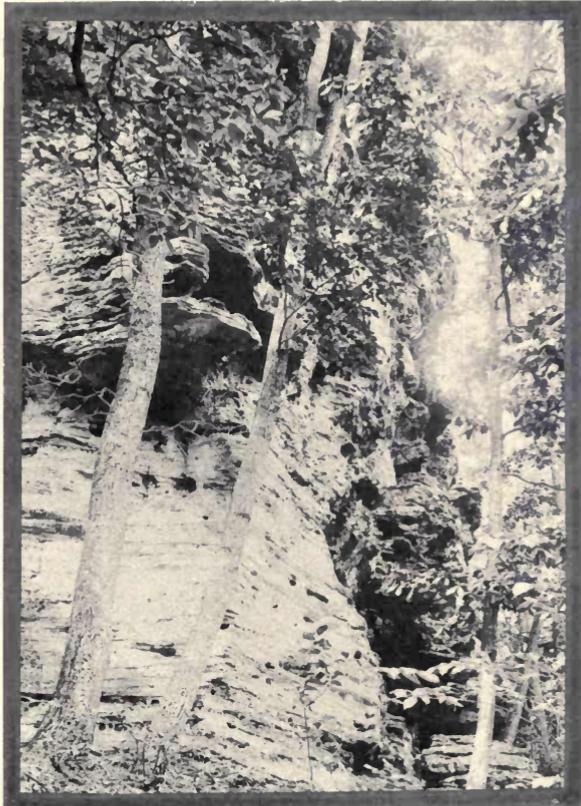
"WITH MOTIONLESS PINIONS."

excellent naturalist, too, fancied it must be rather unpleasant to the birds themselves." Hence it would appear that since the birds smell so loudly themselves, they are not in a position to exercise discrimination with reference to external scents. It does not seem to be true, as has sometimes been

supposed that the birds really prefer decayed flesh. It is rather a matter of necessity for them, inasmuch as they are unable, except in rare instances, to rend a carcass sufficiently before an advanced stage of decomposition has set in.

Turkey Vultures have been known in an extremity of hunger to fall upon sick lambs or young pigs, but the offense is so rare as to be easily condoned, more especially since the birds are ordinarily so useful as scavengers. Occasionally one drifts over a poultry yard and causes consternation among the undiscerning fowl. I once saw a Vulture pass and re-pass a yard in Columbus amidst a great commotion. The bird was probably a bit of a wag who enjoyed playing Sir Hawk, without the slightest intention of harm.

Vultures nest in trees, in crannies of cliffs, or upon the ground, according to the nature of the country in which they find



Taken near Sugar Grove

Photo by the Author.

A LIKELY LOOKING SPOT FOR A VULTURE'S EYRIE.
THE TURKEY VULTURES ARE KNOWN TO NEST IN THE LITTLE CAVERNS ABOUT THESE CLIFFS.

themselves. In Ohio the Turkey Vulture usually chooses for a nesting site a hollow stub or fallen log. If possible this must be in the depths of some unfrequented wood, but through the scarcity of suitable situations the birds are being driven more and more to rely upon the friendliness of man. The willow stub, shown in the accompanying illustration, was situated in the corner of a wood-lot in perfectly plain sight. In fact the location was first made known from the distance of a quarter of a mile by the approach and sudden disappearance of a parent bird. Upon the decayed punk in the bottom of the cylinder reposed two chocolate-blotched eggs, one, the last laid, being much more lightly marked than the other. In due time the young appeared. They were quiet, rather attractive looking fellows, in their suits of white down and buttons (eyes, bill, etc.) of jet. The young are fed by regurgitation; what, were best not specified. A Vulture's eyrie is not an inviting place at its best; and at its worst, when the season is advanced, it is awful.

The parents, however, se-



*Taken near Columbus
Photo by the Author.*

A NESTING SITE
OF THE TURKEY VULTURE

riously affect only one sense—that of smell. If caught upon the nest the female will hiss defiantly. Besides this, the birds have only one note, a low guttural croak—of alarm rather than warning. If closely beset the bird is said to eject the contents of its crop—an effectual defense, in very sooth.

It would appear that Turkey Vultures have very materially decreased in numbers in our state during the past fifty years. It is probable that this decrease is due in large measure to the gradual failure of their food supply. Wild meat is entirely lacking, and the necessary untidiness of the pioneer days has given place to thriftier habits on the part of our farmers.

No. 189.

BLACK VULTURE.

A. O. U. No. 326. *Catharista urubu* (Vieill.).

Synonym.—CARRION CROW.

Description.—*Adult*: Entire plumage black, somewhat lustrous above, and with greenish reflections; very dark brownish black below; wing-quills edged with gray and grayish brown, whitish on under surface and with white shafts; naked skin of head and neck and “cere”, blackish; tip of bill yellowish white. Young not different. Length 23.00-27.00 (584.2-685.8); extent about four and a half feet; wing 17.00 (431.8); tail 8.00 (203.2); bill 2.10 (53.3).

Recognition Marks.—Brant size; dusky head serves to distinguish from *Cathartes aura*; smaller; flight more labored; tail shorter, etc.

Nesting.—Does not breed in Ohio. *Nest*, in hollow trees or logs or on the ground under logs, palmettos, projecting stones and the like. *Eggs*, 1-3, pale bluish white, marked as in preceding species, but perhaps less heavily. Av. size, 3.00 x 2.00 (76.2 x 50.8).

General Range.—South Atlantic and Gulf States, north irregularly to North Carolina and the lower Ohio Valley, west to the Great Plains, and south through Mexico and Central America, the West Indies, and most of South America. Straggling north to New York, New England, and South Dakota. Breeds in the United States from North Carolina coastwise to Texas, and in the interior to Indiana, Illinois, and Kansas.

Range in Ohio.—“Rare or accidental winter visitor in southwestern Ohio only” (Wheaton). One recent record, Reynoldsburg, February 6, 1895 (Jones).

SERVICES which in our northern cities are usually delegated to a “White-wings” brigade, are regularly performed in some quarters of the South by regiments of Black-wings. Swarthy and unsavory scavengers they

are, but in countries where humidity and heat soon raise off to a high degree of nidorous efficiency the Black Vultures are entitled to and receive hearty protection. These birds are stockier and heavier than our Turkey Buzzards. Their flight also is more labored, consisting of a series of short flaps followed by a sail in regular alternation.

The occurrence of this bird within our borders has been reckoned as little less than accidental, but observers in the southern part of the state should be on the lookout for a Vulture which flaps its wings conspicuously and lacks the separated tips of the primaries. It is noteworthy that two of the recent records of its appearance in the state were made in winter, Madisonville, Dec. 20, 1867, and Reynoldsburg, Feb. 6, 1895.

Mr. Raymond W. Smith, in his "List of the Birds of Warren County, Ohio,"¹ published in 1891, has this to say of the Black Vulture in that region: "A rather uncommon but regular summer resident from March to October, in the northeast part of the county, along the Little Miami and Cæsar's Creek hills, where it breeds and is each year becoming more common. On the farm of Commissioner W. J. Collett is a large Sycamore tree, in the hollow of which a pair of Turkey Vultures had nested for a number of years. A few years ago, Mr. Collett informs me, when the Turkey Vultures had completed their nest they were driven from it by a pair of Black Vultures, which took possession and have used it as a nesting place each year since. This is, I think, the northernmost record of this Vulture breeding, and the first record of its breeding in the state. The first positive record of its appearance in the country I have, is my own observation of a pair near Lebanon, in December, 1883. The Cæsar's Creek country residents vary greatly as to the time of the first appearance of the 'new kind of buzzard,' but it was about eight or ten years ago, since which time they have steadily increased in numbers, and, although even now they are by no means common, yet they are regular summer residents and breed here each year."

¹ See Journal of the Cincinnati Society of Natural History, July, 1891, p 113.



PASSENGER PIGEON
Ectopistes migratorius
½ Life-size

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No. 190.

PASSENGER PIGEON.

A. O. U. No. 315. *Ectopistes migratorius* (Linn.).**Synonyms.**—WILD PIGEON; MIGRATORY PIGEON.

Description.—*Adult male*: Upper parts and head all around bluish slate, purest on head and rump, with beautiful metallic iridescence,—purplish red and golden on sides and back of neck, glossed with olive on back, heavily shaded with olive-gray on middle back and proximal portion of wings; the outer scapulars and inner wing-coverts and tertials spotted or tipped with velvety black; primaries fuscous, with some gray external edging; tail tapering, its feathers graduated for more than half its length, the central pair of feathers blackish, the remainder white on exposed portions and below; chest and below deep vinaceous-rufous, fading through vinaceous-pink on lower breast and sides to white of lower belly and crissum; iris orange, surrounding skin red; bill black; “feet lake red, drying an undefinable color.” *Adult female*: Similar to male, but brownish gray on head paling on throat; under parts drab, fading to pale brownish gray on sides; iridescence of neck less marked; a little smaller. *Immature*: Similar to adult female but mottled by whitish tips of feathers on upper parts of wing, head, neck, and fore-breast. Length 15.00-17.50 (381.-444.5); wing 8.25 (209.6); tail 8.00-9.00 (203.2-228.6); bill .72 (18.3).

Recognition Marks.—Little Hawk size; long tail; graceful, rapid flight.

Nest, a frail platform of twigs, at moderate heights in trees. *Eggs*, 1 or 2, pure white. Av. size, 1.48 x 1.07 (37.6 x 27.2).

General Range.—“Eastern North America from Hudson Bay southward, and west to the Great Plains, straggling thence to Nevada and Washington. Breeding range now mainly restricted to portions of the Canadas and the northern border of the United States as far west as Manitoba and the Dakotas.”—A. O. U. 1895. Present range still more restricted, and breeding haunts unknown (1903).

Range in Ohio.—Formerly exceedingly abundant migrant and summer resident. Bred locally in vast numbers; now almost unknown. “Last records” are coming in from various quarters, but they are mainly from ten to twenty years old.

NO more marvellous tales have been handed down to us from a remote past, than those which our own fathers tell and solemnly asseverate, concerning the former abundance of the Wild Pigeon during its migrations and in its breeding haunts. During their passage the sun was darkened and the moon refused to give her light. The beating of their wings was like the voice of thunder, and their steady on-coming like the continuous roar of Niagara. Where they roosted great branches, and even trees two feet in diameter, were broken down beneath their weight, and where they nested a hundred square miles of timber groaned with the weight of their nests or lay buried in ordure.

At the beginning of the last century the species enjoyed a general distribution throughout the northern portions of the Eastern States and was to be found scattering to the Pacific Coast. The birds were, however, rather

Just added in Conti for 1918.

irregular in their habits, and the center of abundance within historic times was in the North Central States. Altho very abundant in Ohio, they are best known from Kentucky, through the accounts of Wilson and Audubon, and in Michigan, where the birds had their last known stronghold, and where the last considerable flight was observed in 1888. In Kentucky they bred and occasionally wintered in such numbers that Wilson once computed a single flight at upwards of two billions. Since the Pigeons appeared to the people of the day absolutely countless their destruction was carried forward by wholesale methods, and upon a colossal scale. Men gathered them with nets and knocked them down with poles, or felled trees to secure the fat squabs. At Pentwater, Michigan, people lined the cliffs and beat them down with sticks and whips as they arrived spent with the passage of the Lake, and they wielded their weapons until the ground was heaped with countless thousands slain. Powder and shot were deemed inadequate for the quest, altho my grandfather in southern Michigan in the late Forties once killed fifty-nine Pigeons with a shot-gun at a single discharge. The next day his boys, a lusty brood, and zealous for their father's honor, turned out and scoured the neighborhood until they found one more dead bird and added it to the collection.

"In order to show a little more clearly the immense destruction of the Passenger Pigeon in a single year and at one roost only, I quote the following extract from an interesting article 'On the habits, methods of capture, and nesting of the Wild Pigeon,' with an account of the Michigan nesting of 1878, by Prof. H. B. Roney in the *Chicago Field* (Vol. X, pp. 345-347):

"The nesting area situated near Petosky, covered something like 100,000 acres of land, and included not less than 150,000 acres within its limits, being in length about 40 miles by 3 to 10 in width. The number of dead birds sent by rail was estimated at 12,500 daily, or 1,500,000 for the summer, besides 80,352 live birds; an equal number was sent by water. We have,' says the writer, 'adding the thousands of dead and wounded ones not secured, and the myriads of squabs left dead in the nest, at the lowest possible estimate, a grand total of 1,000,000,000 Pigeons sacrificed to Mammon during the nesting of 1878.'"

Even if the last estimate were a hundred times too large (as I believe it to be) it is evident that such wholesale slaughter could not go on forever. The extraordinary flights suddenly ceased during the Eighties. Since that time, What has become of the Passenger Pigeon? has been the puzzling question. There are those who believe that great roosts are now maintained in the northwest, beyond the reach of communication. Others fancy they may have abandoned the migratory habit and taken to staying in Central and South America. Others still believe that they have rather abandoned the gregarious habit, and are to be found only in isolated pairs or small groups

well distributed throughout the north. It is known that the birds do breed by single pairs, to some extent at least; but it is altogether probable that the Passenger Pigeons are virtually gone—gone irretrievably after the manner of the Bison—lost in the maw of human greed.

The following is the only recent published instance of the bird's occurrence in Ohio, altho others doubtless have been known locally to hunters: "On March 24, 1900, a solitary individual was shot by a small boy near Sargents, close to the boundary line of Pike and Scioto Counties, and mounted by the late wife of ex-sheriff C. Barnes of Pike County. This is the only authentic record for twenty years."¹

No. 191.

MOURNING DOVE.

A. O. U. No. 316. *Zenaidura macroura* (Linn.).

Synonyms.—WILD DOVE; TURTLE DOVE; CAROLINA DOVE.

Description.—*Adult male*: General color of upper parts olive-gray or drab, with glaucous bloom and changeable metallic reflections on hind neck and anterior marginal areas of wings; with bright purplish red iridescence on the sides of the neck; the lower scapulars and inner quills broadly but sparingly black-spotted; hind head bluish slate; remainder of head light drab with a vinaceous tinge, paling on throat; a blue-black spot below the ear; tail graduated, central feathers like back; the remainder slaty at base, blackening distally, then abruptly white for terminal inch; fore parts below deep vinaceous, fading into cream-buff on lower belly and crissum; axillars and under wing-coverts light bluish gray; bill black; bare space about eye light blue; feet lake red. *Adult female*: Similar to male, but bluish of hind head and neck restricted or wanting; less iridescence; under parts and forehead light drab tinged with vinaceous on breast. *Immature*: Like adult female but duller, without iridescence; black spot below ear wanting; feathers of fore parts above and below tipped with whitish. Length about 12.00 (30.48); wing 5.75-6.00 (146.1-152.4); tail 5.75-6.50 (146.1-165.1); bill .57 (14.5).

Recognition Marks.—Robin size; sober, blended colors; rapid, graceful flight, accompanied by whistling sound of wings; mournful, "cooing" notes.

Nest, a frail platform of twigs or straw at moderate heights in trees or on stumps, rocks, etc.; sometimes on the ground. *Eggs*, 2, white. Av. size, 1.08 x .82 (27.4 x 20.8).

General Range.—Temperate North America, from southern Maine, southern Canada and British Columbia, south to Panama and the West Indies, breeding throughout its North American range.

Range in Ohio.—Common summer resident; decreasing locally. Winter resident in southern third of state and casually elsewhere.

ALTHO the birds winter with us in small numbers, it is usually about the middle of March "when the voice of the turtle is heard in the land." The

¹ Rev. W. F. Henninger in the Wilson Bulletin, Sept., 1902.

name Turtle Dove, while not strictly applied to any New World species, may be allowed to pass in the case of this one because of the prophet who said, "We mourn sore like Doves." The familiar long-drawn, calling notes of the male Mourning Dove have indeed a pensive sadness about them which brings the bereaved soul face to face with its own grief again, but there is in them a wealth of tenderness, a world of adoration, for they are love notes and speak only of a worthy passion.

The Wild Doves are model lovers, and are chiefly known for their de-



Taken near Lorain.

NEST AND EGGS OF THE MOURNING DOVE.

Photo by the Author.

mesticity. During the mating season they vary the monotony of the ordinary whistling flight by sailing about in graceful curves on stiffened noiseless wings. There is always an abundance of billing and cooing; and love-making, it is to be feared, often interferes somewhat with the practical side of house-keeping. At least the young wife is not a good house-builder, altho she may be, and doubtless is, a kind mother.

A Dove's nest is the symbol of frailty. A few careless sticks or straws are laid together in a platform and lodged at a moderate height in the crotch

or upon the horizontal limb of a tree or bush. Fence-corners, the tops of stumps, brush piles, and overgrown stone heaps are favorite places, and occasionally eggs are laid upon the ground with little pretense of a nest or none. I have found several nests in low bushes entirely surrounded by water. Old Robins' nests and those of the Grackle, Blue Jay, and others are also used, the tenant adding a few clean straws or twigs to the structure as found. Now and then, however, a pretty substantial nest is found, and one which reflects credit upon the gentle builder.

The Doves are very prolific. Eggs may be found at any time from May to September inclusive. Incubation lasts two weeks, and since the young are of rapid growth, three and even four broods are raised in a season. Dr. Jones, writing from Circleville, says that he has seen these Doves sitting on fresh eggs every month of the year except December and January. According to the same author the female sometimes lays again before the young have flown, in which case they must assist, perforce, in the duties of incubation.

The young are frail creatures in spite of the fact that they get as fat as oysters before they leave the nest. They are fed by regurgitation and their food is mingled with a whitish fluid from the adult stomach—"Pigeons' milk." "At night," according to Langille, "the old one sits crosswise on them even when they are quite large, the nest and birds together thus making quite a grotesque pile."

When frightened at the nest the female drops instantly to the ground and goes off into a series of elaborate convulsions, but I have seen this trait exhibited oftener in the West than hereabouts. The male also is vigilant in defense, and when the young are ready to leave the nest he takes charge of them, while his mate is sitting on another pair of eggs.

In late summer and autumn the Doves gather into groups or small flocks, altho they can no longer be characterized as "highly gregarious," and feed in the stubble fields or feast upon the wild fruits and acorns. Either singly or in companies the birds linger into late autumn and early winter, or stay outright, becoming abundant during the cold season southerly.

There seems to be a growing tendency among sportsmen to regard the Dove as a game bird. Only recently a gentleman in close touch with sporting circles boasted that he had killed fifty in a day, not far from Columbus. I cannot but feel that this is very much to be deplored. While the bird is unquestionably swift of wing and may be frightened until it becomes very wild, it does not seem, upon sober thought, that its value either as meat or as a flying target begins to equal that of its tender song, and its confiding presence in our midst. Sportsmen in Ohio are confessedly hard put to it for legitimate game, but the remedy does not lie in assaulting the next biggest bird, until our bird population is reduced to the dead level of chattering Chickadees and gibbering Sparrows. It lies rather, if anywhere, in the introduction and propagation of birds which have unquestionable food and game value.

No. 192.

RING-NECKED PHEASANT.

Introduced. *Phasianus torquatus* Gmel.**Synonyms.**—MONGOLIAN PHEASANT; CHINESE PHEASANT.

Description.—*Adult male*: Sides of head largely bare, with livid skin; top of head light greenish; short plumicorns dark green; throat and neck all around black, with rich metallic reflections; a *white cervical collar* nearly meeting in front; fore neck and breast, well down, shining coppery red with golden and purplish reflections; sides rich fulvous with black spots; belly mostly blackish; above with indescribable intricacy of marking,—black, white, copper, fulvous, pale blue, viridian green, glaucous green, etc., etc., (we are not morally responsible for the coloring of this marvellous exotic); tail much lengthened, mostly greenish fulvous, edged with heliotrope-purple and cross-banded with black. *Adult female*: Much plainer, mostly brownish and without white collar; the upper parts more or less spotted and mottled with dusky; the under parts nearly plain buffy brown; the tail-feathers barred for their entire length, dusky and whitish on a mottled brownish ground. Adult male length 30.00 or more (762.), of which more than 16.00 is tail (406.4).

Recognition Marks.—Size of domestic fowl. Long tail and white collar distinctive.

Nest, on the ground of dried leaves, grasses, etc., usually in grass tussock or under bush. *Eggs*, 8-15, yellowish, or bluish buff. Av. size, 1.61 x 1.31 (40.9 x 33.3).

General Range.—China. Introduced in various localities of the United States. Well established in Oregon and adjacent states.

Range in Ohio.—"Successfully introduced into Allen, Ashtabula, Crawford, Erie, Hamilton, Hardin, Madison, Morgan, Scioto, and Summit Counties and probably others" (Jones).

THE successful introduction into our state of this splendid game bird really marks a new era in the history of sport, and its advent should be hailed with delight by all true sportsmen. Quick on the wing, prolific, hardy, sapid, this handsome Pheasant is admirably adapted to take the place of those larger native birds, the Wild Turkey, the Prairie Chicken, the Ruffed Grouse, which are no longer available to us.

The ethics of the situation is perfectly clear. When this country was a howling wilderness it was right and proper that the pioneers should help themselves freely to the abundant game to satisfy their wants and to gratify their desire for sport. That they went too far in some instances is clear to us as it was not to them. It is perhaps inevitable that some of the larger species of birds, unconfined, should have succumbed, as did the deer and the bear among the mammals. The necessary conditions of civilization, apart from the use of gunpowder, were no longer quite tolerable to some of them. Up to a certain point anybody might shoot the Wild Pigeon and the Turkey and welcome. They were bound to go sooner or later.



WILD TURKEY
Meleagris gallopavo sylvestris
1/2 Life-size

But the situation has entirely changed. The country is no longer a wilderness, nor its citizens dependent on the conquests of the chase for sustenance. With the decline of the culinary claim a new value has been discovered for the wild things, especially for the birds, viz., the *esthetic* value. The birds no longer belong to those who seek food; they no longer belong to those who seek life for the sake of taking it in artistic ways; they belong rather to the four millions of people in this state who are awaking to a sense of the varied charm of the *living bird*. We should no longer regard the Wood Ducks, for example, as creatures to be killed (pitiful remnant that there is left!) but as beautiful objects of a fascinated interest,—birds to study, to understand, to appreciate, to foster. A gunner might kill them all in a day, but he has no moral right to do so (whatever the law may say about open seasons); they belong now to those who have a higher use for them.

But what about legitimate sport? It must confine itself to legitimate objects. Those species which are now verging upon extinction, or which are not capable of maintaining their present numerical status without absolute protection, are no longer legitimate objects. Such objects do exist, and the Bobwhite is typical of these. But we have evidently reached that stage when the demand for game must be artificially supplied. This can best be done by the introduction of certain hardy species of demonstrated value, such as the Mongolian Pheasant. This may lead to the extensive use of private preserves under competent management. It is not fair for Farmer A. to pasture grouse which Lawyer B. may shoot without expense, nor is it fair to forbid Lawyer B. and his friends to shoot their own birds on their own grounds whenever they like, within the dictates of humanity.

In short, the time is upon us when those who want to shoot (and it's royal fun!) must furnish their own game. With the single exception of the Quail there is no self-propagating game-bird in the state, nor one that is even capable of maintaining its present numbers under the very moderate protection now afforded. This may seem extravagant to such as are insensible to the rapid changes which are taking place in our bird population, but those who have studied the situation know it to be true.

No. 193.

WILD TURKEY.

A. O. U. No. 310a. *Meleagris gallopavo silvestris* (Vieill.).

Description.—*Adult male*: General plumage shining, coppery brown; the feathers of the middle regions all around square-ended, and narrowly tipped with black; wing-quills fuscous, indistinctly barred with white; upper tail-coverts tipped with rich, dark chestnut; tail-feathers tipped with rufous-brown; feathers of sides and flanks showing highest metallic reflections,—coppery, violet, green,

etc.; a "brush" of long, stiff, black bristles depending from center of chest; black, conical spurs, etc. Does not require more particular description because of great similarity to the domestic bird. A typical specimen in the O. S. U. collection presents the following measurements: length 46.00 (1168.4); wing 20.00 (508.); tail 17.50 (444.5); tarsus 6.20 (157.5); middle toe and claw 4.30 (109.2); bill from nostril 1.03 (26.2); brush, along exposed portion, 5.80 (147.3). Females are much smaller.

Recognition Marks.—Distinguished from the domestic race principally by the chestnut or rufous tips, instead of white, on the upper tail-coverts and tail.

Nest, on the ground, usually under protection of bush or tree-trunk, lined indifferently with grasses. *Eggs*, 10-20, usually about 12, creamy buff, thickly speckled with rusty brown. Av. size, 2.50 x 1.90 (63.5 x 48.3).

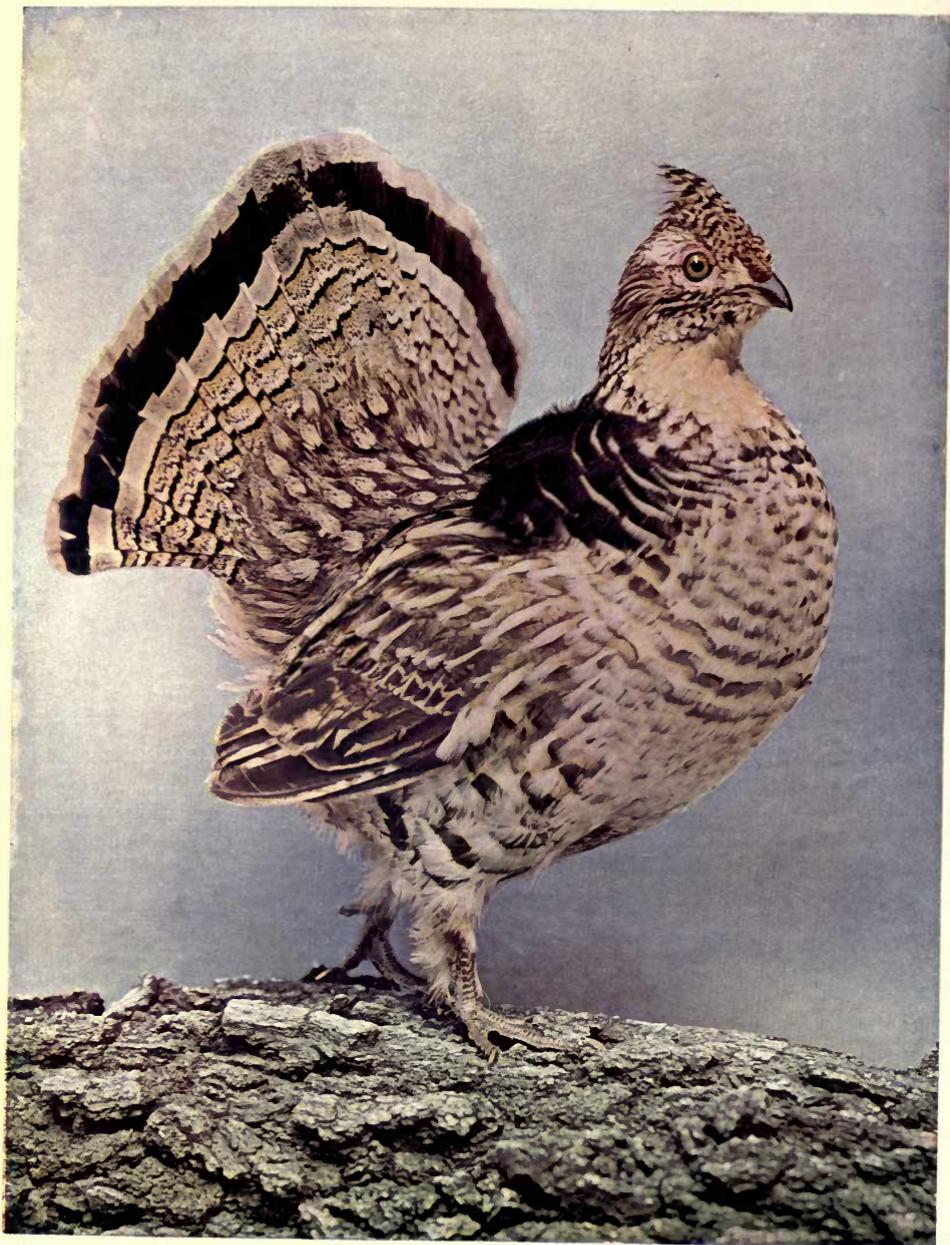
General Range.—United States from Chesapeake Bay to the Gulf Coast, and west to the Plains, along wooded river valleys; formerly north to southern Maine, southern Ontario, southern Michigan, etc., and up the Missouri River to North Dakota.

Range in Ohio.—Formerly abundant throughout the state, but now nearly extinct. One of its late strongholds was in the northwestern part of the state in the neighborhood of Wauseon. It is believed to linger yet in Brown, Adams, and Highland Counties.

THE young people of the present generation are conning over Greek characters out of gilded books, where their grandfathers studied Turkey tracks on the moist floor of the ancient wood; and the log shambles to which led certain seductive trails of Indian corn, have made way now for the seats of the mighty. Our fathers too are still able to point out the spot where this feathered pride of the forest was wont to strut and gobble, or exercise himself, with becoming reverence for approaching Thanksgiving, in the virtue of fat.

The wild Turkeys were once abundant in Ohio. They were resident in the large sense, but ranged freely and somewhat irregularly through a considerable section in search of food. Stupid and unwary at first, they soon learned the ways of the white man, and became, years before their now practical extinction, the most cunning and vigilant of all wild birds. Indeed, to track a Turkey in the woods, to learn his haunts, to come upon him unawares, or even to get within rifle shot of him, were high accomplishments of wood craft, to which only the elect might attain.

The preference of these birds was for low damp woods, and especially those which gave ready access to the fertile clearings of the pioneer. Here they ranged widely by day, gathering nuts and acorns, or grasshoppers and fallen grain, and at night they roosted in the highest tree-tops. During the mating time, the gobbler, choleric with the distemper of the season, met the scattering members of his harem one by one as they answered his summons, and resorted to some secluded trysting place. The hens, however, were careful not to betray the secret of their nests, fearing with good reason, that their tyrannical lord would destroy eggs or chicks in his blind rage of jealousy. With greatest caution, therefore, each female stole softly to some spot, far



RUFFED GROUSE
Bonasa umbellus
About $\frac{1}{4}$ Life-size

removed, under shelter of log or stump, or in the homogeneous open, where lay her dozen or so of speckled eggs. Occasionally two of these Turkish wives would pool their interests and care for a nest in common.

In the neighborhood of dwellings domestic Turkey hens (which, by the way, are descendants of Mexican stock, reimported from Europe) were often allowed to associate with the coaxing monarch of the wilds, or were, rarely, entrusted with the care of eggs belonging to their wild sisters. Some modification of the domestic breed was thus at times effected, but slight, if any, traces of the indigenous stock have survived.

The little Turks of the woods were as delicate as their tame cousins are known to be, and their careful mothers would shield them from possible dampness for hours after a rain had passed. As they grew to adult size they were joined in early fall by their fathers, now quite reformed, and families would join in with neighbors until sometimes great flocks were to be seen scouring the woods for mast, or scattering in noisy flight when the Nemesis of the Turkey-kind appeared.

No. 194.

RUFFED GROUSE.

A. O. U. No. 300. *Bonasa umbellus* (Linn.).

Synonyms.—PARTRIDGE; PHEASANT.

Description.—*Adult male*: Prevailing color of upper parts cinnamon-rufous, varied interminably with black central spots and blotches, buffy stripes and margins (buff in cordate spots on rump and upper tail-coverts), white or grayish white tips, and "bloom"; primaries light fuscous, broadly spotted with ochraceous-buff on external web; tail rufous or grayish, mottled variously with lighter and dusky markings; a broad, subterminal, blackish zone (merely indicated on central feathers) bounded on either side by whitish bands; "epaulets" or flaring feather-tufts on the side of the neck behind,—rich, brownish black, lustrous-tipped, varying to mottled rufous; below, fore parts buffy or ochraceous, plain on chin and throat, dusky-marked and rufous-tinged on cheeks and breast; remaining under parts heavily barred with ochraceous-buff, ochraceous-brown, and dusky,—the latter shade clearest and broadest on flanks, elsewhere more or less obscured by broad white tips of feathers; tarsi feathered half way down, plain brownish. *Adult female*: Very similar, but neck-tufts reduced in size and containing more rufous. *Young* birds are spotted and irregularly striped rather than barred below, and have more pronounced dusky bars on the tail. Av. of eight males from Lancaster: length 17.34 (440.4); wing 7.23 (183.6); tail 5.93 (150.6); bill from nostril .52 (13.2).

Recognition Marks.—Crow size; cinnamon-rufous, mottled above; drumming notes; flaring ruffs distinctive; strictly confined to woodland and brush-lots.

Nest, on the ground at base of bush, stump, or tree, or under protection of log or brush; indifferently lined with leaves, grass, and a few feathers. *Eggs*, 7-14, usually about 10, ochraceous-buff, usually plain, but sometimes nest-stained, and rarely, speckled with brownish. Av. size, 1.52 x 1.16 (38.6 x 29.5).

General Range.—Eastern United States and southern Canada, west to Minnesota, south in the mountains to northern Georgia, Mississippi, and Arkansas.

Range in Ohio.—Formerly common throughout the state, except in prairie portions; now greatly reduced in numbers and locally restricted. Most common in hilly portions south and northeast.

APPRECIATION of the Ruffed Grouse is about equally divided between the nature-lovers and the sportsmen. Be he gunner or poet there is none who can withstand the charms of the October woods in which it lives, when the air is crisp and the fallen leaves are rustling smartly. The trees are not yet entirely stripped, but certain clusters of saplings have great windrows piled about their feet, and the carpet of the woods is everywhere pregnant with possibilities. The poet feels the overhush of autumn and the gunner the undercrush of leaves, but both alike are startled by the first wing-rush of the Partridge, as it bursts from cover and whirls away like a cyclone to the uttermost parts of the woods. Time was when the Partridge treed from curiosity at yelping cur or whistling human, but now there is just a half moment for the gunner, or the chase must be renewed.

On the drumming log those marvelous wings which stir the blood like none others, may be heard again:

“Hearest thou that bird?

I listened, and from 'midst the depth of woods
 Heard the love signal of the Grouse that wears
 A sable ruff around his mottled neck:
 Partridge they call him by our northern streams
 And Pheasant by the Delaware. He beats
 'Gainst his barred sides his speckled wings, and makes
 A sound like distant thunder; slow the strokes
 At first, then fast and faster, till at length
 They pass into a murmur, and are still.”

The purpose of this extraordinary music is well known; it is to attract the female and guide her to the tryst. It is not, however, certainly known whether the bird is monogamous or not. Bendire thinks he is. On the other hand, Henry William Herbert once saw seven hen birds grouped about a strutting male. “And seven women shall take hold of one man in that day, saying, We will eat our own bread and wear our own apparel; only let us be called by thy name; take thou away our reproach.”

Various theories have been advanced as to the real method of sound production in drumming. The reverberating sounds were long supposed to be due to the impact of the wings upon the breast. A very creditable imitation may be produced by a sound-winded man who pounds upon his lungs with clenched fists. Others affirmed that the ictus was made by the contact of wings as they met over the back. Bendire says: “It is generally conceded



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PRAIRIE HEN
Tympanuchus americanus
37. Life-size

now by most naturalists, including such well-known ornithologists as Brewster, Merriam and Henshaw, that the sound is produced by the outspread wings of the bird being suddenly brought downward against the air, without striking anything."

Another noisy surprise is in store for the person who comes upon a mother Partridge with a brood of tender chicks. With a great outcry the mother bird charges up in front of the intruder, or dashes into his face; then stands before him with flashing eyes and ruffled feathers looking fierce enough to eat him up. Thus she holds the enemy at bay for one bewildered moment,—a precious moment, in which her tiny darlings are finding shelter. Then she collapses like a struck tent and vanishes in a trice. A diligent search may discover a chick under a fallen leaf, or between two pieces of bark, but no living man can find an entire brood in this way.

The Ruffed Grouse is still not uncommon in the hilly counties in the southern and eastern portions of the state, but it is nowhere found in such numbers as formerly. Its suitable range is necessarily somewhat restricted by the advance of civilization, but it is a hardy bird and there is no reason why it should not be retained as a permanent inhabitant of the state. As it is, the species stands in need of an extended period of absolute protection, followed by a rigid enforcement of good laws, that it may recover its rightful status.

No. 195.

PRAIRIE HEN.

A. O. U. No. 305. *Tympanuchus americanus* (Reich.)

Synonyms.—PRAIRIE CHICKEN; PINNATED GROUSE.

Description.—*Adult male*: Above dusky-brown to blackish, narrowly barred and spotted with ochraceous-buff of several shades; crown blackish, less spotted with buff; an elongated tuft of feathers on each side of the neck, brownish-black, the uppermost feathers rufous-and-buffy-striped on the inner webs; tips of feathers rounded or truncated; beneath the neck-tufts a bare space of orange-colored skin, largely concealed at rest; wing-quills, light fuscous, spotted with whitish or ochraceous-buff on external webs; tail, rounded, fuscous, blackening toward the tip, the central feathers narrowly white-tipped; chin, throat, and sides of head, buffy or ochraceous with a blackish malar stripe and an obscure spot of same color on side of throat; remaining under parts evenly barred with light grayish-brown and white, tinged more or less with ochraceous on sides and sometimes on breast; nearly unmarked on lower belly and crissum; tarsi fully feathered, plain ochraceous. *Adult female*: Similar, but neck-tufts smaller and shorter; tail regularly and narrowly barred with ochraceous-buff or tawny. *Immature*: Brownish above, with medial white streaks and heavy blotches of black;

chest, brownish-tinged and spotted rather than barred. Measurements of six Monroeville Prairie specimens in O. S. U., museum.—Two males: length 18.25 (463.6); wing 9.25 (235.); tail 3.85 (97.8); bill from nostril .52 (13.2); neck-tufts, 3.30 (83.8). Four females: length, 17.15 (435.6); wing, 8.32 (211.3); tail 3.50 (88.9); bill from nostril .49 (12.5); neck-tufts 1.65 (41.9).

Recognition Marks.—Crow size; general barred appearance; elongated, erectile tufts on side of neck; distensible air-sacs distinctive.

Nest, on the ground in open fields or in the edges of swamps, lined with grasses and feathers. *Eggs*, 8-15, usually about a dozen, dull buffy-drab or olive, usually unmarked but sometimes speckled with brown. Av. size, 1.70 x 1.27 (43.2 x 32.3).

General Range.—Prairies of the Mississippi Valley; south to Louisiana and Texas, east to Kentucky, Indiana, Ohio, Michigan and Ontario, west through eastern portions of North Dakota, Indian Territory and intervening states, north to Manitoba; general tendency to extension of range westward, and contraction eastward; migration north and south in Minnesota, Iowa and Missouri.

Range in Ohio.—Formerly not uncommon in northwestern, rare in central Ohio. Now probably extinct.

THE life history of the Prairie Hen of Ohio will probably never be written; certainly not unless some one is at great pains to interview the older hunters of the passing generation, and succeeds in piecing together scraps of information which have lain long dormant in memory. Having become quite extinct within twenty years, the bird was confined to a few restricted localities in the north-central and north-western parts of the state for as many more, and it has been a half century since it was common even in those regions. So far as known the last survivors were seen during the early Eighties in Erie and Huron Counties. The last record for Franklin County is that given by Dr. J. M. Wheaton; November 16, 1878.

It is idle at this late date to bewail the loss of this noble game-bird. Its ways were to a certain extent incompatible with those of civilization. Experience has amply proven that the rural portion of a community will not stand the sole burden of support of a grain-eating bird, which genteel sportsmen from the city are allowed to slaughter at periodical seasons,—and there is an end of discussion. Apparently the only alternative lies in imported birds of various sorts (the tamer the better), and in private game-preserves.

Fortunately the species under consideration has been fully studied in the prairie states further west, and the brief sketch which follows is based chiefly on observations in Illinois and Iowa.

During the first days of April a mellow rolling boom comes over the prairies in the early morning or late afternoon hours. If the birds are plentiful the soft *ook-ah-oom-boo-hoo-oo-oo* may sound from several scratching-grounds or "walks" at once. In the corner of some large meadow or on some prairie knoll a company of twenty or thirty cocks and hens are gathered, the former bustling and bursting with excitement, the latter affecting utter indifference.



BOB-WHITE
Colinus virginianus
 $\frac{2}{3}$ Life-size

The cocks ruffle all their feathers, throw forward the erectile feather-tufts of the neck, inflate the distensible air-sacs until they look like ripe oranges; then rush forward across the ball-room floor with lowered heads and scraping wings while the air escapes in that tender penetrating sob which reverberates a mile away. As the show proceeds the ladies get interested, yield somewhat of their frigid manner, and move about coyly among the strutting gallants. At the first few dances only pleasant mutual acquaintance is promoted, but on subsequent occasions, as attentions become more serious, conflicting interests are sure to be developed among rival cocks, and fierce and bloody battles ensue. To the victor belongs the choice of maidens, and that too on a generous scale. Of course, under such circumstances conjugal fidelity is a thing unknown, and it becomes a marvel that the females will pay daily visits to the scene of these disgraceful scrimmages.

The female hides her nest in some grass tussock of the open prairie, or in a deep, feather-lined depression at the edge of a swale, and sits closely upon ten or a dozen eggs. When thoroughly frightened from her nest she is not likely to return, or if she does, and finds the eggs handled, she will break them up in disgust. Incubation is completed in from three to four weeks, and the little brood is promptly led off to forage or hide at the behest of the wary and devoted mother.

The flock follows its mother until nearly full grown. As fall comes on several family troops are merged, and the company thus formed is joined by the hitherto exiled males. Under the contingency of persecution by gunners the flock scatters to right and left, each member rising in turn and making off rapidly with a vocal rattle which adds to the excitement of whirring wings. The bird is capable of sustained flights of several miles, much of which is accomplished by stiff downward sails of long duration. In the prairie states west of the Mississippi the females and young-of-the-year retire several degrees south in winter, but the hardier males usually endure the rigors of the season in the North.

No. 196.

BOB-WHITE.

A. O. U. No. 289. *Colinus virginianus* (Linn.).

Synonym.—QUAIL.

Description.—*Adult male*: Above general color vinaceous-rufous, changing to cinnamon-rufous on wings and on sides, clearest on upper back and sides of breast, heavily black-spotted or barred on lower back, scapulars, and inner quills, heavily margined with buff on inner edges of inner scapulars and quills, changing to black on forehead, everywhere mottled finely with black, white, or whitish, and bluish gray; tertials in closed wing completely covering the fus-cous primaries and secondaries; a broad, white superciliary stripe, almost meet-

ing fellow on forehead, becoming buffy on hind-neck; a broad, black stripe below eye and across auriculars coalescing behind with narrow breast-band of same color; *enclosed space pure white*; breast and belly white or buffy white, narrowly and finely cross-banded with black, usually with disconnected brace-shaped markings; chest mingled heavily or slightly with vinaceous-rufous below the black band; sides and flanks broadly striped with cinnamon-rufous, marked with black and white and blending with pattern of wing; bill black. *Adult female*: Similar to male, but throat and superciliary line deep buff instead of white; black of throat, cheek-band, and crown merely indicated by blackish spots; general coloration a little more subdued. This bird varies interminably within the limits laid down; no two birds are exactly alike, and albinistic and melanotic specimens are not rare. Spring birds are brighter colored than fall specimens. Length "9.50-10.75" (241.3-273.1); av. of six Columbus males: wing 4.33 (110.); tail 2.33 (59.2); bill .56 (14.2). Females average a little smaller than males.

Recognition Marks.—Robin size; stocky proportions; terrestrial habits; swift, whirring flight, etc.

Nest, on the ground, a mere depression, indifferently lined with grasses, leaves, etc. *Eggs*, 10-26, usually about 18, white, pure or nest-stained; pyriform-ovate. Av. size, 1.20 x .94 (30.5 x 23.9).

General Range.—Eastern United States and southern Ontario, from southern Maine to the South Atlantic and Gulf States, west to central South Dakota, Kansas, eastern Texas, etc. It is recently extending its range westward along lines of settlement, and has been successfully introduced into various western and Pacific states.

Range in Ohio.—Common resident throughout the state.

THERE is an interesting parallel between Bob-white and civilized man. Both have come of a polygamous ancestry: indeed, both can point to contemporary polygamous ancestors. Out of these primitive conditions Bob-white has grown to be quite "civilized," in his family relations as exemplary as any that polite society can boast. He is a model parent, willing to sacrifice his own life for the brood. The late Judge J. N. Clarke, of Saybrook, Conn., has proved that at least in one instance the male cared for and completed the incubation of the second nestful of eggs while his wife raised the first brood of youngsters. He was shot in the act of protecting his brood. There is an interesting question, just here, which I have not seen answered: When two broods are reared, do the broods remain separate during the winter, under the care of one parent, or do they unite?

Bob-white's ringing call has very appropriately become his name. By it he is known in literature, in spite of the misnomer "Quail," which the sportsmen and careless observers have heaped upon him. He is wholly American, and is no near relative of the European Quail. Either there is a good deal of poetic fancy in rendering the whistled call "*Bob-white*," or "*more wet*," or else the whistle is untranslatable. However that may be, one has no difficulty in recognizing the call. There is no doubt that the call was considered by the first writers to be prophetic of the weather, and no doubt many still

listen attentively to it to be warned of rain. I have spent a good many hours listening to calling birds, some in the distance, some near at hand. While the distant birds often, perhaps usually, seemed to give but two syllables, those near at hand always gave three, but the first was often so softly given that it would not be audible beyond a few rods.

As soon as the young birds are able to leave the nest they are taught to shun danger in various ways, first by "freezing"—trusting to their protective colors for safety. The assembly is a means of mutual protection, and the call for assembly is given by the old birds. In fact, the family remains together during the whole winter, and the young are constantly being taught, by example, how to avoid danger, and how to live the best. The signal for danger to the whole feeding flock is a low chuckling rattle, which might be mistaken for field mice.



Taken in Jefferson

Drawing by Robt. J. Sim.

"THE CHARMED CIRCLE—NO MORE ROOM."

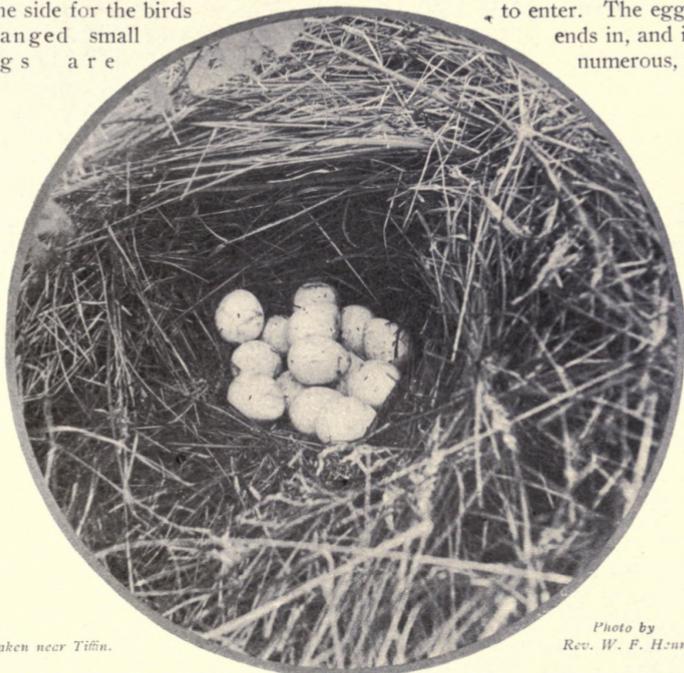
While this signal is being given the birds are running to a place where they can fly up suddenly and away swiftly. Following the scattering of the flock there is certain to be the assembly call, which is loud enough to be heard by the most distant bird, but might be unnoticed by an unpracticed ear. It is a low *whoo-ee, whoo-ee*, almost crooning in character. Only one bird gives this call. There is an undertone of conversational chatter while the birds are feeding as they run, as they often do when they are suspicious of danger. These calls and signals are winter and late fall flock signals. During the season, especially during the days of courting, there is a loud, but pleasing, *Whooooee-che, whoooooee-che whoooooee-che*, the first long drawn syllable with an upward inflection, the second a short, almost aspirated syllable, dropping suddenly. I do not feel certain what the office of this signal is, but presume it is merely a mate call. The *bob-white* whistle is clearly a challenge, and so performs the same office as the crowing of Chanticleer.

The winter life of Bob-white is not the least interesting of his yearly round. It is pretty clearly true that the flocks which are found then are single families, possibly the largest flocks are the two broods of one pair of birds. These flocks feed, and roost, and live together in a close companionship, sharing the dangers and the pleasures alike. Their whole life is based upon mutual protection; no other spirit seems to actuate them during this season. If they separate it is only to be drawn together again at the first opportunity. If one is lost he is instantly missed, and all in the power of the flock is done to regain the lost one. At night, and during severe storms, the birds find some sheltered spot as free from any danger as possible, and pack themselves into a close circle, tails touching in the center, heads outward to detect danger in any direction, each warming the other. Mr. Robert J. Sim, of Jefferson, Ohio, contributes the drawing of a flock which he fed during one winter. They came regularly for the supper provided, and passed the night under an evergreen tree in the yard. The picture was taken of the flock during a severe north-west storm of snow and wind, during which the birds went to roost in the middle of the afternoon, more out in the open than was their wont. Mr. Sims describes the method of their arrangement somewhat as follows: First two birds stood together, tails touching, then a third and a fourth crowded up, then others crowded their way into the charmed circle, pushing and elbowing the birds closer together, until finally only one remained outside. He hurried around the circle trying first one place and then another to no purpose. There was no more room. Not to be left out, he sprang upon the backs of the close-packed flock, examined each seam carefully, and finally began to wedge himself down between two until he, too, became a part of the circle. The birds now settled themselves for the night, their breast feathers almost blending into a perfect curve all around the circle. In the morning they were ready for their breakfast of oats and

corn, and then went foraging in the fields for waste grain and weed and grass seeds.

The warm days of early April stir Mr. Bob to send forth his ringing challenge over field and meadow, for he has chosen his preserve and will defend it against all comers. He is not worrying, just now, about his wife. His duty is first to provide the home preserve. Battles for this preserve and for possession of the female often occur, in regions where the birds are numerous, but the bird in possession usually wins, because he has the better conscience.

The nest is made on the ground among the grass and weeds, the dead grass often being used to form an arch over the nest. First nests are pretty sure to be arched over and almost completely covered, leaving an opening in the side for the birds to enter. The eggs are arranged small ends in, and if the eggs are numerous, there



Taken near Timin.

*Photo by
Rev. W. F. Henninger.*

NEST AND EGGS OF THE BOB-WHITE.

are two, and sometimes three tiers piled up like cannon balls. I found one nest containing twenty-six eggs arranged in this manner.

The methods to which the old birds will resort to protect the young

are illustrative of the mental development of Bob-white, the old broken wing ruse, the pitiful cry, the plain invitation to kill the old bird and be satisfied, and very rarely, the daring attack upon the intruder. Meanwhile, the young have reached a place of safety, or are hidden securely. There is much to admire in Bob-white, and very little to excuse.

No. 197.

KING RAIL.

A. O. U. No. 208. *Rallus elegans* Aud.

Synonyms.—RED-BREASTED RAIL; MARSH HEN; FRESH-WATER MARSH HEN.

Description.—*Adult*: Above brownish black, the feathers broadly striped laterally with lighter browns (wood-brown, bistre, and olive-brown), and shading into burnt umber on wing-coverts and edges of quills; forehead with numerous, enlarged, glossy, black shafts without attendant vanes; a light line over eye in front, and a dusky line through eye; lower eye-lid white; chin and upper throat white; lower throat and breast, reaching up well on sides of neck and face, cinnamon-rufous (Mars brown), growing paler medially and posteriorly; belly, flanks, and lining of wings brownish dusky or blackish, crossed by narrow, white bars, lighter, or sometimes almost unmarked fulvous, centrally and on thighs; bill dark above, lighter below. *Downy young*: Uniform glossy black. Length 14.00-17.00 (355.6-431.8); av. of six Columbus specimens: wing 6.25 (158.8); tail 2.57 (65.3); bill 2.32 (58.9); tarsus 2.26 (57.4); middle toe and claw 2.47 (52.7).

Recognition Marks.—Little Hawk to Crow size; marsh-creeping habits. Large size distinctive among the Rails of the interior.

Nest, of cat-tail leaves and grasses on the ground or in grass-tussock of marsh. *Eggs*, 6-12, dull white or buffy, sparingly spotted and dotted with reddish brown and purplish gray. Av. size, 1.65 x 1.21 (41.9 x 30.8).

General Range.—Fresh water marshes of eastern United States, north to the Middle States, northern Illinois, Wisconsin, and Kansas; casually (?) to Massachusetts, Maine, and Ontario.

Range in Ohio.—Not common summer resident and migrant. Of local occurrence.

RUSHES, sedges, arums, and waving cat-tail leaves form a curtain of living green which effectually screens the private life of the Rails from the common eye. From behind the curtain issue certain sounds which we attribute to this bird or that, if we are wise, but that is all. Now and then, indeed, some ruthless invader dashes behind the decent folds and sends the Rail-folk scurrying. This, to say the least, is rude, and brings its own punishment.—an empty swamp, or maybe a few limp carcasses; but what are they? No; if you would learn Rail ways, you must do as Rails do,—pry and spy, lurk and peep, and above all, when the time comes, keep silent. To thread the mazes of the swamp, to know its mysteries, to be on intimate terms

with its inhabitants, to speak its language, that is an achievement. But if it is only exercise or "sport" you are wanting, go shoot bloodless pigeons made of clay, on some pleasant hillside.

The most that can be learned about the King Rail in thrashing about a swamp is that it rises suddenly, flies slowly in a straight line just above the tops of the reeds, and plumps down suddenly not far away, as tho its wings had given out. It affords an easy mark for the sportsman, being in fact about as severe a test of skill as a tomato can floating down stream. The gunner learns too that the bird is hard to flush, and that if it has any sort of a show for cover, will run rapidly through the weeds, and skulk, rather than seek safety in flight.

The chance explorer is about as likely as is the plotting student to come across a nest built up in the reeds and grasses, either well up in a grass-tussock or just sufficiently elevated to keep a hatful of eggs clear of the water. The eggs, ten or a dozen in number, are like nothing else in the swamp except those of the Florida Gallinule. From these there is no certain distinction. I have noticed, however, that the reddish brown spotting of the latter is apt to be less angular and the spots more numerous and regular. The nest of the Rail does not boast the inclined approach which characterizes that of the Gallinule or the Coot.

The food of the Marsh Hen consists of insects, slugs, leeches, tadpoles and small crayfish, besides a goodly proportion of seeds from aquatic and palustral plants. The last are obtained not only from the soft bed of ooze upon which they may have fallen, but from the seed-pods themselves, since the bird can climb quite nimbly. Like all birds of this class, the most active hours are spent just after sunset and before sunrise. But in a region where they were in little fear of molestation, I have seen them deploy upon an extensive mud-flat in broad daylight and go prodding about in company with migrant Sandpipers, for the worms which riddle the ooze with their burrows. At such times, too, I have seen a few standing stock still for a quarter of an hour at a stretch, evidently to catch a wink of sleep along with their sun bath, and trusting, perhaps, to their more vigilant neighbors to give warning of approaching danger.

The King Rail has not been much observed in our state, and altho not to be accounted rare, is doubtless much more frequent in the prairie states to the west and northwest of us, where swales and "slews" abound. It has been reported breeding in the neighborhood of Circleville, but is more commonly found in the extensive marshes which vary the Lake Erie shore. Its presence may be detected by its weird call, which is best described in the words of Mr. Frank Chapman, "a loud startling *bup, bup, bup, bup, bup*, uttered with increasing rapidity until the syllables are barely distinguishable, then ending somewhat as it begins—the whole performance lasting about five seconds."

No. 198.

VIRGINIA RAIL.

A. O. U. No. 212. *Rallus virginianus* Linn.

Description.—*Adult*: An almost exact miniature of the preceding species (*q. v.*); generally coloration perhaps more strongly rufous; blackish barring of lower parts more restricted; *sides of head ashy gray*; bill red, darker above. *Immature* birds show blackish more extensively on lower parts. Length 8.00-10.50 (203.2-266.7); wing 4.15 (105.4); tail 2.00 (50.8); bill 1.50 (38.1); tarsus 1.33 (33.8); middle toe and claw 1.78 (45.2).

Recognition Marks.—Robin size (to appearance); marsh-prowling habits. The long reddish bill and rufous coloration serve to distinguish this bird from the following species.

Nest, of sedge and grasses in tussock of swamp. *Eggs*, 6-12, pale buffy or creamy white (of noticeably lighter coloration than those of the succeeding species); spotted and dotted with reddish brown and obscure lilac. Av. size, 1.25 x .95 (31.8 x 24.1).

General Range.—North America from the British Provinces south to Guatemala and Cuba.

Range in Ohio.—Rather common summer resident; more common northerly, rare in extreme southern portion of state. Nowhere so common as the next species.



Taken in Lcrain County.

Photo by the Author.

THE HOME OF THE VIRGINIA RAIL.

GIVEN an oasis of water of, say, two acres extent in a pasture desert of barren green; crowd a company of water elms into one end; add a half acre of bogs crowned with rose bushes; then a little space of clear water; than a jungle of cat-tails at the other end; surround the whole with a thirty-foot border of sedges and coarse grasses cropped close on the desert side, and you have an ideal home for the Virginia Rail and his kind. Poke about carefully in the edge of the rose-bog and you will soon start him, a sly reddish brown bird with a red eye and a longish beak. See him some ten feet away standing at the edge of cover, all alert, one foot uplifted and with claws curled down; or when he plants it gingerly, he alternately perks and lowers his head, as tho divided in his mind between darting away and facing it out with you. Simultaneously he cocks his tail forward and relaxes it nervously. If you succeed in looking sufficiently disinterested, he will snatch a slug hastily and watch you furtively with a blood-red eye, to note whether you approve of such actions. If you pass all the tests of good behavior during the first five minutes, the gentle bird will relax his vigilance and show you how he can walk over half-submerged vegetation without sinking very deep himself, or if in the passage from bog to bog he comes to a space of clear brown water, he will swim as lightly as a duck, but with that odd bobbing motion peculiar to his race. A single false motion, however, will send him scuttling off through the plant-stems and out of sight in a twinkling, cackling in alarm and dudgeon.

Swamp noises are difficult to describe. A verbal transcription serves for little more than to

recall to the *writer* a sound he has once heard. About all that one can safely say is that both the Virginia and Sora Rails have call and alarm notes which are characteristic and mutually distinctive. Virginia's alarm has been com-



Taken in Lorain County.

Photo by the Author.

ANOTHER "NEEDLE IN A HAY-STACK."

A FEMALE VIRGINIA RAIL IS SITTING ON HER NEST NEAR THE CENTER OF THE PICTURE AND WITHIN FOUR FEET OF THE CAMERA BUT THE SCREEN OF REEDS AND HER OWN PROTECTIVE COLORS RENDER HER INVISIBLE.

pared not inaptly to the grunting of a hungry pig, while the same author, Mr. Brewster, likens the love song of the male to the syllables "*cut, cutta, cutta, cutta.*" The anxiety of the female is betrayed by a mournful *ki-i*, or by short phrases of creaking notes. If the young are in hiding a low cluck of reassurance will bring them skurrying to find their mother.

The nesting is quite similar to that of the next species in all respects, save that the eggs are almost certainly distinguishable by their lighter creamy tones, as well as by the clearer red of their markings, and that they are on the average fewer in number.



Taken in Lorain County.

Photo by the Author.

NEST AND EGGS OF THE VIRGINIA RAIL.

No. 199.

SORA RAIL.

A. O. U. No. 214. *Porzana carolina* (Linn.).**Synonyms.**—CAROLINA RAIL; SORA RAIL; SOREE.

Description.—*Adult*: Above olive-brown varied by black and white in spots and stripes on back and scapulars,—the black broad and central, the white narrow and marginal; region about base of bill, chin, throat, and median crown-stripe black; cheeks behind, sides of throat, and breast bluish ash; below olive-brown to dusky, sharply barred with white, whitening on middle of belly; under tail-coverts tawny or tawny-washed; wing-quills fuscous; edge of wing and of first primary white; bill yellow, darkening on tip of upper mandible. *Immature*: Without black on head and neck; chin whitish; throat and breast washed with light brown. *Downy young*: Sooty black, the down interspersed sparingly with longer glossy black hairs; a tuft of bright orange bristles on throat,—stiff and inclined forward; and a bright red excrescence at base of upper mandible. Length 8.00-9.50 (203.2-241.3); wing 4.20 (106.7); tail 2.00 (50.8); bill .83 (21.1); tarsus 1.36 (34.5); middle toe and claw 1.85 (47.).

Recognition Marks.—Chewink size, but stouter in appearance; marsh-skulking habits; *short* yellowish bill.

Nest. a raised platform of grasses and sedge, usually placed centrally in grass tussock of swamp. *Eggs*, 8-15, dull buffy or ochraceous-buff (and so darker than eggs of *Rallus virginianus*); spotted and dotted with dark brown and with purplish shell-markings. Av. size, 1.24 x .90 (31.5 x 22.9).

General Range.—Temperate North America, breeding chiefly northward, but less commonly on the Pacific Coast. Casually north to southern Greenland. South to the West Indies and northern South America.

Range in Ohio.—Common summer resident and migrant throughout the state. Much more common than the preceding species.

IF a correspondent writes me of a "curious brown bird" which he "shot yesterday in a swamp," or "picked up this morning under the telegraph wires"; and if he accompanies the letter with a spool-box about a half an inch in thickness (O. N. T. preferred) under convoy of two two-cent stamps, I confidently expect to find a Sora Rail. Yes, there it is, lying on its side; because that is the way a Rail fits most easily into a shallow box. "As thin as a Rail" does not refer to the Lincoln variety of split trees, but to this bird and his congeners. The birds are bilaterally compressed in order to enable them to slip readily between the close-set stalks of vegetation. And this they do with almost incredible rapidity, and without leaving a wake of motion by which their course may be traced.

Like the King Rail the Sora rises to a dog; or if caught feeding inshore some little ways from his watery fastnesses, he flits over the tops of the reeds, drops down suddenly, and loses himself immediately in the maze. It is idle

to follow him when alarmed, for he will not rise again save under exceptional circumstances. Immense numbers of these birds are slaughtered yearly, especially along the Atlantic Coast. They have this at least to recommend them,—that they are easy practice for juvenile hunters. They afford less meat, however, than so many English Sparrows, and qualms of conscience make poor sauce.



*Taken in
Lorain
County*

*Photo by
the Author*

WHERE THE SORA HIDES.

THE SWAMP IS THE ONE SHOWN WITH THE PRECEDING SPECIES BUT THE PICTURE WAS TAKEN ABOUT A WEEK EARLIER IN THE SEASON.

Tho rightly counted shy, the Sora possesses one trait which brings it into frequent notice—curiosity. Often when I have been lying in a boat waiting for ducks among the aquatic plants, some little distance off shore and removed from the usual haunts of the Sora, I have heard sundry *kcks* half apprehensive, half quizzical, followed by the plashing of light feet as a troop of the little Rails worked their way out and surrounded me, under pretense, indeed, of searching for food, but being all too plainly prompted by inquisitiveness. Dr. Howard Jones tells of similar experiences: "I have had them come up to me and peck my gum boots, and play with the gun barrel as a bantam rooster does when teased."



SORA
Perona carolinensis
1/3 Life-size

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A slight platform of rushes or a shallow basket of woven cat-tail leaves and grasses serves for a nest. A site is chosen anywhere in the swamp, but usually in a rather open situation. Sometimes a tussock of grass is used, and the growing blades curl over to conceal this anchored ark of bulrushes. The Sora is a little more prolific than her cousin the Virginia, a dozen eggs being commonly found and fourteen and fifteen not infrequently. In the latter case the eggs are apt to be in two layers. The ochraceous cast of the ground color is unmistakable, and the spots are both more numerous and of a duller brown than those of *R. virginianus*.



Taken near Oberlin.

AN EMPTY NEST.

Photo by Lynds Jones.

Nothing could be at once more interesting and more comical than the appearance of a young Sora just out of the shell. He is, to begin with, a ball of down as black as jet, and he has a most ridiculous tuft of orange chin whiskers. Add to this a bright red protuberance at the base of the upper mandible and an air of defiance, and you have a very clown. And such precocity! I once came upon a nestful in a secluded spot at the critical time. Hearing my distant footsteps most of the brood had taken to their new-found heels, leaving two luckless wights *in ovo*. At my approach one more prison door flew open. The absurd fluff-ball rolled out, shook itself, grasped the situation, promptly tumbled over the side of the nest, and started to swim across a six-foot pool to safety.

Speaking of the protuberance at the base of the upper mandible, one cannot help wondering whether this is not a reminiscence (in embryo, or as good) of some distant ancestor who possessed a red frontal shield like that of the Florida Gallinule of today. We know that the Rails and Gallinules are closely related, but has this tie of relationship been noted before?

No. 200.

YELLOW RAIL.

A. O. U. No. 215. *Porzana noveboracensis* (Gmel.).

Description.—*Adult*: Prevailing color ochraceous-buff, clearest on breast; upper parts heavily striped with dark brownish anteriorly, and with black posteriorly; feathers of back and scapulars, and inner quills with very narrow subterminal bars of white, some of the feathers twice or three times crossed with white; edge of wing white; wing-quills light fuscous, the inner secondaries broadly tipped with white; a dark brown spot on lores, produced indistinctly to include auriculars; axillars and lining of wings white; sides and flanks dense ochraceous to dusky, narrowly barred; middle of belly whitish. Length 6.00-7.75 (152.4-196.9); wing 3.30 (83.8); tail .51 (13.); tarsus .92 (23.4); middle toe and claw .95 (24.1).

Recognition Marks.—Sparrow size; marsh-skulking habits; ochraceous coloration.

Nest, of grasses, on the ground in marsh. *Eggs*, 6 or more, creamy buff, densely sprinkled and speckled on larger end with rusty brown. Av. size, 1.12 x .83 (28.5 x 21.1)" (Ridgw.).

General Range.—Chiefly eastern North America, north to Nova Scotia, Hudson Bay, etc.; less commonly west to Nevada and California. No extralimital records except for Cuba and Bermuda.

Range in Ohio.—Rare or locally restricted. Believed to breed.

THIS little Rail possesses most of the common traits of the three preceding species, but adds to them an even greater reluctance to take to wing, and is on this account little known. It is said to frequent upland meadows as well as reedy swamps, but such is its fleetness of foot and ingenuity in threading the wilderness of bristling grass stems that even here it takes a clever dog to raise it. Probably the only efficient method by which to study this bird is to learn its call notes and so entice it to the edge of some secluded swamp opening. It is said to be quite pugnacious, and to respond readily to the supposed challenge of another bird. Mr. Nuttall speaks of their "abrupt and cackling cry, *krek-krek,krek, krek, kuk, k'kh.*" and likens it to the sound of a croaking tree frog.

Dr. Howard E. Jones of Circleville has attained a special facility in the study of the Yellow Rail, and the reports of his success indicate that the bird ought to be found not uncommonly throughout the state.

No. 201.

BLACK RAIL.

A. O. U. No. 216. *Porzana jamaicensis* (Gmel.).**Synonym.**—LITTLE BLACK RAIL.

Description.—*Adult*: Head, breast, and upper belly blackish slate, darker on crown; a large patch on hind-neck dark chestnut; remaining plumage brownish black sprinkled sparingly, except on wing-quills, with small white spots and bars; bill black. *Immature*: Similar to adult but lighter on breast, whitening on throat, shaded with chestnut on hind crown. *Downy young*: "Entirely bluish black." Length 5.00-6.00 (127-152.4); wing 2.70 (68.6); tail 1.23 (31.2); bill .57 (1.45); tarsus .78 (19.8); middle toe and claw .95 (24.1).

Recognition Marks.—Warbler size, but appearing Sparrow size. Marsh-haunting habits; diminutive size and dark coloration distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, of the finer grasses lining a cup-shaped depression in ground of marsh. *Eggs*, 9-10, white or creamy white, sparingly sprinkled with dots of reddish brown, more heavily about the larger end. Av. size, 1.00 x .80 (25.4 x 20.3).

General Range.—Temperate North America north to Massachusetts, northern Illinois, and Oregon; south to West Indies and Guatemala.

Range in Ohio.—Very rare. Positive records from Hamilton and Lake Counties.

SECRETIVENESS is conceded to be the most striking characteristic of the Rails as a group, and there can be no question that this little midget possesses the quality in a superlative degree. "About as difficult to observe as a field mouse," says Mr. Chapman, with this difference, however, that the field mouse is some thousands of times more numerous. Looking for a needle in a haystack is not such a forlorn quest, after all. The writer once found at the bottom of a hay-mow in spring a fountain pen, which he remembered having lost on a load of hay in the meadow the previous summer—but when the needle is endowed with life, and is bent on concealment, the task is well nigh hopeless. Under favorable conditions, however, where cover is limited, or occurs in scattered bunches, the Black Rail may be flushed from covert to covert. In Jamaica, where the birds have been more fully studied than elsewhere, an informant of Mr. Gosse told him that several were killed accidentally by the negroes at work, as the bird is so foolish as to hide its head in the presence of danger, cock up its rump, and imagine itself safe. Another authority, a Mr. March, likened its cry to the syllables *chi-chi-cro-croo-croo*, "several times repeated in sharp, high-toned notes, so as to be audible to a considerable distance."

No accounts have been published of the nesting of the bird in Ohio (where, indeed, it has been seen only three or four times), but they have been found breeding in the Calumet marshes of northern Illinois, and there

is no good reason why they should not here, especially on the borders of the reservoirs, and of those streams which empty into Lake Erie.

Mr. Ray Densmore informs me that he has seen the Black Rail near Perry, in Lake County, and that a neighbor of his captured one alive in a potato patch. This specimen was finally sent to the Experiment Station for identification.

No. 202.

PURPLE GALLINULE.

A. O. U. No. 218. *Ionornis martinica* (Linn.).

Description.—*Adult*: Broad frontal shield dusky blue; head, neck, and lower parts dark purplish blue, blackening on belly and thighs, lighter and bluer on under wing-coverts; above bright olive-green centrally, shading off through bluish green on wings and upper back into contiguous blue or purple; under tail-coverts pure white; bill bright red with pale green tip (the latter yellow in skins); feet yellow. *Immature*: Above heavily washed with light brown; beneath buffy or mottled white; bill dull yellowish. *Downy young*: Black, with short, white filaments interspersed through down of head; bill yellow at base, black-tipped. Length 13.25 (336.6); wing 7.15 (181.6); tail 2.75 (69.9); culmen, exclusive of frontal shield 1.20 (30.5); tarsus 2.35 (59.7); middle toe and claw 2.85 (72.4).

Recognition Marks.—Little Hawk size; brilliant coloring distinctive.

Nesting.—Not certainly known to have bred in Ohio, but probably has done so. *Nest*, a platform of reeds and grasses elevated above surrounding muck or water of swamp. *Eggs*, 6-10, or sometimes more, pale cream-white or buffy, heavily speckled or, rarely, spotted, chiefly about larger end, with purplish gray and umber. Av. size, 1.58 × 1.14 (40.1 × 29.).

General Range.—South Atlantic and Gulf States, casually northward to Maine, New York, Wisconsin, etc.; south throughout the West Indies, Mexico, Central America, and northern South America to Brazil.

Range in Ohio.—Rare or casual in spring. One fall record by Dr. Carl Tuttle, Sept. 2, 1894, near Lake Erie.

THERE are seven well authenticated records of the capture of this bird within our limits, and it has been taken once in Ontario. Since two of these records come within the last decade, it is altogether possible that this handsome swamp prowler may be found breeding in some of our larger marshes.

“It has little of the aspect of a Gallinule, but stands higher, and has its legs more forward. As it walks, the neck is alternately bridled up or thrown forward, and its short black-and-white tail is changed from a semi-erect to a perpendicular position, with a flirting motion. As this bird walks over the tangled leaves and stems of aquatic plants resting on the surface of the water, it moves with great deliberation, frequently standing still and looking leisurely on either side.



PURPLE GALLINULE
Icnornis martinica
About $\frac{1}{2}$ Life-size

"Ever on the lookout for any danger that may menace it, at the least noise it takes to flight and hides among the rushes. It is only when its place of retreat is inaccessible that flight is attempted, its movement in the air being heavy and not well sustained. Its voice is loud and strong but has in it nothing remarkable. Worms, molluscs, and the fruit of various kinds of aquatic plants are its food. It gathers seeds and carries them to its beak with its claws, and it also makes use of them in clinging to the rushes where the water is very deep" (Brewer).

No. 203.

FLORIDA GALLINULE.

A. O. U. No. 219. *Gallinula galeata* (Licht.).

Description.—*Adult*: Frontal shield and bill bright red, the latter tipped with greenish yellow; general plumage blackish slate; above heavily overlaid with olive-brown on back and scapulars; edges of wings and lateral and posterior under tail-coverts white; a few flank feathers narrowly striped with white; feet greenish; tibiae red. *In winter* specimens the frontal shield is narrower and the feathers of the belly more or less white-tipped. *Immature*: Similar to winter adult, but frontal shield reduced; bill brownish, yellow-tipped; feathers of lower parts more extensively white-tipped. *Downy young*: "Glossy black, the lower parts sooty along the median line; throat and cheeks interspersed with silvery-white hairs" (Ridgway). Length 13.75 (349.3); wing 6.50-7.25 (165.1-184.2); tail about 2.75 (69.9); bill (to frontal shield) 1.26 (32.); tarsus 2.20 (55.9); middle toe and claw 3.20 (81.3).

Recognition Marks.—Little Hawk size; nearly uniform slaty coloration; bright red bill and frontal shield distinctive.

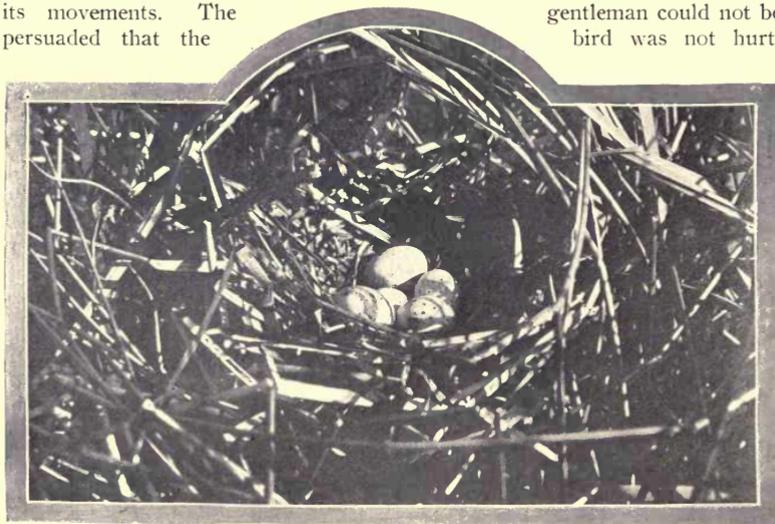
Nest, a platform of dried reeds and grasses raised above surrounding mud and water of swamp. *Eggs*, 6-13, usually 8 or 9, buff or brownish buff, sparingly speckled and spotted or blotched with reddish brown, never (?) black. Av. size, 1.77 x 1.22 (45. x 30.9).

General Range.—Temperate and tropical America from Canada to Brazil and Chili.

Range in Ohio.—Not uncommon summer resident in the larger swamps throughout the state.

GALLINULA—literally, *little hen*,—is the connecting link between ducks and chickens. On the one hand she swims freely and dives readily to escape a pursuer, moving upon the surface of the water rather daintily, nodding the head and perking the tail with each stroke, as if she were working her passage. When under the water the bird makes all speed to shelter, where, if sore pressed, she is said to cling to the submerged stems of water plants, protruding only the nostrils for air. On the other hand the water-hen moves nimbly through the reeds and walks upon the lily pads, or ranges the grass on the dry borders of the swamp. The resemblance to the domestic

fowl is further heightened by its occasional appearance among them during migrations. Says Dr. Jones: "The Florida Gallinule is in many respects a curious bird. It occasionally is found during its periods of migration in open fields away from the water or even in the barn yard. Some years ago a gentleman in Circleville found one walking about among his chickens. To him it was a new and strange bird and he concluded to capture it and see where it was hurt. He at once gave chase and soon caught it, but a careful examination failed to reveal a wound. I saw the bird later in the day walking about his yard. It seemed as tame as the chickens and perfectly contented. On the flat hard ground it moved about awkwardly, often stepping with one foot upon the toes of the other, an accident which seriously affected the grace of its movements. The gentleman could not be persuaded that the bird was not hurt,



Taken near Sandusky.

Photo by Walter C. Metz.

NEST AND EGGS OF THE FLORIDA GALLINULE.

and having no idea that it would fly it was left in the yard with the poultry. The following morning it was gone, having disappeared as mysteriously as it came."

A brood of Gallinule chicks—tiny black fellows with funny silver whiskers—are fully as cunning as any raised ashore. And they add to the accomplishments of pattering over the lily pads, and peeping lustily while they gather in little insects and snails, that which would horrify their landmen cousins, viz., the ability to swim and dive.

The Gallinule keeps much more closely to the reeds than does the Coot, to which it is so closely related. It is difficult to flush, but when seen the red bill is immediately distinctive. The notes, by which the bird's presence in the swamp is oftenest betrayed, distantly resemble those of the Guinea-hen, but are much softened and subdued.

The nest is a low platform of broken-down reeds, and is oftenest placed upon the shore side of the swamp, where the ground is only moderately damp. It is a little smaller than that of the Coot, but boasts the same characteristic run-way. Like the Coot also it will build in isolated weed-patches, well out, which can be reached only by swimming; while Dr. Langdon found, near Port Clinton, a floating nest which was only anchored to the reeds.

The eggs may be distinguished with certainty from those of the Coot by remembering that the markings are of pale rufous and lavender, and that they incline to larger sizes and irregular shapes, while the spots of the Coot's egg are rounded or punctate, and run in sepias and blacks.

The Florida Gallinule is quite irregular in its distribution in this state. Its presence, especially in the swamps which border the larger reservoirs, depends largely upon the height of the water. In 1902, they were common at the Licking Reservoir, while in 1903, with the water a foot or so higher, none were to be found. They are common at any time in the larger swamps which bound Lake Erie, but even here their presence varies locally from year to year.

No. 204.

AMERICAN COOT.

A. O. U. No. 221. *Fulica americana* Gmel.

Synonyms.—MUD HEN; CROW DUCK.

Description.—*Adult*: General color blackish slate, bluer tinted above, browner tinted below; head and neck pure black; lower scapulars and interscapulars tinged with olive-green; edge of wing, exterior margin of first primary, tips of secondaries, and lateral and posterior tail-coverts white; bill ivory-white, a dark brown spot near the tip of each mandible; frontal shield brownish red; tarsi and feet greenish; toes margined by scalloped flaps. *Adult in winter*: Plumage lightened below by whitish tips of feathers; frontal shield reduced in size. *Immature*: Similar, but more extensively tipped with whitish; frontal shield still further reduced; red spots on bill wanting; bill obscure flesh-color or with olive tinge. *Downy young*: Blackish head and neck decorated with orange-colored bristly filaments; remaining upper parts with similar but paler filaments; bill orange-red, the upper mandible black-tipped. Length about 15.00 (381.); wing 7.35 (186.7); tail 2.20 (55.9); bill (from beginning of frontal shield) 1.40 (35.6); tarsus 2.10 (53.3); middle toe and claw 3.10 (78.7).

Recognition Marks.—Crow size, to appearance; substantially uniform coloration (slaty black); white bill; lobate feet.

Nest, an elevated platform of dried cat-tail leaves and grasses in heavy growth of marsh, or surrounded by water. *Eggs*, 6-15, usually about 10, pale buffy or cream color, moderately sprinkled with rounded spots and dots of burnt umber, sepia or black. Av. size, 1.88 x 1.32 (47.8 x 33.5).

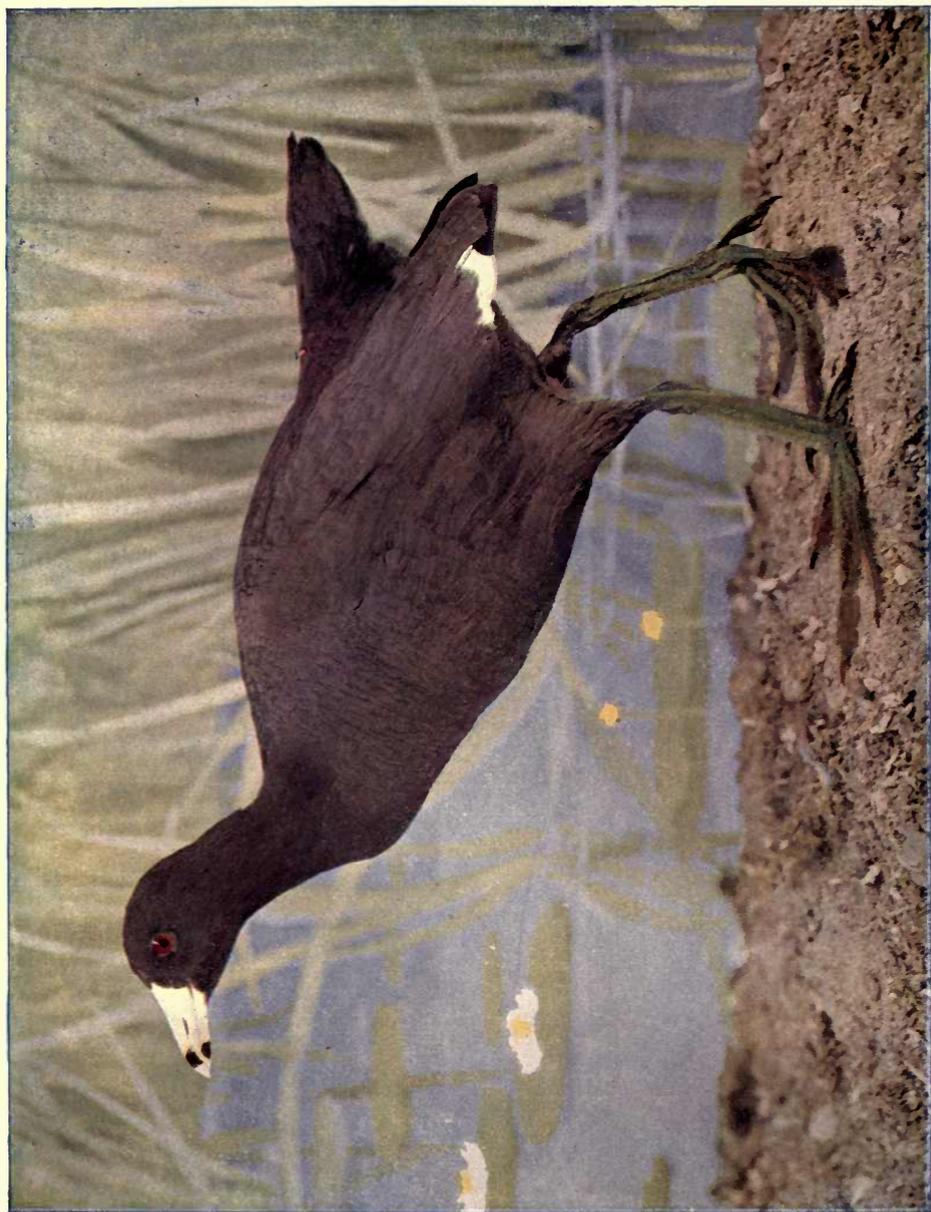
General Range.—North America from Greenland and Alaska southward to the West Indies and Veragua.

Range in Ohio.—Abundant during migrations. Not common summer resident in swamps, along southern shore of Lake Erie, as also upon the Reservoirs and in extensive marshes of the interior.

UP to a dozen years ago the Coot or Mud-hen, as it is commonly called, was considered "no game," and many were the expressions of contempt cast upon the humble creature. Its flesh was "stringy," "fishy," "tough" and "loud," and its pursuit was voted too tame for any but six-year-olds. As Dr. Wheaton said of them: "They are considered a nuisance by sportsmen, and a fraud by amateurs who sometimes mistake them for ducks." But recently, because of the amazing dearth of ducks, sportsmen have professed a change of views with regard to them, and an inn-keeper, well known to the brethren, is wont to declare that there is nothing superior to the flesh of a Coot well smothered in onions. However that may be, the battle is on now, and the issue for the Coots will shortly prove decisive.

Last year at the Licking Reservoir I was permitted to witness a chapter in "The Education of a Coot;" subtitle: "How a flock of Coots melts away on an autumn day in our hospitable land." When I went out upon the water in the gray of a crisp October morning, the Coots lay scattered about, half-anchored on the banks of pickerel-weed, asleep. As the day began to dawn they gathered just off-shore into one immense flock; and as the sun rose I drifted down upon them and came within a hundred feet, as they lay huddled together like sheep, five hundred strong. The sight moved the artist in me, and I ached to slip the camera but the sun was too low to admit of taking a snap-shot, and I pulled off without molesting the birds. To tell the truth, I had not thought of its being sport to kill Coots. but two boys soon disabused me. Hurrying up to seize the opportunity I had let pass, they fired charge after charge and picked up fifteen birds. The Coots were badly scattered, but even after the attack, separate bunches were studied at close range, and I refused a dozen opportunities to deliver murderous shots. Returning after breakfast, I found the shooting mill in full swing. Not "kids" this time, but full-grown men, gentlemanly sportsmen, to the number of a dozen were banging right and left. I lay by and watched for half an hour or so listlessly, and then seeing the birds were doomed (wretched excuse!), I chimed in half-heartedly.

It was now for the first time that I saw the Coot as a flying bird. Every one is familiar with the shuffling manner in which it rises from the water, and lumbers off at a low height to splash down again at what it supposes a



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AMERICAN COOT
Fulica americana
 $\frac{3}{4}$ Life-size

safe distance. To-day, however, under the lash of incessant alarms they took to wing readily and proved themselves graceful fliers—a little slow and very steady, but really fair game so far as that is concerned. [In flight, they carry their legs stretched at full length behind them, and seem to use them quite cleverly as a rudder, to supply the deficiencies of the abbreviated tail.]

Every gun in the swamp was pounding at them, but they had no thought of leaving the locality by daylight. A sad feature of the chase was the number of birds that fell into the reeds and were either lost, if dead, or else left wounded. So fierce was the persecution, that by noon there were only eighty that mustered in the open water while the sportsmen lunched; altho I presume there were as many more lurking in the reeds. Those which were spared the first day were too tired to



Taken in Lorain County.

COOT AT BAY.

Photo by the Author.

THIS BIRD WAS FOUND SPENDING THE DAY ON A TINY STREAM FOUR MILES FROM LAKE ERIE.

move south on the following night, and a remnant of a hundred and fifty birds were found on the same spot early the next morning, when the process of half-killing was substantially repeated.

Query: If it takes Coots ten nights, with daily rests (?) between, to pass from their northern breeding grounds to their winter quarters, and a flock, faring as this one did, averages to lose half its number each day, of 512 birds that leave Canada, how many will reach Florida?

Query number two: Does it pay? Well, here is something to guage by: I would have given ten dollars for a photograph of the flock as I saw it first, but I would not give half that sum for all their carcasses piled in a heap. What sort of folly is this thing we call sport?

Coots breed in suitable localities throughout the state, and are partially resident southerly, but the majority of those seen in spring pass farther north to nest. If left absolutely undisturbed they would become almost as familiar as chickens, and the observer might be delighted with glimpses of happy families at play among the reeds; but as it is, the fluffy chicks are taught to fear the sight of man above all plagues.

Nests are constructed of broken-down reeds built up into a platform, which lifts the eggs from three inches to a foot clear of the water. They



Taken on the Licking Reservoir.

A HAUNT OF THE COOT.

Photo by the Author.

are usually placed in the lakeward edge of the cat-tail patch, or else lodged in the outlying clumps and along bayous. Floating nests are sometimes constructed which differ from Grebes' only in their more firm anchorage and freedom from moisture above.

No. 205.

WHOOPING CRANE.

A. O. U. No. 204. *Grus americana* (Linn.).**Synonym.**—WHITE CRANE.

Description.—*Adult*: Plumage pure white, the wing-quills, primary coverts, and alula black; top of head, lores and cheeks bare, dull red, covered with a thin growth of short black hair,—the hair mixing more or less with white feathers on hind nape; bill dusky green; feet and legs black. *Immature*: Similar to adult, but head not bare; plumage, especially on back, more or less overlaid with ochraceous. Length 52.00 (1320.8); extent 90.00 (2286.); wing 24.00 (609.6); tail 11.00 (279.4); bill 5.50 (139.7); tarsus 11.50 (292.1); middle toe and claw 5.40 (137.2).

Recognition Marks.—"Eagle" size; immense size; long neck; long stout black tarsi; pure white coloration.

Nesting.—Does not breed in Ohio. *Nest*, of grasses, on ground in marsh. *Eggs*, 2 or 3, pale olive or light drab, spotted and blotched with reddish brown and with obscure purplish gray shell-markings. Av. size, 4.00 x 2.50 (101.6 x 63.5).

General Range.—Interior of North America from the Fur Countries to Florida, Texas, and Mexico, and from Ohio to Colorado. Formerly on the Atlantic Coast, at least casually, to New England.

Range in Ohio.—Rare migrant in western half of state only.

YEARS ago this stately bird was occasionally seen during the migrations. It formerly bred in abundance in Illinois, and may once have done so in northwestern Ohio, but the center of the bird's present breeding range lies further north and west. Upon the prairies of North Dakota, Dr. Coues declares that he has mistaken one of these Cranes at a distance for an antelope, so great was its size.

That the Whooping Crane deserves its name we cannot doubt after we learn that it is provided with a windpipe nearly five feet long, some two feet of which, for convenience, is coiled away in the breast bone.

No. 206.

LITTLE BROWN CRANE.

A. O. U. No. 205. **Grus canadensis** (Linn.).

Description.—*Adult*: Plumage slaty gray to brownish, more or less washed, especially on back and scapulars, with ochraceous or rusty,—this rusty sometimes abruptly confined to scattered single feathers; quills, alula and primary coverts blackish; top of head to below eye bare, dull red, skin minutely warty and with some short, bristly, black hairs; feet and legs black. *Immature*: Head entirely feathered; plumage brown rather than plumbeous, extensively washed with rusty. Length about 35.00 (889.); wing 18.50 (469.9); tail 7.50 (190.5); bill 3.60 (91.4); depth at base .77 (19.6); tarsus 7.50 (190.5); middle toe and claw 3.25 (82.6).

Recognition Marks.—Eagle size; slaty gray or brownish color; crane proportions of bill, neck and tarsus; smaller than the next species.

Nesting.—Does not breed in Ohio. Like that of next species. *Eggs*, smaller. Av. size 3.66 x 2.28 (93. x 57.9).

General Range.—Arctic and subarctic America, breeding from the Fur Countries and Alaska to the Arctic Coast, migrating south in winter into the western United States.

Range in Ohio.—One record of its occurrence in the state. (Cf. "Nests and Eggs of North America," Oliver Davie, p. 121.)

THIS species and the next reverse the usual order of sequence in size, it being a case where the northern form is conspicuously smaller than the southern. The migrations of the Little Brown Crane are normally confined to the western part of the United States. Mr. Oliver Davie states that he mounted a specimen of this bird which was taken from a flock of seven near Springfield, Ohio, in the spring of 1884.

According to Chapman, there are but two other instances of its occurrence east of the Mississippi,—Rhode Island and South Carolina.

Its appearance within our limits is therefore to be accounted strictly accidental.

No. 207.

SANDHILL CRANE.

A. O. U. No. 206. *Grus mexicana* (Müll.).

Synonyms.—SOUTHERN SANDHILL CRANE; BROWN CRANE.

Description.—Exactly like preceding species, but larger. Length about 45.00 (1143.); wing 22.00 (558.8); tail 8.00 (203.2); bill 5.50 (139.7); depth at base 1.05 (26.7); tarsus 10.25 (260.4); middle toe and claw 4.00 (101.6).

Recognition Marks.—Eagle size; slaty gray or brownish color; crane proportions of bill, neck, and tarsus; considerably larger than the preceding species.

Nest, a platform of roots, reeds, weed-stalks etc., raised slightly above water or mud of swamp. *Eggs,* 2, grayish olive or drab, spotted and blotched distinctly and obscurely with reddish brown. Av. size 4.00 x 2.45 (101.6 x 62.2).

General Range.—Southern half of North America; rare near the Atlantic Coast, except in Georgia and Florida.

Range in Ohio.—Not common migrant and rare resident. Breeds sparingly in the northern part of the state.

THE Sandhill Crane is found in great numbers in northern Ohio, especially in Huron and adjoining counties. They have been known to breed in this section for a number of years. In 1895, I first saw the Sandhill Crane in what is known as the New Haven marsh, situated within a few miles of Chicago Junction. This was on the 15th of April, and I was informed by people living in the neighborhood that the Crane usually returned between the 15th of March and the 1st of April. They are, at this time, seen in small flocks varying in number from three to nine; however, four or five is the usual number.

In the following year ('96), in the second week of April, I again observed a pair of these birds, at about the same place. A young man living in the neighborhood collected, in the latter part of May, a set of the Sandhill Crane's eggs and placed them under a setting hen. In a few days they hatched, but he was only able to raise one of the birds; this became quite a pet, and when I saw it in the autumn of that year it was very large and seemed to govern everything in the hennery. The bird was quite tame and would follow one around if there was any prospect of its receiving food. The following year, 1897, I again visited this marsh, on the 15th of May, intending to find a nest of this bird if possible. I was rewarded by finding two nests within one-fourth of a mile of each other. They were placed in the open, upon a portion of the marsh land that had been under cultivation for a few years prior to my visit, but had again grown up in weeds.

The first nest was built in a small hollow in the ground and made of a few roots and weeds and some small bits of grass. These eggs were per-

fectly fresh, and were of an ashy yellow, spotted and blotched with brown and reddish brown. One of the eggs had light splotches of gray upon it. This set is now deposited in the oölogical collection at the Ohio State University.

The second nest, which was located in the same field, was similar in every respect to the first, except that it was placed on a little more elevated ground and contained more grass as a lining. These eggs were slightly incubated.

The nest of these birds can readily be located, as the male bird is likely to be in the vicinity, and upon being disturbed, takes flight with a note of warning to his mate. She usually follows if you are coming in the direction of the nest. It is my impression that these birds leave the nest and run for a little distance before they take flight, as in both cases the birds ran from twenty-five to thirty feet from the nest before they started to fly. I marked well the position where they left the ground, and in my search I found they had gone that distance before flying.

On the 18th of the month I again visited the marsh, intending if possible to get another sight of these birds, but they had left that part of the marsh and had no doubt gone farther toward the center and uncultivated part, which is less likely to be disturbed by man. On this day I went to the southern section of the marsh and was successful in flushing a Sandhill Crane from her nest. I found the eggs to be in a high state of incubation, the nest having the appearance of being long occupied, and I concluded to leave the eggs and return in a few days and see the young; but it was upwards of a week before I was able to visit the place, and then I found that the eggs had hatched and the young had left the nest. I made a number of trips to the vicinity of the nest later in search of the birds, but was not able to see any but adult birds, and those only occasionally. During September they can again be seen in small flocks, and it is supposed that they leave this region the latter part of September or the first of October.

I have always found these birds exceedingly shy and difficult to approach. In fact, I have never been within gunshot of one of them even during the nesting season. However, with a field glass I got a good view of one of these birds feeding, and even at this great distance the bird's vigilance was never relaxed. For after bending his long neck to the ground he rises again very erect, and at full length surveys the surroundings upon all sides. He resumes his repast, but should anything appear to view he stands perfectly motionless, surveys it closely, and invariably takes flight upon the slightest move.

WM. C. MILLS.



AMERICAN BITTERN
Botaurus lentiginosus
½ Life-size

No. 208.

AMERICAN BITTERN.

A. O. U. No. 190. *Botaurus lentiginosus* (Montag.).**Synonyms.**—BOG-BULL; STAKE-DRIVER; THUNDER-PUMP; INDIAN HEN.

Description.—*Adult*: General color ochraceous or ochraceous-buff; darker, brownish, on back, the crown and upper back washed with blackish, the neck obscurely streaked with buffy and brown; the back and wings finely mottled, brownish, fuscous and ochraceous, becoming grayer marginally on wing-coverts; wing-quills and their coverts slaty; inner primaries and the secondaries tipped with ochraceous-rufous; a glossy, black or blackish stripe on side of neck anteriorly, continued to bill by indistinct, brownish line; chin and upper throat white; belly and crissum unmarked buffy; remaining under parts buffy or whitish, marked with large stripes of mottled ochraceous and dusky; bill brownish black on ridge of culmen, pale yellow on sides and below; feet and legs yellowish green. Very variable in size. Length 23.00-34.00 (584.2-863.6); av. of four Columbus specimens: wing 11.13 (282.7); tail 4.35 (110.5); bill 3.00 (76.2); tarsus 3.60 (91.4); middle toe and claw 3.98 (101.1).

Recognition Marks.—Brant size; ochraceous coloration; heavily streaked below; secretive, swamp-loving ways; heavy flight; "pumping" and "stake-driving" notes.

Nest, on the ground in swamps, or on dry swamp islands, a mere depression with scant lining of grasses, etc. *Eggs*, 3-5, olive-drab or olive-buff, unmarked. Av. size, 1.90 x 1.44 (48.3 x 36.6).

General Range.—Temperate North America south to Guatemala, Cuba, Jamaica, and Bermuda; occasional in British Islands.

Range in Ohio.—Not common summer resident; more common spring and fall migrant.

THE rather meager opportunities now afforded in this state for the study of this remarkable bird in its haunts are supplemented from time to time by the neighbor boys who bring in specimens found dead or wounded under telegraph wires during the migrations, or whose brothers shoot the strange creatures on sight,—for no better reason than that they are strange. For all that the Bittern is so large to appearance, it is a light-weight, a mere mass of skin and feathers, not so heavy as some ducks. A light charge of fine shot will bring it down; but if it is only wounded, beware of that sharp beak, which shoots out like lightning, and strikes the eye of dog or master with deadly precision.

This curious fowl is at home in the fastnesses of the swamp. Here he skulks and feeds quietly by day; but as twilight approaches, he becomes much more active, and stirs about among the reeds hunting for crayfish and frogs, or wading with deliberate step in search of water insects and minnows.

If the fishing is poor, he may venture up into the meadows in search of moles and mice. When suddenly flushed, the bird makes off with a low frightened *quawk*, on heavy noiseless wings; but if he has a moment's warning, and a ghost of a show at concealment, the bird stretches instead to an enormous height, holding the long bill vertically, and becomes rigid. In such a position it requires the closest scrutiny to distinguish the bird from the surrounding reeds. Even in the open the bird will pose as a stake or a weed, and often quite successfully, relaxing or flying only when the danger is past. When at rest and unsuspecting, as in the heart of the swamp, the Bittern allows his feathers to droop like a rudely thatched roof, and he himself

looks not unlike a deserted hut, fit emblem of the melancholy morass.

It is not, however, upon his beauty nor upon his weight that the Bittern's reputation rests, but upon his wonderful voice. The moonlight serenade which this ardent lover accords his mistress is one of the most outlandish performances in



Taken in Oberlin.

CAPTIVE BITTERN.

Photo by
R. L. Baird.

nature. Take an air-tight hogshead and immerse it suddenly in water with the bung-hole down; then allow the air to escape in great gurgles, say a caskful at a time, and you will get but a faint idea of the terrifying, earth-shaking power of the "Thunder-pump" at close range. *Umph-ta-googh, umph-ta-googh*, groans this absurd wooer, and the swamp quakes with apprehension. The case is serious, for the bird accompanies the cry with a motion which suggests the miseries of the Scriptural whale, and each successive Jonah has a long way to go before reaching fresh air. Maria likes the noise, of course, and,—well, love is like seasickness at certain stages.

The birds also indulge in another note not less strange, but somewhat less startling,—that of a stake smitten by a hammer. *Whack - a - whack*,

whack-a-whack, goes the bird, and the dullest imagination can picture the stake sinking deeper into the mud with every stroke.

The nest is an unpretentious affair, a grass-lined depression on the surface of some tiny island, high and dry, or a bed of reeds and coarse grasses, or even sticks, placed anywhere about the swamp, under cover of the protecting vegetation. Sometimes the nests are built in shallow water.

No. 209.

LEAST BITTERN.

A. O. U. No. 191. *Ardetta exilis* (Gmel.).

Description.—*Adult male*: Top of head, back, scapulars, and tail shining black with faint greenish reflections; sides of head and neck pale rufous, deepening on back of neck to rich chestnut; wing-coverts, bordering the black, brownish buff; the greater coverts and tertials broadly tipped with chestnut-rufous, and the inner primaries and secondaries narrowly; under parts whitish, clearest on chin and sides of throat and lower belly, streaked with buffy on throat, fore-neck, chest, and flanks; dark brown patches on sides of breast, sometimes almost meeting in front; bill pale yellow, blackening on culmen; iris yellow; legs greenish in front, yellow behind; toes yellow. *Adult female*: Similar, but dark brown rather than black on top of head; black of back entirely replaced by glossy rufous-brown, the scapulars margined on outer edge with white; buffy flank-streaks with sharp, blackish shaft-lines, etc. *Immature male*: Similar to adult, but back and scapulars washed with rufous, and feathers chestnut-tipped. *Immature female*: Like adult female, but feathers of back and scapulars bordered with ochraceous, etc. Length 12.00-14.00 (304.8-355.6); wing 4.60 (116.8); tail 1.60 (40.6); bill 1.75 (44.5); tarsus 1.60 (40.6); middle toe and claw 1.65 (41.9).

Recognition Marks.—Little Hawk size; black or dark brown and rufous coloring above; slender form; marsh-skulking habits. The brownish buff area on wing, and white or buffy of under tail-coverts serve to distinguish this form from *Ardetta neoxena* (for which see Appendix A.).

Nest, a raised and slightly hollowed platform of dead cat-tail leaves, etc., surrounded by water or mud of swamp. *Eggs*, 3-5, rarely 6, pale bluish- or greenish-white (often fading to white in collections). Av. size, 1.20 x .90 (30.6 x 22.9).

General Range.—Temperate North America north to British Provinces, and south to the West Indies and Brazil. Less common west of the Rocky Mountains; on the Pacific Coast north to northern California.

Range in Ohio.—Not common summer resident, but sometimes locally abundant.

ONE is tempted to apply the epithet awkward to this bird as he is ordinarily noted in daylight. See him as he springs up suddenly from your



Taken on the Licking Reservoir Photo by the Author.

A NEST OF THE LEAST BITTERN.

feet in the cat-tail tangle—the flapping wings, the straightening neck, the legs clumsily dangled until the bird's balance is gained, the noisy plash with which he settles into the reeds again—all this seems awkward enough. Or if you persist in dashing after the stranger, having noted his exact whereabouts, see him as he stretches to an incredible length, and stiffens to the semblance of a reed-stalk,—slender, immovable, the very counterpart of any of his sere and lifeless companions. In this position, if you avoid betraying your recognition by a too knowing gaze at the bird's eye, you may even get close enough to seize him in the hands. The bird apparently realizes what a sorry figure he cuts on the wing, and flies only as a last resort. Even when he wants to make a reconnaissance, instead of taking a turn a-wing, he climbs carefully up some upright stalk, Wren-fashion, and squints furtively over the tops of the reeds.

Amused criticism, however, turns to admiration when we note the marvelous dexterity with which the bird threads the lawless mazes of a cat-tail swamp. Now plashing softly through a shallow, now scrambling nimbly over opposing vegetation, he can soon quit dangerous territory if he will.

But the Least Bittern is a

bird of the night. When evening falls, he goes to his accustomed hunting-ground with strong, sure flight. These birds do not often wait for the game to come to them, as is the habit of that patient fisherman, the Great Blue Heron, but they move about with lowered head and outstretched neck industriously searching for slugs, frogs, tadpoles, beetles, and their kin. Even field mice are sometimes caught by a rapid run and a flashing stroke.

These little Bitterns are not guilty of any such outlandish noises as those produced by the "bog bull." Their only notes are a low *qua*, when flushed or frightened, or a short hoarse croak of greeting or inquiry; and during the breeding season, a subdued and labored *coo, coo, coo, coo, coo*, which proceeds, without doubt, from the male bird.

They do not nest in colonies exactly, but a favorable stretch of tules or saw-grass is likely to contain a dozen nests scattered about. At one of the Reservoirs during the latter part of May, I saw as many as a hundred birds in a day, and was all the time stumbling upon their nests. The nests are composed of cat-tail leaves laid flatwise, and are either built up out of the muck or shallow water to a height of a foot or more, or else lodged midway on the growing plants. In the latter case the broken-down tops of the reeds are used as a basis, and the shallow platform thus formed is lined with green leaves and sedges, or even fine sticks. The eggs are almost equal ended, and are of a delicate bluish white tint. The four eggs of one set which I examined were disposed in a straight row, as if accommodated to the narrow and elongated breast of the bird. According to Dr. Abbott, the youngsters are scantily covered when hatched with a pale buffy down, interspersed with white hairs as long as the bird itself. They are unusually active and vivacious, and learn to shift for themselves much sooner than the young of the tree-nesting Herons.

No. 210.

GREAT BLUE HERON.

A. O. U. No. 194. *Ardea herodias* Linn.

Synonym.—BLUE CRANE.

Description.—*Adult*: Crown, sides of head, and throat white; occiput and top of head on sides glossy black, the feathers elongated into an occipital crest; neck pale, purplish brown; a mesial stripe in front black, white and ochraceous; feathers of the side of the neck in front much lengthened, whitish and purplish brown; breast and belly broadly streaked with black and white in about equal proportions; thighs cinnamon rufous; lower tail-coverts white; above nearly uniform slaty blue; the scapulars lanceolate, sometimes varied with bluish white; black shoulder tufts of plumulaceous feathers, arching over band of folded wing, and continuous with black on the sides of the breast; wing-quills, lining of the wings,

and sides bright plumbeous; lores blue; upper mandible yellowish-olive, blackening on ridge; lower mandible yellow; feet and legs black. The occipital crest of the male contains two, much elongated, filamentous, deciduous feathers during the breeding season. *Immature*: Similar, but top of head entirely black; without specially colored or lengthened feathers on neck, sides of breast, or scapulars; upper parts inclined to fuscous; under parts with slaty and ochraceous in addition to black and white; feathers on bend of wing and thighs lighter, or vinaceous-rufous. *Young in first plumage*: Brownish-fuscous above, streaked and spotted with buffy and whitish, narrowly on head and neck; below white, streaked with fuscous and buffy. Juvenile plumages vary interminably within these general limits, but the bird is unmistakable. Length 42.00-50.00 (1066.8-1270.); extent about 70.00 (1930.4); wing 18.00-20.00 (457.2-508.); tail 8.25 (209.6); bill 5.00-6.00 (127.-152.4); tarsus about 7.00 (177.8); middle toe and claw 5.00 (127.).

Recognition Marks.—Eagle size; great size and bluish cast of plumage unmistakable.

Nest, a bunch or platform of sticks placed high in trees or, rarely, on cliffs. *Eggs*, 3 or 4, pale blue. Av. size 2.50 x 1.50 (63.5 x 38.1).

General Range.—North America from the Arctic regions southward to the West Indies and northern South America. Bermudas; Galapagos.

Range in Ohio.—Common migrant; not common summer resident. The well-known heronries of former years are much reduced in numbers.

If we were to listen to the French modistes we should soon have no Herons. But fortunately a saner spirit from the far east is beginning to touch us, and we are being made to realize that the beauty of the Heron belongs to the landscape as God made it, rather than to a woman's hat as milliners distort it. The Japanese have found in the Heron an inexhaustible motif for decorative art, and it is noteworthy that their treatment of it, on vases and screens or in mural decorations, always gives it its proper place as the central feature, or at least the finishing touch, of the landscape.

The Great Blue Heron is, with us, the largest of its kind, and while not exactly graceful on the one hand, nor majestic on the other, it presents that peculiar combination of the two which we recognize as picturesque. While standing knee-deep in the water of some pond or stream, awaiting its customary prey of minnows or frogs, it may remain for an hour as motionless as a bronze statue; then with a movement like lightning, the head is drawn back and suddenly shot downward, and a wriggling fish is transfixed on the spear-like beak. A deft toss of the head puts the fish up and transfers it to the inside, and the bird moves with quiet, measured step to another station, or else rises heavily with slow flaps into the air. In full flight the Heron stretches its legs to the greatest extent behind; and the neck, especially when the bird is sailing, is carried like the letter S or Z, so that the lower part is brought parallel to the long bill, and the bird looks like a strato-cumulus cloud floating in space.

Besides frequenting our inland ponds and water-ways, the Herons find

most acceptable perches provided by the long lines of piling which anchor the fish-nets in the shallow waters of Lake Erie. On a windy day it is interesting to see these long-legged creatures trying to make connection with their narrow perches as they alight. Facing the wind, some will fly well past until their dangling legs touch the top of the pile, and then allow the wind to right them; while others thrust the feet well forward and critically observe the moment of contact, after which they struggle into position with great flappings. In spite of this apparent awkwardness, they can maintain themselves on no larger a footing than a taut rope; and I have seen them stand on the edge of a fish-net, and, reaching down to the water some two feet below, select an under-weight Whitefish.

During the breeding season these large birds are gregarious. They formerly bred in immense numbers in suitable places, and these heronries were known locally as Crane towns or Crane heavens. Now they are much reduced in numbers and I know of no place in the state where above a dozen pairs breed together.

A visit to one of these heronries, such as the writer enjoyed on the 18th of last June, is a unique experience. A scattered colony is to be found in a swampy tract of tall timber about ten miles east of Columbus. While still at least a half mile away from the woods in question, a peculiar roaring sound was heard, which I was assured by a farmer proceeded from the Herons as they fed their young. The forest was practically primeval and the foliage very dense, while the mosquitoes rose in clouds at every step. These little insects were not simply a pest, they were a scourge, and if one paused but for a moment to adjust a camera or change a plate their onslaughts became maddening.

After wandering about aimlessly for a time, I heard a low croaking overhead, and this was answered most enthusiastically from a tree-top not far distant. Stepping out into the open, I saw a Great Blue Heron crossing overhead and putting on the brakes as she approached the nest. The wings were drawn in stiffly and the whole attitude was tense,—a tantalizing figure for an unprepared and mosquito-ridden photographer. The nest was placed about eighty feet high in a live oak, a very substantial structure of sticks, and at least as large as a bushel basket. It contained young nearly full grown, and these crawled about uneasily, now balancing on the edge and trying their wings, or squabbling viciously with their brothers. Now and then one took refuge on an outlying limb; but the coming of the parent was the signal for all to gather. Upon alighting the old bird first indulged a pensive moment, like a cow which is expecting another order of grass sent up from the proventriculum, after which she suddenly jabbed her bill down the neck of the nearest squawker and dispensed sweet nourishment from her secret store.



Taken in Franklin County.

Photo by the Author.

NESTS OF GREAT BLUE HERON AT
HEIGHT OF ONE HUNDRED FEET.
ONLY THE TOP OF THE NESTING TREE IS SHOWN.

Whenever the old birds were about, the young kept up a loud cackling not unlike that of Guinea hens, but less shrill and of immensely greater volume. The parents, too, made an astonishing amount of noise, roaring at times like caged lions. One in particular which was greatly incensed by the visit of an over-curious neighbor bellowed till the earth shook.

Similar cacklings and bellowings led me to another tree a hundred yards away. This tree was quite destitute of foliage, but held at a height of a hundred feet two nests, which might have been there for many years, so securely lodged were they, and so venerable to appearance. At a signal from an old bird, the young ones, which were standing at full height in these nests, instantly froze to stone. After this, they sank down by a movement as insensible as that of the hands of a clock, but after ten minutes they had vanished to sight from below.

Another nest in the same wood was in a live oak at a height of not less than 120 feet. How many more there might have been I do not know, for the mosquito question was beginning to assume a serious aspect. It would be of interest to collect all possible information concerning local heronries and to collate the facts, as Harting did in Great Britain some thirty

years ago. Wherever found the Great Blue Heron should be rigidly protected, not merely because it adds mice and large insects to its humble bill of fare, but because of its picturesque interest.

No. 211.

AMERICAN EGRET.

A. O. U. No. 196. *Herodias egretta* (Gmel.).

Synonyms.—GREAT WHITE EGRET; WHITE HERON; "WHITE CRANE."

Description.—*Adult in breeding plumage:* Entire plumage pure white; from the interscapular region originates a train of from forty to fifty elongated feathers, "aigrettes," with enlarged and stiffened shafts, and decomposed filamentous webs, which reach from eight to twelve inches beyond the tail; lores orange; bill yellow; legs and feet black. *Adults after the breeding season and immature:* Without elongated plumes on the back. Length (not counting plumes) 36.00-42.00 (914.4-1066.8); wing 15.00 (381.); tail 6.75 (171.5); bill 4.70 (119.4); tarsus 6.00 (152.4); middle toe and claw 5.40 (137.2).

Recognition Marks.—Eagle size; pure white plumage; black legs and feet; Heron habits; "aigrette" train.

Nesting.—Not certainly known to have bred in Ohio. *Nest*, a mere platform of sticks in bushes near or over water. *Eggs*, 3-5, dull blue. Av. size, 2.28 x 1.60 (57.9 x 40.6).

General Range.—Temperate and tropical America, from New Jersey, Minnesota and Oregon south to Patagonia; casually on the Atlantic coast to Nova Scotia.

Range in Ohio.—Formerly not uncommon summer visitor; now very rare.

NEVER was the diabolism of fashion more clearly illustrated than in the case of the Egrets. The women of America have coveted the wedding garments of these great, innocent, white birds, and their coveting has not been in vain. In the Southern States, where birds of this and the succeeding species used to breed by countless thousands, there are now only a few scattering pairs or small colonies in the depths of the dismal forests and impenetrable everglades. And these few, instead of being allowed to spread their beauties before the admiring gaze of nature lovers, flee at man's approach as before a pestilence.

The peculiar cruelty of this war of extermination lies in the fact that in order to secure the "aigrettes," which are to nod and dance upon some lady's bonnet, the bird which owns them must be shot *during the nesting season*. The magnificent train of feathers is provided only at this time of year, as a bride is granted her best robes for the wedding day and the honeymoon; and if the butchers whom the "feather merchants" hire were to wait until the young birds were raised, the wedding garments of the parents would be worn threadbare or cast away. Therefore, since it must be done, the only way is to visit a colony during the breeding season, shoot all the old birds (who will not of course desert their young), snatch out their nuptial plumes, and leave their carcasses to putrify, while the starving children call down from the tree-tops to the ears that hear not. Thus a

single plume-hunter has killed hundreds of Egrets in a day; and in the palmy days of the "industry" certain gangs were able to kill tens of thousands in a single season.

Much has been done to arouse a healthy public sentiment upon this question, but the apathy which still remains is appalling. Only last spring (1903) the traffic in "aigrettes" was one of the marked features of the millinery business. Of course the market is no longer supplied from the United States—our birds are gone—but what matter? There are still enough left in Central and South America to last about six years. And then? "Why, then," says Dame Fashion, quite cheerfully, "we will covet something else."

Dr. Wheaton says of this species: "Rather common visitor in July, August, and September. Perhaps breeds in western Ohio, but I have no record of its occurrence in spring or in the breeding season, nor seen any except young birds. Dr. Coues, in connection with this bird,¹ observes 'that a certain *northward* migration of some southerly birds at this season (summer) is nowhere more noticeable than among the Herons and their allies, the migrants consisting chiefly of birds hatched that year, which unaccountably stray in the wrong direction.'"

There is little to add to this brief record, except to say that the bird is now very rare in Ohio. The only recent occasion of its occurrence with us, so far as I have been able to learn, is that reported by Mr. D. C. Stone of Cincinnati. Mr. Stone observed a single bird which visited a sandbar near the mouth of the Little Miami River, daily, for a week, during the month of August, 1902.

No. 212.

SNOWY HERON.

A. O. U. No. 197. *Egretta candidissima* (Gmel.).

Synonym.—LITTLE WHITE EGRET.

Description.—*Adult in breeding plumage:* Entire plumage pure white; a bunch of forty or fifty "aigrettes" originates on middle of back and reaches to or beyond tail; character of plumes as in preceding species, but delicately *recurved toward tip*; a lengthened occipital crest of decomposed feathers; feathers on side of neck below somewhat similar to those on back, not recurved; lores, eyes, and toes yellow; bill black, yellow at base; legs mainly black. *Adult after breeding season and immature:* Without dorsal plumes. Length 20.00-27.00 (508.-685.8); wing 9.75 (247.6); bill 2.00-3.50 (50.8-88.9); tarsus 4.15 (105.4).

Recognition Marks.—Brant size; pure white plumage; nuptial train not so

¹ "Birds of the Northwest, p. 521."



SNOWY HERON

Ardea candidissima

$\frac{3}{4}$ Life-size

REPRODUCED BY PERMISSION OF THE UNITED STATES GOVERNMENT PRINTING OFFICE

long as in preceding species, recurved at tip; lengthened, decomposed, jugular plumes distinctive.

Nest, of sticks, a mere platform in bushes over or near water. *Eggs*, 3-5, dull, pale blue. Av. size, 1.74 x 1.30 (44.2 x 33.).

General Range.—Temperate and tropical America from Long Island and Oregon south to Argentine Republic and Chili, casually to Nova Scotia and Southern British Columbia.

Range in Ohio.—Rare and irregular summer visitor.

LIKE the preceding species this beautiful Egret is only a summer visitor from the South. It may once have bred in the southern part of this state, as it still does in greatly diminished numbers along the Wabash River, and throughout southern Illinois.

It has also enjoyed (?) a more nearly universal distribution through the medium of women's head-gear, but those who wear aigrettes do so unlawfully since the traffic in the plumage of these birds is expressly forbidden by both state and federal statutes.

No. 213.

LITTLE BLUE HERON.

A. O. U. No. 200. *Florida cærulea* (Linn.).

Description.—*Adult*: Head and neck dark purplish red; remaining plumage slaty blue, sometimes blackening on upper back and below; an occipital crest of decomposed feathers, but containing several, lengthened, compact, webbed feathers; jugular patches of somewhat elongated feathers, with irregularly subdivided webs; scapular and interscapular region with feathers somewhat decomposed, the central ones elongated, compact webbed, and reaching two to four inches beyond the tail; bill and feet black. *Immature*: Quite different; entire plumage pure white, except tips of longer primaries, which show traces of slaty blue; no special modification of feathers; basal half of lower mandible yellow; lores, legs and feet greenish yellow. *The young* gradually acquire adult characteristics, and every intermediate stage is found. The encroaching blue usually appears on the crown, and the elongated feathers are usually acquired before the blue proceeds further, giving rise to the old belief that the species was dichromatic, i. e., that the adult was blue or white. Length about 23.00 (584.2); wing 9.50-11.00 (241.3-279.4); tail 4.00 (101.6); bill about 3.00 (76.2); tarsus 3.60 (91.4); middle toe and claw about 2.90 (73.7).

Recognition Marks.—Brant size; dark, slaty blue plumage with purplish-red head and neck of adult; young, white, but with slaty-blue tips to primaries, and without "aigrette" train of *A. candidissima*.

Nest, a platform of sticks in bushes near or over water. *Eggs*, 3 or 4, pale blue. Av. size, 1.72 x 1.29 (43.7 x 32.8).

General Range.—Eastern United States from New Jersey, Illinois, and Kansas, southward through Central America and the West Indies to Guiana and Colombia; casually north on the Atlantic Coast to Massachusetts and Maine.

Range in Ohio.—Formerly unknown. Recently discovered to be not uncommon in the lower Scioto Valley, and reported casually throughout the state.

THE summer of 1901 witnessed an invasion of this southern species into our state which was noted by two competent observers. At different times during the month of August, Rev. W. F. Henninger saw or had reported to him eight specimens on the banks of the Scioto River in Pike County, and he mounted four of them. Most of those seen were young birds in the white plumage.

During July, August, and September of the same year, Mr. J. N. Proctor, while camping out on the banks of the Miami River, near Hamilton, repeatedly observed four or five adult birds and several young, one of which he secured. He found them feeding at the edges of the bars and mud-flats, usually in open situations, where they could command a view of all the approaches. They were very wary, and before settling to feed, would circle about apprehensively until satisfied that there was no danger. Upon being flushed, they would fly up or down the stream and take refuge in some tall trees. At night they roosted high, usually at some distance from the river.

The birds were not found the following season, and careful inquiry in the neighborhood showed that their presence was unknown. Mr. Proctor surmises—correctly, I believe—that those seen in 1901 were wanderers from the south, following the tribal instinct of securing a northern outing during the heated term. In like manner, it is not at all certain that the Pike County birds were breeders, but they might be encouraged to take up residence with us (at least if the local museums would content themselves with Southern specimens), for they are known to nest along the Wabash and elsewhere in southern Illinois.

No. 214.

GREEN HERON.

A. O. U. No. 201. *Butorides virescens* (Linn.).

Synonyms.—FLY-UP-THE-CREEK; SHITEFOKE (vulg.).

Description.—*Adult*: Top of head and occipital crest glossy, dark green (bottle-green); median line of throat and neck white, with admixture of greenish black posteriorly; remainder of head and neck rich, maroon-chestnut, the feathers more or less decomposed; lower neck with lengthened bare space behind; general color of back and wings green, the interscapulars lanceolate and tapering, with a glaucous or slaty cast and with white shafts; middle coverts bright bottle-green edged with buff; greater coverts dull bottle-green edged with

whitish; the primaries dusky slate, with glaucous and greenish reflections; the inner primaries and secondaries narrowly tipped with white; under parts slaty or brownish gray, with buffy or ochraceous washing, and irregularly outcropping white; bill dark green above, yellow below; iris and lores yellow; feet and legs greenish yellow. *Immature*: Occipital crest not so long; crown streaked with cinnamon; chestnut of neck not so deep, reduced in extent; back feathers unmodified, plain, glossy greenish; wing-coverts broadly margined with ochraceous, some of the feathers, with the outer scapulars, having wedge-shaped tips of buffy or whitish; under parts whitish, striped with greenish- and reddish-dusky, most heavily on sides of breast and neck. Length 16.00-22.00 (406.4-558.8); wing 7.25 (184.2); tail 2.70 (68.6); bill 2.47 (62.7); tarsus 2.05 (52.1); middle toe and claw 2.00 (50.8).

Recognition Marks.—Crow size; chestnut and greenish coloration above.

Nest, a platform of sticks placed at moderate heights in bushes of swamp or trees of neighboring orchards, etc. *Eggs*, 3-6, pale greenish blue. Av. size, 1.50 x 1.14 (38.1 x 29.).

General Range.—Temperate North America from Ontario and Oregon, southward to Colombia, Venezuela, and the West Indies; Bermuda.

Range in Ohio.—Abundant summer resident.

THE Green Heron is the commonest and best distributed bird of this group and is almost solitary in its habits. Arriving about the middle of April the bird soon seeks out the best fishing holes along the streams, or else retires to the forest glades to take in the spring concert season of the frogs. When work, the frog- with a fright- and surprised at his catcher either rises ened *squawk* clears



Taken in Franklin County

Photo by F. C. Price.

WHERE THE GREEN HERON WAITS.

the tree-tops with all haste, or else alights easily upon some midway branch to reconsider the danger. Here he may pace restlessly to and fro along the limb, craning his neck and twitching his tail, and acting altogether very nervous, or he may "freeze" in some protective attitude until the danger is past. Opportunity is thus afforded for a study at close range of a plumage which is unusually handsome, especially as regards the bottle-green and glaucous shades of the upper parts.

The ordinary fare of this little Heron consists of minnows, frogs, snails, leeches, etc., but as the season advances, beetles and other insects, with their larvæ, are added. Dr. Jones tells of a bird which he once saw stretched out flat on a slanting log at a point where it ran under water, and beneath which various kinds of minnows had found a congenial shelter. The bird was resting motionless, with its bill at the water's edge, when suddenly it darted its head under the water and withdrew a wriggling minnow. This it swallowed at once and then waited at ready, as before. Sometimes a quarter of an hour would pass before the next fish, silly or forgetful, would venture too near the waiting spear. The Heron returned to his lowly station daily, and watched with the patience of an Esquimau until the hole was fished out.

Old orchards are favorite places of resort for these birds during the nesting season. Altho not in any strict sense gregarious, several pairs will sometimes appear in the same orchard, and two or three nests have been found in a single tree. After these the thick clumps of water willows which grow in the deepest water of tiny swamps and kettle-holes, are almost sure to contain nests; and a chance nest may be found ten or fifteen feet up in some crowded thicket of slim saplings. The nest is a shallow but substantial platform, made out of twigs and sticks up to a fourth of an inch in diameter, and it is lodged securely upon spreading branches. There is no suspicion of lining, and the four or five greenish blue eggs need no adornment to enhance their beauty.

The parent birds are very solicitous for their eggs and young, and employ, in their efforts to discourage investigation, an exceedingly low type of Dutch. Besides disgusting execrations, which are half hiss and half caw, the anxious bird cries *snkowk*, in a loud voice, and flirts its wings and jerks its tail in a manner which would intimidate a smaller foe.

A nestful of callow young is an interesting sight. At a signal from the old bird the youngsters pause and freeze with upturned beaks, looking like a tiny group of palisades done in bronze. They know, too, when to be silent; and one would not often discover them save for the abundance of whitewash which adorns the surrounding limbs and the ground below. If disturbed they can clamber out of the nest and make off across the surrounding branches with great agility.

No. 215.

BLACK-CROWNED NIGHT HERON.

A. O. U. No. 202. *Nycticorax nycticorax nævius* (Bodd.).**Synonyms.**—QUA-BIRD; QUAWK; NIGHT SQUAWK.**Description.**—*Adult in breeding plumage:* Extreme forehead and line over eye white; entire under parts white,—pure on chin and throat, elsewhere delicately tinged with light ashy gray or lilaceous; crown, nape, and scapular-mantle (including back and interscapular region) lustrous greenish black; the occipital

Taken in Columbus.

Photo by the Author.

A HERON THAT IS OUT ALL NIGHT MUST BE A VERY TEMPERATE BIRD TO BE
REALLY SURE *which* END HE IS STANDING ON IN THE MORNING.

crest with several narrow, much-elongated, cylindrical, pure white plumes; remaining upper parts ashy- or smoky-gray; edge of wing white; bill black; lores greenish; irides red; legs yellow. *Immature*: Above fuscous, with central stripes, or centro-terminal wedge-shaped spots of white and buffy; green-tinged on crown and back, or not, according to age; below and on sides of head and neck white heavily streaked with fuscous. Length 23.00-26.00 (584.2-660.4); wing 12.50 (317.5); tail 4.75 (120.6); bill 3.00 (76.2); tarsus 3.30 (83.8); middle toe and claw 3.45 (87.6).

Recognition Marks.—Brant size; greenish black crown and mantle of adult contrasting with ashy gray; general streakiness of young.

Nest, a platform of sticks, usually placed high in trees, but occasionally in low bushes or even on the ground. *Eggs*, 4-6, pale, dull blue. Av. size, 2.00 x 1.45 (50.8 x 36.8).

General Range.—America from Ontario and Manitoba southward to the Falkland Islands, including part of the West Indies.

Range in Ohio.—Not common resident and migrant. Of local appearance only.

THIS Heron works on the night shift, and as a consequence forfeits much of the admiration and avoids most of the target practice of men. Only after sunset does it leave its perch on some secluded log or well-screened limb and hurry off for a twilight breakfast. It cannot be proved that the bird loves darkness because of evil deeds, for its diet consists almost exclusively of fish, and these are lawful prey of king or peasant. In seeking food the Night Heron does not, after the fashion of its diurnal kin, stand knee deep in some quiet pool waiting for something to turn up, but it moves briskly about in shallow water with its head half lowered and poised on the mobile neck ready for an instant stroke. These tactics are very successful, and according to Dr. Warren, an observer in Pennsylvania tells of a Heron which was shot and brought to him, from whose bill the tail of a fish projected four inches. "On removing the fish (a sucker, *Catostomus*, which must have been twelve inches long) its head and shoulders—except the bony portions—were eaten away by the gastric liquor of the stomach."

As the Heron moves through the gloom from place to place, it often utters a hoarse croak, *qua* or *quawk*, and while the note is not very ominous in itself, it seems to conjure up much of the mystery and the sadness of the night. The belated sportsman feels a wee creepy when this voice of the night challenges out of the darkness, and he hurries home to light and expected cheer.

Nests occur only in colonies, sometimes to the number of thousands. The platforms of sticks are built in saplings or tall trees, and even, westerly, upon the ground. Two broods are usually raised in a season, and according to Mr. W. E. Endicott, it is not an uncommon thing to find four or five young birds clambering about the tree-top while the second brood wait

in the nest below, all alike dependent upon the parents. At the nesting season, therefore, the old birds are impelled to hunt by day as well as by night.

No definite word has come of the nesting of this species within our state, altho it is almost certain to do so. Because of its very retiring habits it is seldom observed even where it may be reckoned common.



Taken in Columbus.

Photo by the Author.

THIS WILL HELP HIM TO DECIDE THE MATTER.

No. 216.

WOOD IBIS.

A. O. U. No. 188. *Tantalus loculator*. Linn.**Synonyms.**—AMERICAN WOOD STORK; WATER TURKEY.**Description.**—*Adult*: Plumage pure white; wing-quills and tail shining greenish black, or with violet and bronzy reflections; head and about six inches of neck bare, covered with scurfy skin, dusky gray; bill mostly dingy yellow; tarsi blue-black; toes black at base, becoming yellow toward claws and on webs. *Young*: Face only bare; hind head and neck, where bare in adult, covered thinly by fuscous, woolly feathers; remaining plumage as in adults, but duller or grayish; quills and tail less glossy. Length 35.00-45.00 (889.-1143.); wing 17.70-20.00 (449.6-508.); tail 8.50 (215.9); bill 7.00-9.60 (177.8-243.8); tarsus 7.80 (198.1); middle toe and claw 4.95 (125.7).**Recognition Marks.**—Eagle size; white plumage; large bill; bare head and neck of adult.**Nesting.**—Does not breed in Ohio. *Nest*, a loose platform of sticks, lined with moss, and placed high in trees. *Eggs*, 2 or 3, chalky-white, with flaky white deposits on the rough shell, rarely spotted with reddish brown. Av. size, 2.75 x 1.80 (69.9 x 45.7).**General Range.**—Southern United States from the Ohio Valley, Colorado, Utah, southeastern California, etc., south to Argentine Republic. Casually northward to Pennsylvania and New York.**Range in Ohio.**—Rare and casual. One positive record, several inferential.

THE great family of Storks, so familiar to our Old World friends, especially the Germans, has regularly but one representative in the United States, the Wood Ibis, confined pretty closely to the lagoons and bayous of the Southern States. The Storks are rather stupid birds, perhaps because they are such notorious gluttons. They are, however, shrewd enough in procuring food, if Audubon's account is correct. He says that a large company of them will enter a shallow pool of water and stir up the mud by dancing about, until the frenzied fish, frogs, and young alligators, venturing too near the surface, are rapidly knocked on the head in turn with the bird's powerful beak, and there left to float until the drive is completed. Then the birds gorge themselves and stand about the margin of the pond in sated rows, while digestion wrestles with its task. Recent observers have not noted these wholesale methods of slaughter, but have oftener found the birds singly or in pairs, raking the oozy bottoms with their feet, and quickly seizing with open bill whatever prey is brought to light.

It was Audubon, too, who would account for the well-known habit, which these birds have, of mounting into the air and soaring about at great heights during the later hours of the morning, by calling it an aid to diges-

tion—a sort of morning constitutional, necessary to well-fed burghers who would avoid gout. Whatever may induce the Storks to play the Buzzard for a time each day, they certainly present a pleasing and impressive spectacle, as, with plumage striking by reason of its contrasting black and white, they wheel aloft in majestic circles, whose dizzy and distant mazes test the eye-sight.

The Wood Stork is supposed to have been more frequent northerly in the early days; but there is only one recent record, that of Mr. H. E. Chubb, of Cleveland, who took one in 1879. In view of its greatly diminishing numbers it is scarcely likely that it will ever appear so far north again.

No. 217.

GLOSSY IBIS.

A. O. U. No. 186. *Plegadis autumnalis* (Hasselq.).

Description.—*Adult*: Head, neck, upper back, lesser wing-coverts, and entire under parts, except under tail-coverts, rich purplish chestnut; remaining plumage shining, metallic green, bronze, violet, violet-green, purple, etc.; “lores greenish in life, blackish in dried skins; feathers surrounding the base of the bill blackish” (Ridgw.); bill black; feet and legs grayish black in life, drying dark brown. *Immature*: Head and neck dark grayish brown, minutely streaked with white; under parts dull grayish brown, acquiring purplish chestnut in increasing intensity; back and wings dark greenish dusky. Length 22.00-25.00 (558.8-635.); wing 11.25 (285.8); tail 4.25 (108.); bill about 5.00 (127.); tarsus 3.50 (88.9); middle toe and claw 3.50 (88.9).

Recognition Marks.—Brant size, but appearing smaller; dark, reddish and shining bronzy coloration; long, black, decurved bill.

Nesting.—Not known to breed in Ohio. *Nest*, of broken-down reeds, compactly built and well-cupped, in swamps. *Eggs*, 3, deep greenish blue. Av. size, 2.01 x 1.47 (51.1 x 37.3).

General Range.—Warmer parts of eastern hemisphere, West Indies, and southern portion of eastern United States, wandering northward to New England and Illinois. In America only locally abundant and of irregular distribution.

Range in Ohio.—Accidental. One record.

ONLY the most meagre accounts exist of this little known and irregularly distributed species. It remained undiscovered in America until 1817, when Mr. Ord took a specimen on the eastern coast of New Jersey. Altho it first described under a new name, it is now known to be identical with the Old World species, which thus enjoys a wide and rather remarkable

range. It is believed that this bird was known to Herodotus, and that it was held by the ancient Egyptians in reverence second only to that accorded the Sacred Ibis (*Ibis aethiops*).

There is only one record of this bird in Ohio, that reported by Dr. Kirtland in 1850, a pair having been seen "two years since near Fairport, Lake County," and one of them taken.

No. 218.

BLACK-BELLIED PLOVER.

A. O. U. No. 270 *Squatarola squatarola* (Linn.).

Synonyms.—BEETLE-HEAD; OX-EYE.

Description.—*Adult in summer:* Above, broadly dusky or black varied by white in spots and terminal edgings, the latter color predominating on top of head and hind-neck and on wings; primaries dusky brown with large basal areas and portion of shaft (increasing inwardly) white; upper tail-coverts and tail white, barred with black; forehead, space over eye, and sides of neck, to or below breast, white; lining of wings, lower belly, thighs, and crissum white; sides of head and remaining under parts, including axillars, sooty black; bill and feet black. *Adult in winter:* Without black below (except on axillars)—white instead; fore-neck and chest streaked and spotted with dusky; dusky of upper parts lighter; and white replaced by pale gray. *Immature:* Similar to adult in winter, but head and neck streaked and back spotted with yellowish-buff. Length 10.50-12.00 (266.7-304.8); wing 7.50 (190.5); tail 3.00 (76.2); bill 1.18 (30.); tarsus 1.85 (47.).

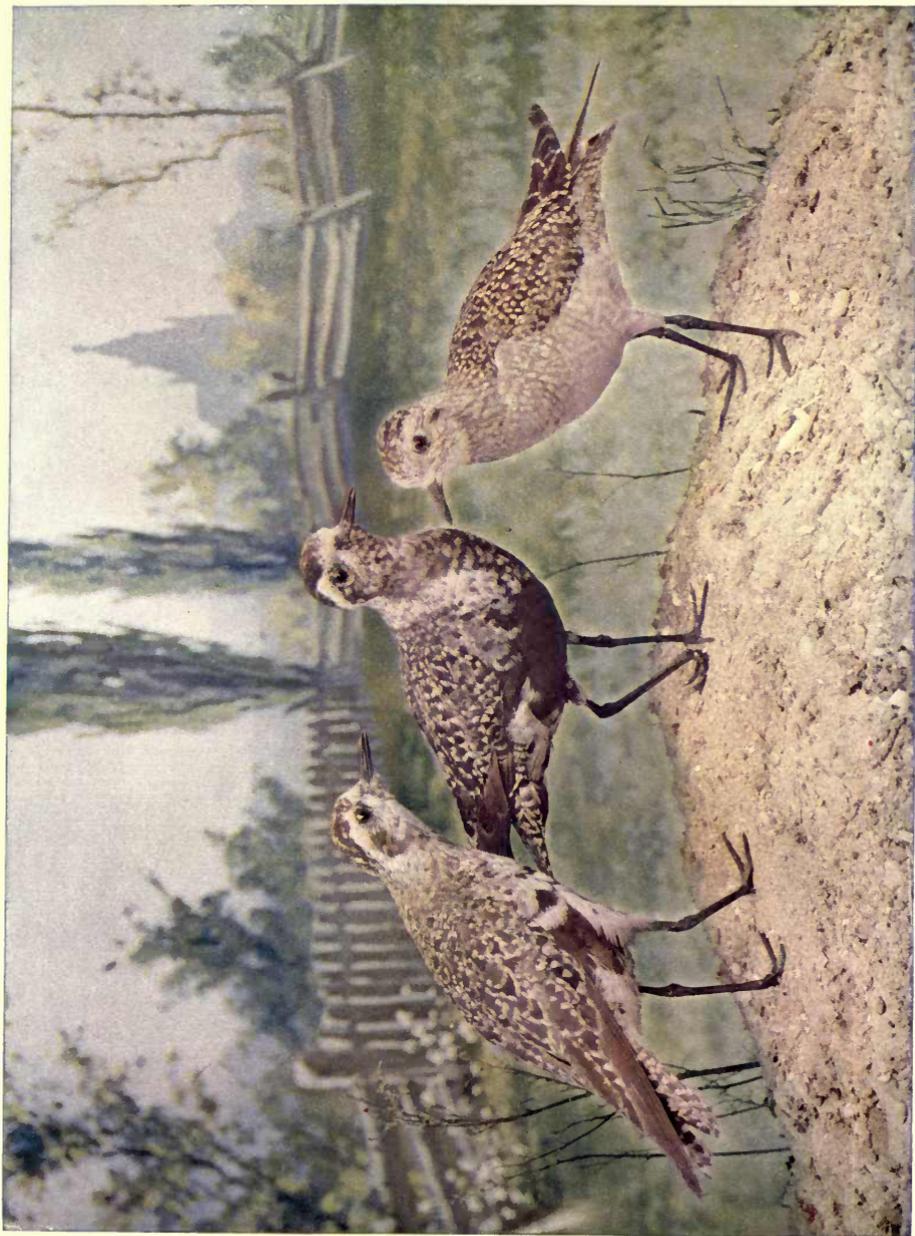
Recognition Marks.—Killdeer size or larger; black and white in broad design, and without distinct yellow above; below black (in summer) or nearly white (in winter or young); *axillaries black* at any season. Similar to succeeding species, but larger; bill and head larger; presence of hind toe distinctive.

Nesting.—Does not breed in Ohio. *Nest,* on the ground. *Eggs,* 3 or 4, light or dark buffy olive, heavily speckled and spotted with dark browns or blacks. Av. size, 2.04 x 1.43 (51.8 x 36.3).

General Range.—Nearly cosmopolitan, but chiefly in the northern hemisphere, breeding far north and migrating south in winter; in America to the West Indies, Brazil, and Colombia.

Range in Ohio.—Rare migrant on the Lake Erie shore; casual elsewhere.

IT is not to be wondered at, perhaps, that a bird so light of body and so fleet of wing should choose to live the strenuous life at all seasons. In summer the Plover is always within sound of the crunching ice-floe or the screaming Gyrfalcon. In winter the frequent cannonading of South American revolutionists serves to redeem the monotony of tropical existence; while

**AMERICAN GOLDEN PLOVER***Charadrius dominicus*

1/2 Life-size

the annual passage to and fro across the continent is at all times as exciting as a race with death.

This species and the next are especially sought after by the sportsmen of the Atlantic Coast. Their comparative infrequency in Ohio, together with their late arrival and early return, enables them to escape unpleasant notice for the most part. Coming north as late as April or early May, they return in August or linger a few days into September, and are gone before raw weather has stirred our sporting blood. These are properly birds of the upland and meadow rather than of the beach and riverside, but most of the stragglers picked up within our borders are found on the Lake Erie shore, or on the sand-bars and pebbly spits of inland streams.

"The Baron Droste Hülskoff, in his 'Birds of Borkum,' states that this species passes there late in May, and again appears in its southward migrations in August and early in September. He describes it as a fine, lively bird, carrying its head and body erect and its breast thrown forward. It runs backward in the manner of the Golden Plover; and before flying always lifts its wings high above its head. Its flight is peculiarly swift,—more so than that of most other shore birds—and it flies off in a straight line, now approaching and now leaving the ground in easy dips, extending the wings far and flying with powerful strokes. The call note of this bird, he adds, is a sharp whistle, *tlj-e-ih*, the final note being very softly sounded. On the wing it repeats this note with long pauses; and when at rest, if another of the same species settles down beside it, the last part of the call-note is repeated back and forth between the two. At sunset they are most uneasy, and fly about, calling continually, late into the night. They are very watchful and shy, carefully avoiding every suspicious-looking mound, and very rarely approaching a place where a sportsman is hid. This is the sentinel of other shore birds, warning them by its sudden flight and loud alarm note. On the edge of the water it seeks its food in the foam; and like the Sandpiper wades up to its belly in the water." (B. B. & R.)

No. 219.

AMERICAN GOLDEN PLOVER.

A. O. U. No. 272 *Charadrius dominicus* Müll.

Synonyms.—FIELD PLOVER; BULL-HEAD.

Description.—*Adult in summer:* Above dusky, blackening on tips of feathers on back and crown, lightening to fuscous on wing-coverts, tertials, sides of neck, etc.; spotted sharply on back and crown, less distinctly on neck and upper tail-coverts with bright ochre-yellow; primaries blackish, the basal and a concealed

distal portion of each quill white; tail dusky, barred irregularly with lighter grayish brown; entire under parts, except lining of wing, including sides of head, glossy, brownish black; bordered on head, neck, and breast with pure white; lining of wings smoky gray or ashy; bill and legs black. *Adult in winter*: Usually less decidedly black on back; the spotting (streaking on hind neck) finer on upper parts; the ochre-yellow brightest on upper tail-coverts; elsewhere more or less displaced by paler yellow and whitish; below without black; throat and crissum dull white; elsewhere streaked and spotted with light brownish gray, a lighter shade of the same vaguely diffused over the plumage, or else under parts definitely brownish gray, finely spotted with white. *Immature*: Like adult in winter, but lighter below; only the breast tinged, and that uniformly, with light fuscous; pattern of neck all around blended. Length 9.50-11.00 (241.3-270.4); av. of nine Columbus specimens: wing 6.83 (173.5); tail 2.56 (65.); bill .89 (22.6); tarsus 1.63 (41.4).

Recognition Marks.—Killdeer size. "Golden" speckling of upper parts distinctive. Somewhat smaller than preceding species; bill decidedly smaller; not so white below in fall plumage.

Nesting.—Does not breed in Ohio. *Nest*, on the ground with a scanty lining of leaves and grass. *Eggs*, 3 or 4, buffy white to buffy brown, boldly spotted and blotched with brownish black. Av. size, 1.98 x 1.37 (50.3 x 34.8).

General Range.—Arctic America except the coast of Behring Sea, migrating southward throughout North and South America to Patagonia.

Range in Ohio.—Formerly reported as abundant during migrations; now much less common or rare.

ALTHO the Golden Plover is commonly reported from various places in the interior during migrations, the great bulk of the migrants, especially in the fall, appear to pass along the Atlantic Coast, or at a considerable distance out at sea. During the later days of August enormous numbers push boldly out to sea from the southern shore of Nova Scotia, and are not seen again until they touch the West Indies, unless they be driven back against the Atlantic Coast by strong east winds, in which case the sportsmen of Massachusetts and Long Island reap a rich harvest.

But since we are concerned with the status of the species in Ohio, I quote nearly in full the account given by Dr. Wheaton, who had a better opportunity to study the bird than that afforded any recent observer: "The Golden Plover is the most abundant of the strictly migrant species of the family. In April it usually appears in flocks of from thirty to one hundred birds in high meadows and pastures. Their flight is very swift, and the flocks are very close. All movements, when on the wing, are performed with wonderful rapidity and unanimity. They run quickly in the grass, and, while rather shy, exhibit considerable curiosity and some degree of confidence. Their voice is a pleasant mellow whistle frequently repeated while on the wing. During the spring migrations while with us they are changing from winter to breeding plumage. Generally the colors of winter predominate, but sometimes specimens are taken with the under parts nearly

uniform black. In September they return in full winter plumage, and now frequent the gravelly and muddy borders of streams, sometimes in large flocks and sometimes in pairs or as single birds, solitary or in company with 'Tattlers and Sandpipers. At this season their habits are less active than in spring. They are the only birds of the family whose size, abundance, and other qualities entitle them to any consideration as a game bird. As such they are generally esteemed."

The Golden Plover is to be accounted an abundant bird in many parts of the Arctic regions, especially on the Barren Grounds. McFarlane recorded the finding of one hundred and fourteen sets of eggs during the passage of his expedition from the edge of the northern woods across the Barren Grounds to the shores of the Arctic Ocean. During the breeding season the male "is accustomed to utter a sweet melodious song, most frequently heard during the brief hours of the Arctic night." Nelson represents this song by the syllables, "*tee-lee-lee, tu-lee-lee-wit, wit wit, wee-u-wit, che lee u too lee-e.*"

No. 220.

KILLDEER.

A. O. U. No. 273. *Oxyechus vociferus* (Linn.).

Synonyms.—KILDEER; KILDEE PLOVER; KILDEE.

Description.—*Adult*: Crown, and occiput and back bright grayish brown, the feathers edged or narrowly tipped with tawny; rump and upper tail-coverts cinnamon-rufous or tawny; tail like back, crossed subterminally by broad black band, and tipped with lighter brown, ochraceous, and white, the lateral feathers irregularly dusky, white and tawny; primaries dusky, the outer with some white on the inner webs, and the inner ones with white on the outer webs; two black bands across chest, the anterior one nearly reaching around cervix; a band on forehead, separating the white and brown, and another across cheek from bill, impure black; included spaces of head and neck, a ring around cervix, and remaining under parts pure white; the brown of back encroaching on sides of breast between black bars, and sometimes suffusing entire space between them; eye-lids bright orange-red; bill black; legs pale. *Young*: With rather more ochraceous or pale rusty edging on back than adult. Length 9.00-11.25 (228.6-285.8); wing 6.34 (161.); tail 3.59 (91.2); bill .81 (20.6); tarsus 1.41 (35.8).

Recognition Marks.—Robin size; black and white bands of head and breast; tawny rump; vociferous "*Kildeer*" cries.

Nest, on the ground, often upon gravel, unlined. *Eggs*, 4, ovate-pyriform, buffy white or clay-color, boldly spotted and blotched or scrawled with chocolate-brown or brownish black. Av. size, 1.48 x 1.06 (37.6 x 26.9).

General Range.—Temperate North America, breeding north to Newfoundland and Manitoba, migrating to the West Indies, Central America, and northern South America; Bermuda.

Range in Ohio.—Common summer resident throughout the state; winters sparingly in southern portion.

ALTHO the shrill cry of the Killdeer shouting his name is a welcome sound when it cuts across the frosty sky in early spring, one can scarcely forgive him the immoderate clamor of midsummer, nor the officious way in which your self-appointed guide heralds the approach of the huntsman to every living thing. If you are actually near the nest there is some excuse for alarm, and the female does not fail to try every ruse in the endeavor to lure you away from the dangerous spot. First she rolls and flounders away across the ground, screaming with agony, as tho she had been stepped on. But if you are simple enough to follow, the bird gradually recovers, and is soon able to patter along ahead of you with tolerable celerity. The male, too, is no indifferent spectator. He comes as near as he dares, and shrieks, "*Dear, dear, dear, dear, dear,*" until the wonder is that he does not burst a blood vessel or split his vocal chords. Interested neighbors add their frenzy to the din, until in desperation you are almost ready to believe yourself the frightful villain they are all accusing you of being. If you are willing to quit the place a bevy of fathers will pilot you out of bounds. One will patter ahead of you with breast pushed forward and legs incredibly nimble, only to pull up presently with a jerk and a compensatory bob to ask if you are following. The others describe a great half-circle about you with graceful wing but unceasing stridor, and take their places in the van. The birds believe themselves extremely clever as they lead you off by alternate flights and sprints, and you may hear them indulge from time to time in a low rapid titter, *teece-t*, which you may be sure is quite at your expense. All this racket is bad enough at best, and one may be really sorry to have intruded at first, but when the whole operation is gone through with again the next time you happen that way, and when you know that the young are long since flying, all this fuss and outcry is distinctly annoying. One feels as if the Killdeer had contracted the habit of yellow-journalism and couldn't let go.

The Killdeer nests in fallow fields, plowed ground, and open prairie, or else upon the open bars of river courses, never very far from water, but by no means confined to it. The four eggs are invariably placed with the little ends together, so that they may occupy the least room possible; and this appears quite necessary when we note how large they are in comparison with the parent bird. Sometimes a little grass or crumbled bark or dried rabbits' dung serves for the lining, but often the eggs are laid upon the bare ground. Once in eastern Washington, I found what I think must be

regarded as the ideal environment for these eggs. An upland gravel-bed, peculiar to that region, was composed of disintegrating fragments of a light brown lava mingled with the soil. Each pebble of the bed was scrawled and spotted by a black lichen, as tho tar had been carelessly flung about. Upon this bed reposed four Killdeer eggs. When you saw them you saw them, because their outlines were rounded instead of angular; but the moment the eye departed from them the search had to be commenced anew, so perfectly were the eggs mimicked by their surroundings.

Young Killdeers are delightful absurdities. Their strength is in their



Taken in Lorain County.

Photo by the Author.

NEST AND EGGS OF THE KILLDEER.

legs, and these carry them pattering away, before the embryonic juices are fairly dried upon their backs. They need to be nimble, for all nature turns teeth to little birds that cannot fly.

Fortunately for them the flesh of the Killdeer is not esteemed for food by humans, so they are allowed to gather in peace into fall companies containing a score or two of individuals. The Killdeer is not gregarious at other times of year, altho a half dozen pairs may nest in the same field; but in fall they flock commonly, and are found about meadow ponds, river bars, and even on the lake beaches.

These Plovers migrate at night, preferably by moonlight; and, indeed, Killdeer may be regarded as an unquiet spirit on almost any moonlight night in spring or fall. Most of the birds leave our borders for two or three months in winter, but Rev. W. F. Henninger reports them as "very common" during that season in Pike and Scioto Counties.

No. 221.

SEMIPALMATED PLOVER.

A. O. U. No. 274. *Ægialitis semipalmata* Bonap.

Synonyms.—RING PLOVER; RING-NECK.

Description.—*Adult in summer:* A narrow black band across breast and continuous around hind-neck; fore-crown and a band on side of head below eye to bill, and meeting fellow on extreme forehead, black mixed with brown; forehead, indistinct superciliary line, lower eye-lid, chin, and throat, continuous with narrow band across cervix, and remaining under parts, white; crown and nape, back, etc., bright grayish brown; upper tail-coverts and base of tail a little lighter; tail blackish subterminally, the outer pair of feathers pure white, the others decreasingly white-tipped; greater wing-coverts white-tipped; primaries blackish, the basal and subterminal portion of their shafts white; bill black, orange-red at base; feet and legs yellowish. *Adult in winter:* The black markings replaced by dark grayish brown. *Young:* Similar to adult in winter, but feathers of upper parts tipped with light buffy. Length 6.50-7.50 (165.1-190.5); wing 4.90 (124.5); tail 2.10 (53.3); bill .52 (13.2); tarsus .97 (24.6).

Recognition Marks.—Sparrow size, but appearing larger; a miniature Killdeer, but without tawny rump, and with only *one* band across breast. Feet partially webbed.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, like those of the Killdeer, but smaller. Av. size, 1.30 x .92 (33. x 23.4).

General Range.—Arctic and subarctic America, migrating south through tropical America as far as Brazil, Peru and the Galapagos.

Range in Ohio.—"Not common migrant in spring, more abundant in the fall" (Wheaton). Found regularly on the Lake Erie shore during fall migrations.

THE Semipalmated Plover is a lesser Killdeer to appearance, but in manner it is a much gentler bird, and, while with us at least, it realizes the full value of the adage, "Silence is golden." Gentle and unsuspecting it patters along the Lake Erie beach, following the retreating wave, or else gleans from the mud-flats of river and pond, where chance finds it at early morning. Only when startled from its quest does it utter a "soft mellow whistle." It is not easily frightened, and if it has half a chance it will scamper along the shore ahead of you, or even hide in the grass rather than take to wing.

This Plover is found singly or in little companies, more frequently in late summer or fall, and it mingles freely with other migrating waders. I shall not soon forget a sight which once met my eyes on one of the Lake Erie Islands in early August. A lagoon, filled with water only when the East wind blew stretches of the best cover of

strongly, presented inviting warm mud, bordered by the dense bind-weed and rank grasses. With great labor Mr. Jones and I made our way, unobserved, to the edge



Taken in Lorain County.

SHORE BIRD INN.

Photo by the Author.

THIS LITTLE SWAMP LIES JUST BACK FROM THE LAKE ERIE SHORE AND WAS TENANTED, AT THE TIME THIS PICTURE WAS TAKEN, BY EIGHT KINDS OF SHORE BIRDS. THE SCENE IS NOT, HOWEVER, THE ONE REFERRED TO IN THE TEXT. A SEMIPALMATED PLOVER MAY BE FAINTLY DESCRIBED AS HE STANDS REFLECTING NEAR THE LEFT CENTER.

of the tangle, and parting the grass blades, looked out upon eight kinds of Limicolæ within a stone's throw of us. There were Semipalmated Plovers, Killdeers, Yellow-legs, with Solitary, Pectoral, Least, and Semipalmated Sandpipers, and a chance Spotted which held itself aloof from the foreigners. There they pattered and scampered, or stalked, according to their kind. They dozed, or prodded, or teetered and bowed, or put up a slender, tentative wing to try the motion of the air, as fancy led them, until our brains were fairly awl with the delicious confusion of this rare ornithological sight.

No. 222.

PIPING PLOVER.

A. O. U. No. 277. *Ægialitis meloda* (Ord.).

Description.—*Adult male in summer:* Upper parts pale brownish gray, the forecrown black and a black band on the side of the breast, not meeting its fellow in front or behind; a band on forehead, a cervical collar continuous with throat, and remaining under parts, pure white; tail fuscous, becoming white laterally; primaries dusky with partially white shafts, and corresponding white spaces centrally on webs; greater coverts and secondaries mostly white; bill yellow or orange at base, blackening toward tip. *Adult female, and male in winter:* Similar, but black of crown and sides of breast reduced to brownish gray. *Young:* Similar, but feathers of upper parts edged with whitish. Length 6.50-7.50 (165.1-190.5); wing 4.70 (119.4); tail 2.20 (55.9); bill .48 (12.2); tarsus .87 (22.1).

Recognition Marks.—Sparrow size, but appearing larger; much paler above than other species; breast band incomplete.

Nesting.—Not definitely known to breed in Ohio. "Eggs, 3 to 4, creamy white, finely spotted or speckled with chocolate." Av. size, 1.24 x .95 (31.5 x 24.1) (Chapman).

General Range.—Eastern North America breeding from the coast of Virginia northward to Newfoundland; in winter, West Indies.

Range in Ohio.—Not common migrant on Lake Erie; rare or casual in the interior. Is conjectured to have bred near Lake Erie.

IT is not difficult to distinguish this bird by the generally lighter tone of its plumage, and by its incomplete collar; but to say that it differs thus and so in habit from other small Plovers,—that is a task to which very few are equal, and one which the author must modestly disclaim. This Plover enjoys a more southerly distribution than do the other species, and is even more largely confined to the sea-coasts and the shores of the larger bodies of water. It is almost never found along streams and ponds in the interior, and is no longer commonly seen on the Lake Erie shore. Years ago Mr. Winslow surmised that the bird bred in the vicinity of Cleveland, and it is known to have done so on Lake Michigan. Because of its southern range it has felt more keenly the unequal struggle against the white burden-bearer, and unless better counsels prevail against the senseless lust for its thimbleful of meat, we shall have to record its extinction at no very distant date.

Rev. J. H. Langille has observed this bird more accurately perhaps than anyone else in recent times. He says, "The Piping Plover cannot be called a 'whistler,' nor even a 'piper,' in an ordinary sense. Its tone has a particularly striking and musical quality. *Queep, queep, queep-o,* or *peep, peep, peep-lo*, each syllable being uttered with a separate, distinct, and some-

what long-drawn enunciation, may imitate its peculiar melody—the tone of which is round, full and sweet, reminding one of a high key on an Italian hand-organ, or the haut-boy in a church organ.”

No. 223.

BELTED-PIPING PLOVER.

A. O. U. No. 277a. *Ægialitis meloda circumcincta* Ridgw.

Description.—Similar to preceding species, but black band complete on breast and cervix. No difference in measurements. Nesting not appreciably different.

General Range.—“Mississippi Valley, breeding from northern Illinois, north to Lake Winnipeg; more or less frequent eastward to the Atlantic Coast.”

Range in Ohio.—Imperfectly known. Recorded by Moseley as rare on Lake Erie. Recently found breeding there.

A fortunate discovery made late in the season of 1903 enables us to add this interesting bird to the state list. On the 26th of June, while



Taken at Cedar Point.

WHERE THE PLOVER NESTS.

Photo by the Author.

Professor James H. Hine was doing the honors of the new biological laboratory at Cedar Point, our party of three came upon a strange Plover, as he danced before the lapping waves on the neighboring shore. A hundred



Taken at Cedar Point.

Photo by the Author.

NEST AND EGGS OF THE BELTED PIPING PLOVER.

yards or so below we saw another, evidently of the same species, entertaining his mate with a flight song. He would circle round and round with quivering wings, describing curves a hundred feet or so in diameter, and whistling the while a prolonged soft note with a rising inflection. Professor Jones was detailed on the case and soon came back reporting a nest of four eggs,—that shown in the accompanying illustration. He had concealed himself quietly in a clump of willows, and marked the female as she stole to her nest. The bird had settled once in the middle of the pathless sand, but upon some sudden misgiving had scampered away again, without the astute observer's suspecting that she had visited her eggs. Upon her return, however, to the same spot, the truth became evident.

yards or so below we saw another, evidently of the same species, entertaining his mate with a flight song. He would circle round and round with quivering wings, describing curves a hundred feet or so in diameter, and whistling the while a prolonged soft note with a rising inflection. Professor Jones was detailed on the case and soon came back reporting a nest of four eggs,—that shown in the accompanying illustration. He had concealed himself quietly in a clump of willows, and marked the female as she

It is not fair to say that the nesting site was unmarked, for what is easier to see than a piece of waif coal, *after* one's attention has been called to it? And as for the nest itself, what could be more charming than a mosaic of flattened pebbles and bits of broken shell, to say nothing of such neighbors as a fish-bone and a joint and a half of straw?

While we were examining the nest, the birds kept circling about uneasily at a safe distance, uttering low cries in questioning or querulous tones



Taken at Cedar Point.

"IN THE MIDDLE OF THE PATHLESS SAND."

Photo by the Author.

—*queep*, in a variety of inflections, and a longer *queeplo* or *queeplew*. They had the habit also of scampering rapidly for a little ways and then pulling up short with a compensating bob and perk like the Killdeer. When squatted upon the ground with the lower whites obscured, the color of the Plover's back so perfectly matched that of the glowing sand as to render the bird almost invisible.

All the birds seen on this occasion, to the number of four or five, were

of the belted variety, and the identification was confirmed through specimens secured by Professor Hine on the following day. He also took another set of four eggs about two weeks later from a nest in a similar situation, but some four hundred yards north of the first discovered site. From the advanced stage of incubation he was sure that the eggs belonged to a different pair of birds.

The question of the validity of the two forms of Piping Plovers is still open for discussion. The finding of this nest makes it certain that the breeding ranges of the alleged subspecies overlap considerably.

No. 224.

TURNSTONE.

A. O. U. No. 283. *Arenaria interpres* (Linn.).

Synonyms.—CALICO-BACK; BRANT BIRD.

Description.—*Adult in summer:* Back, scapulars, etc., variegated black and chestnut-rufous, with a little white edging; the black pure on sides of neck or "shoulders", and continuous with that of chest; rufous predominating on wings; upper lores, cheeks, sides of throat, foreneck and sides of breast glossy black; throat and lower lores pure white, and the remaining portions of head and neck impure white, the crown heavily or lightly streaked with black; rump, basal portion of tail, with lateral and longer upper coverts, the greater wing-coverts (principally), and the remaining under parts, entirely white; basal portion of upper tail-coverts, and subterminal portion of tail, black, the latter tipped narrowly with white and rufous; more or less concealed white on primaries;—altogether a piece of patch-work in three colors. Bill short, stout, sharpened, but not acute, slightly upturned, black; feet and legs yellow, blackening at the joints. *Winter plumage:* Without rufous; the black mostly replaced by brown, and the rufous by gray; black of breast much restricted. *Immature:* Similar to adult in winter, but with some ochraceous margining above; head chiefly dusky, the foreneck clouded with dusky. Length 9.00-10.00 (228.6-254.); wing 5.75 (146.1); tail 2.30 (58.4); bill .90 (22.9); tarsus 1.00 (25.4).

Recognition Marks.—Killdeer size; patch-work in rufous, black, and white above; black and white below; beach-haunting habits.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. "Eggs, 3 to 4, clay-colored, blotched and scrawled with grayish brown" (Chapman). Av. size, 1.59 x 1.13 (40.4 x 28.7).

General Range.—Nearly cosmopolitan. In America from Greenland and Alaska to the Straits of Magellan; more or less common in the interior of North America on the shores of the Great Lakes and the larger rivers. Breeds in high northern latitudes.

Range in Ohio.—Not common; found only on the Lake Erie shore,—save for one record at Cincinnati.





AMERICAN WOODCOCK

Philotula minor

$\frac{2}{3}$ Life-size

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TWICE only have I seen flocks of these tardy migrants resting on the Lake Erie shore or feeding on moist plowed lands adjacent to it. On May 22nd, 1897, several squads, aggregating twenty-five birds, were seen on the pebbly beach west of Lorain. They appeared fatigued after their long journey, but were quite wary and could be approached only by stealth. For the most part they kept back from the water's edge upon the dry sand, but one waded boldly into the water and allowed the low waves to buffet him repeatedly. On June 4th, 1903, in company with Rev. W. F. Henninger, of Tiffin, I was surprised and delighted, in view of the late date, to see a flock of sixteen of these waders feeding industriously on a large piece of reclaimed swamp land near Port Clinton. By cautious approach under cover of a dyke, we were able to see that both sexes were about equally represented in the flock, and noticed the patchy pattern of white, black and intense rufous, as it was thrown into relief by the black, mucky soil. The birds were silent and intent only upon feeding. This they did by advancing slowly over the plowed ground and gleaning from its surface, and by turning over the clods which lay in their path to search eagerly beneath. It was rather amusing to see a bird walk up to a clod bigger than itself and several times as heavy, insert its beak and give an odd little bunt and upward jerk, which would send the clod rolling a foot or more. Sometimes a lump, more firmly imbedded, offered resistance, in which case the bird would make another honest effort, or pass on unconcerned. In flight the Turnstones bunch closely at first, but afterward scatter a little more widely, and wheel and turn after the manner of the Killdeers in autumn. The chief impression was of flashing white as they quartered before the sun or as they settled again in some distant portion of the field with wings daintily uplifted.

These handsome waders are somewhat irregular in their migrating movements, and it is said that the duties of incubation are attended to in the far north, and the return journey commenced within the short space of two months.

No. 225.

AMERICAN WOODCOCK.

A. O. U. No. 228. *Philohela minor* (Gmel.).

Description.—*Adult*: Below ochraceous-buff, vinaceous-rufous or even cinnamon-rufous, especially on sides, unmarked; above pale grayish brown, heavily blotched with black, and with much edging and mottling of the shade of the under parts; the chin whitish vinaceous, and the anterior portion of the head in general, with a somewhat bleached appearance; a narrow, black bar from bill to eye, and another paralleling it about half an inch further back; hind head and nape black,

crossed sharply by two narrow, ochraceous bars, and bounded indistinctly by the same color; much black on back and scapulars centrally, together with V-shaped, terminal margins of ochraceous; wing-coverts finely mottled dusky and ochraceous; wing-quills plain fuscous; the first three primaries very narrow, and stiffened; tail ashy-tipped above, below silvery white; tibiae fully feathered; bill brownish; feet and legs pale ruddy. Length 10.50-12.00 (266.7-304.8); av. of six Columbus specimens: wing 5.13 (130.3); tail 2.27 (57.7); bill 2.65 (67.3); tarsus 1.27 (32.3).

Recognition Marks.—Robin to Kingfisher size; rusty coloration; long bill, and eyes set far back in the head.

Nest, a slight depression in ground of damp woods, lined with dry leaves. *Eggs,* buffy or light drab, spotted distinctly and obscurely with reddish brown. Av. size, 1.58 x 1.17 (40.1 x 29.7).

General Range.—Eastern North America north to the British Provinces; west to Dakota, Kansas, etc., breeding throughout its range. No extralimital record except Bermuda.

Range in Ohio.—Common summer resident throughout the state. Decreasing in numbers.

TO anyone who handles a gun the peculiar sharp whistle of a Woodcock's wings is one of those sounds which serves to epitomize a whole chapter of sport. It is the signal for instant action, the challenge whose prompt acceptance distinguishes the sportsman from the rest. The Woodcock is a game bird *par excellence*. The comparative difficulty of his chosen retreats—damp woods choked with undergrowth, sodden thickets, and corners of lowland meadows overgrown with weeds; the suddenness of his alarm; the deviousness and brevity of his way in the air;—all these are elements which give zest to the chase, and afford the bird that running chance for life which it is the delight of every true sportsman to concede. The bird, too, is really delicious, a trifle small in comparison with his European relative, but still "big for his bulk," for he is a hearty and persistent feeder.

The Woodcock is nocturnal or crepuscular in his habits, both flying and feeding after sunset. In spring, wet woods bordering streams, second-growth clearings, and open or sylvan bogs are frequented. In favorite localities, such as the seepage pools bordering levees, one may hear the almost incessant whistle of wings as the birds shift from place to place, where their presence in daytime was scarcely suspected. Examination in the morning of the ground traversed will show a multitude of holes, borings in the mud, where the "bog-sucker" has thrust in his bill in search of worms. It is not quite certain whether the bird prods the earth at random, or whether he is guided by the sense of smell, or even by some subtler instinct in his quest. Certain it is, however, that the Woodcock secures enormous quantities of angle-worms—more than his own weight in a single night, it is believed. The tip of the bird's bill is enlarged and very sensitive, so that no mistakes are made during those dark underground meetings. The end

of the upper mandible is capable of a certain amount of independent action, like the distal joint of one's finger when the rest is held firmly, so that the bird is never at a loss to seize its wriggling prey. The eyes are set well back in the head, partly to avoid too close approach to the ground, and partly to command the bird's surroundings while it is probing for food.

As the season advances and the ground is dried out, the Woodcock resorts to the banks of ditches and sluggish streams, or retires to higher ground. Here, especially in hillside woods, it industriously turns over the fallen leaves and rubbish in search of insect prey concealed beneath. It is in the fall of the year, therefore, that its range is more accessible to the gunner; altho its precise whereabouts may be less certain at that season.

When surprised, the Woodcock rises perpendicularly to the tops of surrounding bushes, then makes off at an angle with a rather weak, unsteady flight, only to drop quickly to cover and run rapidly along the ground and out of sight. The opportune moment for the gunner is just that fraction of a second when the bird pauses at the top of the perpendicular and decides (if indeed decision be involved in that whimsical angle) which way to go. For my part, I consider it quite as fair and a good deal more ingenious, to catch the bird sneaking on the ground. I see my sporting friends lifting up hands of holy horror. But try it! It isn't easy; and there is no mischance connected with the experiment as there would be in the case of Quail. Sharp eyes are as good as quick hands any time; and the bird really has about three chances on the ground to one in the air.

Woodcocks nest early in March or April, and frequently raise two broods in a season. The courting evolutions of the male have been variously described, but are as yet imperfectly understood. The only flight song which I ever witnessed occurred about five o'clock one afternoon in the middle of April. A few large hickory and oak trees stood in an otherwise open field half covered with water, and afforded a base of operations. About this grove a male Woodcock circled and charged at various heights, now mounting rapidly upward, now crossing in plain sight in a curious zigzag course, now sweeping downward as tho bent on dashing out his brains at the feet of his enamorata. The most singular feature of the performance was the series of weird hooting notes, to which the bird gave vent in describing his parabolic downward curves. I am fairly confident that the sounds were vocal, and not produced by the rush of air against the primaries, as some have surmised. *Hooh, hooh hooh, hooh, hooh, hooh, hooh*, as rendered by this frantic lover were a sound to court the dead with, but the language of love is various, and why should the uninvited listener cavil? Twice this mad Romeo paused in his flight, and attempted to alight in the top of a tall dead tree, but neither time did he succeed in finding footing to his satisfaction; so he passed on before I could get a snap-shot of him.

The Woodhen's eggs are placed on the ground in damp woods, usually upon a bed of leaves carelessly drawn together, and sometimes under the protection of a projecting root or fallen log. Of the eggs Dr. Howard Jones says, "Four eggs are the usual number in a set. I have never found more than this, but I have seen an old bird with five young ones. As is usual, the second set probably contains one less than the first. The ground color of the shell is brown, of different shades in different sets. In some it is a light Vandyke brown; in others it is a moderately dark tint of the same color; in others it is a light shade of bistre; while in others it is a yellowish-brown, such as may be formed with bistre and yellow ochre. The markings consist of numerous blotches, spots and speckles, often confluent, distributed most numerous about the larger end. The deep shell marks appear purplish or neutral tint, while the surface marks are of various shades of the ground color, always, of course, deeper in tint. When placed upon a bed of winter-beaten oak leaves, the colors of the eggs and leaves are so similar that I know of no eggs which offer a better example of protective coloring. In shape the eggs are not very different from common hen's eggs."

The female sits for three weeks, and the young when hatched immediately desert the nest. They are quaint little toddlers, by no means able to care for themselves for all of their independence. They remain under the care of the mother for at least a month, and it is asserted that she sometimes transports them from place to place by clasping them, one at a time, between her thighs.

It is a little hard to see why our Solons have elected August as the month in which we may hunt Woodcock. At that time the young of the second brood are not fully grown, and the older birds are moulting; some of them, indeed, at this season being quite incapacitated for flight. September shooting would not only afford better protection but better sport; and an open season from, say, September 10th to October 20th, would be best for all. The Woodcocks linger until the first really severe frosts have made further operations in the mud impossible, and then all take flight for the south, whether it be in October or late November.

No. 226.

WILSON SNIPE.

A. O. U. No. 230. *Gallinago delicata* (Ord.).

Synonyms.—AMERICAN SNIPE; JACK SNIPE; "ENGLISH" SNIPE; BOGSUCKER.

Description.—*Adult*: Upper parts brownish black, freckled, mottled, barred, and streaked with ochraceous-buff and whitish; crown and back nearly pure black, the former divided by irregular buffy median line; the scapulars and interscapulars bordered by whitish or cream-buff, on outer margins only; wings fuscous, the edge including outer web of first primary, white; the greater coverts, secondaries, and sometimes inner primaries narrowly tipped with white; a dark line from eye to bill; throat whitish; sides of head and neck and breast ochraceous-buff, finely spotted and streaked, or indistinctly barred with blackish; belly white, the axillars, sides and flanks strongly barred,—blackish and white; both tail-coverts and exposed tip of tail strongly ochraceous-buff, or rufous, finely barred with black; tail-feathers black basally, some of the lateral ones white or white-tipped. Length 10.00-12.00 (254-304.8); wing 5.00 (127.); tail 2.40 (61.); bill 2.50 (63.5); tarsus 1.25 (31.8). The female averages smaller than the male.

Recognition Marks.—Robin size; general mottled and streaked appearance; long bill used as mud-probe; marsh-skulking habits, and *jack, jack* notes on rising.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, clay-color, olive, or ashy-brown, spotted and blotched with reddish brown or umber. Av. size, 1.58 x 1.14 (40.1 x 29.).

General Range.—North and middle America, breeding from the northern United States northward; south in winter to the West Indies and northern South America.

Range in Ohio.—Common migrant; winter resident in southern part of state, and casually elsewhere; rare summer resident in northern Ohio. No authentic record of breeding.

WHENEVER the word "snipe" is uttered we think most naturally of this recluse of the inland fens, for he is *the* Snipe of America. Altho possessing much in common with the European Snipe (*G. gallinago*) and something with the Woodcock, his ways are peculiar enough to make him distinctly known to every sportsman. He is rather a disreputable looking fellow, a tatterdemalion in fact, as he bursts out of his bog with an exultant cry of "*escape, escape,*" and flutters his rags in the wind. And as he pursues his devious way through the air, jerking hither and thither in most lawless fashion, the gunner could easily believe him an escaped jail-bird, if the stripes of his garments only ran the other way.

The Wilson Snipe is a bird of the open marsh, a frequenter of the grassy border stretches, or of the boggy margins of the "spring branch." Here he lies pretty closely by day, but as dusk comes he bestirs himself and goes pattering about in the shallow water or over the weedy scum-strewn muck, thrusting his beak down rapidly into the ooze and extracting worms or succulent roots. If danger approaches by day, the bird's first instinct is to crouch low. If the sky is clear, it is difficult to dislodge him, for the light blinds him in the air, and he knows that his ragged blacks and browns exactly match the criss-crossed vegetation and interlacing shadows of his present surroundings. If, however, the day be overcast and windy, the bird

springs up quickly against the wind, shouts "*Jack, Jack,*" twice, pursues a bewildering zigzag until out of range, and then flies straight to some other feeding ground, or circles about and enters the old one from another quarter. This zigzag flight, which is the joy of the old gunners and the despair of the young, is really a wonderful exhibition of the self-protecting instinct. For we cannot fairly accuse the Snipe of not knowing his own mind, since when once out of harm's way, his flight is direct and rapid, and he drops into a bog like a shot. The trick must have been deliberately acquired. The cries of the first bird startled are sometimes a signal for all the others in a given swamp to rise and dodge about in the upper air, taking distant counsel whether to return or fly to pastures new. In either case, the sport is off for that day, for the aerial caucus is a sign that the birds won't stand much fooling.

Of course the degree of timidity which the birds exhibit in any locality is simply a matter of the amount of persecution to which they have been recently subjected. Sometimes the entrance of a gunner into a field is the signal for the Snipe to flee the country. On the other hand, I once approached in midwinter a bird which I knew to be in perfect condition, and which stood quizzically in full survey until I got within five feet of it, whereupon it calmly *swam* across a little brook rather than bother to fly from the harmless bird-man.

Besides its semi-nocturnal habits and fashion of probing the mud for food, the Wilson Snipe closely resembles the Woodcock in the manner of its love-making. Indeed, never having had opportunity of simultaneous comparison, I cannot now distinguish in memory the characteristic hooting notes of the Snipe from those of the Woodcock. I have seen the former, not only at the favorite hours of dawn and sunset, but at high noon as well, hovering over a pasture swamp patch, or cutting mysterious figures in high air, and uttering ever and anon the most lugubrious, love-lorn strains, like unfocused flute-notes. This passion song of the Jack-snipe has been called drumming, but the term is inappropriate. When nesting season is on the male betrays his anxiety by resorting frequently to commanding positions on fence-posts and stumps. Sometimes, when greatly excited, the bird will utter a harsh, guttural cackling or bleating note. On such occasions, when the bird is settled on a post regarding you with sober, down-turned beak and watchful eye, the effect is irresistibly comical. And you might as well laugh, for you can't find the nest—not once in a dozen times.

No. 227.

DOWITCHER.

A. O. U. No. 231. *Macrorhamphus griseus* (Gmel.).**Synonyms.**—RED-BREASTED SNIPE (in summer); GRAY SNIPE (in winter).**Description.**—*Adult in summer:* Upper parts black, finely mottled and streaked with pale cinnamon-rufous, and with some white; rump and upper tail-coverts white, finely and heavily marked with broadly crescentic, blackish spots, and sometimes tinged with ochraceous; tail barred with black and white or with black and ochraceous; lesser wing-coverts light grayish brown; primaries dusky; the greater wing-coverts and secondaries varied by white margining, shaft-marks and tips; a chain of dark specks from bill to eye; belly whitish; remaining under parts pale cinnamon, finely but not heavily speckled on sides of head and neck, and across breast with blackish; spotted or lightly barred with the same on sides; axillars and lining of wings white, striped and barred, or with V-shaped markings of dusky; bill and legs greenish black. *Adult in winter:* Pale cinnamon-color wanting; above brownish gray, the feathers with darker centers; rump and upper tail-coverts black and white without ochraceous; indistinct superciliary white stripe; under parts white,—clear on belly, shaded with ashy gray on throat and breast; the sides and under tail-coverts barred with blackish. Length 10.00-11.00 (254-279.4); wing 5.65 (143.5); bill 2.30 (58.4); tarsus 1.35 (34.3) (Ridgway).**Recognition Marks.**—Robin size; pale cinnamon predominant above and below in summer; fine mottling of back in either plumage; long bill; beach-haunting habits.**Nesting.**—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 4, like those of preceding species. Av. size, 1.65 x 1.13 (41.9 x 28.7).**General Range.**—Eastern North America, breeding far north; south in winter to the West Indies and Brazil. Casual in Alaska, Bermuda, Great Britain and Europe.**Range in Ohio.**—Rare migrant.

ALTHO comparable in size and general appearance to the Wilson Snipe, in movement and habit the Dowitcher is the very antithesis of the wily and erratic "Jack." The Gray Snipe is gregarious and unwary, and is found chiefly in exposed situations, such as sand-bars, mud-flats and pebbly shoals. It is not jerky in flight like its cousin, but moves swiftly and easily after the approved fashion of Sandpipers. D. G. Elliott says of this species, "It is an extremely gentle, sociable bird, goes in small flocks, the individuals of which keep close together, and perform various graceful evolutions when on the wing, as if moved by one common impulse."

The Dowitcher is not commonly observed in the interior, but is one of the favorite "bay-birds" of the Atlantic Coast, highly esteemed by gun-

ners. The flying birds give out a peculiar shrill whistle, which is easily imitated by the sportsman concealed behind his decoys. The birds are easily deceived by anything resembling a wader, since they mingle freely with other species at all times, and the stupid wooden things deployed upon the sand are eagerly hailed and received into prompt fellowship, as the compact mass of Dowitchers settles to its fate. The wooden snipe are guiltless, but their immobility tempts the shattered flock to return, when it has recovered from the first murderous discharge, and few escape to tell the story.

If, however, a flock contains a few "wise" birds, they may alight at some distance from the ambushade, chattering softly as they come up, but motionless and silent as they stand huddled together, until their fears are allayed, and they feel safe to scatter for food. The Dowitcher swims readily, assisted as it is by a slight webbing of the toes; and it bobs its head with a peculiar compensating motion for every stroke. When wounded, it may escape by swimming or by skillful hiding in the grass.

The Dowitchers pass north rapidly in spring, as those who have important business in hand; but they reappear with their young in July or August, and pursue a leisurely southward course, being found in latitudes corresponding to ours until cold weather sets in.

No. 228.

LONG-BILLED DOWITCHER.

A. O. U. No. 232. *Macrorhamphus scolopaceus* (Say).

Synonyms.—WESTERN DOWITCHER; RED-BELLIED SNIPE.

Description.—*Adult in summer*: Similar to preceding species but somewhat larger, and with longer bill; pale cinnamon-rufous of under parts more extensive; more heavily barred with blackish on sides. *Adult in winter*: Indistinguishable from *M. griseus*, except by larger size. Length 11.00-12.50 (279.4-317.5); wing 5.72 (145.3); tail 2.20 (55.9); bill 2.72 (69.1); tarsus 1.53 (38.9).

Recognition Marks.—Robin to Kingfisher size; as in preceding species, but bird larger and with longer bill.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 4, like those of preceding species. Av. size, 1.74 x 1.21 (44.2 x 30.8) (Ridgw.).

General Range.—Western North America, breeding in Alaska to the Arctic Coast; migrating south in winter through the western United States (including Mississippi Valley) to Mexico and, less commonly, along the Atlantic Coast.

Range in Ohio.—Rare or casual during migrations.

THIS larger form is normally confined to the western United States, but finds its way irregularly eastward to the Atlantic Coast during migra-

tions. Altho like the preceding species in most of its ways, it is said to prefer brackish lagoons and the margins of streams rather than the tide flats frequented by the other birds. It secures its food by wading about in water as deep as its long legs and bill will permit, probing the bottom industriously. Perhaps it is through the more diligent practice of this habit that the western bird has gradually acquired its longer bill.

No. 229.

STILT SANDPIPER.

A. O. U. No. 233. *Micropalama himantopus* (Bonap.).

Description.—*Adult in summer*: Upper parts blackish with considerable buffy, or tawny, and white edging; a blackish line from bill to eye; auriculars rufous,—the color continued indistinctly around back of head; top of head dusky streaked with whitish; the remainder of head and neck dull white, dusky-streaked; wing-coverts and secondaries grayish, the latter edged with white; primaries fuscous; rump ashy; upper tail-coverts white, barred and striped with dusky; under parts whitish, streaked with dusky and ochraceous on fore breast, elsewhere dusky-barred; bill and feet greenish black. *Adult in winter*: Above brownish gray with traces of black and tawny mottling, or not, the feathers more or less edged with whitish; upper tail-coverts white; the tail white, the feathers bordered with brownish gray; under parts white shaded with grayish, and more or less dusky-streaked on sides of neck, throat, and sides; legs and feet greenish yellow. *Immature*: Similar to adult in winter but blackish above, and with edgings of ochraceous-buff; breast and sides more or less buffy-tinged. Length 7.50-9.00 (190.5-228.6); wing 5.15 (130.8); bill 1.65 (41.9); tarsus 1.62 (41.2).

Recognition Marks.—Chewink size; bill with flattened punctate tip; comparatively long legs.

Nesting.—Does not breed in Ohio. *Nest*, a depression in the ground lined with dead leaves and grasses. *Eggs*, 3 or 4, grayish buff or light drab, boldly spotted and marked with reddish brown and purplish gray. Av. size, 1.44 x 1.00 (36.6 x 25.4).

General Range.—Eastern North America, breeding north of the United States, and migrating in winter to Bermuda, West Indies, and Central and South America.

Range in Ohio.—Several "light" records,—enough perhaps to constitute a valid claim.

SINCE it passes rapidly through the United States on the way to and from the Arctic regions, comparatively little is known of this rare Sandpiper. When found, it is often associated with other species, especially

the Yellow-legs, and is seldom seen in large companies. It has something of the sedateness of movement of the Curlews, but is still very graceful on its "stilts." The long legs enable their owner to wade into a considerable depth of water, where the bill is immersed to the base and swept rapidly from side to side in search of minute crustaceans. The birds also probe the sand for worms and shell-fish after the manner of Curlews. A sharp *tweet-tweet* note has been remarked by several observers, and compared to that of the Solitary Sandpiper.

No. 230.

KNOT.

A. O. U. No. 234. *Tringa canutus* Linn.

Synonyms.—ROBIN SNIPE; GRAY SNIPE.

Description.—*Adult in summer*: Upper parts light gray, streaked centrally with black (narrowly on crown and nape, broadly on back and scapulars), and varied irregularly with some ochraceous buff; primary coverts and primaries blackish, the latter with white shafts; upper tail-coverts with subterminal U- or V-shaped markings of dusky; tail uniform, grayish brown; under parts in general pale cinnamon-rufous; cheeks and superciliary region washed with same, and dusky-streaked; paler or white on belly; crissum, under tail-coverts, thighs, lining of wings, and sides white,—the last two and sides of breast more or less dusky-barred; bill and feet greenish black. *Adult in winter*: Above plain ashy gray; upper tail-coverts and tail as before; under parts white; the sides of neck, fore-neck, and chest with faint dusky streaks, or irregular bars, and the sides similarly barred. *Immature*: Above, ashy gray, mottled with dusky on crown; with whitish edging and narrow submarginal dusky on feathers of back and scapular region; the fore-breast flecked or streaked, but not barred, with dusky; otherwise much as in winter plumage adult. Length 10.00-11.00 (254-279.4); wing 6.50 (165.1); tail 2.31 (58.7); bill 1.34 (34.); tarsus 1.23 (31.2).

Recognition Marks.—Robin size; called "Robin Snipe" from the cinnamon-rufous of breast (in summer); the largest of the *Tringae*; found coastwise.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*: only one specimen known,—that taken by Lieutenant Greely, near Fort Conger; described as "light pea-green, closely spotted with brown in small specks about the size of a pin-head." Av. size, 1.10 x 1.00 (27.9 x 25.4).

General Range.—Nearly cosmopolitan. Breeds in high northern latitudes, but visits the southern hemisphere during its migrations.

Range in Ohio.—Rare migrant.

WHEN King Canute, or Knut, had dined on a dish of strange coast-faring birds, he was gracious enough to express to his blushing chef the

royal appreciation of their flavor. Whereupon the eager courtiers dubbed the waders Knuts, or Knots, and so they have come down to us—at least so Pennant says: and Linnaeus, not over-curious (he was a busy man with all of Adam's task to finish) accepted the tradition in "*Tringa canutus*." It is certainly fitting that these birds of the farthest north should bear the name of some hardy Norseman.

Knots had swept down the roaring coast for centuries, but the mystery was, Where do they come from? Sir So-and-so was charged with high commission to bring back with him from the algid north, along with sundry information about the tides, and temperatures, and short cuts to China, a set of Knot's eggs; but he came back empty-handed. Grizzled sea-captains said, "Lo here! lo there! they breed;" but the eggs were not forthcoming. Finally, it was left for our own Lieutenant Greely to bring back the first authentic specimen, one taken near Fort Conger, Latitude 81°, 44', north, together with the parent bird. Verily if we were Knots, even baby Knots, we might stand some show of reaching the North Pole.

The Robin Snipe are found chiefly coastwise. They are still common along the Atlantic, altho greatly reduced in numbers; but are rare or casual in the interior. Dr. T. M. Brewer thus summarizes some of the bird's chief points of interest: "The Knot is said to feed principally on aquatic insects and the soft animals inhabiting small bivalve shells. It is also said to be able to swim with great ease. Wilson, who has observed flocks of these birds on the sandy shores of New Jersey, states that their favorite and almost exclusive food seemed to be a small, thin, oval, bivalve shellfish of a pearly white color, which lie at a short distance below the surface, and in some places in low water occur in heaps. These are swallowed whole, and when loosened by the waves are collected by this bird with great ease and dexterity. While doing this the bird follows the flowing and the recession of the waves with great nimbleness, and Wilson adds that it is highly amusing to observe with what adroitness it eludes the tumbling surf, while seeming wholly intent on collecting its food. Audubon has seen this species probe the wet sand on the borders of oozy salt-marshes, thrusting in its bill with the same dexterity shown by other species. Its flight is swift, elevated, and well sustained. The aerial evolutions of these birds on their first arrival in fall are said to be beautiful, and they follow each other in their course with incredible celerity."

No. 231.

PURPLE SANDPIPER.

A. O. U. No. 235. *Arquatella maritima* (Brünn.).

Description.—*Adult in summer*: Upper parts blackish, top of head streaked with dull buffy, and the back and scapulars spotted and margined with the same; wings fuscous-gray, the greater coverts bordered, and secondaries narrowly tipped with white; the innermost secondaries almost entirely white; upper tail-coverts brownish dusky; tail fuscous centrally, brownish gray, lightened by whitish edgings laterally; throat and breast light grayish brown streaked with dusky; the chin, lower eye-lid, and remaining under parts white. "Legs, feet, and bill at base light flesh-color; rest of bill greenish black" (Coues). *Adult in winter*: Head and neck all around and well down sooty gray or mouse-brown; the chin, lower eye-lid, and a space in front of and over eye whitening; remaining upper parts brownish black, edged with sooty gray of neck (said to have a purplish cast at times, but doubtful; we catch eagerly at faint characters in the members of this so nearly homogeneous group); wing-coverts lighter fuscous, and with considerable white edging; remaining under parts white, more or less streaked with sooty gray on lower breast and sides. *Young*: "Above dusky, the scapulars, interscapulars and wing-coverts bordered with pale buffy or whitish" (Ridgw.). Length 8.00-9.50 (203.2-241.3); wing 5.00 (127.); tail 2.40 (61.); bill 1.25 (31.8); tarsus 1.00 (25.4).

Recognition Marks.—Chewink size, but appearing larger; plain brownish gray or sooty gray of breast probably most distinctive. Somewhat similar to the Red-backed Sandpiper, in the shade and blend of color, but distinguished from the latter by its darker back and its smaller, lighter bill.

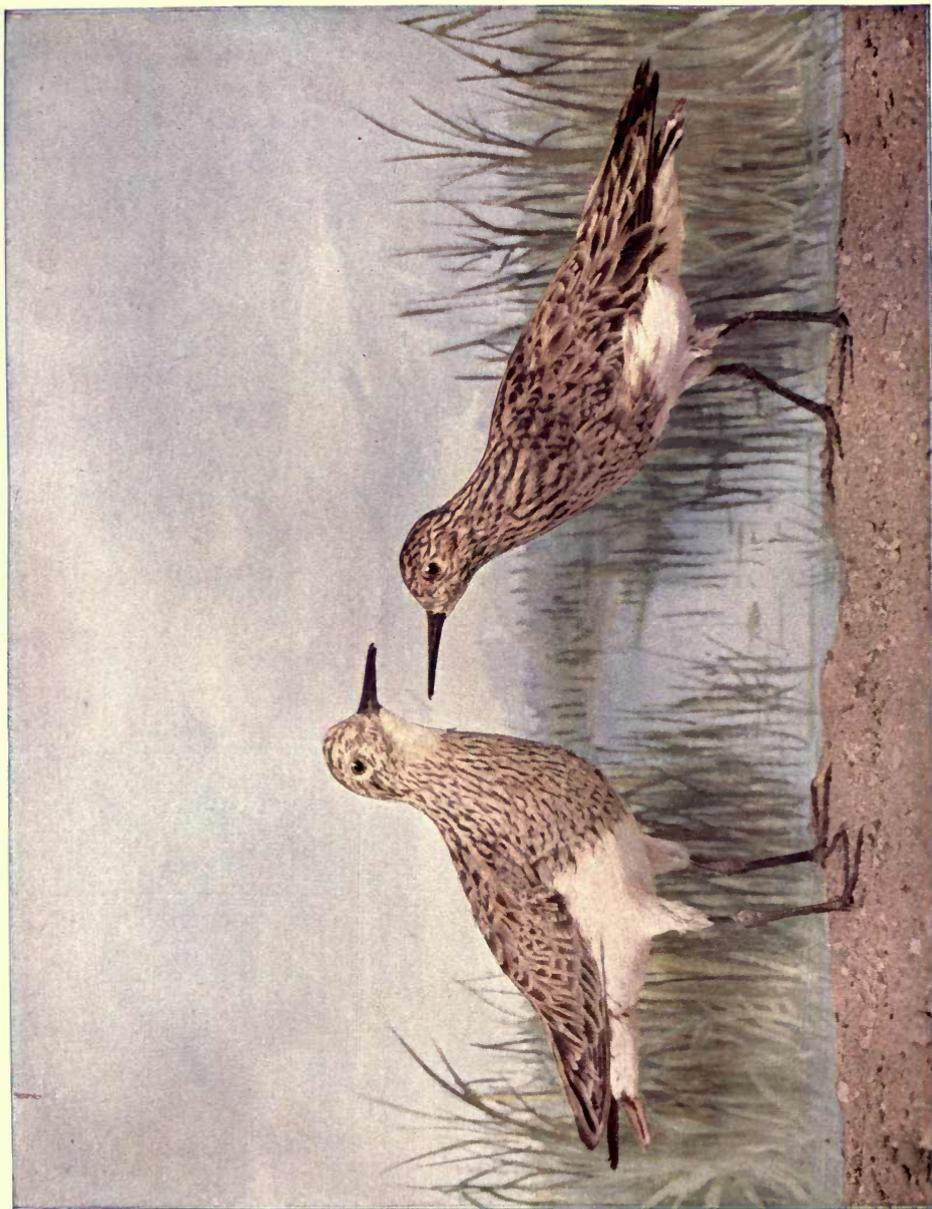
Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3-4, olive-buff or ashy brown, distinctly marked with large spots of rich umber brown, chiefly about larger end. Av. size, 1.44 x 1.06 (36.6 x 26.9).

General Range.—Northern portions of the northern hemisphere; in North America chiefly in the northeast portions, breeding in the high north, migrating in winter to the Eastern and Middle States (casually to Florida), the Great Lakes, and the shores of the larger streams in the upper Mississippi Valley.

Range in Ohio.—Very rare; one record on Lake Erie.

THE responsibility of including this species in a list of Ohio birds still rests with Mr. Winslow of Cleveland. It is, however, included by Thomas McIlwraith in his Birds of Ontario, on the basis of three or four specimens.

The Purple Sandpiper is a strictly maritime species, being found in winter by preference only on "a stern and rock-bound coast." It is very sure-footed, and gleans fearlessly over the most slippery rocks amidst the dashing of the spray.



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PECTORAL SANDPIPER
Tringa macularia
½ Life-size

No. 232.

PECTORAL SANDPIPER.

A. O. U. No. 239. *Actodromas maculata* (Vieill.).**Synonyms.**—GRASS SNIPE; KRIEKER.

Description.—*Adult*: Above, ground-color, blackish, everywhere heavily margined, and thus finely streaked, with ochraceous-buff, ochraceous, or rusty, and with some grayish or whitish edging on the larger feathers; darker on crown, where streaked with rusty only; wing-quills dusky, the first primary only with white shaft; rump and upper tail-coverts black, delicately tipped with rusty; tail sharply pointed, the central feathers longest,—blackish centrally, brownish gray laterally, with ochraceous or white edging; below, sides of head and neck, fore-neck and breast finely, sharply, and heavily streaked with dusky on a dull white or buffy ground; throat and remaining under parts white; bill and feet greenish dusky. *Coloring in winter* perhaps more blended. There seems to be no constant difference between summer and winter plumages,—conflicting authorities to the contrary. *Immature*: A little brighter-colored above, with sharper markings and more rusty, and with considerable white edging on larger feathers of back; the breast more deeply buffy, and the streaks, if possible, more numerous. Length 8.00-9.50 (203.2-241.3); av. of seven Columbus specimens: wing 5.40 (137.2); tail 2.67 (67.8); bill 1.17 (29.7); tarsus 1.10 (27.9).

Recognition Marks.—Chewink size, but appearing larger; fine streaking of fore-neck and breast on heavy ground, contrasting with pure white of throat and belly, distinctive for size.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 4, drab, sometimes with a greenish shade, spotted and blotched with reddish brown. Av. size, 1.45 x 1.04 (36.8 x 26.4).

General Range.—The whole of North America and the West Indies, and the greater part of South America. Breeds in the Arctic regions. Of frequent occurrence in Europe.

Range in Ohio.—Quite common spring, less common fall migrant.

DURING the days of heaviest rainfall, in middle April, the Pectoral Sandpiper enjoys the most general distribution of any of the waders. Caring nothing at this season for the presence of lake or stream, it is to be seen wherever the surfeited ground sustains a pool of undrunk water. Prairie pastures are likely to swarm with them for at least a day or two; and meadows prove most attractive to this grass-loving Snipe.

When startled, a flock of fifty Sandpipers moves off as one bird, wheeling and turning at precisely the same moment, and presenting in the morning light a pleasing alternation of flashing white, when the under parts are exposed, and somber gray, when the backs appear. While on the wing, the birds keep up a desultory cross-fire of peculiar, wild, creaking notes; but upon alighting, they scatter widely in search of food and are mainly

silent. They both glean and probe on land, or wade about busily in the grassy splashes. At the approach of danger, the waders will often crouch low upon the ground in the hope of escaping observation. During the return movement in late summer and early autumn, they scatter even more widely, and frequently each individual shifts for himself independent of his fellows. At this season it is said to lie well to a dog; and upon being flushed it moves off with a rapid zigzag flight, much admired by the knights of the reeking tube.

Very interesting accounts of the breeding habits of these birds, in their far northern home, reach us through the pen of Mr. E. W. Nelson. According to this careful observer the males are able to distend the loosened skin of the breast, inflating it with air until it becomes nearly as large as the rest of the body. With these absurd appendages they run up and down before the females, or attempt strange sallies in the air. While engaged in these attempts to win attention, they utter notes which are "hollow and resonant, but at the same time liquid and musical, and may be represented by the syllables *too-u, too-u, too-u.*"

No. 233.

WHITE-RUMPED SANDPIPER.

A. O. U. No. 240. *Actodromas fuscicollis* (Vieill.).

Description.—*Adult in summer:* Top of head ochraceous-buff, broadly streaked with black; upper tail-coverts pure white, or with a few dusky streaks; rump brownish gray centrally, but showing white laterally; remaining upper parts blackish centrally, but with much edging of light brownish gray and ochraceous-rufous; central tail-feathers blackish, lateral feathers brownish gray; superciliary stripe and under parts white, the fore-neck, breast, and sides finely streaked with dusky and washed with ochraceous-buff. *Adult in winter:* Above plain brownish gray, the blackish reduced to central streaks; streaking of breast less distinct. *Immature:* Like adult in summer, but black feathers of back with rounded tips and ochraceous edge; those of lower scapulars rounded and white-tipped; feathers of crown indistinctly, and the tertials sharply bordered with ochraceous-rufous; not so sharply streaked, and less heavily tinged with buffy on breast. Length 7.00-8.00 (177.8-203.2); wing 4.95 (125.7); tail 2.15 (54.6); bill .96 (24.4); tarsus .96 (24.4).

Recognition Marks.—Sparrow to Chewink size; finely streaked breast; white upper tail-coverts distinctive.

Nesting.—Does not breed in Ohio. *Nest,* on the ground, lined scantily with dead leaves. *Eggs,* 3-4, light olive, or olive-brown spotted boldly or finely with deep reddish brown, chiefly about larger end. Av. size, 1.37 x .94 (34.8 x 23.9).

General Range.—Eastern North America breeding in the high north. In winter, the West Indies, Central and South America, south to Falkland Islands. Occasional in Europe.

Range in Ohio.—Not uncommon migrant on Lake Erie; rare elsewhere. No recent records.

THIS Sandpiper is comparatively uncommon anywhere in the interior, and nothing has been added in our state to the meager records left by Dr. Wheaton. It would appear that the bird may be looked for both on the shore of Lake Erie, and upon the moist uplands of the interior, where it frequents pools left by recent rains, quite after the manner of the preceding species. It is described as very confiding and unacquainted with fear, except in localities where incessant gunning has made all wild things afraid.

Mr. William Brewster has this to say of its characteristic cry: "It has a very peculiar note, unlike that of any other Sandpiper, which is not in any sense a whistling but is a low lisping sound, and almost the only cry of a shore-bird which is neither mellow nor whistling. When disturbed it moves quickly off, repeating this rather low note, which, however, is always distinctly audible above that of the small *Tringa* with which it associates."

No. 234.

BAIRD SANDPIPER.

A. O. U. No. 241. *Actodromas bairdii* Coues.

Description.—*Adult in summer:* Upper parts fuscous, with considerable edging of buffy and light brownish gray,—the buff mostly in lateral striping on top of head and hind-neck, where predominant, and as terminal edging on back, etc.; some whitish edging on coverts, secondaries and inner quills, but no strong shades or contrasts anywhere; upper tail-coverts and tail dark fuscous, the former tipped with buff, and the latter edged with whitish, the outer feathers becoming much lighter; forehead and supra-oral streaks white; throat white; the sides of the head, and neck, and breast, with a heavy buffy suffusion, lightly spotted and streaked with brownish dusky; remaining under parts white; bill and legs black. *In winter,* the shades of the upper parts are a little more blended. *Immature:* Similar to adult, but lighter above, light brownish gray predominating; the feathers of back and scapulars rounded, with conspicuous, white, terminal edging; the streaking of breast, etc., less distinct. Length 7.35 (186.7); wing 4.83 (122.7); tail 2.03 (51.6); bill .91 (23.1); tarsus .94 (23.9).

Recognition Marks.—"Sparrow" size, but appearing larger; about the size of a Spotted Sandpiper; dull fuscous and buffy coloration of upper parts; buffy breast streaked with fuscous; upper tail-coverts *not* white.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, lined with a few dry leaves and grasses. *Eggs*, 4, buff, or light cream-buff, finely speckled or spotted and blotched with chestnut of various shades. Av. size, 1.30 x .93 (33. x 23.6).

General Range.—Nearly the whole of North and South America, but chiefly the interior of North and the western portions of South America, south to Chili and Patagonia. Breeds in Alaska and on the Barren Grounds. Rare along the Atlantic Coast, and not yet recorded from the Pacific Coast of the United States.

Range in Ohio.—Rare spring and fall migrant.

MUCH confusion formerly existed with reference to the status of this species, and even now it seems certain that many of them pass through our borders unrecognized, because of their habit of associating during migrations with other and smaller Sandpipers.

The Baird Sandpiper is abundant in the interior states, and especially in the Rocky Mountains at certain seasons; but it breeds exclusively in the remote north.

"In habits they are similar to the White-rumped (which they so closely resemble), but are more inclined to wander from the water's edge. I have flushed the birds on high prairie lands, at least a mile from the water" (Goss).

No. 235.

LEAST SANDPIPER.

A. O. U. No. 242. *Actodromas minutilla* (Vieill.).

Synonyms.—AMERICAN STINT; PEEP.

Description.—*Adult in summer*: Upper parts brownish black, relieved by fuscous on wings, hind-neck, etc.; the feathers more or less bordered with grayish and rusty-ochraceous, especially on scapulars, where deeply indented, often nearly to shaft; upper tail-coverts and central feathers of tail brownish black; remaining tail-feathers ashy gray; sides of head, neck, and breast ashy or brownish white, spotted and streaked with dusky; a few dusky streaks on sides; remaining under parts white. *Winter plumage*: Above plain brownish gray, black, if at all, only in mesial streaks; spotting of breast nearly obsolete. *Immature*: Similar to adult in summer, but without ochraceous indentations on scapular feathers; feathers of back with rounded ochraceous tips, scapulars with white tips on outer web, etc.; breast not distinctly streaked. Length 6.00 (152.4); wing 3.60 (91.4); tail 1.70 (43.2); bill .80 (20.3); tarsus .73 (18.5).

Recognition Marks.—Warbler to Sparrow size; least among Sandpipers; most liable to be confused with *Ereunetes pusillus*, from which it differs in its slightly smaller size, slender bill, more extensively washed breast, and rather darker coloration above. The absence of webs on the feet is, of course, distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, light

drab or grayish buff, speckled and spotted with deep chestnut and purplish gray. Av. size, 1.15 x .85 (29.2 x 21.1).

General Range.—The whole of North and South America, breeding north of the United States.

Range in Ohio.—Common migrant.

IT is with a distinct sense of privilege that one is permitted to gaze upon a company of these elfin waders at meal time. Not soon shall I forget a Sunday stroll which led past the corner of a certain brickyard pond on a bright May afternoon. A tiny babel of soft peeping had given us warning of what we might expect to see, if we managed to steal up to the edge of the shallow cut unobserved. By exercising care and patience, both my wife and I succeeded in seating ourselves on the near brink without alarming the little strangers. They seemed to accept us as a part of that gracious horizon which is the birthright of both innocence and optimism. So confiding were they that at a distance of thirty feet they not only went on in their quest of food, but one had a sound nap on shore, a Sunday nap, with his head tucked snugly under his wing.



Taken at Cedar Point.

Photo by the Author.

SANDPIPER PARK.

In their search for food the Peeps appeared to depend entirely upon their bright eyes to spy tidbits and unguessable delicacies in the shallow water or

on the oozy bottom; and they waded about belly deep, thrusting their heads under water as fearlessly as ducks. There was little said except when some member of the party flew further than usual, when they set up a quaint clamor, which seemed like a faint echo of the far-sounding surf on Arctic seas. The little travelers were scrupulously neat in their habits, dividing their time about equally between dabbling in the water for food and making their toilets on shore. A few hours for rest and refreshment, beside a prosy brickyard pond in old Ohio, and then,—Heigh ho! for Hudson Bay!

No. 236.

RED-BACKED SANDPIPER.

A. O. U. No. 243a. *Pelidna alpina pacifica* (Coues.).

Synonyms.—AMERICAN DUNLIN; OX-BIRD.

Description.—*Adult in winter:* Above, nearly uniform light brownish gray, the feathers slightly darker centrally, or with dusky mesial streaks; primary-coverts and wing-quills blackish; the greater coverts white-tipped; the inner primaries narrowly white-edged; the secondaries increasingly white on the inner web; the tertials almost entirely white; upper tail-coverts like back or darker, but the lateral feathers white or white-edged; an impure whitish superciliary line; sides of head and neck and across fore-neck and breast like color of back, but lighter; the color distributed centrally from the feathers, giving a faintly streaked appearance; remaining under parts white, or with a few gray streaks on sides; bill longer, stout, slightly curved near tip, black; feet and legs black. *Adult in summer:* Upper parts black centrally with broad margining of bright rusty ochraceous; wings as before; breast, etc., grayish white, faintly streaked with dusky; belly black, strongly contrasting with breast; crissum, etc., white. *Immature:* "Upper parts blackish, the feathers with rounded tips of rufous or buff; belly spotted with black" (Chapman). Length "7.60-8.75" (193.-222.3); av. of six Columbus specimens: wing 4.70 (119.4); tail 2.29 (58.2); bill 1.50 (38.1); tarsus .99 (25.2).

Recognition Marks.—Chewink size (considerably under Killdeer size); bright rufous of back and black of belly distinctive, but seldom seen in Ohio. Soft brownish gray of upper parts and breast; rather long black bill, slightly curved near tip, distinctive for plumage commonly seen.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 4, dull brownish buff, or clay color, ("bluish-white to ochraceous-buff"—Chapman) spotted, blotched and stained, chiefly about the larger end, with chestnut and chocolate. Av. size, 1.43 x 1.01 (36.3 x 25.7).

General Range.—North America in general, breeding far north. Eastern Asia.

Range in Ohio.—Rare spring and common fall migrant. More common on Lake Erie.

WE are disposed to grumble a little at times because of the encroachments of civilization, and especially for the lessening opportunities afforded

us for the study of water- and shore-birds. It is annoying to find our favorite beach prostituted to the purposes of the average "summer resort," and our favorite swamp domesticated into a corn-field. The ornithological pessimist may raise his voice here, and there shall be none to rebuke him. At the same time it is instructive to note the efforts made by the birds to adjust themselves to the changed conditions, and to see how bravely they will venture into the old haunts. It was in a riverside swamp in the city of Lorain that I once saw a little group of Red-backed Sandpipers. The tiny stretch of bog-water and sedge was completely engirdled by railroads, and the air was filled with the jargon of strange tongues, and the attendant din and roar of the ore-handling trade; yet on the 25th day of July, 1898, in the muddy heart of this tiny oasis, five "Dunlins" and a half dozen "Peeps" paused to rest and spend the day, undisturbed save for the harmless inquisitiveness of the bird-man. It is thus for the most part that some thirty species of shore-birds accept our waning but ungrudged hospitality, and pass unhindered to those distant bournes appointed them by the Father's will.

No. 237.

SEMIPALMATED SANDPIPER.

A. O. U. No. 246. *Ereunetes pusillus* (Linn.).

Synonyms.—PEEP; SAND-PEEP; OX-EYE.

Description.—*Adult in summer:* Above blackish or fuscous, with much brownish gray and some whitish or pale rusty edging; darker on crown and back, lighter on neck and wings; tips of greater coverts white, rump grayish brown; upper tail-coverts and central tail-feathers dusky; remaining tail-feathers ashy gray; a white superciliary line, and a dusky line from bill to eye; under parts white, except across breast, where tinged with brownish gray, and distinctly streaked with dusky brown; bill and feet dark brown. *Adult in winter:* Above plain, brownish gray, with darker shaft-streaks or central areas; below pure white, marked, if at all, with faint streaks on sides of breast. *Immature:* Similar to adult in summer, but feathers of back and scapulars rounded, and with conspicuous edgings of pale rufous and white; breast tinged with buff, and faintly streaked on sides only. Length 5.50-6.75 (139.7-171.5); av. of seven Columbus specimens: wing 3.67 (93.2); tail 1.60 (40.6); bill .80 (20.3); tarsus .82 (20.8).

Recognition Marks.—Sparrow size. A little larger than *Actodromas minutilla*, with which alone it could be confused. Distinguished by longer, stouter bill, somewhat lighter coloration of back, clearer white below, with streaked area of breast not so extensive. Partial webbing of feet distinctive.

Nesting.—Does not breed in Ohio. *Nest,* on the ground, a slight depression, scantily lined with grass. *Eggs,* 3 or 4, grayish buff, greenish drab, or olive, finely speckled or spotted with dark brown or obscure lilac. Av. size, 1.23 x .85 (31.2 x 21.6).

General Range.—Eastern North America, breeding north of the United States; south in winter to the West Indies and South America.

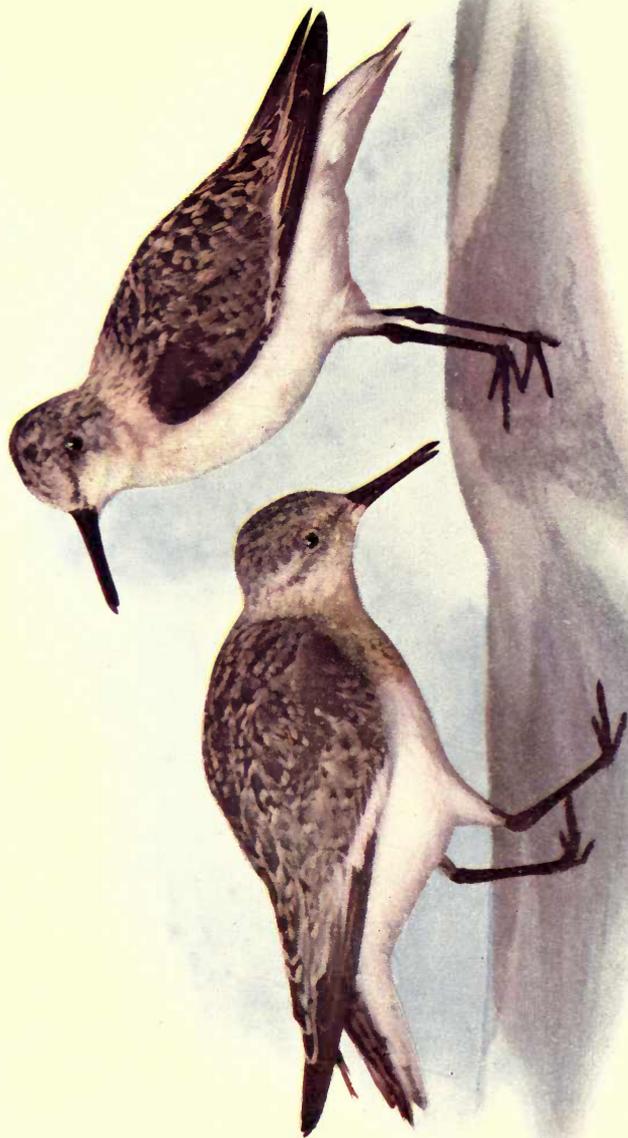
Range in Ohio.—Common spring and fall migrant throughout the state.

WHO knows where these huddling Sandpipers come from? Where are they going? We do not know. Who cares? We never saw them before—shoot them! It is pleasant to hear the roar of a gun in our ears. We love to see little white bodies dotting the sand. See! the wind lifts a dainty wing and lets it fall again. It is broken. And look! There is a bird dragging itself off into the coveted shelter of a fallen log. Hurry, or you will be too late. Ah! now you have it safe! A rough squeeze of mercy you can hardly deny it, as its eyes flood and it looks the unutterable woe of the wild things. "Waal, stranger, what ye goin' to do with them birds? Reckon you'll eat 'em?" "Why, ye-es; I suppose so. They are good to eat, are they not?" "Humph! Yaas; so's Hummin' birds."

Thus again is enacted that familiar tragedy of the migrating shore birds—a tragedy, which, repeated tens of thousands of times in a season, is sweeping away these harmless lowland dwellers of the North with a movement as relentless as the oncoming iceberg and as rapid as the progress of invention.

Of course no true sportsman would assault such tiny game as this, but the fact remains that somewhere somebody with a gun is doing for our shore-birds, even the smallest of them; and that unless our legislatures place ample means at the command of our Fish and Game Commissioners, and unless the people themselves support and help to enforce wise measures of protection, all our water- and shore-birds will be things of the past. This department of ornithology may then be given over to the care of the paleontologist.

The Semipalmated Sandpiper is the one of most frequent occurrence, as well as greatest abundance during migration. Flocks, containing anywhere from a score to several hundred birds, may be found feeding on mud-flats or floating vegetation, or pattering about the sands of the Lake Erie shore. In flight the birds move in close order, turning and doubling sharply in obedience to one knows not what sudden fear or fancy, uttering the while soft whistling notes, *tweet, tweet*, so that the passing flock sounds like a fairy rattle-box. Altho rather wary when feeding, it is possible gradually to accustom the birds to one's presence, so that they will permit a very close approach. By maneuvering for half an hour in nearly open water, I once brought my boat within three feet of a wisp of birds huddled on a floating patch of pickerel weed, before they took flight. At such a time, as soon as the Peeps suspect danger, they stop feeding and stand motionless. Upon a nearer approach, they may sink slowly to their knees and crouch closely, as tho hoping to escape notice; or else they will take wing with sudden unanimity and shrill pipings. If not greatly disturbed the flock may return to the same spot the next minute; but when it does, the birds first stand motionless upon alighting, until all fears are removed, or until the object of distrust retires.



SANDPEEP
Culiteris arenaria
 $\frac{2}{3}$ Life-size

ILLUSTRATION BY A. W. WOODWARD, WASHINGTON
BIRDS RELEASED IN HAND BY THE WASHINGTON FIELD STATION

No. 238.

SANDERLING.

A. O. U. No. 248. *Calidris arenaria* (Linn.).

Description.—*Adult in summer*: Crown and upper parts in general blackish with heavy edging of ashy white, and with much striping, sub-marginal marking, or indenting and barring, of pale rufous; sides of head, throat, and neck all around, and sides of breast ashy white, strongly tinted with pale rufous, and finely spotted with dusky; remaining under parts pure white,—the white well up on sides of rump, and including outer feathers of upper tail-coverts; wings, marginally, and including exposed portions of quills, fuscous; the greater coverts tipped with white, and the wing-quills changing to white on their inner webs and under surfaces; the inner primaries white basally on outer webs; tail dusky above, ashy gray on lateral feathers; bill and feet black. *Adult in winter*: Wings dusky, varied, on middle coverts, etc., with white; central upper tail-coverts and tail-feathers dusky; remaining upper parts ashy gray (nearly pearl gray); the feathers, especially on crown, with dusky shaft-lines; entire under parts pure white. *Immature in fall*: Somewhat like adult in summer, but without rufous anywhere; back, therefore, showing more black, varied chiefly by white in scant edgings and tips, or in liberal indentations on scapulars and tertials; feathers of rump nearly square-ended, marked subterminally with light ashy gray, but tipped with a sharp, narrow band of blackish; under parts white,—or sometimes spotted on breast. Length 7.00-8.75 (177.8-222.3); wing 4.82 (122.4); tail 2.11 (53.6); bill 1.06 (26.9); tarsus 1.02 (25.9).

Recognition Marks.—Chewink size; fine, mottled rufous-ash and black of spring birds; excess of white in fall specimens; black bill, strongly contrasting with adjacent plumage. Absence of hind toe, of course, distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4. light olive, or greenish brown, finely speckled and spotted with dark brown, chiefly about larger end. Av. size, 1.41 x .91 (35.8 x 23.1).

General Range.—Nearly cosmopolitan, breeding in the Arctic and subarctic regions; migrating in America south to Chili and Patagonia.

Range in Ohio.—Fairly common on beaches of Lake Erie during migrations. Not common in the interior.

THERE is a tide in the affairs of the Sanderling which, taken at the ebb, provides a momentary fortune of stranded crustaceans and marine insects. The bird follows the retreating billow with uplifted wing, quick to seize upon the wave's disclosures, and ready at a sign to avoid the return of the fickle water. It is thus that we find him in May, and again late in August or September, along the Lake Erie shore. The birds usually occur in considerable flocks, which deploy and feed silently at the water's edge; but single individuals or a half dozen are sometimes found in company with Semipalmated Sandpipers or Semipalmated Plovers. In the latter case they may be readily distinguished by their larger size, and, in the fall, by their lighter color. I once

found a solitary bird feeding upon the floating vegetation in the Licking Reservoir; and they occur not infrequently upon the gravel bars of the larger streams.

Sanderlings appear to be very graceful birds, when their movements are unconstrained by the knowledge of man's presence. When approached, however, the flock will stand silent, viewing your actions with grave regard.



Taken at Cedar Point.

THE SANDERLING'S DOMAIN.

Photo by the Author.

Even tho partially reassured as to your intent, the remaining movements are apt to be halting—with only one eye spared for bug-catching; and the strain is relieved only when the whole company take sudden flight with sharp whistling cries:

"Friend, if friend you be,
The world is wide.
If you tent here,—
Why, yonder does for me."

No. 239.

MARBLED GODWIT.

A. O. U. No. 249. *Limosa fedoa* (Linn.).**Synonym.**—BROWN MARLIN.

Description.—*Adult*: General color pale cinnamon or ochraceous-buff; the head and neck all around streaked and spotted with brownish dusky; the back, etc., heavily and irregularly barred with the same,—a typical feather from the scapulars has a broad dusky center shaped like a dandelion leaf, the complementary spaces being ochraceous-buff, or irregularly white; the primary coverts, and outer webs of three outer primaries brownish dusky; the breast (especially on sides), the sides, flanks, and lower tail-coverts, with fine wavy bars of dusky; the superciliary line and throat immaculate; the axillars and lining of wings darker,—say pale cinnamon-rufous; bill, slightly upturned, yellow at base, blackening toward tip; feet and legs blackish. *Immature*: Similar to adult, but immaculate on breast; sides and flanks less distinctly and extensively barred. Length 16.50-21.00 (419.1-533.4); wing 9.15 (232.4); tail 3.13 (79.5); bill 4.28 (108.7); tarsus 2.74 (69.6).

Recognition Marks.—Crow size; large size; long, slightly upturned bill; pale cinnamon coloration; "marbled" appearance of upper parts.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, light olive-brown, finely speckled and spotted with dark brown and purplish gray. Av. size, 2.18 × 1.64 (55.4 × 41.7).

General Range.—North America, breeding in the interior (from Iowa and Nebraska northward to Manitoba and the Saskatchewan). Migrating in winter to Guatemala, Yucatan, etc., and Cuba.

Range in Ohio.—Not common migrant.

THIS good wight has wit enough at least to avoid our coasts of late; and Professor Jones in his recent catalog is able to add nothing to Dr. Wheaton's records. The bird cannot be blamed exactly, since one of the last records was of thirty-three, which were "shot in one day, near the mouth of the Little Miami, some years ago by ————, Esq."

According to Dr. Coues, the center of the bird's abundance in summer includes the northwestern prairie states and the region of the Saskatchewan. "It breeds in Iowa," he says, "and in Minnesota and eastern Dakota, where I observed it in June, and where the eggs have been procured. I found it on the plains bordering the Red River, in company with Long-billed Curlews and great numbers of Bartramian Sandpipers, nesting like these species, on the prairie near the river, and about the adjoining pools, but not necessarily by the water's edge. In its habits at this season it most nearly resembles the Curlew, and the two species, of much the same size and general appearance, might be readily mistaken at a distance where the difference in the bill might not be perceived. On intrusion near the nest, the birds mount in the air with loud piercing cries, hovering slowly around with labored flight in evident distress, and approaching sometimes within a few feet of the observer."

No. 240.

HUDSONIAN GODWIT.

A. O. U. No. 251. *Limosa hæmastica* (Linn.).

Synonym.—RING-TAILED MARLIN.

Description.—*Adult in summer*: Above black or blackish, the head and neck streaked, and the back, scapulars, etc., irregularly barred with ochraceous-buff; the greater coverts chiefly brownish gray; the edge of wing, primary-coverts and primaries blackish, the shafts of the latter white, and the inner quills white at base; upper tail-coverts white, the longer feathers black-barred and black-tipped; tail black, narrowly white-tipped and extensively white at base; neck in front and on sides pale chestnut-rufous, streaked with dusky; remaining under parts deeper chestnut-rufous, barred with dusky,—finely on breast and belly, more boldly on flanks and lower tail-coverts; the axillars sooty black; the lining of wing dusky, varied with white; the chin and superciliary line buffy white; bill, slightly upturned, flesh color at base, blackening toward tip; feet and legs black. *Winter plumage*: “Back, etc., plain dull, brownish gray; head, neck, and lower parts dull whitish, or pale grayish buffy, shaded with brownish gray anteriorly.” (Ridgw.). *Immature*: Similar to adult in winter, but the feathers of back, etc., margined subterminally with dusky, and terminally with ochraceous-buff; belly whitish. Length 14.00-16.50 (355.6-419.1); wing 8.40 (213.4); tail 2.98 (75.7); bill 3.10 (78.7); tarsus 2.30 (58.4).

Recognition Marks.—Little Hawk size. Smaller than preceding species; chestnut-rufous coloration of under parts in summer adult; *white of upper tail-coverts and black tail* distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, clear light brown or deep olive, spotted with darker brown. Av. size, 2.18 x 1.40 (55.4 x 35.6).

General Range.—Eastern North America and the whole of Middle and South America. Breeds only in the high north.

Range in Ohio.—Rare migrant.

OUR knowledge of this rare wader still rests entirely upon the following words of Wheaton: “Rare spring and fall migrant. Dr. Kirtland notes its capture in the vicinity of Cincinnati, and Mr. Winslow mentions its occurrence near Cleveland. I met with a flock of eight birds in the spring of 1858, wading in a shallow pond in an old brick yard within the city limits, but was not so fortunate as to secure specimens. In the spring of 1861, a fine specimen was taken below the State dam, near the city by a sportsman and taxidermist, which was preserved until recently.”

Professor Butler knows of no recent instance of the bird's capture in Indiana, and Ridgway's estimate, “abundant migrant,” would probably no longer hold good in Illinois.

The Hudsonian Godwits spend our winter in the Argentine Republic, but do not nest there, remaining together instead in small flocks of from one to two dozen individuals. It is possible, however, as Hudson surmises, that a certain proportion of the species does breed in the Antarctic region, while the majority are spending their true summer in the northern part of North America.

No. 241.

GREATER YELLOW-LEGS.

A. O. U. No. 254. **Totanus melanoleucus** (Gmel.).

Synonyms.—LONG-LEGGED TATTLER; STONE SNIPE.

Description.—*Adult in summer*: Above dusky or blackish gray; streaked on the head and neck, and spotted on the edges of feathers of back, scapulars, etc., with white; edge of wing, and quills plain dusky; the upper tail-coverts white, narrowly barred on terminal portions with dusky; tail narrowly barred dusky and white, the central feathers darker; under parts white, the fore-neck and breast heavily spotted and streaked, and the sides barred with dusky; "bill straight or slightly inclined upward, not with regular curve, but as if bent near the middle, black or greenish black;" feet and legs bright yellow. *Adult in winter*: Upper parts fuscous, or light grayish brown, the anterior portions whitish-edged, and whitish-tipped; feathers of back, etc., with spots or incipient bars of dusky and white on edges; margining of under parts not so heavy. *Immature*: Like adult in winter, but darker above, the white spotting with some admixture of brownish buff. Length about 14.00 (355.6); wing 7.60 (193.); tail 3.11 (79.); bill 2.15 (54.6); tarsus 2.40 (61.).

Recognition Marks.—Little Hawk size; long yellow legs; *white upper tail-coverts*, with sober dusky and white coloration, distinctive for size; *Tew, tew, tew*, notes.

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 3 or 4, "brownish buffy, distinctly but very irregularly spotted with rich Vandyke or madder brown." Av. size, 1.43 x 1.20 (36.3 x 30.5) (Ridgw.).

General Range.—America in general, breeding from Iowa and northern Illinois, etc., northward, and migrating south to Chili and Argentine Republic.

Range in Ohio.—"Fairly common during the migrations over the entire state" (Jones).

OF the larger Limicolæ this species is perhaps the commonest during migrations. In saying this, however, one draws the line of size between the Greater Yellow-legs and its lesser double, *T. flavipes*; for the latter is undoubtedly still more common. The impression of abundance is heightened by the restless, noisy ways of these Tattlers, so that if there be a single bird about a pond, the whole country-side is likely to know it. The birds frequent

not only the borders of lakes and marshes, but duck-ponds, brick-yards, upland pools and river bars as well. Sometimes they move uneasily from one pond to another, as tho discontented with the fare offered; and at all times they utter a querulous note which is perfectly characteristic, *tew tew tew, tew tew tew*,—always in groups of three. The notes are vigorous and penetrating as well as petulant, and therefore always pleasing as adding a distinct element to the chorus of the season.

While feeding, the Tattler wades about knee-deep, snatching its food from the surface of the water, or else thrusting its head below for a quick search along the bottom. At such times it may be very alert or quite unwary, according to the amount of persecution which it has previously endured. By gentle advances I have walked entirely around a pool where these birds were feeding, and they waded in toward the center breast deep rather than take wing. At other times I have been unable to get within a hundrd yards of them.

The Yellow-legs seldom remains above a day at any one station, but advances across the state by slow stages. The fall movement is a little more leisurely than that of spring, inasmuch as the bird's business is less urgent; and they are rather more numerous at that season. In their winter home, in far off Argentina, the birds are said to mingle for a time with the members of their race which constitute a southern division, and which must soon be leaving for their breeding haunts within the Antarctic circle.

No. 242.

YELLOW-LEGS.

A. O. U. No. 255. *Totanus flavipes* (Gmel.).

Synonyms.—TATTLER; LESSER TATTLER.

Description.—*Adult in summer:* Head and neck all around (save throat), and breast, finely streaked with dusky, on white or ashy-white ground, the markings on the sides of breast broader and heavier, passing into loose and rather indistinct bars on sides; remaining under parts white; back and upper parts in general light brownish gray, tinging also hind-neck and crown; feathers of back and scapulars with blackish centers, and irregular spotting of ashy white; the larger feathers, especially tertials, with incomplete black bars; primaries dusky; the secondaries with narrow edging of white; upper tail-coverts white, the terminal portion of feathers dusky-barred; tail white or ashy gray, centrally, barred with dusky; bill and feet as in preceding species. *Winter plumage:* Above light brownish gray, with some darker shaft-lines, and considerable white spotting on edges of feathers; markings of neck and under parts much paler, grayish brown, partially obscured or blended. Length about 10.50 (266.7); av. of five Columbus specimens: wing 6.11 (155.2); tail 2.36 (59.9); bill 1.46 (37.1); tarsus 1.98 (50.3).

Recognition Marks.—Killdeer size; like preceding species but smaller.

Nesting.—Does not breed in Ohio. Eggs, 3-4, "buffy (variable as to shade), distinctly (sometimes broadly) spotted or blotched with dark madder or Vandyke brown and purplish gray." Av. size, 1.69 x 1.15 (42.9 x 29.2) (Ridgw.).

General Range.—America in general, breeding in the cold temperate and subarctic districts, and migrating south in winter to southern South America. Less common in western than in eastern North America.

Range in Ohio.—"Very common spring and fall migrant" (Wheaton).



Taken in Massachusetts.

SHORE BIRDS GALORE.

Photo by Lynds Jones.

THIS smaller representative of the genus *Totanus* is even more generally distributed, if possible, than its larger brother, *T. melanoleucus*. During the spring migrations it spreads over the state and rests wherever there is flooded land. Altho not solitary by preference, the birds are rather independent, and I have seen single individuals, or twos and threes, quite as often as larger flocks. These little Tattlers mingle freely with other species, and especially with their larger congeners, the Greater Yellow-legs, and with the closely related Solitary Sandpiper. When frightened from their feeding haunts, however, the Yellow-legs draw off by themselves, and pursue a course to other pastures, without reference to their recent associates.

The most prominent characteristic of these birds, as they flutter about from place to place, or rise for extended flight, is the tail appearing almost white,—for the cross-barring of the tail-feathers, while apparent enough in the hand, is scarcely noticeable at a distance. Upon alighting the bird remains a moment with wings held daintily aloft, and if reassured, folds them quietly, one at a time, like a yacht hauling in sail, or simultaneously, as the case may be. On foot it is often restless, bobbing or teetering with nervous apprehension, and serving frequent notice of its readiness for departure. As the conscious, however, of its own preparedness, it will often suffer a much nearer approach than most other species of waders.

In a company which included shore birds of eleven kinds, I once saw a Lesser Tattler which was obliged to hop about upon one leg, for the other dangled helpless in the air. The bird had evidently been for some time in this plight, for it balanced with ease, and stooped not ungracefully to secure food from the surface of the mud; so that one entertained the hope that his one yellow leg might serve him for a lifetime.

The notes of the Yellow-legs are much like those of the preceding species, but are lighter in character.

D. G. Elliot¹ states without comment, that this species breeds in Illinois and Ohio, but no records of its breeding are known to us, nor had it been reported in Dr. Wheaton's time.

No. 243.

SOLITARY SANDPIPER.

A. O. U. No. 256. *Helodromas solitarius* (Wils.).

Description.—*Adult in summer*: Above, olive-brown or fuscous, with a faint greenish tinge, blackening on wings; the head and neck finely streaked, and the back, etc., distinctly speckled with white; upper tail-coverts dusky, the lateral feathers spotted or barred with white; central tail-feathers dusky, spotted on edges with white; the remaining feathers of tail white, with heavy dusky bars; under parts white, the sides of neck and breast and across chest streaked with fuscous; axillars prominent white, barred with dusky; bill blackish; feet and legs dull greenish black. *Winter plumage*: Colors more blended; olivaceous tinge of upper parts nearly wanting; white spotting less pure; head and neck less distinctly streaked; fore-neck and sides of breast heavily tinged or indistinctly clouded rather than streaked with light grayish brown. *Immature*: Like adult in winter, but colors still more blended; no streakings on head and neck; spotting of back buffy. Length 7.50-8.50 (190.5-215.9); av. of six Columbus specimens: wing 5.04 (128.); tail 2.08 (52.8); bill 1.13 (28.7); tarsus 1.18 (30.).

Recognition Marks.—Chewink size; olive-brown above with white speckling. To be carefully distinguished from *Actitis macularia* by its somewhat larger size

¹ "North American Shore Birds," (published by Francis P. Harper, New York) p. 119.

and slimmer build, as well as by the absence of spotting on the belly. *Weet, weet* note a little sharper than that of *A. macularia*.

Nesting.—Not known to breed in Ohio, but probably does so. *Nest*, on the ground. *Eggs*, 4 or 5, faint dark reddish fading to light drab or clay color, spotted, blotched, and scrawled with brown, and with faint purplish shell markings on the larger end.¹ Av. size, 1.39 x .95 (.35.3 x 24.1).

General Range.—North America, breeding occasionally in the northern United States, more commonly northward, and migrating southward as far as the Argentine Republic and Peru.

Range in Ohio.—Common migrant; perhaps more generally distributed than most of the family. Sparingly resident in summer.

IT is neither because of excessive fear nor hauteur that birds of this species are not often found mingling with others of the Sandpiper kind, but only because they appreciate the beauty of woodsy pools and upland plashes, which are lost on their more gregarious fellows. A Solitary Sandpiper is most nearly comparable to the Spotted Sandpiper, but is larger, slimmer, trimmer (if possible), with a voice a little higher-pitched and thinner. These differences are easily made out if one is so fortunate as to see the birds together. At a time when the distinctive points of this species were only beginning to emerge in the consciousness of the student, I once came upon a Solitary Sandpiper feeding at the edge of a brick-yard pond, in company with a single Spotted and an equally solitary Pectoral Sandpiper. There were no other shore birds of any species within a mile; but these three were not above five feet apart, having been led into a momentary association through some subtle sense of kinship and recognition of common ends. When the observer had conned well the lesson of comparative limicology there afforded, he put the birds to flight. They fled three ways with characteristic cries and never an afterthought, apparently, for their chance acquaintances.

If one happens upon half a dozen of these birds feeding beside a leaf-lined pool in the depths of the woods, he may see not only a beautiful sight, but one out of the ordinary in Sandpiper experiences. The birds dart about rapidly, capturing not only slugs, worms, and small crustaceans, but insects as well. Indeed, the wings at times are carried about half-raised, as tho the bird were on the very point of flight; and quick sallies are made at passing moths or beetles. If a decaying log lies half submerged, it is sure to be inspected from every point of vantage; and the bird is not averse to alighting, on occasion, upon the limb of a convenient tree. Again, the bird plashes about freely upon the floating vegetation, or wades breast deep, taking care, however, that its dainty white bodice shall not be soiled. At other times, perhaps, it moves with the sedateness of a Heron, putting each foot down carefully, so as not to roil the water.

¹ See article by C. K. Clarke, M. D., in *The Auk* for October, 1898.

Altho the Solitary Sandpiper is known principally as a migrant in May and late July or August, it is believed that a few remain in the northern part to breed. Its nesting was for a long time unknown, and it was hazarded that it might be found breeding in holes in trees or in deserted nests, after the fashion of the Green Sandpiper (*Helodromus ochropus*) of Europe. But all such conjecture was discounted by the discovery of a single egg in a ground nest in May, 1878; and finally discredited by the taking of a complete set of five eggs by C. K. Clarke, M. D., on Simcoe Island, Lake Ontario, June 10, 1898. Dr. Clarke says of his find,¹ "The eggs when collected had the peculiar dark reddish ground color so frequently noticed in fresh specimens of the Bartramian Sandpiper, but like them soon lost this characteristic tint. Faint purple shell markings gave pleasing contrast, but the grotesque brown figurings, somewhat similar in shape to those found on the eggs of the Purple Grackle, remain as the striking feature. These grotesque markings exist on three of the specimens." In comparison with eggs of the Spotted Sandpiper they were seen to differ in shape, size, ground color, and markings.

No. 244.

WILLET.

A. O. U. No. 258. *Symphemia semipalmata* (Gmel.).

Synonym.—SEMIPALMATED TATTLER.

Description.—*Adult in summer:* Above brownish gray, the head and neck streaked with dusky, the feathers of back, etc., with irregular bars, or central patches, of dusky, and further varied with some obscure buff; primaries and secondaries white, the former broadly tipped and the latter slightly tinged with dusky; upper tail-coverts white, or with a few dusky bars; central tail-feathers ashy gray, indistinctly barred with blackish; the remaining feathers white mottled with ashy; lower parts white, tinged with grayish on fore-neck, and with buffy on sides; the fore-neck heavily streaked, the breast and sides heavily barred with brownish dusky; belly sometimes faintly barred; axillars and lining of wing dusky; bill dusky; feet and legs dark bluish. *Winter plumage:* Above ashy gray, lighter on neck; below white unmarked, the fore-neck gray-tinged. *Immature:* Like adult in winter, but feathers of back edged with pale ochraceous; below tinged or faintly mottled with brownish gray on neck, chest, and sides; otherwise unmarked. Length about 15.00 (381.); wing 7.36 (186.9); tail 2.91 (73.9); bill 2.19 (55.6); tarsus 2.29 (58.2) (Ridgw.).

Recognition Marks.—Curlew size; extensive white on wing with large size distinctive; semipalmate feet.

¹ The Auk, Vol. XV, p. 329.

Nesting.—Not known to breed in Ohio, altho supposed to have done so formerly. *Eggs*, 4, greenish white or dark brownish olive, spotted boldly with various shades of umber-brown, and with obscure, purplish shell-markings (Davie). Av. size, 2.12 x 1.54 (53.9 x 39.1).

General Range.—Eastern temperate North America, south to the West Indies and Brazil. Breeds from Florida to New Jersey, and locally and rarely to Maine. Accidental in Bermuda and Europe.

Range in Ohio.—Rare migrant. No recent records.

OUR knowledge of the Willet within this state is nearly confined to the following brief account penned by Dr. Jared P. Kirtland, June 4th, 1840¹: "This bird is a common visitor to the shores of Lake Erie, both in the spring and autumn. On the 3rd of July, 1838, I shot an old specimen from a flock of more than twenty individuals, that were in the habit of visiting Ohio City, at the mouth of the Cuyahoga, for a number of days in succession. The young birds appeared here on the first of July of the present year, and considerable numbers have been shot by the sportsmen. A few years since they remained here during the whole of the summer, and probably reared their young in the neighborhood. They are very abundant about some of the upper lakes."

Considerable interest attaches to the Willet, both on account of its large size and general distribution, and from the fact that its breeding range includes the Southern and Middle States. The effect, therefore, of civilization may be easily noticed in the case of this bird; and that effect, as we might expect, has been disastrous. There are no recent notes of its appearance in Ohio, and it is probably upon the vanishing point here and hereabouts.

The Willet is described as an excessively noisy bird, filling the air with its shrill cries of "*pill-will-willit, will-willit, pill-will-willit*" at all hours of the day and often at night. Except during the breeding season it is quite wary, and difficult to approach even by stealth. While nesting, however, it becomes silent and nearly impassive, except when its nest or young are immediately threatened, in which case it throws reserve to the wind and summons its neighbors to join with it in the boldest denunciation of the intruder.

Altho formerly quite generally distributed in the interior, it is now more abundant coastwise, and enjoys some measure of protection in a few favored spots along the Atlantic Coast, notably at Cobb's Island, Virginia.

¹ Amer. Jour. Sci. and Arts, XL. 1841, pp. 19-24.
(Wheaton, Catalogue, pp. 216 and 220.)

No. 245.

RUFF.

A. O. U. No. 260. *Pavoncella pugnax* (Linn.).

Synonym.—REEVE (female).

Description.—*Adult male in breeding plumage:* Front and head usually bare and with fleshy papillæ; feathers of neck enlarged and elongated into a ruff, with corresponding "cape" behind; the latter about half as long as the former, but more persistent; entire plumage very variable; three spring males before me present the following appearance: *Number one.*—Entire plumage, except crissum, flanks, lining of wings, chin and primaries, ochraceous-rufous and ochraceous-buff, heavily and regularly barred with black, the three shades alternating on ruff, and the black of this region showing high metallic purplish reflections. *Number two.*—Crown, cape, and edges of ruff bright ochraceous; enclosed area of ruff white; back ochraceous, finely mottled with black; wings grayish brown to dusky; breast and sides ochraceous and black in irregular blotches. *Number three* (the Columbus specimen).—Crown and abbreviated ruff bright tawny, mottled with glossy black; throat and lower neck all around pure white; back finely mottled ochraceous and black; wings plain fuscous throughout; breast and sides sooty black, the feathers with shining purplish tips and whitish edgings; belly, crissum, and lining of wings white; bill yellowish to dusky; feet and legs bright yellow; claws black. *Adult female:* Without ruff; head completely feathered; above black predominating, but feathers with broad edgings of brownish or buffy gray; wings fuscous or variable gray; fore-neck, breast, and sides mingled ashy gray, black, and whitish; remaining under parts white; the black everywhere with more or less of metallic reflections. *Immature:* Like adult female, but black less extensive, non-metallic or brownish; the edging of feathers on back, etc., heavily ochraceous or buffy; below fore-neck, breast, and sides buffy or buffy-ochraceous; remaining under parts whitish; bill greenish black; feet and legs light greenish brown. Length 10.00-12.50 (25.4-317.5); measurements of a typical adult male: wing 6.75 (171.5); tail 2.65 (67.3); bill 1.33 (33.8); tarsus 1.80 (45.7). Adult female, wing 6.20 (157.5); tail 2.20 (55.9); bill 1.25 (31.8); tarsus 1.70 (43.2).

Recognition Marks.—Killdeer size or larger; most nearly comparable in size, length of bill, etc., to the Bartramian Sandpiper (*Bartramia longicauda*), and best distinguished from that species by negative characters. Ruff of male and glossy black, where visible, distinctive.

Nesting.—Not known to breed in America. *Eggs*, 4, olive or greenish gray, heavily spotted and blotched with umber or bistre. Av. size, 1.71 x 1.20 (43.4 x 30.5).

General Range.—Northern parts of the Old World, straying occasionally to eastern North America.

Range in Ohio.—Accidental. Two records: Columbus, April 28, 1878, and Licking Reservoir, Licking County, Nov. 10, 1872. (Both specimens in O. S. U. collection.)

TWO specimens of this Old World species, now preserved in the Ohio State University collection, entitle it to recognition in our pages. The first,



BARTRAMIAN SANDPIPER

Bartramia longicauda

$\frac{3}{4}$ Life-size

a young male, was taken at the Licking Reservoir, November 10, 1872, by Dr. Theodore Jasper. The second, also a young male, with the ruff undeveloped, was "killed near the Starch factory, Columbus, O., April 28, 1878," presumably by the same collector. Another specimen from "northern Canada" bears date of April 28, 1877.

It is supposed that birds observed in the fall are mainly young of the year, which, in attempting to journey southward from the breeding grounds in the far north, have missed the customary route of the species. Similarly those seen in the spring are those which have found a chance resting place for the winter in the Middle or Southern States and are now feeling their way back to the ancestral home.

The Ruff enjoys the doubtful distinction among the wading birds of being a polygamist. The males wage daily battles for possession of the females, and are as indiscriminate in their choices as Prairie Cocks under similar circumstances. The contestants bridle before each other, and meet with lowered heads and ruffs expanded to serve both as color challenges and shields, while they strike and kick at each other, and long for imaginary spurs. When the season of courtship is ended the victorious male loses both his ruff and his interest, and the poor Reeves (as the females are called) are left to bring up their families as best they may, without either advice or alimony from their recreant lord.

No. 246.

BARTRAMIAN SANDPIPER.

A. O. U. No. 261. *Bartramia longicauda* (Bechst.).

Synonyms.—"THE BARTRAMIAN"; UPLAND PLOVER; FIELD PLOVER.

Description.—*Adult*: Above, varied brown or dusky with a slight olive tinge, the feathers edged with ochraceous-buff, and on the back, etc., spotted and barred with black; top of head blackish, parted by indistinct buffy median line; hind-neck buffy or ochraceous, streaked with dusky; primaries dusky, the outer one with a white shaft, and white strongly barred with dusky on the inner web; tail irregularly barred with black, the central feathers olive-dusky, the outer ones ochraceous and gray; under parts whitish or with buffy tinge on breast, sides, and crissum; the fore-neck sharply streaked with brownish dusky; the markings U- or V-shaped on breast and opening out into bars on the sides; axillars and lining of wings finely barred dusky and white; bill yellow, blackening on ridge and tip; feet and legs dull yellow: *Immature*: Similar to adult, but buffy and ochraceous stronger, the dusky markings of under parts less distinct. Length 11.25-12.75 (285.8-323.9); wing 6.40 (162.6); tail 2.82 (71.6); bill 1.20 (30.5); tarsus 1.78 (45.2).

Recognition Marks.—Killdeer size or larger; bill somewhat shorter than head; finely streaked and mottled coloration, ochraceous and dusky. A bird of upland and prairie. Notes, a quavering alarm cry, and a mellow whistle long-drawn-out.

Nest, on the ground. *Eggs*, 4 or 5, creamy-buff or clay-colored, spotted with reddish- and yellowish-brown, chiefly about the larger end. Av. size, 1.80 x 1.28 (45.7 x 32.5).

General Range.—North America, mainly east of the Rocky Mountains, north to Nova Scotia and Alaska, breeding throughout most of its North American range; migrating in winter southward as far as Brazil and Peru. Occasional in Europe.

Range in Ohio.—Common summer resident, except in heavily wooded portions.

EACH bird has its own place in the mind of the bird student or bird lover. This place may be made by the first sight of the bird, by some constant characteristic of carriage, voice, or environment, or by a deep impression made possible by one's own mental attitude at the time. To me *Bartramia* is the most ethereal, the most spirit-like of all birds, not excepting the owls and Whip-poorwill. Our first intimation of his presence in spring is either the long-drawn whistle or the rolling call, from whence you know not. The first impulse is to glance quickly upward into the clear blue. Next you scan the horizon, the fields, the fences, all to no purpose. The cry seems to be all-pervading—coming from everywhere. I never hear it but I involuntarily stop with a



Taken near
Columbus.

Photo by the Author.

MONOTONOUS UPLAND SUITS THE BARTRAMIAN.

feeling akin to uncanniness. Where is the bird! Another call gives the direction, and you stand staring into the southern sky until in the distance, far up, a quivering speck appears, approaches, passes onward, anon scattering broadcast the rolling whistle, without an added tremor of the wings. The bird seems a monster—at least the size of a large hawk—but the long, slender neck, small head, and almost no tail, are unmistakable. I have often wondered if the birds ever use their wings as other birds do. I have never seen more than the slight quivering, or the motionless soaring. The slight movement of the long wings certainly adds to the ethereal appearance of the bird, which seems to float free in the air, usually with a slow forward motion.

The rolling cry is not unlike the rolling call of a tree-toad, but of a different quality and calibre, which makes it unmistakable. The whistle is partly double, the first part passing upward nearly half an octave, terminating abruptly there, the second part beginning where the first began and rapidly swelling through nearly or quite an octave, then gradually falling again and decreasing in volume to the close, several tones above the beginning. The first part of the whistle is usually rattling or trilled, and sometimes the trill is carried to the end, but oftener it becomes a clear whistle before the culmination, and continues clear to the end. *Tre-e-e-e-e-e-e-e*, *tre-p*; or *tr-r-r-r-r-e-e-e-e-e-e-e-e-p*. Often the whistled part is never reached, but the call stops as if interrupted by some threatened danger.

In northern Ohio the birds make their nests in the midst of a pasture or meadow, often without more than a few stray grass blades lining the slight depression in the ground. In more rolling regions the nest seems to be placed preferably on a hilltop, or on a side-hill; but in any region an open field is essential to the welfare of the eggs and young.

In the autumn the birds select some side-hill, apparently no better than any of a dozen or more in the region, where they pass the night, or gather to visit during the day. They seem to be very much attached to that especial side-hill, and will have no other, even at the risk of life.

Probably the bird is better known throughout the state as the Upland Plover, or Meadow Plover or Sandpiper, or the Whistling Plover. While it is a true sandpiper in structure, its habits resemble the plover group. It gleans rather than probes the mud for food, eating grass seeds and weed vegetation. It is not wary, generally, but is too confiding. One may approach within a dozen yards of the birds, and even when they finally take wing they are more than likely to fly directly over you.

LYNDS JONES.

No. 247.

BUFF-BREASTED SANDPIPER.

A. O. U. No. 262. *Tryngites subruficollis* (Vieill.).

Description.—*Adult*: Upper parts dull grayish buff or grayish brown varied by blackish or olive-brown centers of feathers; under parts buff, dotted and streaked on sides of breast with blackish; the inner webs of the primaries, both webs of the secondaries, and the tips of the larger under wing-coverts speckled with black; axillars white; bill dusky; feet and legs greenish yellow. *Immature*: Like adult, but feathers of back, etc., rounded, distinctly bordered with whitish, the speckling of wing-quills and under coverts finer than in adults. Length 7.25-8.75 (184.2-222.3); wing 5.23 (132.8); tail 2.33 (59.2); bill .77 (19.6); tarsus 1.20 (30.5).

Recognition Marks.—Chewink size; general buffness of coloration; short, straight, blackish bill; black speckling on wing-quills and under coverts distinctive.

Nesting.—Does not breed in Ohio. *Eggs*, 3 or 4, buffy grayish white, varying to pale olive, boldly spotted longitudinally (and somewhat spirally) with dark Vandyke or madder brown and purplish gray (Ridgw.). Av. size, 1.47 x 1.06 (37.3 x 26.9).

General Range.—North America especially in the interior; breeds in the Yukon district and in the interior of British America northward to the Arctic Coast; South America in winter as far as Uruguay and Peru. Of frequent occurrence in Europe.

Range in Ohio.—"Rare migrant, only noted in the fall."—Wheaton. No record since 1876.

OF this species comparatively little is known since it is reckoned a rare migrant anywhere in the Middle States. It is said to resemble the Bartramian Sandpiper in habits, and to prefer high grassy land for a range instead of wet bottoms and ponds. The customary breeding range of the species is in remote northern latitudes, but McIlwraith in his "Birds of Ontario," records the taking of a nest of this species "a few miles back from the north shore of Lake Erie" on June 10th, 1879,—as reported to him by Dr. G. A. Macallum of Dunnville.

"The nest was placed between two tussocks of grass on the ground, a short distance from the bank of the river, where the ground is tolerably high, and where it is the custom to cut marsh hay. The nest was of a decided shape, and was composed of the fine moss or weed which grows between the tussocks of marsh grass. This is the only case of its breeding here to my knowledge."

No. 248.

SPOTTED SANDPIPER.

A. O. U. No. 263. *Actitis macularia* (Linn.).**Synonyms.**—PEET-WEET; TIP-UP; TEETER-TAIL.**Description.**—*Adult in summer:* Upper parts light olive-brown, with pale greenish or brassy luster; the head and neck streaked, and the back, scapulars, tertiaries, etc., irregularly barred with darker; quills darker and with more distinct greenish reflections; the inner primaries and secondaries narrowly tipped

Taken in Lorain County.

Photo by the Author.

A FAVORITE NESTING HAUNT OF THE SPOTTED SANDPIPER.

with white, the former varied with some white on the inner webs, the latter with much basal white showing conspicuously in flight; central tail-feathers like back, but greener, the outer feathers becoming duller and tipped with white; a white superciliary line; entire under parts white and strikingly marked with rounded spots approaching color of back; bill flesh-color, sometimes orange, darkening above, or not, and with dusky tip; feet and legs pinkish white. *Winter plumage:* Similar, but back browner, unbarred. *Immature:* Like adult but unspotted below, tinged with gray on breast; above showing blackish or buffy bars, faintly on back, more strongly on wing-coverts, and upper tail-coverts. Length 7.00-8.00 (177.8-203.2); wing 4.15 (105.4); tail 2.00 (50.8); bill .93 (23.6); tarsus .95 (24.1).

Recognition Marks.—Sparrow to Chewink size; greenish brown back; boldly spotted under parts; the common bird of river-bank and lake-shore.

Nest, on the ground, a slight depression, scantily or somewhat carefully lined with dead leaves and grass. *Eggs*, 4, creamy buff or dull white, speckled and spotted with dark brown, chiefly about larger end. Av. size, 1.25 x .92 (31.8 x 23.4).

General Range.—North and South America from Alaska to southern Brazil. Breeds throughout temperate North America, less commonly on the Pacific Coast. Occasional in Europe.

Range in Ohio.—Common summer resident along streams and reservoirs throughout the state.

LIKE a second Narcissus this familiar little Sandpiper loves to linger at the water's edge; and even if it be conceded that he has other business there besides looking in the mirror, we could not suppose that he is altogether insensible to the flattery of the smooth-flowing stream. It is for this reason, perhaps, that he prefers the vicinity of quiet inland waters; and it is this also—what else?—that tempts him to make from time to time little horizontal excursions, or loops, of flight out over the river or placid lake. If frightened, as by a boatman, the bird may patter along the muddy brim, or remove by short flights, but sooner or later he puts off from shore, edges out over the water, wheels about in a great circle, and draws near his starting point again in a graceful curve, which regards the shore as a sort of asymptote—this on wings held stiffly or quivering with emotion.

On shore the bird indulges a never-ending habit of teetering: "The fore part of the body is lowered a little, the head drawn in, the legs slightly bent, while the hinder parts and tail are alternately hoisted with a peculiar jerk, and drawn down again with the regularity of clock work." This strange motion has won for the bird the name Tip-up and Teeter-tail, and gives it an air of mock solemnity which is only heightened by the Quaker drab adornment of the upper parts and the apparently serious view of life which the owner takes. Absurd as the action is in adults, it tests the risibles still more sorely when a toddling youngster, bristling with pin-feathers, discovers the same uncontrollable ambition in his rear parts, and says, How-do-you-do backward, with imperturbable gravity.

Arriving in its accustomed haunts about the middle of April, the Spotted Sandpiper immediately makes its presence known by notes which altho of trifling import, are particularly sweet and welcome. *Peet-weet*, or *weet, weet, weet, weet*, says the bird on all possible occasions, and a boat-ride on lake or river loses half its charm without the frequent interruption of this wayside greeting.

The Peet-weet's nest is usually a little removed from the water's edge, placed a few rods back among the stunted willows and rank grasses of the upper sand stratum of the beach, or else sunk somewhere upon a grass-grown bank. The birds are not always discreet in the matter of concealment, and will sometimes steal to the nest or visit it openly, while search is being conducted in the immediate neighborhood. The eggs, normally four in number, are immense for the size of the bird, and, as a consequence, the young are so well found at birth that they are able to scamper off with never a thought for the unusually substantial cushion of leaves and dried grasses which has harbored them in embryo.



Taken at Cedar Point.

Photo by the Author.

NEST AND EGGS OF THE SPOTTED SANDPIPER.

THE SET IS INCOMPLETE BUT TWO APPEAR TO MAKE A NESTFUL.

No. 249.

LONG-BILLED CURLEW.

A. O. U. No. 264. *Numenius longirostris* Wils.**Synonym.**—SICKLE-BILL.

Description.—*Adult*: General color ochraceous-buff to pale cinnamon-rufous; upper parts varied with dusky, in broad streaks on crown, in narrow streaks on sides of head and neck, in heavy, central, "herring-bone," connected bars on back and tertials, and so variously mottled throughout, only the outer webs of outer primaries being of solid color,—dusky; below sharply streaked on breast and sides, sometimes sparingly barred with blackish, the ground color reaching its greatest purity and intensity on axillars; bill very long, considerably decurved toward tip; the culmen brownish dusky, the lower mandible yellow at base and darkening toward tip; feet and legs stout, dark; claws short and broad. Length 20.00-26.00 (508-660.4); wing 10.75 (273.1); tail 4.10 (104.1); bill up to 8.50 (215.9); av. about 6.50 (165.1); tarsus 3.15 (80.).

Recognition Marks.—About Crow size,—making some allowance for bill; pale cinnamon coloration; long decurved bill distinctive. Has a quavering cry somewhat like that of the Bartramian Sandpiper.

Nesting.—Not known to breed in Ohio. *Eggs*, 4, ashy brown or clay-color, spotted and blotched with chocolate. Av. size, 2.58 x 1.82 (65.5 x 46.2).

General Range.—Temperate North America, migrating south to Guatemala, Cuba and Jamaica. Breeds in the South Atlantic States and in the interior through most of its North American range.

Range in Ohio.—Formerly common migrant, and perhaps summer resident; now rare migrant.

A bird of such extraordinary appearance as the Sickle-bill would attract attention anywhere, but especially in our section of the country, where it is no longer common. Its peculiarly developed mandibles are well calculated to reap a harvest not only of slugs and aquatic molecules, but of insects and berries as well. Tho once not uncommon throughout the United States, the bird is ill-adapted to the devious ways of our shot-gun civilization, and is now to be found in any considerable numbers only on the prairies and barren foot-hills of the West. Whenever found on the Atlantic Coast, the Curlew frequents marshes or sandy shores much after the fashion of its kind, but in the West it is by no means attached to the vicinity of water.

During migration the Curlews move in small wedge-shaped companies with leisurely flapping wings. A quavering whistle from the leader proclaims their progress, and a ready hunter may call them down to decoys by a skillful imitation of their cry. If successfully diverted from their course, the birds approach the ground with a majestic slow sail and present an easy mark. If allowed to alight they touch the ground lightly, with wings up-raised, and the sun reveals the beauty of the delicate cinnamon linings of the wings before these members are gently folded.

Elsewhere upon the ground the Curlews are unapproachable, except during the breeding season. So sympathetic are they, however, and so devoted to their travelling companions, that if one falls a victim to the gun, the gunner holds the others at his mercy. With clamorous solicitude they gather about their fallen comrade and urge him to leave the fatal spot, receiving, of course, their own death wounds as reward for their fidelity.

When the nest is discovered, a mere depression anywhere in the open prairie, the parent birds throw caution to the winds and hover about the intruder in an agony of apprehension, filling the air with quavering plaints, and sometimes interposing their bodies to shield the young. At such times the long mandibles, moving through a wide arc with every utterance, appear nothing short of ridiculous, but it does not occur to one to laugh at the time,—the bird is so terribly in earnest.

No. 250.

HUDSONIAN CURLEW.

A. O. U. No. 265. *Numenius hudsonicus* Lath.

Synonym.—JACK CURLEW.

Description.—*Adult*: Prevailing color pale buffy; crown with two broad dusky stripes parted by buffy; a dusky line through eye; throat whitish, immaculate; sides of head, neck all around, and fore-breast finely streaked with dusky; the streaks, widening into bars on sides and flanks; back, etc., dusky, varied with buffy and ochraceous-buff; tone lightening on wings, due to preponderance of latter color; tail distinctly barred, ochraceous-gray and dusky; quills less distinctly barred with same tints, except on outer webs of outer primaries, which are plain dusky; axillars and lining of wing clear ochraceous-buff, heavily barred with fuscous; bill decurved, blackish above, lightening at base of mandible; feet and legs black. Length 16.50-18.00 (419.1-457.2); wing 9.75 (247.6); tail 3.50 (88.9); bill 3.50 (88.9); tarsus 2.28 (57.9).

Recognition Marks.—Crow size; mottled and streaked, dusky and pale buff; rather stout, decurved bill of moderate length; broad, blackish crown-stripes.

Nesting.—Does not breed in Ohio. *Eggs*, 3-4, pale olive, spotted with dull brown. Av. size, 2.27 x 1.57 (57.7 x 38.9).

General Range.—All of North and South America, including the West Indies; breeds in the high north, and winters chiefly south of the United States.

Range in Ohio.—Very rare spring and fall migrant.

UNLIKE the preceding species, which is almost wholly confined to temperate North America both summer and winter, this less conspicuous Curlew spends its summers in the far north, and its winters in remotest Pata-

gonia. This is the least known of our three recorded species of *Numenius*, and its occurrence is nowhere counted upon by the sporting fraternity in the state. The chief routes of migration follow pretty closely the east and west coasts of our country, and the Mississippi Valley, but in the two latter regions its numbers have very materially decreased.

No. 251.

ESKIMO CURLEW.

A. O. U. No. 266. *Numenius borealis* (Forst.).

Synonym.—DOUGH-BIRD.

Description.—*Adult*: Similar to preceding species, but smaller and coloration heavier; the ground color warm buff; the back blackish; streaking of neck, etc., broader; the barring of under parts much more extensive, only middle of belly and crissum immaculate; crown-stripes and line through eye not so distinct; primaries not barred or mottled on inner webs,—fuscous throughout; axillars deep ochraceous-buff, barred and dusky; bill smaller every way. Length 12.00-14.50 (304.8-368.3); wing 8.30 (210.8); tail 3.10 (78.7); bill 2.30 (58.4); tarsus 1.65 (41.9).

Recognition Marks.—Little Hawk size; buffy and blackish, finely streaked and mottled; small, decurved bill. An upland bird.

Nesting.—Does not breed in Ohio. *Eggs*, 3-4, "pale olive greenish, olive, or olive brownish, distinctly spotted, chiefly on larger end, with deep or dark brown." Av. size, 2.04 x 1.43 (51.8 x 36.3). (Ridgw.).

General Range.—Eastern North America, breeding in the Arctic regions, and migrating south throughout South America.

Range in Ohio.—Rare migrant.

GREATER abundance atones for the smaller size of this Curlew in regions where it is regularly found at all. It moves up the Mississippi Valley in immense flocks, deploying over the prairies, and keeping company with such birds as the Bartramian Sandpiper and the Golden Plover. When feeding in extensive companies the birds keep up a conversational chattering, which Coues likens to that of a flock of Blackbirds.

In Labrador, where these Curlews have been most closely studied, they are found to feed largely upon the cow berry (*Empetrum nigrum*), so greedily, in fact that their plumage often becomes stained with its purple juice. Upon this fare, together with a generous allowance of sea food in the shape of snails, the birds become excessively fat, and are in prime condition for the unreluctant gunner in August or early September.

According to Nelson, small flocks of this Curlew will follow a single Hudsonian Curlew all over the country, in the same manner in which smaller species of snipe will follow one of a larger kind, and he supposes it is on account of their dependance on the superior watchfulness of the larger bird, and the degree of protection thereby secured.

No. 252.

AMERICAN AVOCET.

A. O. U. No. 225. *Recurvirostra americana* Gmel.

Description.—*Adult in summer*: Head and neck all around and breast light cinnamon rufous; wing-quills and coverts (except inner secondaries and tips of greater coverts) deep brownish black; back, inner scapulars, and inner quills, lighter brownish black; remaining plumage, including outer scapulars, rump, tail, etc., white;—tail tinged with ashy; bill long, slightly recurved toward tip, black; legs dull blue. *Adult in winter*: Similar but without cinnamon-rufous,—white instead; tinged with pale bluish ash, especially on the top of head and hind-neck. *Immature*: Like winter adult, but hind neck touched with rufous; scapulars, etc., buffy-tipped, or mottled; wing-quills tipped with whitish. Length 16.00-19.00 (406.4-482.6); wing 8.82 (224.); tail 3.90 (99.1); bill 3.72 (94.5); tarsus 3.66 (93.).

Recognition Marks.—Crow size; long legs; black and white and cinnamon-rufous in masses; long, slightly upturned bill.

Nesting.—Not known to breed in Ohio. *Nest*, a mere depression in the earth, in or near a swamp. *Eggs*, 3-4, pale olive or olive-buff, heavily and rather uniformly spotted with chocolate-brown and black. Av. size, 1.95 × 1.35 (49.5 × 34.3).

General Range.—Temperate North America north to the Saskatchewan and Great Slave Lake; in winter south to Guatemala and the West Indies. Rare in the eastern United States.

Range in Ohio.—Very rare visitor. Two or three records. One specimen secured at St. Mary's Reservoir, Nov. 10, 1882, by Mr. Clemens Utter, now in O. S. U. collection.

TO a novice the compound curve of a scythe handle might seem an awkward thing, but a little practice upon stubborn grass will justify its precise lines of beauty. Similarly, the long upturned beak of the Avocet appears quite outlandish until one learns how perfectly it is adapted to its peculiar task. Since the bird frequents brackish and muddy pools, as well as the margins of streams, it does not depend largely upon eyesight in securing its prey, but thrusts its bill under water until its convexity strikes the bottom. Then, guided by this "heel," the bill is swayed rapidly from side to side with

a scythe-like motion, and the bird keeps up a sort of dabbling, as it tests the various objects of food encountered.

The Avocet is a bold wader, pushing out into the pond breast deep. If it gets beyond its depth it is nowise concerned, for it swims readily, and can dive, also, if necessary.

There are several records of its occurrence in our state since Wheaton's time, but it can be regarded as little more than a casual visitor. It was formerly not uncommon in the Middle States, and Audubon based his splendid description upon a pair observed at Vincennes, Indiana.

No. 253.

BLACK-NECKED STILT.

A. O. U. No. 226. *Himantopus mexicanus* (Müll.).

Description.—*Adult male*: A white spot above eye and another below eye nearly meeting behind; forehead, region about the base of bill, rump, upper tail-coverts, and entire under parts, except lining of wing, white; tail ashy gray above; remaining plumage glossy, greenish black; bill black; eye red; legs and feet lake red (drying yellow). *Adult female*: Similar to adult male, but back and scapulars margined with buffy or whitish; the black of head and neck finely marked with the same. Length 15.00 (381.); wing 9.00 (228.6); tail 3.00 (76.2); bill 2.60 (66.); tarsus 4.20 (106.7); exposed portion of tibia 3.25 (82.6).

Recognition Marks.—Little Hawk to Crow size; black and white in masses strongly contrasting, and very long legs distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, a depression in the ground, lined with grasses. *Eggs*, 3 or 4, dark ochraceous or olive-drab, heavily spotted and blotched with chocolate-brown and blackish. Av. size, 1.75 x 1.25 (44.5 x 31.8).

General Range.—Temperate North America from northern United States southward to the West Indies, northern Brazil, and Peru. Rare in eastern United States except in Florida.

Range in Ohio.—Rare summer visitor. May perhaps have bred.

IN spite of its slender proportions, the Stilt is a graceful bird, pleasing because of its dexterity in handling such an unusual equipment. In feeding the long legs are bent sharply backward at the middle joint (the heel), and the long neck and bill make inspection of the ground or the surface of the water easy and rapid. Unlike the Avocet, the Stilt is afraid to go beyond its depth, and makes a poor show at swimming.

Besides those said by Mr. Winslow to have been taken on Lake Erie, there is only one record of this bird's occurrence in the state,—by Mr. Charles Dury of Cincinnati—and it has not been reported from Ontario, or from any of the neighboring states save (doubtfully) Michigan.

No. 254.

RED PHALAROPE.

A. O. U. No. 222. *Crymophilus fulviciarius* (Linn.).

Description.—*Adult female in summer:* Entire under parts, except lining of wing, purplish chestnut; axillars and lining of wing white; region about base of bill, forehead, and crown blackish plumbeous; sides of head white nearly meeting on nape; upper parts, centrally, black with buffy and ochraceous edgings, mostly in lengthwise patterns; wings plumbeous-gray; quills fuscous with white shafts; the greater coverts tipped with white, the inner primaries white-edged basally, and the secondaries extensively white at base; upper tail-coverts black, with ochraceous tips centrally, plain cinnamon laterally. *Adult male:* Very similar, but smaller; white on sides of head reduced; crown and hind-neck streaked with ochraceous. *Adults in winter:* Quite different. Upper parts ashy, nearly uniform; wings darker ash or blackish, but with white bar as before; head and neck all around, and entire under parts pure white, or ashy-washed on sides only; a dusky space about eye, and another on hind head. *Immature:* Above dull black, with ochraceous edgings; wing-coverts, rump, and upper tail-coverts plumbeous,—the first bordered by buffy and the last by ochraceous; remainder of head and neck and lower parts white, tinged with brownish buff on the throat and chest (Ridgw.). Length about 8.00 (203.2); wing 5.35 (135.9); tail 2.15 (54.6); bill .86 (21.8); tarsus .80 (20.3); middle toe and claw .93 (23.6).

Recognition Marks.—Chewink size; lobate feet (in common with other Phalaropes); broadened sulcate bill distinctive.

Nesting.—Does not breed in Ohio. "*Nest, a slight hollow in the ground, lined with a few bits of moss and grasses*" (Chapman). *Eggs, 3 or 4, pale drab or olivaceous, spotted and blotched with dark browns. Av. size. 1.25 x .88 (31.8 x 22.4).*

General Range.—Northern parts of northern hemisphere, breeding from Maine northward and in Arctic regions, and migrating south in winter; in the United States south to the Middle States, Ohio Valley and Cape St. Lucas; chiefly maritime.

Range in Ohio.—Rare migrant. No Ohio specimens known to exist in collections.

THE occurrence of this species is recorded by Dr. Wheaton upon the sole authority of Mr. R. K. Winslow of Cleveland, by whom he was informed that two or three specimens had been taken on Lake Erie. The statement is a little vague, but the casual appearance of this bird has also been reported from Kentucky (Audubon), Indiana (Butler), Michigan (Cook), and Ontario (McIlwraith); so that Mr. Winslow's identification may very well be a correct one.

The Red Phalarope is more exclusively maritime than the other members of this group, being found in the breeding season only along the coasts of

the northern seas. It obtains its food, also, far from shore, gleaning for the purpose the tiny crustaceans which infest the surface waters of the ocean. The whalers affirm that the appearance of the Phalarope is a good index of the near presence of the large cetaceans, since it delights in the same sort of sea-forage as that upon which the whales subsist. The dainty birds are expert swimmers, and are the most nearly at home in the water of any of the Limicolæ.

No. 255.

NORTHERN PHALAROPE.

A. O. U. No. 223. *Phalaropus lobatus* (Linn.).

Description.—*Adult female in summer*: Above and on sides of breast and sides (narrowly) slaty with a drab cast, blackish on back and scapulars, and edged here with light ochraceous; wings darker slaty gray, the greater coverts broadly tipped with white, forming a transverse bar; sides of neck and lower throat rufous, —pure on sides, more or less mixed with slaty gray on throat; chin and under parts entirely white; bill black; feet yellow, lobate and semipalmate, most extensively between middle and outer toes. *Adult male*: Similar, slightly smaller, and of duller coloration, save that the black of back is more decided, and the ochraceous edgings of upper parts deeper. *Adults in winter*: Without rufous; more extensively white; crown and auriculars (connecting below eye with a similar spot in front of eye) and median stripe of hind-neck dusky gray; the rest white; remaining upper parts blackish (centrally) and dusky gray, extensively edged and striped with cream-buff and white; wing-bar as before; sides of breast grayish clouded. *Immature*: Similar to adult in winter, but with more black above; breast usually tinged with buffy or brownish. Length 7.50 (190.5); wing 4.53 (115.1); tail 2.02 (51.3); bill .85 (21.6); tarsus .77 (19.6); middle toe and claw .80 (20.3).

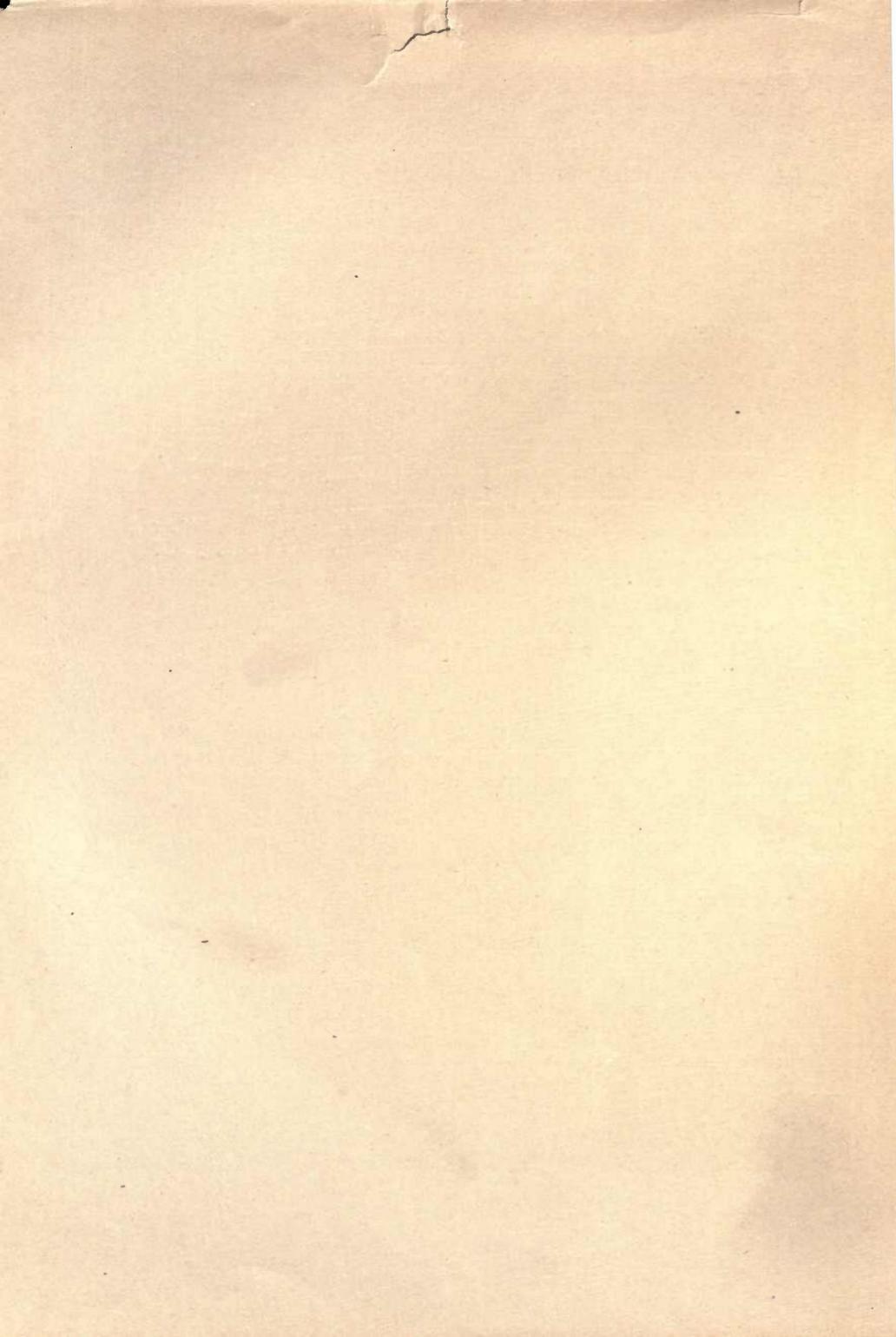
Recognition Marks.—Chewink size; slaty gray, rufous, and white of head and neck in spring plumage; slender, black bill, less than one inch long, *with scalloped feet* distinctive in any plumage.

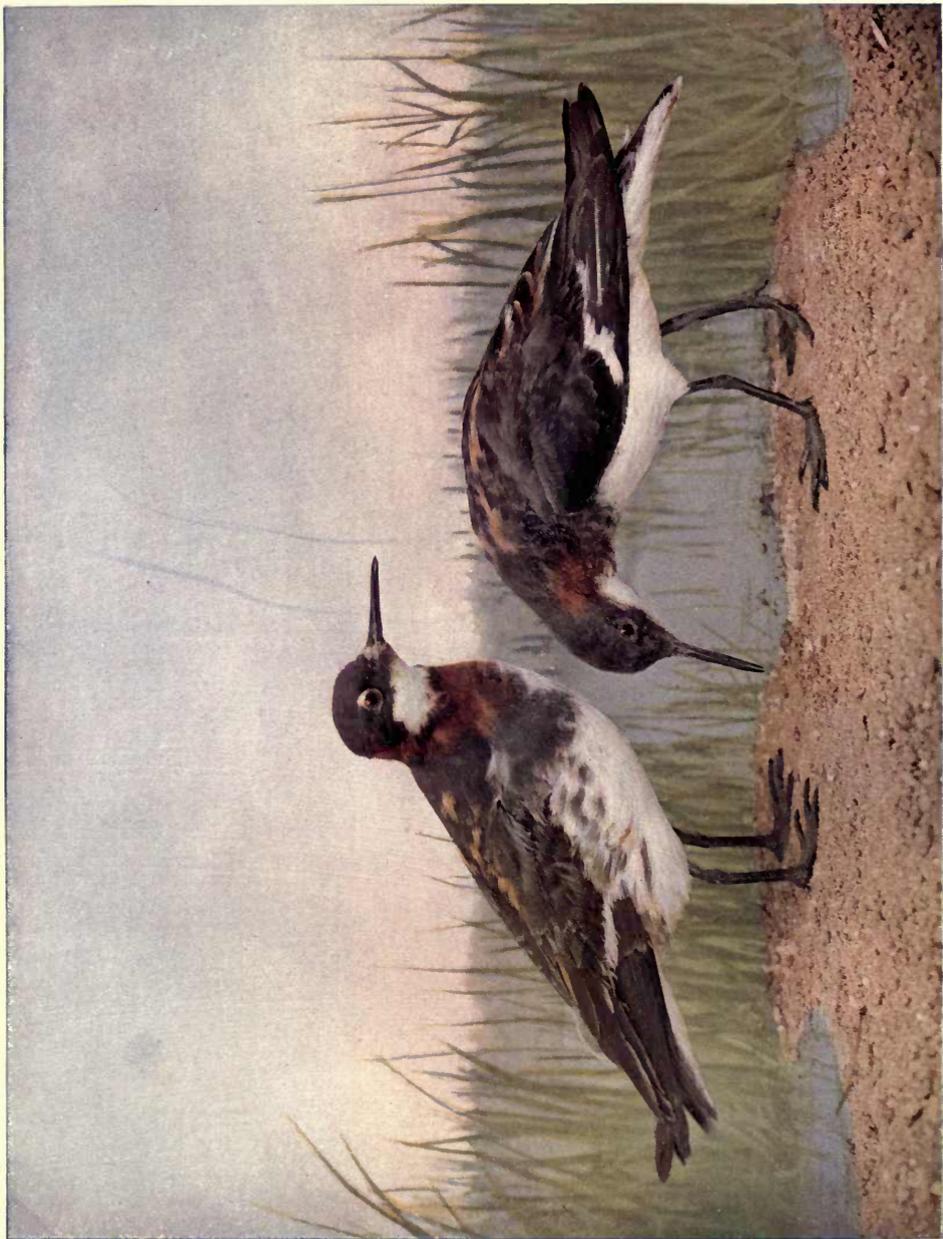
Nesting.—Does not breed in Ohio. *Nest*, a slight depression in the ground, lined with moss and grass. *Eggs*, 3 or 4, olive-buff or pale olive-gray, heavily speckled, spotted or blotched with dark brown. Av. size, 1.19 x .83 (30.2 x 21.1).

General Range.—Northern portions of northern hemisphere, breeding in Arctic latitudes; south in winter to the tropics.

Range in Ohio.—Rare spring and fall migrant. A half dozen or more records.

NOTHING can exceed the exquisite grace of this delicate bird as it moves about, not at the water's edge, like other waders which it so closely resembles in appearance, but upon the surface of a pool or even on the bosom of the deep. As it swims it nods with every stroke, turns at a thought to





PHOTOGRAPH BY W. H. HARRIS, U.S. GEOLOGICAL SURVEY
SPECIES PREPARED BY THE U.S. GEOLOGICAL SURVEY

NORTHERN PHALAROPE

Phalaropus lobatus

♂, Life-size

snatch some floating sea-morsel, or flits away with as little provocation as that afforded the bursting bubble of foam, its late brother.

It is, however, in its domestic and social relations that this dainty creature attracts our wondering interest. Phalarope society has evidently reached a high stage of evolution, for in it the ladies not only have more ordinary rights than they know what to do with, but they even do the courting. How, Mr. E. W. Nelson shall tell us:

"As the season comes on when the flames of love mount high, the dull-colored male moves about the pool, apparently heedless of the surrounding fair ones. Such stoical indifference appears too much for the feelings of some of the fair ones to bear. A female coyly glides close to him and bows her head in pretty submissiveness, but he turns away, pecks at a bit of food, and moves off. She follows, and he quickens his speed, but in vain; he is her choice, and she proudly arches her neck, and in mazy circles passes and repasses before the harassed bachelor. He turns his breast first to one side and then to the other, as though to escape, but there is his gentle wooer ever pressing her suit before him. Frequently he takes flight to another part of the pool, all to no purpose. If with affected indifference he tries to feed, she swims along side by side, almost touching him, and at intervals rises on wing above him, and, poised a foot or two over his back, makes a half a dozen sharp wing strokes, producing a series of sharp whistling noises, in rapid succession."

When at last this modern Adonis becomes a Benedict, he not only shares in the labor of constructing a nest, but is actually set to the task of incubating the eggs, while his care-free spouse enjoys club life at a neighboring pool. We are glad, on the whole, that these perilous precedents are set in the wilds of Alaska, rather than here in the Buckeye State.

No. 256.

WILSON PHALAROPE.

A. O. U. No. 224. *Steganopus tricolor* Vieill.

Description.—*Adult female in summer:* Top of head and upper back pearl-gray; nape and upper tail-coverts white; a white supraloral line; a black stripe starting from before eye passes backward, becoming broader on side of neck, changes to deep chestnut on hind-neck, and continuing backward over shoulder, is interrupted and dispersed over the scapulars; rump and wings grayish brown, the latter with a very little white edging; tail still lighter gray-brown; a reddish brown wash across throat and chest and sometimes sides, as tho the coloring matter of the hind-neck had "run"; remaining under parts pure white; bill black; feet brownish. *Adult male in summer:* Similar to female but smaller,

lacking the pearl-gray and chestnut,—slaty-gray and rusty instead; general appearance of back and wings brownish gray, with blackish centers of feathers and some ochraceous edging; black on sides of head and neck almost obsolete; rufous tinge of chest very slight. *Adults in winter*: "Above plain ash-gray; upper tail-coverts, superciliary stripe, and lower parts white, the chest and sides of breast shaded with pale gray. *Young*: Top of head, back, and scapulars dusky blackish, the feathers distinctly bordered with buff; wing-coverts also bordered with pale buff or whitish; upper tail-coverts, superciliary stripe, and lower parts white, the neck tinged with buff" (Ridgw.). Adult female length 9.70 (246.4); wing 5.23 (132.8); tail 2.03 (51.6); bill 1.40 (35.6); tarsus 1.38 (35.1); middle toe and claw 1.20 (30.5). Adult male length 8.75 (222.3); wing 4.69 (119.1); tail 2.17 (55.1); bill 1.25 (31.8); tarsus 1.26 (32.); middle toe and claw 1.06 (26.9).

Recognition Marks.—Chewink to Robin size; pearl-gray, chestnut, and black in masses distinctive in adult female. This bird superficially resembles the preceding in some of its plumage; its larger size and especially longer bill, and larger feet, as well as really different color pattern, should be noted.

Nesting.—Not definitely known to breed in Ohio. *Nest*, a shallow depression in the earth lined sparingly with grass, or not. *Eggs*, 3 or 4, grayish or brownish buff, speckled, spotted, and blotched with dark brown.

General Range.—Temperate North America, chiefly the interior, breeding from northern Illinois and Utah northward to the Saskatchewan region; south in winter to Brazil and Patagonia.

Range in Ohio.—"Not common spring and fall migrant." (Wheaton). Possibly breeds in northwestern Ohio.

IN view of Mr. E. W. Nelson's remarkable discoveries in northeastern Illinois, Dr. Wheaton was led to surmise that these birds might be found breeding in at least the northwestern corner of our state. Nothing has, however, come to light to sustain this conjecture, and it is pretty generally understood that we are too far east to expect such a favor.

Altho it has been frequently copied, I cannot forbear to reproduce in this connection a portion of Mr. Nelson's unrivalled description:¹

"During the first two weeks of May, the exact date varying with the season, this beautiful bird first makes its appearance in northeastern Illinois. Its arrival is heralded by a few females, which arrive first, and are found singly about the marshes. At this time the females have a peculiar harsh note, which I have heard but a few times, and only from solitary individuals, before the arrival of the main body.

"A few days later small flocks, embracing both sexes, may be found along the borders of grassy pools, or lying at midday on the sunny side of some warm knoll in the marsh. As the breeding season approaches they become more restless, flying from place to place, and finally separate into small parties of two or three pairs. About the middle of May their love-making commences, and is at first indicated by the increasing solicitude they show for each other's welfare. The appearance of a person in their vicinity at this

¹ Bull. Nutt. Orn. Club, II., 1877; pp. 38-43.

time is the signal for all the birds near to come circling about, though not within easy gun-shot. By a careful approach one may now and then find a small party swimming about in some secluded pool.

"The charming grace of movement exhibited at such times, combined with their tasteful elegance of attire, form one of the most pleasing sights one could witness as they swim buoyantly from side to side of the pool, gracefully nodding their heads, now pausing for an instant to arrange a feather or to daintily gather some fragment of food, and now floating idly about, wafted by the slight breeze, which at intervals ripples the surface of the water. A more common, but scarcely less pleasing sight, is presented when, unconscious of observation, they walk sedately along the border of the water, never departing from their usual grace of movement. Their food is generally found in such places, where the receding water furnishes a bountiful supply. The only demonstrations I have observed during the pairing time consist of a kind of solemn bowing of the head and body; but sometimes, with the head lowered and thrust forward, they will run back and forth in front of the object of their regard, or again, a pair may be seen to salute each other by alternately bowing or lowering their heads; but their courtship is characterized by a lack of the rivalry and vehemence exhibited by birds.

"The nesting is usually in some thin tuft of grass on a level spot, but often in an open place concealed by a few straggling blades of small carices. The male scratches a shallow depression in the soft earth, which is usually lined with a thin layer of fragments of old grass blades, upon which the eggs, numbering from three to four, are deposited about the last of May or first of June."

No. 257.

POMARINE JAEGER.

A. O. U. No. 36. *Stercorarius pomarinus* (Temm.).

Synonyms.—POMATORHINE JAEGER; POMARINE SKUA; GULL-HUNTER.

Description.—*Adult, light phase:* Top and sides of head, upper parts (except back of neck, and crissum brownish slate or dusky; rest of head and neck and under parts white; the region of ear-coverts and around on hind-neck tinged with straw-yellow; central feathers of tail projecting three or four inches beyond most of the others, their breadth sustained to the abruptly rounded tip; bill horn-color tipped with black; feet and legs black. *Adult, dark phase:* Entirely brownish slate, except sides of hind and hind-neck often tinged with straw-yellow as before. *Young, light phase:* Upper parts brownish dusky, the feathers of the back sparingly tipped with whitish or dull buffy; those of the rump and upper tail-coverts spotted and barred with the same; head, neck and under parts dull buffy, every-

where barred with dusky. *Young, dark phase*: Entirely brownish slate, the under parts more or less barred with whitish or dull buffy. In the young of the year the central tail-feathers do not project beyond the others more than half an inch or such a matter. The light and dark phases described above do not represent actual dichromatism, such as exists in the case of the Screech Owl, but only extremes of coloration within which every intermediate condition may be found. The commonest form is one in which the chest is sparingly, and the sides of the breast, hind-neck, and sides are heavily barred with dusky and buffy. Length 22.00 (558.8); wing 13.75 (349.3); tail 8.25 (209.6); bill 1.55 (39.4); tarsus 2.10 (53.3).

Recognition Marks.—Large Crow size (size of Ring-billed Gull); uniform dusky or dusky-and-white coloration; central tail-feathers elongated, *not* tapering; bill rather small for size, sharply hooked, and provided with thin "cere". Predatory in habit; oftenest found harassing other birds of the same family.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, of grass and moss. *Eggs*, 2-3, pale olive-green or deep olive-drab, sparingly spotted with slate-color and two shades of umber, chiefly at the larger end, where they become confluent (Brewer). Av. size, 2.30 x 1.67 (58.4 x 42.4).

General Range.—Seas and inland waters of northern portions of the northern hemisphere; south in winter to Africa, Australia, and probably South America.

Range in Ohio.—Quite rare. Since the record made at Cleveland, Ohio, Feb. 7, 1881 by H. E. Chubb, two more specimens have been reported from Lake Erie.

FISHER-FOLK, because of their exposed situation, have ever been at the mercy of pirates and free-booters; and the same rule obtains in the bird-world as among men. The Bald Eagle stands ready to relieve the Fish Hawk of his hardly-won prey, and the Man-o'-War Bird sweeps the southern main on a perpetual quest for fish-laden Gannets and Pelicans. In the northern waters the gentlemen of the sea are the Jaegers—hunters. Here upon wings marvellously swift and cruelly graceful, the little corsairs hurry to and fro to observe which of their fisher-friends has made a catch, and to make instant requisition for it. It may even be a Glaucous Gull that has just swallowed a herring, and if detected in the act the Gull moves off screaming, while the little bully darts at him repeatedly, and prods and browbeats him until he is glad to disgorge for the sake of being rid of his persecutor.

The Kittiwake Gull is the acknowledged thrall of this rapacious viking, and if his eggs or callow young escape the devouring beak, it is only that they may henceforth share the spoils of the sea with their merciless master. The Jaegers follow their victims southward in the fall, and like them, are upon rare occasion seen about the Great Lakes.

In default of unlawful plunder, the birds gather refuse and offal cast up on shore, or occasionally share the bounty of the ship's galley. In some sections also they are said to capture small birds and quadrupeds on shore.

No. 258.

PARASITIC JAEGER.

A. O. U. No. 37. *Stercorarius parasiticus* (Linn.).**Synonym.**—RICHARDSON'S JAEGER.

Description.—Quite similar to preceding species in general appearance of plumage and in color phases; smaller; the central pair of tail-feathers elongated about three inches beyond others and *tapering*; light phase not so dark as in *S. pomarinus*,—fuscous rather than dusky, throughout, except top of head and lores, which are blackish. Length 15.00-21.00 (381.-533.4), av. 17. (431.8); wing 13.00 (330.2); tail 7.50 (190.5); bill 1.20 (30.5); tarsus 1.80 (45.7).

Recognition Marks.—Crow size, but appearing larger; marks much as in preceding species, but *central pair of tail-feathers sharply pointed*, produced about three inches beyond others (not nearly so long as in the Long-tailed Jaeger,—*S. longicaudus*).

Nesting.—Does not breed in Ohio. *Nest*, on the ground. *Eggs*, 2 or 3, "olive-drab to green-gray and brown, marked with several shades of chocolate brown, and an obscure stone-gray, distributed over the entire egg." Av. size, 2.30 x 1.65 (58.4 x 41.9).

General Range.—Northern part of northern hemisphere, southward in winter to South Africa and South America. Breeds in high northern districts, and winters from New York and California southward to Brazil.

Range in Ohio.—Rare on Lake Erie in late autumn. Several records.

LYNDS JONES in his Catalog of the Birds of Ohio, records six instances, with a possible seventh, of the capture of this bird within the state, all since the publication of Wheaton's list of 1880. Of these six specimens, four were taken at Sandusky, one near Lorain, and one "at the close of a week of very stormy weather," near Lebanon.

In habit the Parasitic Jaeger does not differ materially from the preceding species, but recent records would go to show that it is rather more likely to occur inland.

No. 259.

KITTIWAKE.

A. O. U. No. 40. *Rissa tridactyla* (Linn.).**Synonym.**—KITTIWAKE GULL.

Description.—*Adult in summer*: General plumage pure white, the mantle¹ deep pearl-gray; five outer primaries with terminal portion black, the breadth of black area on first primary about three inches, decreasing to .85 in the fifth; the

¹ A term used to designate the plumage of the back, scapulars, and wings collectively, and which is often differently colored from that of the remaining parts in birds of this family.

first black on the outer web also; the fourth and fifth narrowly tipped with white; bill light yellow; legs and feet blackish; the hind toe rudimentary (a mere knob) or absent; iris reddish brown; eye-ring red. *Adult in winter*: Similar, but sides of head and hind-neck overlaid with dark gray or plumbeous, and with plumbeous slate around eye, most sharply in front. *Immature*: "Similar to winter adults, but with the back of the neck, lesser wing-coverts, and part of the tertials black; tail, except outer pair of feathers, with a black band at the tip; four outer primaries black, except the inner half or more of their inner webs; fifth and sixth tipped with black and white; bill black; feet yellowish" (Chapman). Length 16.00-17.50 (406.4-444.5); wing 12.00 (304.8); tail 4.80 (121.9); bill 1.35 (34.3); tarsus 1.35 (34.3).

Recognition Marks.—Crow size; it differs from the Ring-billed Gull (*Larus delawarensis*), with which alone it is likely to be confused in this state, by the deeper blue of mantle, much less extensive black of primaries, and absence of black band on bill.

Nesting.—Does not breed in Ohio. *Nest*, on ledges of rocky cliffs, of grass, moss, and seaweed. *Eggs*, 3 to 4, yellowish or olive-buff, pale greenish gray, etc., with spots and blotches of chocolate-brown and obscure lilac. Av. size, 2.26 x 1.61 (57.4 x 40.9).

General Range.—Arctic regions, south in eastern North America in winter to the Great Lakes and the Middle States.

Range in Ohio.—Rare winter visitor on Lake Erie.—fide Mr. Winslow.

THIS gentle Gull exists in countless numbers in the high northern latitudes, but it no longer ventures farther south than Long Island Sound or the coast of New Jersey. There are several records of its appearance in winter upon the Great Lakes, all by competent observers; but, so far as I have been able to learn, no specimens exist of birds taken anywhere nearer than Lake Ontario. Inasmuch, however, as Mr. McLlwraith pronounces the species "very common around the west end of Lake Ontario," there is little reason to call in question the record of Mr. R. K. Winslow¹ of three specimens seen in Cleveland harbor many years ago.

No. 260.

ICELAND GULL.

A. O. U. No. 43. *Larus leucopterus* Faber.

Synonym.—WHITE-WINGED GULL.

Description.—*Adult in summer*: Mantle pale pearl-gray (just off white); remaining plumage pure white; bill chrome yellow, with vermilion spot on lower mandible at angle; legs and feet pale yellowish or flesh-color; iris yellow. *Adult in winter*: Similar, but head and neck lightly streaked with pale brownish gray. *Young*: White below, tinged with pale brownish gray; elsewhere streaked, barred

¹ Vide, Wheaton p. 550.; Jones' Catalog p. 224.

or mottled with brownish gray,—most heavily on crown, back, wings and tail; bill flesh-colored tipped with black. *Second year young* are nearly pure white, but show the black-tipped bill. Length 24.00-26.00 (609.6-660.4); wing 16.00 (406.4); tail 6.00 (152.4); bill 1.65 (41.9); depth of bill at angle of gonyx .62 (15.8); tarsus 2.20 (55.9). Dimensions quite variable. Specimens apparently intermediate between this species and *L. glaucus* are to be found.

Recognition Marks.—Brant size; general white appearance; pale pearl-gray of mantle scarcely distinguishable at a distance; primaries without black.

Nesting.—Does not breed in Ohio. *Nest*, on sandy beaches or rocky cliffs. *Eggs*, 2 or 3, yellowish or brownish buff, marked irregularly with chocolate. *Av.* size, 2.80 x 1.90 (71.1 x 48.3).

General Range.—Arctic regions, south in winter in North America to Massachusetts and the Great Lakes, occasionally much further south.

Range in Ohio.—“Rare winter visitor on Lake Erie” (Wheaton, fide Mr. Winslow). A specimen taken at Lorain, Dec. 22, 1888, by Mr. L. M. McCormick, now rests in Oberlin College Museum.

THE term Iceland, as applied to this Gull, must be understood in a general sense. It accurately describes the sort of country which the bird frequents, the ice-bound shores of the high Arctics, but is not restricted to the political division which bears the name “Island,” or Iceland. Indeed, an old observer, Faber, expressly states that this Gull does not breed in Iceland, where it is abundant in winter, but proceeds in spring much further north.

The White-winged Gull has in a measure escaped particular scrutiny, because of its close resemblance to the better known Burgomaster, or Glaucous Gull, of which it is, in fact, a smaller edition. In point of size, also, it is comparable to the Herring Gull, and on this account, birds seen on Lake Erie have doubtless occasionally been allowed to pass for the more familiar species. Like the Burgomaster again the smaller bird is something of a tyrant, quarrelsome and predacious. Not content with catching its own cod-fry, it seizes impudently upon the catch of the more successful and better-mannered birds, and wrests it away in triumph.

No. 261.

GREAT BLACK-BACKED GULL.

A. O. U. No. 47. *Larus marinus* Linn.

Synonyms.—SADDLE-BACK; COFFIN-CARRIER.

Description.—*Adult*: Mantle dark slate (black only by courtesy); the primaries mostly black and tipped (the first broadly) with white¹; the secondaries and tertiaries broadly tipped with white; entire remaining plumage white; bill

¹ There exists in each of the outer primaries evidence of a former (or at least suggested) second terminal white band in the shape of a whitish area on the shaft, even amidst the contrasting black of the webbing. On this supposition, the terminal area of the first primary corresponds with the (indicated) sub-terminal bands of the remaining quills.

chrome yellow, a bright vermilion spot near tip of lower mandible; legs and feet flesh-color; iris lemon yellow; eye-lids bright red. *Adult in winter*: Similar, but head and neck streaked with grayish. *Immature*: Head and hind-neck whitish, streaked with light gray; mantle brownish dusky, its feathers marked and margined by pale buffy; wing-quills blackish, narrowly tipped with whitish; tail dusky with a narrow subterminal band of gray; remaining plumage white, more or less spotted and streaked or mottled below with brownish gray. Length 28.00-31.00 (711.2-787.4); wing 18.50 (469.9); tail 7.00 (177.8); bill 2.50 (63.5); depth at angle of gonyx 1.00 (25.4); tarsus 3.10 (78.7).

Recognition Marks.—Eagle size; large size with black mantle distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, of grasses, seaweed, etc. *Eggs*, 2-3, grayish olive, yellowish brown, etc., spotted and blotched with chocolate and with lilac shell-marks. Av. size, 3.05 × 2.15 (77.5 × 54.6).

General Range.—Coasts of the North Atlantic; south in winter to Long Island and Italy.

Range in Ohio.—Occasional winter visitor. Records from Cleveland, Cincinnati, and the lower Scioto.

OUR recent knowledge of this, the largest of American Gulls, rests so far as this state is concerned, upon the statement of Mr. E. W. Vickers, who reports "one found dead floating among ice in the creek near Canton";¹ and that of Rev. W. F. Henninger, who says:² "On March 21, 1900, while out duck-hunting I observed one specimen of this superb species. While lying in a thicket on a small peninsula surrounded by the two arms of the Scioto River and a slough on three sides, a large Gull alighted on the gravelly bank of the river opposite me. Tho the bird was out of gun-shot range, with my field glass I could easily tell the species. After staying there for about three minutes, it raised its wing and soared majestically away, reminding one of the Eagle's flight."

The Great Black-backed Gull is a common species of the North Atlantic. It is said to prey boldly upon the eggs and young of other species, and to attack the smaller mammals of the Labrador Coast, altho its principal diet is fish. It is at all times exceedingly wary, and in fair weather delights to soar at great heights.

No. 262.

HERRING GULL.

A. O. U. No. 51. *Larus argentatus* Brünn.

Description.—*Adult in summer*: Mantle deep pearl-gray; primaries extensively blackish, the first quill white basally on inner web, and with a large, rounded, subterminal white spot on inner web, and narrowly tipped, or not, with white; the basal white of succeeding quills gradually encroaching on the black, but always

¹ Jones, Cat. Birds of Ohio, p. 29.

² The Wilson Bulletin, No. 40, Sept., 1902, p. 79.



HERRING GULL
Larus argentatus
1/8 Life-size

REPRODUCED FROM THE LIFE-SIZE SERIES, ILLUSTRATED BY A. W. WOODS, PHOENIX, ARIZONA. RIGHTS RESERVED BY AND FOR THE NATIONAL GEOGRAPHIC SOCIETY.

more extensive on the inner web until the seventh quill is reached, in which the black is nearly obsolete; the second to sixth quills tipped with white¹; remaining plumage entirely white; bill bright chrome with a vermilion spot near angle, and sometimes black traces; feet and legs pale flesh-color. *Adult in winter*: Similar but head and neck streaked with brownish gray; bill duller. *Immature*: Brownish gray, nearly uniform, or finely mottled with grayish white below; streaked with the same on head and neck; upper parts irregularly varied,—brownish gray of two shades with dull white and grayish buff; wing-quills and tail brownish dusky, the former unmarked, the latter mottled laterally with dull buffy or whitish; bill blackish, paling basally. Between this and the adult in high plumage every intergradation appears. Length 22.00-26.00 (558.8-660.4); av. of nine O. S. U. specimens: wing 17.60 (447.); tail 6.72 (170.7); bill 2.14 (54.4); tarsus 2.68 (68.1).

Recognition Marks.—Brant size; mantle rather light bluish gray; black wing-tips (with white spots on adult) distinctive for bird of this size.

Nest, on the ground, or (under the influence of persecution) in trees, of grasses, moss, and seaweed. *Eggs*, 2 or 3, yellowish and olive-brown to dull bluish white, spotted, blotched, and sometimes scrawled, with chocolate-brown and umber. Av. size, 2.85 x 2.00 (72.4 x 50.8).

General Range.—The northern portion of the northern hemisphere; in North America breeding from Maine, northern New York, the Great Lakes, and Minnesota, northward; south in winter to Cuba and Lower California.

Range in Ohio.—Common in spring and fall on Lake Erie, where some regularly winter and a few possibly breed; not uncommon migrant along water-courses and about the reservoirs in the interior.

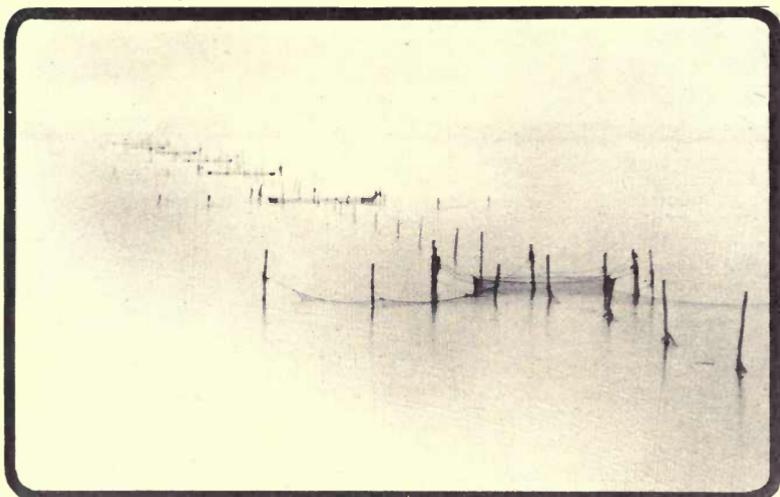
OHIO does not furnish these graceful intermediaries of water and sky a permanent home, but they are easily the commonest birds of their group in spring and autumn. Their breeding ground lies further north, in the Georgian Bay and beyond, and only a few score of the immature birds in the gray plumage, "over young to marry yet," lounge about upon our Lake Erie Islands during the summer. Similarly the majority of individuals pass further south during the actual freeze-up of mid-winter, proceeding apparently to the seacoast of the Carolinas, but a few hardy individuals, old birds this time, linger about the rifts in the Lake Erie ice, or follow the ice-cutters at their task, while a few more winter on the Ohio River. The southern birds, however, are among the first to put a favorable construction on the early promises of spring. I saw one passing up the Scioto River on the 13th day of February last year—and by the middle of March they are again common on the Lake.

The Herring Gull is both a fisherman and a scavenger. In the former capacity he takes up his station on a post in one of those picturesque lines of piling which support the fish traps, stretching in endless profusion along the south shore of Lake Erie. Here the Gull helps himself freely to the small fry, which are driven to the top by the struggles of their big brothers in the toils. When the season is dull or the nets are empty, the bird wings

¹ The American birds were for many years described as a subspecies, *L. a. smithsonianus* Coues, on the ground of more extensive subterminal black of primaries and larger size; but the characters alleged were found to be inconstant, and the name abandoned (Cf. Auk, July, 1902.).

slowly off-shore and snatches fish or refuse from the surface of the water, or patrols the beach in search of offal. Immense companies follow the fishing tugs as they visit the traps, and these are fed generously by the fishermen, who are glad to be rid of certain sorts of fish.

The voracity of these toilers of the deep is astonishing. Langille tells of one which picked up the newly-skinned body of a Common Tern, thrown on the water, and gulped it down at a mouthful, scarcely retarding its flight. Nothing that contains the faintest elements of nutriment comes amiss. Gulls will follow steamboats from port to port or even across the ocean, subsisting



Taken in Lorain County.

FISH TRAPS IN LAKE ERIE.

Photo by the Author.

entirely upon the refuse which comes from the cook's galley. It is a perennial source of delight to the traveller to feed these winged pensioners by hand, tossing them bits of bread or meat to test their skill in "catching on the fly," or to note the wild scrimmage which follows when a score of birds spy the same morsel.

In following steamers, as at other times, Gulls obtain their rest by sleeping on the water, and it is said that in crossing the ocean they spend the night thus, and overhaul their patron ship early the following morning.

But perhaps the most interesting phase of Gull nature is seen in their manner of flight. They are past masters of that humanly unattainable craft,



RING-BILLED GULL
Larus delawarensis
♂ 3/4 Life-size

and the nature of their aerial progress quite baffles, at times, human comprehension. I once studied a very tame flock of Gulls, of an allied species, as it followed a Puget Sound steamer; and I am able to testify that the birds moved about upon the air at will, and for indefinite periods of time, without the slightest semblance of wing-beats. At one time when we were facing a stiffish breeze and making headway against it at the rate of about fifteen miles an hour, the Gulls were resting in midair above the afterdeck. One bird in particular, remained for about five minutes within four feet of my outstretched hand. Without a visible sign of propulsion the bird moved forward upon the air as by some inner compulsion, at an approximate rate of thirty miles per hour; and when the Gull shifted its position, it was to pass forward and upward rapidly *without wing-beats*. By what magical resolution of forces the birds are thus able to make the wind contradict itself one may not even conjecture.

The sagacity of this bird is further shown in the fact that it has largely abandoned its costly habit of nesting upon the ground, the prey of every pirate, and has taken to building in the tops of evergreen trees. To be sure the tree-tops along the coast of Maine, Nova Scotia, and Labrador are not quite inaccessible, but fishermen no longer gather gulls' eggs by the bushel basketful as once they did.

No. 263.

RING-BILLED GULL.

A. O. U. No. 54. *Larus delawarensis* Ord.

Description.—*Adult in summer*: Mantle deep pearl-gray (typical "Gull-blue", much as in *L. argentatus*); primaries mostly black, the color decreasing in extent inwardly, and disappearing with the sixth quill, owing to encroachment of basal white (or pearl-gray); the first quill with subterminal white spot, the third to sixth tipped with white (that of the third to fifth often lacking in worn plumages); remaining plumage white; bill greenish yellow, crossed at angle by a broad and clearly defined black band; feet light yellow or greenish; eyelids vermilion; iris pale yellow. *Adult in winter*: Similar, but head and hind-neck streaked with dusky gray. *Young*: Above, brownish dusky or fuscous, edged and varied by whitish and grayish buff; outer primaries plain blackish, the shorter ones extensively bluish gray, and tipped with white; tail light bluish gray more or less mottled with blackish; crossed by a broad subterminal black band and tipped with white; below white, the sides spotted with brownish gray; bill blackish, paling basally. Length 18.00-20.00 (457.2-508.); wing 14.50 (368.3); tail 6.00 (152.4); bill 1.60 (40.6); tarsus 2.20 (55.9).

Recognition Marks.—Crow size, but appearing larger; mantle "gull-blue"; primaries blackish; black band across bill at angle distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, of grasses, moss, etc., on the ground. *Eggs*, 2 or 3, dull bluish white to brown or clay-color, spotted distinctly with deep brown and obscurely with lilac. Av. size, 2.40 x 1.70 (61. x 43.2).

General Range.—North America at large; south in winter to Cuba and Mexico.

Range in Ohio.—Perhaps not uncommon migrant on Lake Erie; possibly former summer resident; rare migrant elsewhere.

NOTHING has been added to our knowledge of this Gull since Dr. Wheaton's time, and indeed its numbers must have greatly decreased since he wrote of it: "Common spring and fall migrant, perhaps formerly summer resident on Lake Erie." No recent list makes mention of it, and Professor Jones has never seen it along the Lake Erie shore.

The Ring-billed Gull has much the habit and appearance of the Herring Gull, but when the two species appear together, it may be readily distinguished by its smaller size. While its principal diet consists of fish and the flotsam of the tide, it is said occasionally to vary its fare by feeding upon insects and land molluscs. Dr. J. A. Allen reports that during a visit to Salt Lake Valley, where they breed abundantly, he saw them repeatedly subsisting upon grasshoppers, of which they caught enormous numbers; not as might be supposed, by walking about upon the ground, but by hawking at them in the air.

No. 264.

BONAPARTE GULL.

A. O. U. No. 60. *Larus philadelphia* (Ord).

Description.—*Adult in summer*: Head including throat blackish slate, mantle pearl-gray; primaries extensively white, the first six with black terminal portions, the third to sixth, in addition, narrowly tipped with white; the first quill with outer web and tip black, the second and third altogether white with black tips, the fourth white on outer web, pearl-gray on inner web, with touch of white at extremity of terminal black, effecting the transition to the nearly uniform basal pearl-gray of inner primaries; remaining plumage pure white, the under parts more or less flushed with pale rosy; bill jet black; feet and legs rich orange-red; feathering of eyelids white posteriorly, the skin carmine. *Adult in winter*: Without the black hood; a dab of slate behind the ear and another before the eye, with a plumbeous suffusion of occiput instead; rosy tint of under parts wanting; bill lighter basally, and feet pale flesh-color. *Immature*: Like adult in winter, but plumbeous suffusion of hind-head more extensive and tinged with brownish; the pearl-gray of mantle less distinct and varied by brownish gray; lesser wing-coverts and inner tertials mostly brownish gray; primaries mostly blackish on exposed outer webs, where the adult is white, and white on outer



BONAPARTE GULL

Larus philadelphia

♂ 0 life-size

webs of inner primaries, where adult is pearl-gray; the inner primaries narrowly tipped with white as before; tail crossed terminally, or nearly so, with a broad band of blackish or brownish dusky; bill still lighter, but blackish toward tip. Length 12.00-14.00 (304.8-355.6); av. of six Columbus specimens: wing 10.30 (261.6); tail 3.60 (91.4); bill 1.12 (28.5); tarsus 1.41 (35.8).

Recognition Marks.—Little Hawk size; size of Common Tern (*Sterna hirundo*); head black, in breeding plumage; bill black or mostly black; mantle gull-blue; primaries mostly white and gull-blue, tipped with black, and very narrowly with white. Distinguished from the Franklin Gull (*L. franklinii*) by its small size, its black bill, and different pattern of primaries. To be told at a glance from the Terns by its shorter, squarish tail, and in breeding plumage, by head being blackish all around.

Nesting.—Does not breed in Ohio. Nest, of sticks lined with grass, etc., placed four to twenty feet high in bushes, trees, or on stumps. Eggs, 3, rarely 4, greenish olive or brown, with smallish spots or blotches of amber and lilac, chiefly about larger end. Av. size, 1.95 × 1.35 (49.5 × 34.3).

General Range.—Whole of North America, breeding mostly north of the United States. Not yet recorded from south of the United States, though reported from the Bermudas.

Range in Ohio.—"Common spring and fall migrant on Lake Erie; less common and rather irregular in the interior of the state" (Wheaton).

THIS pretty little gull claims the whole of North America for its home, altho it nests only from the northern United States northward, apparently not quite to the Arctic Circle, or at least not to the Arctic Ocean. This species is often common near streams and other bodies of water large enough to furnish their food of fish. The three acres of the Oberlin water-works reservoir, well within the corporation, is visited each spring by flocks which refresh themselves upon the half-domesticated fish found there. I have often seen flocks of twenty or more birds passing over plowed fields during the vernal migration, sometimes even stooping to snatch some toothsome grub from the freshly turned furrow, but oftener sweeping past in that lithe, graceful flight so characteristic of this small gull. To the farm boy, shut in away from any body of water larger than an ice-pond, where no ocean birds could ever be expected to wander, the appearance of this bird, bearing the wide freedom of the ocean in his every movement, is truly a revelation. It sends the blood coursing hotly through his veins until the impulse to get away into the broader activities of life, to see something of the wide land known to this winged creature, cannot be put down. Such is the bird's mission to one and another.

The flight of Bonaparte's Gull is grace itself. He progresses easily by continued leisurely wing strokes, each stroke seeming to throw the light body upward slightly as though it were but a feather's weight. In flight the watchful eye is turned hither and thither in quest of some food morsel, which may be a luckless fish venturing too near the surface of the water, to be

snatched up by a deft turn of the wings and a sudden stroke of the keen bill. Floating refuse is gathered from the surface of the water while the bird is resting.

It is only in the breeding plumage that this gull wears the slaty plumbeous hood. It seems doubtful if the birds attain the hood until the second or third year, when they are fully adult. But in any plumage there are some dark spots about the head.

The nest is placed in elevated situations, in bushes, trees, or on high stumps, and is composed of sticks and grasses, with a lining of finer vegetable material. The eggs are three or four in number, and have the grayish-brown to greenish brown color, spotted and blotched with browns, which is characteristic of this group of gulls.

LYNDS JONES.

No. 265.

SABINE GULL.

A. O. U. No. 62. *Xema sabinii* (Sab.).

Synonym.—FORK-TAILED GULL.

Description.—*Adult in summer:* Head and upper neck all around plumbeous-slate, bordered posteriorly with black; mantle dark pearl-gray; primaries black, the inner ones changing to white marked with plumbeous, the first five with white tips and white on the inner webs; remaining plumage, including slightly forked tail, white; bill black, tipped with yellow; legs and feet black; eyelids orange. *Adult in winter:* Similar, but slaty color of head and neck reduced to ear-coverts and nuchal region; rest of head and neck white. *Young:* Above, including most of head and mantle, grayish brown, each feather darkening distally and tipped with buffy; tail white with a broad blackish subterminal band; forehead, lores, upper tail-coverts, and under parts white. Emargination of tail about 1.25; that of young not much less (Coues). Length 13.00-14.00 (330.2-355.6); wing 10.50 (266.7); tail 4.75 (120.6); bill 1.00 (25.4); tarsus 1.25 (31.8).

Recognition Marks.—Little Hawk size. Black of wings and slate of head and neck more extensive than in *L. philadelphia*; bill black with yellow tip; tail slightly forked; the black ring bordering the slate of head and upper neck all around is also distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, sand beaches, moss beds, etc. *Eggs*, 2-5, light or dark olive, obscurely spotted or blotched with brown. Av. size, 1.75 x 1.20 (44.5 x 30.5).

General Range.—Arctic regions; in North America south in winter to New York, the Great Lakes, and Great Salt Lake; casual in Kansas, Bermuda, and on coast of Peru.

Range in Ohio.—"Accidental in winter on Lake Erie" (Wheaton). A single specimen said to have been taken at Cleveland by Mr. Winslow, but no longer extant.

THE Fork-tailed Gull is a bird of the Arctic regions, and our knowledge of it is obtained almost entirely from the journals of Arctic travellers, dating from that of the discoverer, Colonel Edward Sabine, in 1818. In common with several other birds of this group, its under parts are suffused with a delicate pinkish or rosy blush during the actual breeding season. One observer, Captain McFarlane, describes a male taken in July as "deeply tinged with crimson."

The species retires from the higher latitudes with the approach of winter, but only a scattering few come as far south as our northern borders. The bird's claim to recognition here rests solely upon Mr. Winslow's record of an immature bird, taken in Cleveland harbor many years since, and for a time preserved in the museum of the Cleveland Medical College.

No. 266.

GULL-BILLED TERN.

A. O. U. No. 63. *Gelochelidon nilotica* (Hasselq.).

Synonym.—MARSH TERN.

Description.—*Adult in summer:* Top of head and nape black; remaining upper parts light pearl-gray; primaries silver-gray over dusky, blackening on tips but with ivory-white shafts, and with some white on inner edge of inner web, the amount of white decreasing inwardly; tail slightly forked; remaining plumage white; bill rather short and stout, with conspicuous angle, and culmen decidedly curving toward tip,—hence like a Gull's—black; feet blackish. *Adult in winter:* Similar, but head and neck white with dusky gray spots before eye and on ear-coverts and grayish suffusion on hind-neck or with traces of black cap in variable proportions. *Young:* Like adult in winter, but upper parts with a buffy wash, and feathers of crown, hind neck, back, and scapulars, streaked or spotted with brownish dusky. Length 13.00-15.00 (330.2-381.); wing 12.00 (304.8); tail 4.50-5.50 (114.3-139.7), forked 1.25-1.75 (31.8-44.5); bill 1.35 (34.3); depth of bill at base .48 (12.2); tarsus 1.30 (33.).

Recognition Marks.—Size of Common Tern; bill shorter and stouter, *black*; wings longer.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground, usually of low islands, in sand or short grass, scantily lined, or not, with grass, etc. "*Eggs*, 3-5, rather uniform buffy white, with numerous and obscure chocolate markings, 1.80 x 1.30 (45.7 x 33.)" (Chapman).

General Range.—Nearly cosmopolitan; in North America chiefly along the Atlantic and Gulf Coasts of the United States, breeding north to southern New

Jersey, and wandering casually to Long Island and Massachusetts; in winter both coasts of Mexico and Central America and south to Brazil.

Range in Ohio.—"Rare visitor in the vicinity of Cleveland" (Wheaton, fide Winslow).

WHILE there are no positive records of the occurrence of this species within the limits of our state beyond the reported statement of a gentleman in Cleveland, who in the early days had unusual success in discovering rare species, this word together with the knowledge of its recent breeding on the St. Clair Flats, in Ontario, would seem to entitle the bird to a place in our avifauna.

The Gull-billed Tern enjoys the distinction of being the most nearly cosmopolitan of its race, being reported indifferently from Denmark, Patagonia, and Australia. It must be a welcome visitor everywhere, because in addition to its strong, graceful flight, always pleasing to the eye, it has set for itself the task of ridding the seacoasts and lowland marshes of insect pests. It is believed rarely to eat fish, which is the common diet of Tern folk. Audubon reported that, in all the stomachs he ever examined, he never found anything but insects; while Wilson tells of one bird which had crammed its stomach full of black spiders, which it had obtained in the marshes about Cape May.

No. 267.

CASPIAN TERN.

A. O. U. No. 64. *Sterna caspia* Pallas.

Description.—*Adult in spring:* Top of head and nape uniform lustrous black; upper parts pearl-gray, whitening somewhat on rump and posteriorly; wing-quills not especially different, the silvery gray nearly concealing dusky on exposed portions; inner webs plain grayish dusky; tail slightly forked for about one-fifth of its length,—folded wings considerably exceeding; remaining plumage white; bill very stout,—the depth at base being nearly equal to one-third the length of culmen,—bright coral-red slightly tinged with dusky at tip; feet and legs black. *Adult after the breeding season and in winter:* Similar, but black of crown speckled or streaked with dull white. *Young:* Black cap of adult represented by spotting on top of head (on grayish white ground), increasing in density until nearly uniform on hind head; above dull pearl gray, sparingly spotted or barred with brownish dusky; primaries darker than in adult; tail pearl-gray with dusky subterminal spots, or indistinct barring; remaining plumage white, bill orange-red; feet brownish black. Length 20.00-23.00 (508-584.2); wing 16.25 (412.8); tail 5.00-6.50 (127-165.1); bill 2.75 (69.9); depth of bill at base .80-.95 (20.3-24.1); tarsus 1.80 (45.7).

Recognition Marks.—Largest of the Terns; of conventional coloration, black-capped, and mantled with pearly blue; bill large, stout, bright red; the stouter bill presents the chief field difference from the Royal Tern (*S. maxima*), but this bird is somewhat larger every way, and lacks the definite white on the inner web of primaries.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground, usually in sand. *Eggs*, 2 or 3, buffy white or greenish buff, spotted and blotched with chocolate and lilac. Av. size, 2.70 x 1.80 (68.6 x 45.7).

General Range.—Nearly cosmopolitan; in North America breeding southward to Virginia, Lake Michigan, Texas, Nevada, and California.

Range in Ohio.—Rare migrant or straggler. Records from Sandusky, Ross Lake, Licking Reservoir, Ohio River, etc.

LITTLE can be said of the occurrence of this Tern within our borders, except that it is a bird of striking appearance, easily recognizable because of its large size. There is no reason yet to suppose that it breeds in Ohio, the few specimens seen having been, in all probability, *en route* to or from more northern breeding grounds. The Caspian Tern has a wide distribution both in this country and in the Old World; but it is reckoned common only in restricted and widely separated localities.

Of the nesting of this species, Mr. Ridgway says:¹ "Unlike most other Terns, and conspicuously unlike the almost equally large Royal Tern (*S. maxima*), the Caspian Tern appears to breed in isolated pairs instead of large colonies, its nest being usually far removed from that of any other bird, and consisting merely of a shallow depression scooped in the sand, in which its two eggs are laid, with little if any lining, though a few grass, or sedge, blades or other vegetable substances are sometimes added. It is very bold in defense of its eggs or young, darting impetuously at the intruder, uttering meanwhile hoarse barking or snarling cries."

No. 268.

FORSTER TERN.

A. O. U. No. 69. *Sterna forsteri* Nutt.

Description.—*Adult in summer*: Top of head and nape sooty black; rump white, shading on upper tail-coverts, remaining upper parts pale pearl-gray; wing-quills dusky, heavily overlaid to tips with silvery gray, with ivory shafts, and with white (decreasing inwardly) on the inner webs; tail the color of back, deeply forked, the outer pair of feathers much elongated and tapering, reaching beyond the tip of the folded wing; *their inner webs of a much darker gray than the narrow outer webs*; under parts white; bill dull orange basally, the terminal half, or at least third, blackish; feet orange-red. *Adult in winter*: Similar, but black cap wanting, represented only by dusky stripe on side of head, and by grayish tinge

¹ The Ornithology of Illinois, Vol. II. p. 242.

of hind head and nape; tail shorter and not so deeply forked, the outer feathers broader and less tapering; bill duller, the dusky tip scarcely contrasting; feet dull reddish. *Young*: Like adult in winter, but upper parts varied by, or overlaid with, light brownish; sides of head more or less tinged with the same shade; tail shorter, its feathers becoming dusky terminally. Length 14.00-15.00 (355.6-381.); wing 10.00 (254.); tail, the central feathers, 2.80 (71.1); the lateral pair 6.75-7.00 (171.5-179.1); bill 1.57 (39.9); depth at base .40 (10.2); tarsus .98 (24.9).

Recognition Marks.—Size of Common Tern; distinguishable from it by subtle but sure marks; the bill is stouter and more extensively black on terminal portion; the upper tail-coverts are gray; the tail more deeply forked, and the outer pair of feathers dark on *inner* webs.

Nesting.—Not known to breed in Ohio. *Nest*, in colonies, on the ground of low islands, in grass, etc., lined with grasses, flags, and the like. *Eggs*, 2 or 3, rarely 4, dull white, greenish white, olive-gray, ashy-brown, etc., spotted and blotched with blackish brown or amber, and with shell-marks of stone gray and lavender. Av. size, 1.80 x 1.25 (45.7 x 31.8).

General Range.—North America generally, breeding from Manitoba southward to Virginia, Illinois, Texas, and California; in winter southward to Brazil.

Range in Ohio.—Apparently a rare migrant; not yet recorded from Lake Erie. Probably more frequent than records would show, but often passing for succeeding species.

COMPARATIVELY little is known of this Tern as an Ohio bird, its great similarity to the next species serving to shield it from the gaze of any but the initiated. Dr. Wheaton's acquaintance with it was limited to a single specimen taken near Columbus in the fall of 1861 or 1862. Six specimens were taken by Messrs. Dury and Freeman near Cincinnati, May 4th, 1879. Examples are more numerous from Indiana, but no breeding records are reported by Professor Butler. Several observers, however, report it as breeding on the St. Clair Flats, in Michigan, and Mr. E. W. Nelson gives a full account of its nesting about the shallow lakes of northeastern Illinois. It would seem, therefore, that the species must regularly cross our state, even tho its principal ranges lie further to the east and west.

According to Mr. Ridgway, who found the species abundant at Cobb's Island, Virginia, the Forster Tern is preeminently a marsh tern. Its nests are usually placed on masses of floating vegetation or broken-down reeds. At Cobb's Island they were found in close proximity to those of the Black-headed Gull (*Larus atricilla*) while in Illinois the chosen nesting site brings the bird into frequent comparison with the Black Tern.

This species can be readily distinguished from the Common Tern, which it closely resembles when on the wing, by its grating monotonous note, which recalls one frequently uttered by the Loggerhead Shrike.



COMMON TERN
Sterna hirundo
1/2 Life-size

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No. 269.

COMMON TERN.

A. O. U. No. 70. *Sterna hirundo* (Linn.).**Synonyms.**—WILSON'S TERN; SEA SWALLOW; "BASS-GULL."

Description.—*Adult, in summer:* Top of head and nape uniform deep black; back and wings pearl-gray; wing-quills dusky, more or less silvered over, except on outer web of outer primary; the inner half of inner webs sharply white, but not reaching tip; rump, upper tail-coverts and tail (basally and centrally), white; tail deeply forked, the outer pair of feathers elongated and narrowly tapering but not, or barely, reaching the tips of closed wings; their outer webs abruptly grayish-dusky, contrasting with white of inner webs; the succeeding pair also similarly marked; under parts white, tinged, except on throat and crissum, with pale pearl-gray or lavender-gray; bill vermilion-red, blackening on tip; feet orange-vermilion. *Adult, in winter:* Similar, but black cap imperfect, restricted to hinder portion of head, or merely indicated (?); under parts pure white; bill and feet not so bright. *Young* (in August): Forehead and lores ashy-gray; region about eyes, hind crown, and nape leaden black; back, scapulars and wings pearl-gray, each feather tipped with brownish-buff and mingled subterminally with brownish-dusky, forming a strong bar; upper tail-coverts and tail lighter pearl-gray, the central feathers of the latter tipped with buffy; the anterior lesser wing-coverts bluish-dusky, with narrow ashy edgings; edge of wing and quills plumbeous-gray; under parts, white. Length, 13.00-16.00 (330.2-406.4); wing 10.25 (260.4); tail 5.00-6.00 (127-152.4); bill 1.38 (35.1); tarsus .80 (20.3).

Recognition Marks.—Little Hawk or Crow size; black cap; pearl-gray mantle; deeply forked tail; extensive white, or pale grayish plumage; graceful flight; lake-(rarely river-) haunting habits. Known from the preceding species by outer pair of tail-feathers dark on the *outer* instead of the inner web; under-parts not pure white in breeding season. Distinguishable at a glance from *S. dougalli* by bill extensively vermilion.

Nests, in colonies, on beach shingle, or in grass of low islands, lined or not, with bits of bark, grass, etc. *Eggs,* 2 or 3, rarely 4, very variable in ground color—light bluish or greenish, dull white, stone, light-olive, etc., spotted and blotched heavily, or not, with blackish-brown or chocolate, and with lavender shell-marks. Av. size, 1.60 x 1.20 (40.6 x 30.5).

General Range.—Greater part of the northern hemisphere and Africa. In North America, chiefly east of the Plains, breeding from the Arctic Coast, somewhat irregularly, to Florida, Texas, and Arizona, and wintering northward to Virginia. Also coast of Lower California. Appallingly reduced in numbers on Atlantic seaboard within recent years.

Range in Ohio.—Spring and fall migrant, not common except on Lake Erie, where it breeds sparingly.

WHAT a piece of work is a Tern! how gentle in instinct! how untrammelled in discursion! in form and moving how elegant and admirable! in action how like the swallow! in innocence how like the dove! the beauty of the air! the paragon of sea-birds!

When Lake Erie is gnawing sulkily at the tough clay of some headland, and the north wind comes straight out of that murky band which veils distant Canada, midway between the hazy blue of the upper air and the criss-crossed opal of the water, the eye searches eagerly for some living thing which shall break the oppression of the blue vastness and afford a sense of companionship with something nearer of kin. Nor does one look in vain, for in the offing



Photo by Walter C. Metz.

THE BREEDING HAUNTS OF THE TERN.

hovers a fleet of white-winged birds, weaving in the air by their incessant plyings a fantastic fisher-net wherein many a luckless minnow is enmeshed. Soon a lone straggler from out the company drifts nearer, parting the air with graceful wing; now hovering critically over a suspected fish, like some huge mosquito with his down-turned beak; now dropping with a splash beneath the wave, or making a nimble catch just below the surface without wetting his plumage. Ever and anon the muffled undertone of the waves is pierced by a weird, frangible cry, as of delicate china or thin ice being broken. The sight of a flock of Terns winning their daily fare on lake or ocean is one to arouse the enthusiasm of the most sluggish observer, and without these dainty birds the sea is orphaned, hopelessly bereft.

The Common Tern is to be seen in many parts of the state during migrations. It can be studied to advantage, however, only in its breeding haunts, and these, so far as known, are no longer to be found within our limits. The Lake Erie birds breed principally, perhaps exclusively, upon a group of islands just over the line in Canadian waters. But let me pause here,—before interest

or possible cupidity shall be aroused by a brief account of a visit to these breeding grounds—to utter a solemn warning against the molestation of these lingering colonies. The birds have been driven from our shores and islands by the wanton cruelty of pseudo-sportsmen, and by the combined activities of “egg-hogs,” scientific and commercial. The Terns have taken a last stand upon a group of islets known as “the Hen and Chickens,” with an outlying colony upon North Harbor Island. Here their isolation has afforded them a measure of relief, but the time is rapidly approaching when intelligent and cordial *protection* alone can save them from extinction. Farmers of Isle St. George and Middle Bass! What are a few Terns’ eggs, even a bushel basket full, in comparison with the matchless grace of the living bird, which delights your eye and that of ten thousand others each season? Spare the Terns! Sportsmen! if you be such, you will spare the Terns. It is not marksmanship, but a vulgar itch for blood-letting, which will tempt a man to such tame assassination as the death of a Tern affords. Plume-hunters! Ah! it is a wonder that men of your ilk have not bereft us of these birds long since, as they have for a thousand leagues along the Atlantic Coast. You sin in ignorance, we know, for your eye is dulled to beauty, and pity is ever invisible in the presence of dollars. The fault is with your masters, the miserable men milliners who order the slaughter of innocents by the wholesale, to supply “the trade.” And the fault is even more with those silly women who shamelessly flaunt your mummied atrocities in the faces of honest men. We reserve our indignation—against the more enlightened.

During the summer of 1901, August 7-8, I visited the Canadian breeding haunts of the Tern in company with Professor Lynds Jones and his eight-year-old son, Leo. Leaving Isle St. George at an early hour, in a row-boat, we headed for the nearest colony, that on Chicken Island. As we approached over the shimmering, sunlit waters, inquiring Terns passed the time of day with us. Their interest unquestionably centered upon the island ahead, and many were bearing small white fish in their beaks. As we drew near enough to the islet to mark a few circling birds the entire population took sudden flight to the number of two thousand,—a magnificent spectacle.

Chicken Island is a small mass of morainic gravel, an acre or so in extent, and resting on a concealed foundation of limestone. The gravel has been re-sorted by the waves, which have left the material in terraces substantially continuous throughout the circumference. A small fisherman’s hut and two willow trees redeem the island from absolute desolation, while the birds are to be found everywhere, even invading the deserted hut itself. The odor of guano was tolerably strong, but the sight of the restless, hovering multitude of “Sea Swallows” made anything endurable.

Altho the season was far advanced, nests and eggs abounded, making it appear probable that the colony had been plundered earlier in the summer,

or else had been overwhelmed in time of storm. We made the circuit of the island like excited children, only taking care not to crush the eggs beneath our feet. The birds themselves were tireless in voice and wing, and would not be lulled to any sense of security, while the strangers were on their premises. The convenient, terrace-like arrangement of the ground invited the taking of a census, which showed the following results: empty nests, 200; nests with eggs, 232; nests with young only, 25; loose squabs, 26. Only those empty nests were



A TYPICAL BIT OF NESTING GROUND.

Photo by Walter C. Metz.

counted which showed some signs of architecture,—perhaps half the number.

Some of the nests were quite respectable affairs, neat cushions of bark and feathers and trash; but for the most part eggs were dumped just anywhere on the gravel. Two nests were found in the corners of dry-goods boxes, which had been cast up on the reef. One of these contained a waif cork by way of a nest-egg. A large percentage of the eggs found were evidently deserted or dried-up specimens. Others were on the very point of hatching; while a few were perfectly fresh.

A similar visit and inventory was made at "the Chick," a half-acre reef

hard by; and at the Little Chicken, where our illustrations were secured the following season by Mr. Walter C. Metz, of Newark. The latter island boasts a clump of willows (*Salix amygdaloides* Andr.) and is half covered with a growth of Smart-weed (*Polygonum lapathifolium* L., *P. persicaria* L., etc.). Here the soft bedded masses of drift-wood proved to be the favorite nesting site, altho gravel was not forsworn. At one spot I dug my toe into an empty nest for a base and "fetching a compass" with my hands, touched eggs or young in fifteen nests. Something like a thousand Terns claimed this reef for a home, while two hundred or more of visiting Black Terns, having done with

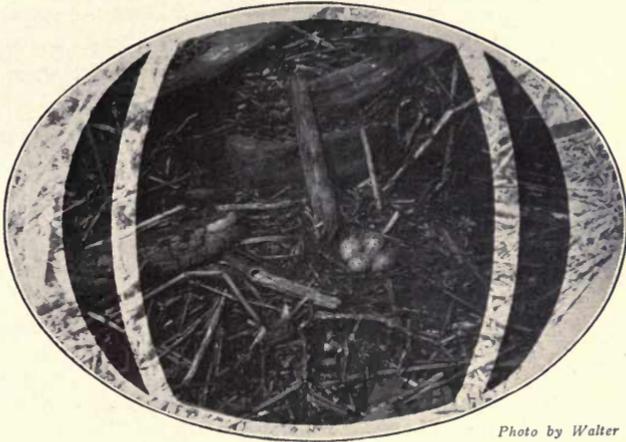


Photo by Walter C. Metz.

NEST AND EGGS OF THE COMMON TERN.

domestic cares long since, mingled idly in the circling throng, or betook themselves to undisturbed areas.

The breeze of early morning having died down, the sun beat upon the rocks unmercifully, cooking, I fear, many a tender baby Tern. We got away as hastily as might be, not to interfere with the ministrations of the anxious parents. Never have I felt so like a bold, bad buccaneer as upon this occasion, and I warrant the Tern population heaved a sigh of relief when Bluebeard and Blackbeard with Captain Kid(d) finally pushed from shore.

More romantic still, was the scene at North Harbor Island, some six miles further to the northwest. Here a limestone knob, two acres in extent, rough-chiseled by the ancient glacier, supports a skirting fringe of gravel on one side, and a considerable grove of hackberry trees in the center. As we drew near this charming spot, toward sunset, the island with its attendant halo of timorous Terns, rose out of the western sea like the fabled Atlantis in miniature, an

enchanted isle of wondrous beauty. As the barque of the gentle pirates grated on the strand, a thousand Purple Martins rose in a cloud from a dead hackberry tree and whirled about in wild confusion until better counsels prevailed and they returned to slumber.

Not so the Terns. Nothing could completely lull their fears; altho, when we made our bivouac in the woods, the mothers did settle to their eggs. The Terns were everywhere. We found them nesting indifferently upon the polished limestone of the western shore, the naked gravels of the south end, the grassy paddocks of the upland, or within the dim and grassless shade of the interior. The Terns owned the island and their clamor was really unceasing. A few were crying all night long, and the noise at four o'clock in the morning was nothing short of an uproar. We estimated that something like fifteen hundred Terns found harbor upon the island, but we did not attempt a nest-and-egg census.

Lest some suspicion enter the mind of the reader that we too were bent on plunder, let me hasten to confess that we helped ourselves freely to *addled* eggs and secured two fresh sets for the museum of Oberlin College. No firearms were discharged during the entire trip. If others will practice similar moderation, we bid them Godspeed.

Arrived again at Isle St. George, on the evening of the 8th, in time for camp, the Terns still followed us, in spirit if not in body. Altho we had put six watery miles between ourselves and the nearest Terns, on several occasions this evening and the following morning, I heard them screaming. I say *heard*, not vividly recalled alone, for the impression made by their outcries upon the subliminal mind was so intense that it reproduced the full chorus, by means of an auditive hallucination, which lasted several seconds at a time. For an amateur psychologist it was an interesting experience, in no wise diminished, apparently, by the fact that the normal consciousness became instantly aware of the trick that was being played upon it, and alert to observe the process.

No. 270.

ROSEATE TERN.

A. O. U. No. 72. *Sterna dougalli* Montag.

Description.—*Adult in summer*: Top of head and nape deep lustrous black; mantle pearl-gray, delicately shaded to lighter on cervix, longer scapulars, etc.; wings much as in preceding species, but lighter—extensively white on exposed portions of inner web; rump and upper coverts and tail pale pearly, the latter deeply forked, the outer feathers narrowly tapering, reaching two or three inches beyond tips of closed wing,—unicolored; four succeeding pairs graduated for about half the distance of entire furcation; under parts white, beautifully tinted

with rosy-pink; bill black, reddening at base; feet and legs bright red. *Adult in winter*: Similar, but cap retreating from forehead, leaving it white, and indistinctly blending with grayish and white on fore-crown. *Young*: "Pileum and nape pale buffy grayish, finely mottled or sprinkled with darker, and streaked especially on crown, with dusky; orbital and auricular regions dusky blackish; remainder of head, and entire lower parts white, the nape and sometimes side of breast finely mottled with buffy gray; pale pearl-gray of back and scapulars overlaid by pale buff, irregularly mottled with dusky, each feather with a submarginal dusky V-shaped mark; bill brownish dusky; feet dusky (in dried skins)" (Ridgway). Length 14.00-17.00 (355.6-431.8); wing 9.40 (238.8); tail 7.50 (190.5), forked for 4.50 (114.3); bill 1.40 (35.6); tarsus .80 (20.3).

Recognition Marks.—Size of Common Tern or slightly larger, and with much the same appearance; tail longer and more deeply forked; bill principally black; under parts delicate rose pink in breeding season.

Nesting.—Not known to breed in Ohio. *Nest* and *Eggs* much as in preceding species. Av. size, 1.66 x 1.21 (42.2 x 30.8) (Ridgway).

General Range.—Temperate and tropical regions; north on the Atlantic Coast of North America to Massachusetts, and casually to Maine and Nova Scotia.

Range in Ohio.—Rare migrant or accidental visitor; two or three records.

THIS exquisite of the ocean is represented in the interior by only a few wandering individuals; and, altho nearly cosmopolitan in its range, it is not believed to breed in North America except along the Atlantic and Gulf Coasts. Like all species of Terns it has suffered fearfully of late from the depredations of the plume hunters; but there are a few protected colonies off the south coast of Massachusetts and one in Long Island Sound, where their habits may still be studied.

In this connection I venture to quote parts of several paragraphs from Dr. Brewer,¹ who observed the species in Massachusetts, not only for the intrinsic value, but for the side light which they throw upon the habits of somewhat similar and more familiar species:

"There is a noticeable difference between this and both the *hirundo* and the *paradisæa* (Arctic Tern), which, having been once carefully studied, will not be lost sight of. The present species is easily distinguished in its flight by its long and graceful tail-feathers, its more brilliant under parts, and its more regular and even motions in flight. Its voice is different, less sharp, more hoarse, and its cry of *Creek* is more prolonged and less frequently enunciated, than is the case with the other species named. It is less clamorous when its nest is approached, hovers overhead at a higher point, and rarely makes a rush at one's head, as does the impetuous *paradisæa*.

"It makes its appearance (at Faulkner's Island, L. I. Sound) about the 15th of May, seldom varying three days in this date. At first six or eight of these birds are seen well up in the air. These hover over the island awhile and then disappear. The next day the same individuals return with an addition of twelve or more of their number; but none of them alight on the

¹ "The Water Birds of North America," by S. F. Baird, T. M. Brewer, and R. Ridgway, (Boston,—Little, Brown, and Co., 1884.) Vol. II. pp. 306, 307.

island until the third or fourth day. After this if nothing disturbs them their numbers increase very fast. They begin to lay about the 1st of June, never varying three days from that time. While some gather a few dry weeds or a little dry seaweed, others make only a hollow in the sand; and some deposit their eggs on the stones without any nest at all. They usually lay two eggs, though some nests are found to have three, and some four, eggs. When four are found they are never alike; when three they are sometimes alike, and sometimes one of them differs both in shape and color. Where there are only two they are usually very much alike.

"The male feeds its mate while she is sitting, and may frequently be seen carrying fish to the island, which is often found deposited near the nests. The young bird begins to run soon after it is hatched, and when disturbed it leaves its nest and hides among the stones, or in the grass and weeds. When the young one is large enough to fly, the parent takes it out alone to practice flying. At first it ventures only a few rods, but soon is able to fly a mile or more, but always accompanied by the old bird,—the latter never taking more than one of her young out with her at the same time. * * * The young birds reach their growth by the 20th of August, and their stay after September 1 depends upon the abundance of their food. When fish is plentiful they remain until the first of October. They feed entirely upon fish, which they catch by diving. They are greatly troubled by the depredations of Hawks, and in one year—1863—the birds were driven away before their young were ready to fly. The Duck Hawk seems to be their most troublesome enemy."



Taken in Massachusetts.

ROSEATE TERNS.

Photo by Lynds Jones.

No. 271.

LEAST TERN.

A. O. U. No. 74. *Sterna antillarum* (Less.).

Description.—*Adult in summer*: Forehead white, in a crescentic, or V-shaped patch with horns reaching above the eye; the remainder of top of head and nape, including lores, deep black; upper parts nearly uniform, pale pearl-gray; the sides of breast sometimes tinged with same; the three outer primaries and their shafts plain dusky, or only slightly tinged with silvery gray, the inner half of the inner webs distinctly white; tail the color of back, forked for about half its length, its longest feathers not reaching tip of folded wing; under parts white; bill bright yellow, the extreme tip black; feet bright orange. *Adult in winter*: Similar, but black retreating from lores and crown; bill and feet duller, the former often dusky. *Young*: Similar to adult in winter, but lesser coverts slaty in a distinct patch; scapulars and interscapulars and tail with terminal and subterminal markings of buffy and dusky; the primaries much as in adult or darker; bill blackish. Length 8.50-9.75 (215.9-247.6); wing 6.50 (165.1); tail 3.00 (76.2); bill 1.10 (27.9); tarsus .60 (15.2).

Recognition Marks.—Chewink size, but of course more slimly proportioned; of nearly conventional coloring, but diminutive size unmistakable; *forehead white*.

Nesting.—No positive record of breeding in Ohio, but probably did so formerly. *Nest*, on the ground, usually on beach sand or gravel. *Eggs*, 2 or 3, rarely 4, buffy or greenish white to drab, spotted and blotched with dark brown and obscurely with lilac. Av. size, 1.26 x .91 (32. x 23.1).

General Range.—Northern South America northward to California, Minnesota, and New England, and casually to Labrador, breeding nearly throughout its range.

Range in Ohio.—Rare and casual migrant. Formerly more abundant.

LIKE Forster's Tern, this species is reported as breeding on the St. Clair Flats in Michigan, and, as long as it does so, it must occasionally pass to and fro across this state. Recent records of its occurrence hereabouts are very meagre, and there is grave reason to fear that the milliner's agent has about completed his bloody work.

Altho least in size this dainty bird lacks nothing of dash or spirit, mingling as it does more or less with its larger fellows, and securing its full share of sea-spoil. In the interior it subsists principally upon insects, dragon-flies, spiders, and aquatic sorts; and, but for its color, would often pass among the unlearned as a Swallow.

Like its congeners, the Least Tern deposits its eggs upon beach-sand or gravel, rarely covering them by day, but depending upon the tender (?) mercies of the sun. It seems probable that the large proportion of addled eggs found among sea-birds, is in part traceable to the intemperate zeal of the foster mother. This shifting of responsibility is not due to indifference on

the part of the Terns, for this tiny species is not a whit behind the Arctics in the vehemence of its resentment, dashing at the intruder with fierce darts and swoops, which only just miss the pate wherein conscience lies uneasy. Besides, while its eggs or young are being menaced, it "keeps up a protesting cry of *uik, uik, uik*, sounding very much like the querulous grunt of a young pig whose mother has left it too far in the rear."

No. 272.

BLACK TERN.

A. O. U. No. 77. *Hydrochelidon nigra surinamensis* (Gmel.).

Description.—*Adult in summer*: Head and neck all around, and under parts sooty black; the crissum white, and the edges and lining of wings white or pale pearl gray, under parts plumbeous, darker on upper back, where it blends through slate with black cervix; primaries not different on exposed webs, the inner webs, however, dusky, lightening on the inner half, and the shafts white; tail slightly forked; bill and feet black. *Adult in winter*: Lighter, the black replaced by white, save on back of head, orbits, and auriculars, where obscurely persistent; upper parts deep pearl gray. *Immature*: Like adult in winter, but upper parts more or less tinged and tipped with brownish, and sides washed with grayish. Length 9.00-10.25 (228.6-260.4); wing 8.00 (203.2); tail 3.00 (76.2); bill 1.04 (26.4); tarsus .67 (17.).

Recognition Marks.—Chewink to Robin size, but appearing about Killdeer size; sooty black and plumbeous coloration distinctive in breeding plumage; *dark* pearly gray of upper parts with *black* bill (and feet), with small size sufficiently distinctive at other seasons.

Nest, in marshes, on the ground, or on old broken-down reeds, old musk-rat houses, and the like. *Eggs*, 2 or 3, sometimes 4, grayish olive, or pale brownish, heavily spotted and blotched with blackish brown, the markings sometimes confluent at larger end. Av. size, 1.35 x .98 (34.3 x 24.9).

General Range.—Temperate and tropical America. From Alaska and the Fur Countries to Brazil, breeding from the middle United States, west of the Alleghanies northward.

Range in Ohio.—Common during migrations throughout the state. Breeds in the river marshes along the south shore of Lake Erie.

IN some of the prairie states further west, the Black Tern seems to be a sort of connecting link between the birds of land and water. There it is found either singly or in little companies, ranging over the prairie with the freedom of a Swallow and at considerable distances from its breeding haunts. In our own state it is more strictly confined to the vicinity of the extensive marshes which line the Lake Erie shore, and where alone it is known to breed



ILLUSTRATION BY J. W. WOODS, JR., WASHINGTON, D. C.
PHOTO BY J. W. WOODS, JR., WASHINGTON, D. C.

BLACK TERN
Hydrochelidon nigra aurimamensis
2/3 Life-size

at present. During the migrations, the birds may pause upon the Ohio River, and are almost sure to look in upon the larger reservoirs for a few days, but are known elsewhere only casually and as birds of passage.

The Terns arrive upon their breeding grounds during the first week in May or even earlier, but they are not usually in haste to begin their nesting, since there is danger not only of high water and destructive storms, but of cold snaps as well. Nesting is at its height during the last week in June, but fresh sets are often obtainable well into July. August is spent in leisurely fashion, either by loitering about the more secluded islands of the lake, or



*Taken near
Sandusky.*

*Photo by
the Author.*

ON THE POINT OF DISCOVERY.

THE NEST SHOWN ON THE FOLLOWING PAGE LIES ON THE SURFACE OF THE OOZE A FEW FEET IN FRONT OF MR. JONES.

remaining in the accustomed swamps. The return movement begins late in August, and continues in a desultory fashion through September, but may be accelerated by early frosts.

The food of the Black Tern consists almost exclusively of insects. These are obtained a-wing, and in securing them the bird exhibits great dexterity,—now towering to a lofty height, with a single stroke against the wind, to make connections with a drifting moth; now following a bewildering zigzag through the reed-tops in pursuit of the agile dragon-fly. In the fall I have seen them busily engaged over the beds of pickerel-weed at the Licking Reser-

voir. On these occasions they feed with a peculiar motion, by which they cull some tidbit from the surface of the weed-strewn water, and regain a higher level after each stroke without wetting the wings; but whether they find insect prey or only vegetable matter, I have not been able to determine.

In searching for the nests of the Black Tern one must



Taken near Sandusky.

Photo by the Author.

JUST OUT.

EGG AND YOUNG OF BLACK TERN.

penetrate the sozy recesses of some undisturbed swamp, preferably in a flat-boat. Here in a secluded bayou the birds will hover about the intruder, fretting and screaming incessantly. If the water becomes too thick with mud and tangled vegetation to admit of easy passage, one must be content to strip off and wade through black water, say six inches deep, over black mud one and a half feet deep, and be prepared as well for occasional plunges into uncharted

depths. When one gets "hot" in this ancient game of hide-the-thimble, the most interested pair of birds will single themselves out from the hovering throng and prepare for defense. Unless their advances are early discouraged, the boldness of these two will increase until they actually strike the intruder on the head, to say nothing of frequent salutations with flying shearn. At the same time the characteristic cry, *krik, krik*,—hoarser and deeper than that of the Common Tern, and lacking its nasal resonance—is flatted by anger into *krā-ack, krā-ack*.

The nests are usually placed upon floating vegetation, or upon bars of incipient land at the edge of the bayou—never, in my experience or in that of Professor Jones, upon the tops of muskrat houses, either new or old. They vary in construction from the almost imperceptible mud hollow, through the water-soaked circling of retaining trash, to the more pretentious high-and-dry heap, shown in the illustration. The pale olive-brown eggs, heavily spotted and blotched with blackish brown, harmonize so perfectly with their surroundings of decaying and mud-spattered vegetation, as almost to elude the sight even after being once discovered.



No. 273.

WHISTLING SWAN.

A. O. U. No. 180. *Olor columbianus* (Ord.).

Description.—*Adult*: Entire plumage pure white, the head sometimes tinged with rusty; bill and lores black, the latter usually with a distinct yellow spot near eye; feet and legs black. *Immature*: Plumage ashy gray, the head and neck tinged with brownish; bill and feet light. Length about 54.00 (1371.6); extent seven feet; wing 21.25 (539.8); tail 8.50 (215.9); bill 4.00 (101.6); tarsus 3.90 (99.1); middle toe and claw 5.40 (137.2).

Recognition Marks.—Eagle size; pure white plumage; long neck; small yellow spot on lores distinctive for this species.

Nesting.—Does not breed in Ohio. *Nest*, on the ground or upon loose heap of sticks and trash, lined with mosses, grass, and down. *Eggs*, 2-5, sordid white. Av. size, 4.22 x 2.70 (107.2 x 68.6).

General Range.—The whole of North America, breeding far north. Commander Islands, Kamschatka; accidental in Scotland.

Range in Ohio.—"Not common spring and fall migrant; perhaps also winter resident" (Wheaton). Rare latterly.

NO fitter emblem of purity and grace will ever be found than this matchless daughter of the wilderness, the American Swan. If we are impelled to admire the stately beauty of the domestic bird, as it moves about some narrow duck-pond of our own contriving, how much more shall we yield tribute of admiration to this native princess, spotless and untamed. It is to be feared that our fathers set a higher value upon the gastronomic qualities of the Swan than upon its marvellous purity of plumage or majesty of motion. At any rate early accounts abound with estimates of avoirdupois, and directions for "hanging out" the bird's carcass for a given length of time, in order to fit it for the table; but they had less to say of the flashing splendors of the white-winged fleet, as they passed overhead in their semiannual regattas.

During migrations the Swans move in small flocks, forming a "flying wedge," or V-shaped figure, with some trusted patriarch in the lead. Their flight is exceedingly swift, being estimated by competent observers at one hundred miles per hour—probably twice that of the Geese. For all they are so powerful on the wing, they rise from the water rather reluctantly, and prefer, if there is room enough, to distance pursuit by swimming. Because the neck of the Swan is so long and hung at the water-line, the bird can explore the bottom freely in shallow waters in its search for roots and molluscs, without making any ungainly motions with the body. Indeed, there is a peculiar disconnectedness between the operations of the Swan proper and its far-reaching head,—as tho here were a white boat serenely floating at anchor, from the bow of which now and then a diver is sent down to grapple for hidden treasure. All the bird's motions above water are graceful enough, except in case of anxious inquiry, when the neck is stretched to its utmost, perpendicularly, as it pauses in dread expectancy, and the bird looks like a white eighth-note of the musical scale, set upon a staff of widening ripples.

The Whistling Swan is a noisy bird at best. A flock of them exhibit great individual variations of notes, and they can create a chorus which is mildly worse than that of a political jollification meeting. The bass horns, of tin rather than brass, are blown by the old fellows, while the varied notes which seem to come from clarionets, are really due to cygnets. The birds set up a great outcry when they have done anything, or are about to do anything, important; as when preparing for the flight northward, or when welcoming a company of their fellows to the feeding grounds.

Of the nesting habits little further need be said, since the birds are known to us only as migrants. They breed principally in the Hudson Bay region, and upon grassy islands and river margins within the Arctic Circle. In winter they migrate south into the middle districts of the United States, rarely touching salt water on either side (except it be Chesapeake Bay and the South Atlantic Coast), and never, it is said, reaching the Gulf of Mexico. Latterly they are more plentiful during winter upon the secluded lakes of Oregon and California, but are rapidly diminishing in numbers in the East. The swan-down traffic of the Hudson Bay Company in the North, and the incessant persecution on the part of lubberly pot-hunters in the South, will doubtless compass the destruction of this noble bird within another generation.

No. 274.

TRUMPETER SWAN.

A. O. U. No. 181. **Olor buccinator** (Rich.).

Description.—Similar to preceding species, but larger; bill and lores entirely black. Length 60.00-66.00 (1524-1676.4); extent about 8 feet; wing 24.00 (609.6); tail 9.00 (228.6); bill 4.50 (114.3); tarsus 4.40 (111.8); middle toe and claw 6.00 (152.4).

Recognition Marks.—As in preceding species. Distinguished from it by absence of yellow on lore, and by nostril in basal half of bill.

Nesting.—Like that of preceding species, but eggs a little larger. Av. size, 4.46 x 2.92 (113.3 x 74.2). Does not breed in Ohio.

General Range.—Chiefly the interior of North America from the Gulf Coast to the Fur Countries, breeding from Iowa and the Dakotas northward; west to the Pacific Coast; rare or casual on the Atlantic.

Range in Ohio.—Rare migrant; two or three recent records.

THE Trumpeter Swan is the larger, as it is hereabouts, the rarer, bird. Audubon tells of one which was nearly ten feet in alar expanse, and which weighed above thirty-eight pounds. The names, "Whistler" and "Trumpeter" are not meant to express a difference in kind in the notes of the two birds, so much as a difference in volume. The Whistler blows a post-horn and the Trumpeter a trombone. The preeminence of the latter as a musician is due to the fact that he keeps an extra coil of wind-pipe neatly tucked away within a convenient hollow of his breast-bone.

Altho this Swan has been found breeding as far south as Iowa, it resorts during summer chiefly to the high north, and is known to us only as a rare migrant.

No. 275.

LESSER SNOW GOOSE.

A. O. U. No. 169. **Chen hyperborea** (Pall.).

Description.—*Adult*: Entire plumage, except the primaries and their coverts, pure white; head and neck often heavily tinged with rusty; primaries blackish and with dark shafts on exposed portions, grayish and with white shafts basally; primary coverts gray with dark shafts; bill short, stout, with widely gaping commissure, showing black edges of mandibles, said to be purplish red in life, drying dull orange, nail white; feet and legs (drying) orange-red. *Immature*: Head and neck pale gray; back and wings, except quills, gray, varied by mesial dusky and marginal whitish, notably on wing-coverts and tertiaries; remaining plumage white. Length about 25.00 (635.); wing 15.25 (387.4); tail 6.00 (152.4); bill 1.60-2.30 (40.6-58.4); tarsus 3.00 (76.2); middle toe and claw 2.30 (58.4).

Recognition Marks.—Brant size; pure white plumage with conspicuous black primaries (hence not difficult to determine on the wing); smaller.

Nesting.—Does not breed in Ohio. "*Nest*, of grasses and down on the ground. *Eggs*, 2-6, soiled whitish" (Chapman). Av. size, 3.13 x 2.12 (79.5 x 53.9).

General Range.—Pacific Coast to the Mississippi Valley, breeding in Alaska; south in winter to southern Illinois and southern California, casually to New England. Northeastern Asia.

Range in Ohio.—Rare migrant or casual.

SOME little confusion has always existed regarding the identification of the Snow Geese. Just now, however, when each species has been greatly reduced in numbers under the discipline of the modern breech-loader, Science rests measurably content with four forms, the three here described, and the rarer *Chen rossii*. One factor which has made the problem difficult from the first is the separate flocking of adult and immature birds. Thus the two ranks of the present species are said to be almost never seen together during migrations, or in the winter feeding resorts; and this same exclusiveness obtains largely even in summer. The birds are said to attain their majority in the fourth year.

The flesh of the Snow Goose, especially of young birds, is held in high regard, and furnishes a staple article of food to the natives and traders of the far Northwest. Professor A. W. Butler, in his *Birds of Indiana*, relates an incident, which affords a curious link of interest between the modern hunter, he of the breech-loader, and the primitive "Siwash" of Alaska. "A gentleman one day showed me an Alaskan bone arrow or spear point, which he said he had found in northern Indiana, and stated that for some time he had been puzzled to account for its appearance there. Then he showed me the sternum of an Alaska Goose, possibly this species, which had been shot in northern Indiana, through which a similar arrow head had pierced and remained firmly

imbedded. He had carefully cleaned the sternum and left the head of the projectile as it had been found. Thus was solved the problem of the way in which this implement was transported from the borders of the Arctic Sea to the rich fields of northwestern Indiana."

Chen hyperborea is the better known form and the only one of the four whose eggs have been certainly identified. It is less common in Ohio than the following species, altho the two are estimated to be about equal in numbers as far east as Illinois.

No. 276.

GREATER SNOW GOOSE.

A. O. U. No. 169 a. *Chen hyperborea nivalis* (Forst.).

Description.—Quite like preceding species but decidedly larger; bill stouter and relatively longer. Length 30.00-38.00 (762.-965.2); wing 17.40 (442.); tail 6.85 (174.); bill 2.40 (61.); tarsus 3.25 (82.6); middle toe and claw 2.80 (71.1).

Recognition Marks.—Brant to Eagle size; same as preceding species, larger.

Nest and *Eggs* unknown.

General Range.—North America, breeding far north (east of Mackenzie basin) and migrating south in winter, chiefly along the Atlantic Coast, reaching Cuba.

Range in Ohio.—Occasional spring and fall migrant.

"SNOW-BANKS" of Geese are still reported from the Hudson Bay regions, but they are rapidly melting before the incessant flashings of the white man's gun. According to Hearne, the Snow Geese were the most numerous birds during migrations in the northern part of Hudson Bay, making their appearance a week or ten days later than the Canada Geese. The breeding place of this species was not known either to the Indians of Hudson Bay or to the Esquimaux of the extreme north.

Snow Geese are easily distinguished during the migrations by their white plumage with the sharply contrasting black on the tips of the wing-quills. Altho very noisy in their northern resorts, they are usually silent in the south; but occasionally, when on the wing, utter high, cackling notes.

No. 277.

BLUE GOOSE.

A. O. U. No. 169.1 *Chen caerulescens* (Linn.).**Synonym.**—BLUE SNOW GOOSE.

Description.—*Adult in spring:* Head and upper neck all around bluish white; lower neck all around and fore-breast rich sooty brown; below, color of breast, fading through brownish gray to white on belly, or to uniform bluish gray, better sustained on sides; above, color of hind neck, continued on upper back and scapulars, growing lighter posteriorly; rump, tail, wing-coverts (including primary coverts), wing-quills basally, and edges of tertiaries, light bluish gray; terminal portion of wing-quills and tertiaries, centrally, blackish; bill showing prominent, rounded, black borders of open commissural space as in preceding species; feet (of dried specimens) dingy yellow. *Adult in winter:* Lighter; sooty brown replaced by dark bluish gray, and gray of wings, etc., correspondingly albescent. *Immature:* Somewhat similar to adult in summer, but much more uniform in coloration; head and neck all around dull sooty brown; the chin only white; remaining under parts uniform sooty gray, or darker on sides; back sooty brown, but lighter than neck; rump, tail, wing-coverts, etc., dull bluish gray. Length 26.50-30.00; av. of three Ohio specimens in O. S. U. Museum: wing 17.17 (436.1); tail 6.60 (167.6); bill 2.43 (59.2); tarsus 3.46 (87.9); middle toe and claw 2.92 (74.2).

Recognition Marks.—Large Brant size; head and upper neck white; remaining plumage sooty brown and light bluish gray, shading or contrasting; chiefly bluish gray and white in winter.

Nest and Eggs unknown.

General Range.—Interior of North America, breeding on eastern shores of Hudson Bay, and migrating south in winter through Mississippi Valley to Gulf coast; occasional on Atlantic Coast.

Range in Ohio.—Occasional migrant.

HERE is another of those Hyperborean strangers, of which we know almost nothing, save that now and then one ventures upon our hospitality and is promptly betrayed. Dr. Wheaton was the first to record the species for Ohio, having identified two in Columbus in 1875. On October 28, 1896, a pair were taken on the water-works reservoir at Oberlin; and other records have since been made.

Samuel Hearne, writing more than a century ago, clearly distinguished this species from the Snow Goose (*C. hyperborea nivalis*) but later writers, including Audubon, fell into the mistake of regarding it as the young of the other species, and the Blue Goose was for a long time lost to view. During migrations the two species are not infrequently found together, and the mistake was not unnatural.

“By Indian report the great breeding ground of the *caerulescens* is the country lying in the interior from the northeast point of Labrador. Extensive swamps and impassable bogs prevail there, and the Geese incubate in the most solid and driest tufts dispersed over the morasses, safe from the approach of man or any other than a winged enemy” (Brewer).

No. 278.

AMERICAN WHITE-FRONTED GOOSE.

A. O. U. No. 171a. *Anser albifrons gambeli* (Hartl.).

Description.—*Adult*: Forehead and region about the base of bill white,—the latter narrowly, and bordered immediately by dusky; remainder of head and neck all around warm grayish brown; the same color continued on back, fore-breast, and sides, but varied by lighter brownish gray tips of squarish-ended feathers, thus presenting a curious shingled appearance; under parts fading from grayish brown of breast to pure white posteriorly; the breast and belly irregularly spotted or heavily blotched with sooty black; the primaries grayish at base, blackening distally and with shafts mostly white; the tips of the greater coverts white, and the superior edges of the main course of side feathers (overlapping folded wing) also white; upper and lower tail-coverts, and lower belly well up on flank, and sides under folded wing, white; axillars and lining of wing uniform dusky; tail brownish dusky increasingly white tipped on lateral feathers; bill orange-yellow with white nail; feet orange or reddish. *Immature*: "Similar to adult, but fore part of head dusky instead of white; lower parts without black markings, and nail of bill dusky" (Ridgw.). Length 27.00-30.00 (685.8-762.); wing 16.85 (428.); tail 6.40 (162.6); bill 2.10 (53.3); tarsus 2.91 (73.9).

Recognition Marks.—Large Brant size; speckled or black-blotched belly; rich grayish brown color; white partial mask of face.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, of dried grass or tundra moss, feathers, and down. *Eggs*, 6-7, dull greenish yellow, with obscure darker tints. Av. size, 3.10 x 2.30 (78.7 x 58.4).

General Range.—North America (rare on the Atlantic Coast), breeding far northward; in winter south to Cape St. Lucas, Mexico and Cuba.

Range in Ohio.—Not common migrant. Locally and sparingly resident in winter.

THIS Goose may justify the possession of webbed feet by the fact that it spends the night on the water, but so far as getting food is concerned, it "boards out." It is almost exclusively vegetarian in its diet, and resorts during migrations and in the winter to inland fields, where it nibbles voraciously at the tender blades of grass and winter wheat, or gleans scattered grains of corn. Beech-nuts and acorns vary its fare in middle latitudes, while berries of various sorts form a staple article wherever obtainable. In the great grain fields of California, these birds were formerly so abundant as to be a real menace to the crops, and to necessitate the constant vigilance of watchmen. But those days have passed, along with those in which the Wild Pigeons broke down the limbs of our fathers' orchard trees.

In distant flight the White-fronted Geese closely resemble the more common Canada Geese, moving as they do in wedge-shaped companies, with self-appointed leaders. Their cry is harsh and loud, a rapid iteration of the syllable *wah*, from which they have won the name "Laughing Geese."

No. 279.

CANADA GOOSE.

A. O. U. No. 172. **Branta canadensis** (Linn.).

Synonyms.—"WILD GOOSE;" COMMON WILD GOOSE.

Description.—*Adult*: Head and neck glossy black; a large white triangular patch on either cheek, the two usually confluent on throat—occasionally an indistinct white collar at base of black; back and wings rich grayish brown; fore-breast and below lighter grayish brown, tipped with pale fulvous or grayish white; heavier toned on sides, where presenting a shingled appearance and shading into color of back; lower belly, under tail-coverts, longer upper tail-coverts and flanks well up on rump, pure white; rump and tail black; primaries blackening at tips; bill black; feet dusky. *Immature*: Similar, but white of cheeks and throat more or less mixed with blackish. Length 35.00-42.00 (889.-1066.8); wing 20.00 (508); tail 7.00 (177.8); bill 2.30 (58.4); tarsus 3.55 (90.2).

Recognition Marks.—Eagle size; black head and neck with white cheek-patches, and large size distinctive.

Nest, on the ground, on a cliff, or in a tree (a deserted Osprey's nest and the like), lined with down. *Eggs*, 4 or 5, light greenish buff, or buffy white, Av. size, 3.52 x 2.30 (89.4 x 58.4).

General Range.—Temperate North America, breeding in the northern United States and British Provinces; south in winter to Mexico.

Range in Ohio.—Still tolerably common spring and fall migrant. Winters sparingly in suitable localities. Formerly bred more or less throughout the state.

HONK, honk—honk, honk! What a stirring sound is that which summons us from whatever task indoors, and hurries us out hatless, breathless, into the crisp March air to behold a company of Wild Geese passing forward into the frosty North! *Honk, honk!* We think madly of our gun upstairs, for the Geese are provokingly near, and we hear the thrilling swish of the low-sweeping wings; but we take it out in great boasts to our similarly hatless neighbor, of what we could have done if the gun had been put together and we had known that those foolish Geese were coming right over town. And when the great birds become a row of trailing points on the northern sky, a fever of strange unrest burns within our veins, and we wonder through what ancestral folly our wings were clipped, and our race condemned to unceasing barn-yard toil.

For the Canada Goose there are but two points of the compass, North and South; and unlike most migrants, he does not go by the map, nor follow favorite paths through the air, but flies straight over hill and dale, city and hamlet alike, until the goal is reached, or until the weather discourages further



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CANADA GOOSE
Branta canadensis
1/4 Life-size

movement for a time. The Geese move usually at a considerable height, forming open V-shaped figures, with the oldest or strongest gander in the lead at the apex; or else in single oblique lines. Each bird demands as clear a field as possible, and this is best secured by an arrangement which allows each goose to look over the wing of the one next preceding, right or left, according to the branch of the V which it occupies. The line of march shifts and changes under the eye, as the hindmost birds become dissatisfied with their positions, and change sides, or as tired leaders give place to fresher birds; and the changes are accomplished not without much lordly discussion in high-pitched *honks*.

When selecting a pond or corner of the lake in which to spend the night, the birds first circle about cautiously at a safe height, and then slide down the air from a point a mile or so away, approaching the water silently and at a low angle. In rising from the water or the ground, the Geese prefer to make a little run, or preliminary flutter, to get headway, but are capable of clearing either by a sudden spring. The flight is heavy and labored at near aspect, but strong and swift when under way.

Like all Geese this species feeds principally upon tender herbage, berries, sedge roots and aquatic plants. Stubble-fields afford a tempting banquet, and waste corn is eagerly gathered up. In winter the birds are very regular about their meals, rising punctually at daybreak and flying inland to feed for two or three hours in the grain fields. The middle of the day is passed quietly upon the pond, dabbling for water-cress and duck-weed, or enjoying one-legged slumbers on the sand-bar. Hunger drives them to forage again late in the afternoon, usually at the same spot visited in the morning. At such times the Geese are exceedingly vigilant and wary; and it would appear that when feeding upon the ground, one or more of their number are charged with sentry duty. In countries where winter shooting is still allowed, rifle pits are dug during the night in grain fields known to be frequented by the Geese, and their call imitated by the crouching hunter as they approach at early dawn.

The Canada Goose probably no longer nests in Ohio, altho it is known to linger in northern Indiana, where "nests with the full complement of eggs are usually found from the first to the third week in May."¹ Usually the nests are made of grass and placed near the borders of sloughs, or else upon the high prairie. Eggs have been taken from the top of muskrat houses, or found on weedy sand-bars, without other nest-lining than the down from the bird's breast. Stories of their occupying Ospreys' or Eagles' nests early in the season are numerous, and, I believe, well founded. In June, 1896, while traveling in northern Washington near the British Columbia line, I came upon two large Ospreys' nests placed at a great height in balm trees, near the Okanogan River, and occupied by the owners. I was informed by a neighboring farmer sportsman, in whose word and judgment I had implicit

¹ Butler, "Birds of Indiana," p. 637.

confidence, that earlier the same season two pairs of White-checked Geese (the western form of the Canada Goose) had successfully reared their broods in the same nests.

Canada Geese are readily domesticated and breed in captivity. The following interesting notes on the habits of these Geese in captivity were made by Mr. William Dutcher, in the Auk,¹ reporting in part the experience of Captain Lane of Shinnecock Bay, Long Island: "Captain Lane has had remarkable success in breeding Canada Geese in confinement, and has kindly furnished me with the following information regarding their habits during the breeding season: "They make their nests of dried grass, raising them about twelve inches from the ground. They feather them when they begin to lay, which is about May 1. None lay under three years old; the first season four eggs are laid, five the second season, and when older six and seven. A goose never has more than one mate. The gander never sits on the nest, but while the goose is sitting never leaves her. The time of incubation is four weeks. The young when hatched are strong enough to take care of themselves, that is, they eat grass and walk and swim as soon as they get dry. They will eat meal on the second day. They are in the down four weeks, and are fully grown in six weeks. When swimming the gander goes ahead, the young next, and the goose follows, invariably."

No. 280.

HUTCHINS GOOSE.

A. O. U. No. 172 a. *Branta canadensis hutchinsii* (Rich.).

Synonyms.—LESSER CANADA GOOSE; LITTLE WILD GOOSE.

Description.—Precisely similar to preceding species in coloration, but averaging smaller. Length 25.00-34.00 (635.-863.6); wing 17.00 431.8); tail 6.00 (152.4); bill 1.75 (44.5); tarsus 3.00 (76.2).

Recognition Marks.—Brant to Eagle size; like preceding form but smaller.

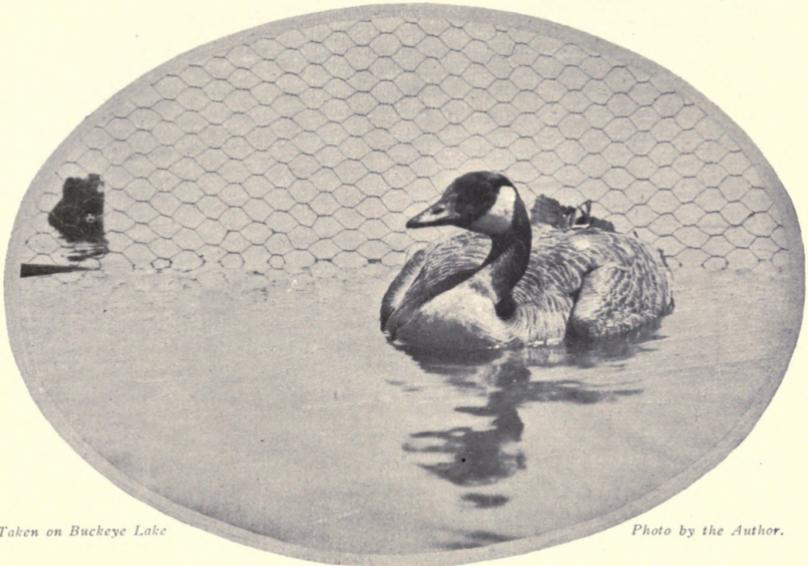
Nesting.—Does not breed in Ohio. *Nest*, on ground or in deserted nest of Hawk or Crow, lined with grass and leaves or not, and with abundant down. *Eggs*, 4-6, averaging lighter than those of *B. canadensis*. Av. size, 3.20 x 2.10 (81.3 x 53.3).

General Range.—North America, breeding in the Arctic regions, and migrating south in winter, chiefly through the western United States and Mississippi Valley; northeastern Asia.

Range in Ohio.—"Rare migrant, only recognized on Lake Erie" (Wheaton). One recent example, a bird captured on Buckeye Lake.

¹ January, 1885, p. 111.

THE summer range of this smaller species lies almost entirely north of that of true *canadensis*, and it is more abundant westerly, altho not unknown upon the Atlantic Coast. During migrations the few birds which drift across this part of the country are apt to be seen associating with the larger species, or even with the Mallard Ducks. Their voices are said to be finer, and more like those of the domestic Goose.



Taken on Buckeye Lake

Photo by the Author.

HUTCHINS GOOSE.

CAPTIVE BIRD IN POSSESSION OF MR. WILLIAM HARLOW.

The only recent authentic instance of its occurrence in this state is that of an adult female which was winged and captured upon the Licking Reservoir. Mr. William Harlow kept the bird for four years, and allowed it latterly the freedom of the place, except during the migrating season. I measured the bird in the summer of 1903, and found that it came well within the requirements of the Hutchins Goose.

No. 281.

MALLARD.

A. O. U. No. 132. *Anas boschas* Linn.**Synonyms.**—GRAY MALLARD; "WILD DUCK" (par excellence); GREEN-HEAD.

Description.—*Adult male*: Whole head and neck soft, shining, dark green; fore-neck and breast rich dark chestnut, with a purplish tinge, separated from green of neck by narrow white collar not meeting behind; sides of breast, belly, sides and crissum grayish white, finely undulated with dusky; the same continued on back, but largely overlaid or suppressed, except on scapulars, by rich brown of various shades; speculum (terminal portion of secondaries) shining metallic blue or purplish violet, bordered on either side immediately by black and then by white, —the anterior bars furnished by the tips of the greater coverts, the posterior by the tips of the secondaries; rump sooty brown; upper tail-coverts deep black with greenish gloss, the longer central feathers curled upward; under tail-coverts deep purplish black; tail grayish white with dusky speckling and central areas; bill olive-yellow with black nail; iris hazel; feet orange red. *Adult female*: Quite different; speculum much as in male, but remaining plumage dusky and ochraceous or brownish buff, the former centrally on feathers, broadly and prevailingly on upper parts, the latter narrowly or obscurely in crescentic, U-shaped, and irregular markings; below brownish buff predominant, brightest on breast, fading on belly; head and neck buff, sharply and finely streaked except on throat and usually chin, where immaculate. *Adult male in summer*: Much like female, but somewhat darker (Sharpe and Dresser). Length 20.00-25.00 (508-635.); wing 11.00 (279.4); tail 3.35 (85.1); bill 2.25 (57.2); tarsus 1.75 (44.5). Female averages smaller than male.

Recognition Marks.—The standard of measurement for ducks (size of Domestic Duck). Green head of male; metallic blue speculum, bordered by black and white, of both sexes.

Nest, on the ground, near water, but usually well hidden in weeds or rushes, lined with trash and feathers. *Eggs*, 6-10, yellowish drab, pale olivaceous, green, or greenish white. Av. size, 2.30 x 1.70 (58.4 x 43.2).

General Range.—Northern parts of northern hemisphere; in America south to Panama and Cuba, breeding southward to southern United States; less common in the East.

Range in Ohio.—Common migrant, casually resident in winter; also sparing summer resident. Still the most frequent in occurrence, tho not the most "abundant" duck in the state.

THIS, the contemporary ancestor of our domestic duck, enjoys a distribution almost world-wide, and has been from earliest times the best known of swimming birds. Altho nowhere in America so abundant as formerly, it is still the standard with which we compare all other species, both in point of excellence and in numbers. Being somewhat less gregarious than the Teals and the Sea Ducks, the Mallards are found in pairs or small parties, wherever a swampy pool or a widening of the brook affords a resting place, and one may easily recognize their fitness for domestication, in the fact that

they can content themselves with a little six by eight puddle, when the whole world lies before them.

While on the water the birds spend much time "tipping" for food. Heads under water and tails pointing skyward, they search the bottom for molluscs and crustaceans, or feed upon various kinds of aquatic plants, which choke sluggish streams or line the edges of ponds. When hunger is satisfied they frequently disport themselves upon the water, diving, throwing water over their backs, and splashing about with great ado, much like boys in the old swimming hole. Nights, especially in thickly settled regions, are habitually spent feeding, either by dabbling, or in long forays to stubble-fields, and woods where acorns abound, so that much of the daytime is spent sleeping just on shore, with one leg drawn up and the head tucked comfortably under the wing. Upon being surprised the Ducks rise with a great outcry, in which the female voice is recognized as being a little the loudest, and they make off with rapid strong wing-strokes, which can carry them, it is believed, a hundred miles an hour.

It is difficult, owing to the extreme caution displayed by the parent birds, to estimate the number breeding at present in our state. Certainly it bears no comparison with those to be observed fifty years ago;

but as certainly, Mallards do breed with us still, and in unexpected localities. A swift-winged female crossing a principal street in Oberlin on a June evening, gave me a momentary sense of the existence of an underworld, whose craft and cunning are hidden from the eyes of men.

The Mallards mate in March or early April, the female depositing her eggs in some grass-lined depression of a low-lying meadow, or at the edge of the woods, never far from water, but seldom at the water's edge, as is the habit of some. With the completion of the set, the male proceeds into volun-



Taken near Sandusky.

Photo by the Author.

VIEW LOOKING WEST FROM THE NEW LAKE BIOLOGICAL
LABORATORY.

(Under the auspices of the Ohio State University.)

MANY SPECIES OF DUCKS USED TO NEST HERE.

tary exile and renounces all domestic ties, while he undergoes a tedious and painful double moult.

The female, left to herself, sits closely upon her eggs,—so closely, indeed, as occasionally to admit of capture by the hand, and she leaves the nest only after nightfall. At the end of four weeks the ducklings are brought off and led to water, where they become expert swimmers and divers, and learn above all things to secrete themselves instantly upon the maternal note of warning. Those who have not tested their eyes by trying to gather up a hatful of ducklings while a distracted mother limped and quacked in the distance, have either never been boys or else have fallen upon a flabby age.

Many hybrids between the Mallards and other ducks are known to science. One of the commoner forms is a cross between this bird and the Muscovy Duck (*Cairina moschata*) supposed to be the product of breeding in captivity. A hybrid between the Mallard and the Pintail is not uncommon in the interior, and there is a specimen in the collection of the Wynous Point Shooting Club, near Port Clinton, which shows common characters of the Mallard and the Black Duck.

No. 282.

BLACK DUCK.

A. O. U. No. 133. *Anas obscura* Gmel.

Synonym.—BLACK MALLARD.

Description.—*Adults of both sexes:* General plumage rich dusky brown, or sooty brown, varied by light rusty brown edging of feathers; little edging on back, more on belly; head and neck brownish ochraceous or buffy, narrowly and distinctly streaked, *except on chin and throat*, with dusky; top of head and crest of neck nearly uniform dusky brown; speculum metallic blue or violet, bordered by black, but without white; axillars and lining of wing white; bill olive-green or greenish black; feet olivaceous brown or faintly tinged with reddish. Length 22.00 (55.8.8); adult male wing 10.52 (267.2); bill 2.05 (52.1); bill from nostril 1.58 (40.1); tarsus 1.65 (41.9). Adult female wing 10.14 (257.6); bill 1.93 (49); bill from nostril 1.52 (38.6); tarsus 1.61 (40.9) (Brewster).

Recognition Marks.—Size of Mallard or a little smaller. Like female Mallard, but much darker,—sooty brown or blackish to appearance; no white bars on wing. Throat not streaked, and feet and legs not definitely red, as distinguished from *A. o. rubripes*.

Nest, on the ground, among reeds or in grass near water; rather carelessly constructed of rushes or dried grass, and lined with feathers and down. Occasionally built in trees. *Eggs*, 8-12, elliptical, pale buff, or greenish buff. Av. size, 2.43 × 1.75 (61.7 × 44.5).

General Range.—"Eastern North America, west to the Mississippi Valley,



BLACK DUCK

Anas platyrhynchos
4 in. Tall—size

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north to Labrador, breeding southward to the northern parts of the United States."—A. O. U. Now believed to be restricted to the eastern portion of this range.

Range in Ohio.—Not yet satisfactorily distinguished from that of the following variety. Probably not uncommon during migrations. If "Black Ducks" formerly bred in the northern parts of this state, as Wheaton supposes, they were probably of this form.

THIS form and the next taken together (since their relations are not clearly determined) are not nearly so common as the Mallard, which they closely resemble in habits. They are perhaps more common upon the larger reservoirs and Lake Erie than elsewhere, altho they do resort to the smaller ponds and streams during migrations.

The "Black Mallard," as it is called by sportsmen, is more frequently seen in pairs and in small companies than in large flocks, indicating that we are west of the center of abundance for the species. They are scarcely as wary as their gray congeners, and their flesh is fully as excellent.

It is a rare sight to find a company of these dusky birds, lulled to a sense of security and disporting themselves freely upon the water. If it is early morning the first to wake are busy "tipping" and dabbling for a breakfast of cress and succulent roots, while others shake off the traces of recent slumber by rising perpendicularly in the water and flashing the pure white of their under wing surfaces in the morning sun.

Meals are hurried and energetic for most, since they must needs pass further north to breed, but it is pretty certain that some do nest in the northern part of the state. At least I do not know how otherwise to interpret the appearance of certain able-bodied pairs in late May and early August, or to account for a flock of fourteen seen August 6th, 1901, upon Middle Bass Island.

The nest, when found, may be easily recognized even in the absence of the parent, from the blackish feathers which enter into the lining, more or less abundant according to the stage of incubation reached.

No. 283.

RED-LEGGED BLACK DUCK.

A. O. U. No. 133a. *Anas obscura rubripes* Brewst.

Description.—"Similar to *A. obscura*, but larger; the feathers of the pileum conspicuously edged with grayish or fulvous; the dark markings of the fore-neck and the sides of the head coarser, blacker and more sharply defined; the entire throat usually streaked or spotted with blackish; the tarsi and toes bright red; the bill yellow" (Brewster, original description). Av. of four specimens in O. S. U. collection; wing 10.89 (276.6); tail 4.11 (104.4); culmen 2.11 (53.6); bill from nostril 1.62 (41.2); tarsus 1.73 (43.9).

Recognition Marks.—Spotting of throat and red legs most distinctive.

Nest, and *Eggs* probably not different from those of preceding form.

General Range.—Atlantic Coast during migration from Newfoundland to Virginia and west to Arkansas; breeding range not definitely known, but includes northern Labrador and Hudson Bay region.

Range in Ohio.—Imperfectly known as yet. Probably the common bird during migrations. Winters irregularly and sparingly throughout the state.

THE recent elaboration of this well-marked subspecies has left us quite in doubt as to its status in Ohio. From a comparison of museum material, it would appear quite possible that this may prove to be, as Jones suggests, the more common form. Sportsmen would do well to report to some central authority, as to the Secretary of the Wheaton Club, in Columbus, the proportion which the red-legged birds bear to the others in their daily bags.

No. 284.

GADWALL.

A. O. U. No. 135. **Chaulelasmus streperus** (Linn.).

Synonym.—GRAY DUCK.

Description.—*Adult male*: Head and upper neck buffy, spotted or streaked with dusky; top of head darker brownish; breast and lower neck all around dusky and white, each feather with five to eight concentric half-rings of alternating colors, presenting a handsomely scaled appearance; sides, back and scapulars similarly varied with dusky and white, buffy, or ochraceous-white, in semi-concentric, zigzag, or fine, wavy lines; the posterior inner scapulars, not thus marked, dull cinnamon-brown, darker centrally and edged with lighter, lanceolate; lower back dusky, becoming velvety black on lower tail-coverts and around on sides of crissum; middle wing-coverts bright chestnut; the lesser dull brownish gray, the greater velvety black; speculum white, rather narrowly, the outer secondaries black and dusky, the bounding tertials plain fuscous; belly white or grayish, obscurely barred posteriorly; axillars and lining of wings white; bill blue-black; legs and feet dull orange, the webs dusky. *Adult male in breeding season*: "Similar to winter male, but colors duller, crown dusky, rump and breast tinged with rusty, and under parts more spotted with dusky" (Ridgway). *Adult female*: "Head and throat as in the male; back fuscous margined with buffy; breast and sides ochraceous buffy, thickly spotted with blackish; belly and under tail-coverts white, more or less thickly spotted with blackish; little or no chestnut on wing-coverts; speculum ashy gray and white; axillars and under wing-coverts *pure white*" (Chapman). (No specimen in O. S. U. collection.) Length 19.00-22.00 (482.6-558.8); wing 10.60 (269.2); tail 4.50 (114.3); bill 1.67 (42.4); tarsus 1.60 (40.6). Female smaller.

Recognition Marks.—Something under Mallard size; *white speculum* distinctive.

Nest, on the ground near water, of grasses lined with feathers. *Eggs*, 8-12, pale buffy or clay-colored. Av. size, 2.09 x 1.57 (53.1 x 39.9).

General Range.—Nearly cosmopolitan. In North America breeds chiefly within the United States.

Range in Ohio.—Rare migrant. Formerly and possibly still summer resident.

THE apparent scarcity of this species is doubtless to be attributed in part to its excessive timidity and cunning secretiveness. But perhaps at best it is to be regarded as the least common of those river ducks whose appearance in our state is anything more than accidental.

The Gadwall remains, for the most part, closely secreted by day in the reeds or high grasses which border our lakes and river lagoons, venturing out only at dusk and feeding throughout the night. Its food seems to be largely vegetable, the leaves and roots of aquatic plants and river flotsam, obtained by diving or dabbling. It is not, however, averse to varying its diet with occasional insects and small fish. Not infrequently it feeds at considerable distance from water, in stubble-fields and the like, after the fashion of the Mallard. Such visits are, however, strictly nocturnal. Because of its careful feeding the flesh of this duck is highly prized for the table.

The nesting of the Gadwall has been reported by Mr. Charles Dury from the Grand Reservoir. It breeds sparingly wherever found, but its better known haunts are the sloughs of the northwestern prairie states. The nest is said to be always placed on dry ground, but not very far from water. "A hollow is scooped in the ground and well lined with strips or pieces of reeds, bits of dry grass and weed stems, or whatever material can be most easily gathered in the vicinity, mixed with down from the bird's breast and profusely lined with dark gray down around the eggs."¹ Ten or eleven eggs are commonly laid. The birds are close sitters, but even then great care must be taken to distinguish them from the more common Baldpate.

No. 285.

WIDGEON.

A. O. U. No. 136. *Mareca penelope* (Linn.).

Synonyms.—EUROPEAN WIDGEON; WIDGEON.

Description.—*Adult male*: Similar to that of next species, but top of head creamy buffy or buffy instead of white,—green wanting or showing only in traces: throat blackish; rest of head and neck rufous-brown. *Adult female*: Similar to next species, but head and neck deeper ochraceous-buff or rusty¹. Size of next.

¹ I. A. C. Bent, "Nesting Habits of the Anatidae in North Dakota." *The Auk*, Vol. XVIII, p. 333.

Recognition Marks.—Like next species, but head showing more rufous.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, *Eggs*, 5-8, pale buffy. Av. size, 2.23 x 1.35 (56.6 x 38.8).

General Range.—Northern parts of the Old World. In North America breeds in the Aleutian Islands, and occurs frequently in the eastern United States, and occasionally in California.

Range in Ohio.—Accidental. According to Professor Jones, a duck of this species was taken on the Licking Reservoir March 29, 1902, by Mr. Peter Hayden of Columbus. The specimen was presented to Mr. Irving A. Field of Granville, who mounted it for the museum of Dennison University. In going over the same ground three days later Mr. Field discovered another bird in a local bag. So far as known this is the only occurrence within the limits of our state of this Old World duck. It has however been frequently found elsewhere in the Eastern States and careful attention in the future is likely to reveal other instances of its presence here.

No. 286.

BALDPATE.

A. O. U. No. 137. *Mareca americana* (Gmel.).

Synonyms.—AMERICAN WIGEON; WIDGEON.

Description.—*Adult male*: Head and neck white or light buffy, thickly speckled, except on forehead and crown, with dusky; a space from eye along side of crown to occiput bright glossy green, the color scattering behind; fore-neck and upper breast, sides of breast broadly, and sides narrowly, deep vinaceous, edged more or less with hoary vinaceous; the sides with fine wavy bars; back and scapulars similar, black-and-white-barred, and heavily tinged with vinaceous; tertials lanceolate, velvety black, with greenish reflections on outer webs, and narrowly bordered on outer margin with gray and white; wing-coverts mostly white, the lesser brownish gray, the greater tipped with black; speculum dull black with green gloss only on anterior inner portion, the inner bounding feathers abruptly gray; rump cold brownish gray, lightening to grayish white on upper tail-coverts, both finely wavy-barred with dusky; tail tapering, the feathers sharply acuminate; the central feathers blackish, the lateral ones ashy gray; lower breast and belly white; crissum abruptly black; axillars white; lining of wings white and brownish gray; bill grayish dusky, blackening below and black on tip; feet dull grayish dusky; darker webbed. Old drakes have the extreme chin dusky, and are otherwise lighter about the bill, nearly immaculate on throat, and pure white on crown. *Adult female*: Without white or green on head,—uniformly streaked instead; vinaceous replaced by dull cinnamon-brown, obscurely mixed with dusky, and edged with brownish-gray; above dusky or fuscous, barred or edged on back with dull ochraceous; wing-coverts grayish brown sharply edged with white; *speculum and boundaries as in male*; no solid black on upper tail-coverts and crissum,—fuscous or brownish and whitish instead. Length 18.00-22.00 (457.2-558.8); wing 10.50 (266.7); tail 3.00-4.50 (76.2-114.3); bill 1.50 (38.1); tarsus 1.56 (39.6).

Recognition Marks.—Under Mallard size; white "pate" and green head-patches of male; *white of middle and greater wing-coverts*; speculum diagnostic. Head *not* cinnamon-red, as distinguished from preceding species.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground near water; well constructed of grasses, lined with feathers. *Eggs*, 8-12, buffy white. Av. size, 2.00 x 1.50 (50.8 x 38.1).

General Range.—North America from the Arctic Ocean south in winter to Guatemala and Cuba. Breeds chiefly north of the United States.

Range in Ohio.—Once abundant migrant, now found only locally and occasionally. Possibly summer resident.

TO receive the full impression of the dignity which befits these grave senators, one should spy upon them from some convenient willow ambush, as they stand about upon the mud-flats taking an after-dinner-nap, after a comfortable meal of shrimp salad and duck-weed. At such times the mixture of somnolence and content gives the birds a very decorous appearance, but when they are seen junketting upon the water they do not seem to be less frivolous than other ducks.

In the Chesapeake Bay region, where large numbers of them winter, the Baldpates are said to make up for their own lack of skill in diving, by seizing upon the pieces of wild celery which the Canvas-backs and Black-heads bring up from the bottom, and wresting the spoils from their rightful owners. As a consequence, however, of their feeding upon this unlawful food, their flesh is as highly esteemed as that of the celery-fed Canvas-back itself. In their summer home these Widgeons feed largely upon insects, and the flesh becomes less palatable.

No instances are known of this bird's breeding in Ohio, altho it may do so. Professor Butler reports several broods raised in northern Indiana, and a correspondent tells of a female Widgeon which was found on Hogback Lake, leading a brood of thirteen young just hatched. Upon being pursued with a boat all the young ones got upon the mother's back and she swam away with them.

During migrations Baldpates occasionally occur in considerable numbers upon the Reservoirs and on Lake Erie, but only small bands, or twos and threes, are found elsewhere. The birds move northward early in April and return late in October.

No. 287.

GREEN-WINGED TEAL.

A. O. U. No. 139. *Nettion carolinensis* (Gmel.).**Synonym.**—AMERICAN GREEN-WINGED TEAL.

Description.—*Adult male*: Head and upper neck bright chestnut, blackening on chin; darker on forehead and crown, with a glossy green patch from and including eye to nape, usually separated from chestnut below by a narrow white line which is sometimes traceable to bill; a short occipital crest velvety purplish black; a crescentic white patch on side of breast before wing; sides of breast and sides, back, and scapulars continuous with narrow cervical collar, black and white in fine wavy bars or vermiculations; fore-neck and breast brownish buff, fading to silky white or buffy on belly, heavily marked anteriorly with round spots, more or less concealed, or not, according to age and season (?); wing-coverts, interscapulars, tertiaries, rump, and posterior parts, slaty gray or fuscous with an olivaceous or ochraceous tinge; speculum shining green, velvety purplish black on outer feathers, bounded in front by chestnut or fawn tips of greater coverts, behind narrowly by white, and on inner margin by abrupt black of outer tertiary; crissum velvety purplish black with a partially enclosed creamy or buff patch on either side; bill livid black; feet and legs dusky bluish; iris brown. *Adult female*: Speculum substantially as in male; no other trace of pattern of male save white patch on side of crissum; upper parts brownish dusky tinged with greenish and edged with lighter; head and neck dusky brown, streaked with ochraceous above, elsewhere pale buffy, speckled with dusky; breast and sides brownish dusky, ochraceous-brown, and whitish, the former in crescentic and U-shaped markings, and the whole suffused with brownish buffy; belly and crissum pale buffy or brownish buffy, obscurely spotted and streaked with darker. Length 12.50-15.00 (317.5-381.); av of six Columbus males: wing 7.08 (179.8); tail 2.63 (66.8); bill 1.48 (37.6); tarsus 1.19 (30.2).

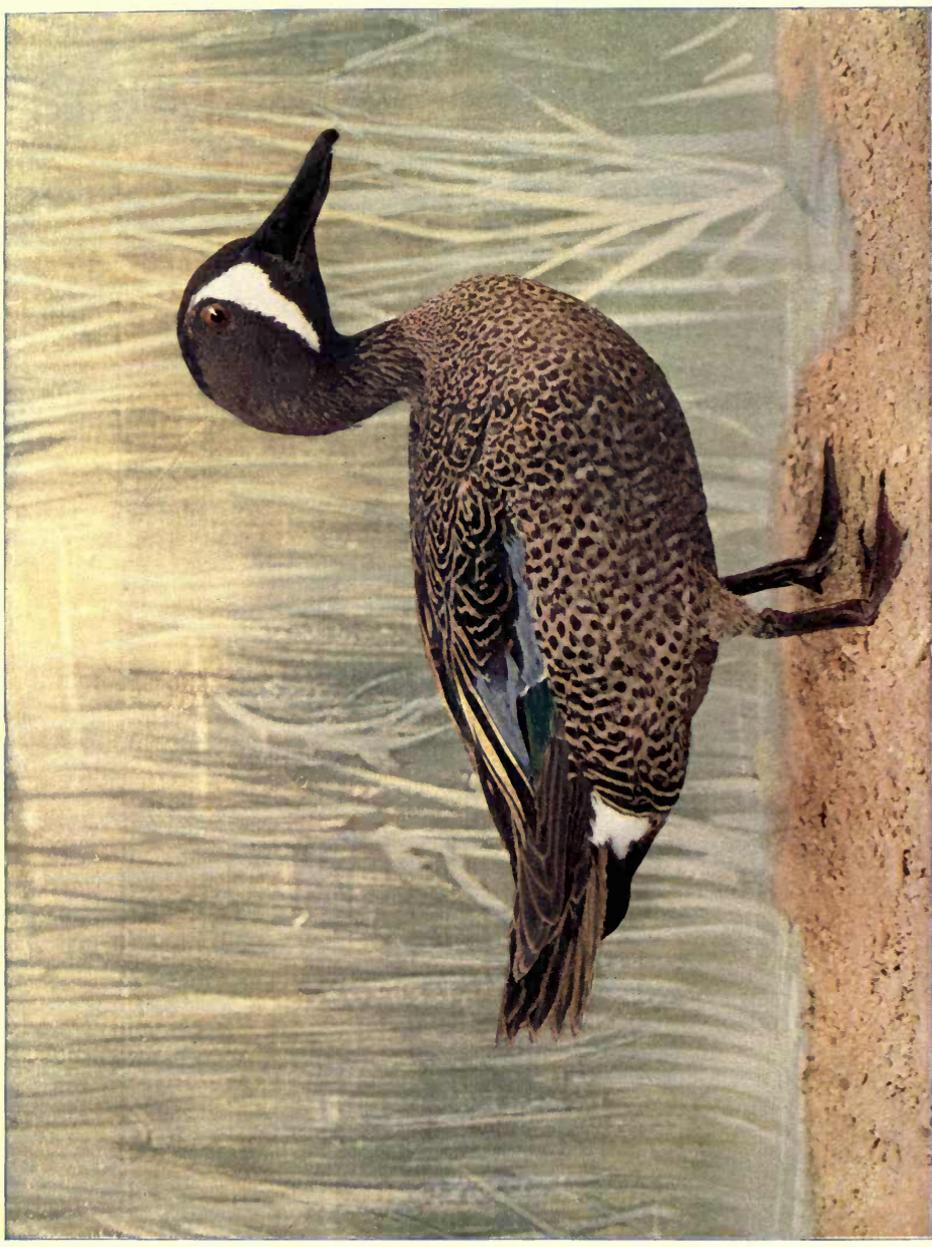
Recognition Marks.—The smallest duck; chestnut and green head of male; black and shining green speculum, with size, distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground, of weeds and grasses, lined with feathers and down. *Eggs*, 6-8, rarely 10-12, greenish buff or buffy white. Av. size, 1.82 x 1.27 (46.2 x 32.3).

General Range.—North America, breeding chiefly north of the United States, and migrating south to Honduras and Cuba.

Range in Ohio.—Not uncommon migrant. Formerly abundant.

THE rare beauty of this diminutive duck is not likely to escape notice, and its flesh has received a correspondingly high rating, altho it takes two of them on a single plate to provide a meal for a hungry gunner. This Teal is among the earliest migrants, following promptly the retreat of the ice in late February and early March, or gathering about the open spring branches, upon the recurrence of a cold snap. It is much less common than formerly, and appears in twos and threes rather than in large flocks; these little companies may be found in the most unexpected places,—a wayside ditch, a horse pond, or an isolated swamp pool. The bird obtains its food largely upon the land, walking with ease and grace. Fallen seeds, nuts,



BLUE-WINGED TEAL
Querquedula discors
1/3 Life-size

Illustration by J. S. Silliman
BIRD'S HEAD IN CASE IN THE MUSEUM OF COMPARATIVE ZOOLOGY

berries and acorns are added to the watery fare of insects, worms, and snails, while fallen grain and the water-soaked rice of the Carolinas is especially acceptable.

When surprised upon the water, the Teal clears its surface with a single bound, and makes off on sharply whistling wings with great swiftness. If the situation is open, the opportunity requires quick work with the gun, but if there are surrounding trees to clear, a good chance comes as the birds are rising. In midflight the wings are agitated with almost incredible rapidity, and it is an interesting thing to contrast their motion with that of a flock of Mallards—which is by no means slow—to which the birds sometimes join themselves.

There is no reason to believe that Green-wing Teals breed in Ohio, tho they may formerly have done so; the birds winter, however, wherever there is open water.

No. 288.

BLUE-WINGED TEAL.

A. O. U. No. 140. *Querquedula discors* (Linn.).

Description.—*Adult male*: Forehead and crown (narrowly) and region about base of bill bright blackish; a large white crescent on side of face before eye; rest of head and upper neck warm plumbeous, with metallic, wine-purple reflections (like the plumage of certain doves); fore-neck and entire under parts to crissum, including lengthened feathers of sides (nearly meeting across back when wings are folded) purplish-vinaceous or purplish-chestnut, heaviest on breast, paling laterally, spotted on crop and sides, and barred on breast, belly, and longer flank feathers, with blackish; upper back and scapulars greenish fuscous, with narrow and elongated V-shaped markings of vinaceous-cinnamon; inner scapulars and tertiaries, narrow and elongated, greenish dusky, striped with vinaceous-cinnamon; lower back and behind nearly plain dusky; crissum and tail externally blackish; flanks white; wing-coverts and outer webs of outer scapulars and tertiaries a beautiful light grayish blue; speculum shining bronzy green (not so bright as in *Nettion carolinensis*, more "sickly") with dusky on either side, and bordered in front by broad white tips of greater coverts; axillars and lining of wings mostly white; "bill grayish black; feet dingy yellow with dusky webs and claws; iris brown" (Coes). *Adult female (and male in summer)*: Wing substantially as before, or greater coverts not so extensively white-tipped; no other indication of prime pattern; head, neck, and under parts dull buffy or pale brownish buff; the first two finely streaked, save on chin and upper throat, the last variously spotted and marked with dusky, lightening on belly; back and scapulars brownish dusky, blackening on longer feathers, narrowly edged with light brownish. *Young*: "Similar to adult female, but whole belly immaculate, and speculum dull grayish brown without metallic gloss" (Ridgw.). Length 14.50-16.00 (368.3-406.4); av. of six Columbus males: wing 7.34 (186.4); tail 2.60 (66.); bill 1.60 (40.6); tarsus 1.20 (30.5).

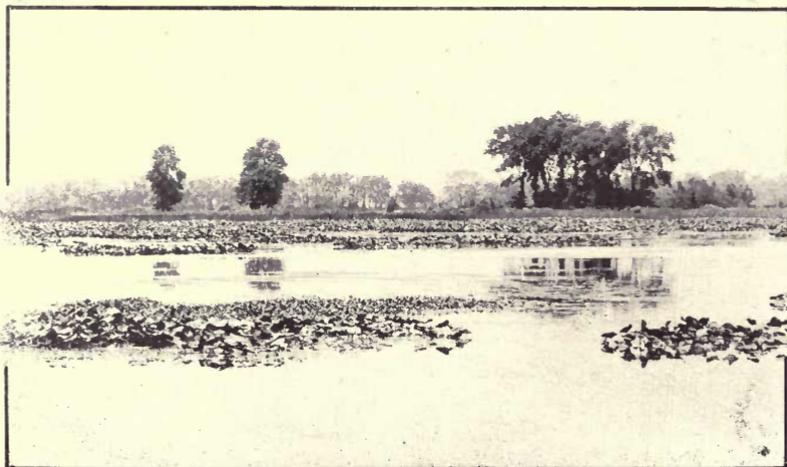
Recognition Marks.—"Teal" size; white facial crescent of male; grayish blue wing-coverts distinctive (except from the following which is rare and otherwise quite different).

Nest, of grasses, etc., lined with feathers, on the ground. *Eggs,* 6-12, greenish white, or dull buffy. Av. size, 1.80 x 1.28 (45.7 x 32.5).

General Range.—North America in general, but chiefly eastward; north to Alaska, and south to the West Indies, Lower California, and northern South America. Casual in California. Breeds from Kansas and southern Illinois northward.

Range in Ohio.—Abundant spring and fall migrant. Formerly summer resident in northern portion of state.

BECAUSE of the nature of their food, which consists chiefly of insects, the Blue-winged Teals are much less hardy than their Green-winged kin, and most of them retire to the Gulf States in winter, or even to the tropics. On this account, also, they are the latest of the migrant ducks in spring, appear-



Taken on the Licking Reservoir.

Photo by the Author.

WHERE THE TEALS WOULD NEST.

ing commonly about the middle of April, and lingering until the first week in May. They arrive paired, but are much less frequently observed than in fall, when they appear in considerable numbers.

Sluggish streams, lagoons, and channels choked with vegetation, are the favorite places of resort for this bird. Our reservoirs and lake marshes afford ideal conditions, and I am inclined to think that if spring shooting

were abolished, a good many pairs would remain to breed. There are, of course, valid sentimental reasons which should discourage the slaughter of mated pairs in spring, but there are even stronger economic reasons why the practice should be abandoned altogether. At the best, ducks of all kinds are decreasing in numbers at an alarming rate. They are doomed as a class, unless prompt and stringent measures are adopted in their behalf. If those ducks which would naturally breed in this latitude, are confronted in spring by the muzzles of our guns, they not only decline to nest with us, but if they succeed in escaping our fire, and if they receive the same treatment in Ontario which they do here, they are obliged to run a gauntlet substantially five hundred miles longer before they feel safe in settling down for the season. And, of course, one bird killed in the spring is equal to three in the fall. In other words, we are consuming our seed wheat, instead of planting it and waiting for the harvest in Nature's time.

In autumn the Teals are moving southward in leisurely fashion by the 10th of September, altho the last of their number may not clear before the 20th of the following month. In the air they move in compact flocks, wheeling and charging with a single impulse, and in such ranks that a single broadside from a waiting gun will sometimes account for dozens. Upon the water, also, they huddle together, and invite a murderous raking fire. In addition to the whistling of the wings, the Teals have a soft lispng note, only remotely related to the typical Anatidine *quack*, and this is uttered either in apprehension or encouragement.

Of the bird's nesting in Ohio nothing is known further than that eggs have been taken in the Sandusky marshes. The nests are in the midst of grass or sedges on low ground, and not infrequently at some distance from water. The female habitually covers her eggs with down, if obliged to leave them for a time, and draws the surrounding grasses down over them as an additional protection.

No. 289.

CINNAMON TEAL.

A. O. U. No. 141. *Querquedula cyanoptera* (Vieill.).

Description.—*Adult male*: Entire plumage except back and wings, rich chestnut, darker on head, darker and duller on belly, darkest, almost black, on crissum; back and inner scapulars warm dusky, margined with cinnamon or lighter, inner and middle wing-coverts (the latter overlapping and nearly concealing the greater coverts), and the outer webs of outer scapulars and tertials beautiful light grayish blue; speculum lustrous green, bounded on sides by dusky

and in front, only in part, by white tips of greater coverts; axillars white; under wing-coverts white and dusky; bill black; feet and legs orange; iris orange. *Adult female (and male in breeding plumage)*: Similar to corresponding plumage of *Q. discors*, but darker; more of the throat and sometimes chin speckled; "under parts with at least a tinge of the peculiar chestnut color;" averaging larger. Length 15.50-17.00 (393.7-431.8); wing 7.45 (189.2); tail 2.90 (73.7); bill 1.80 (45.7); tarsus 1.32 (33.5).

Recognition Marks.—Large Teal size; heavy chestnut coloration of male distinctive. Females and young require careful discrimination from *Q. discors*; see above.

Nesting.—Does not breed in Ohio. *Eggs*, 6 to 12, creamy white or pale buff. Av. size, 1.87 x 1.41 (47.5 x 35.8).

General Range.—Western America from British Columbia south to Chili, Patagonia, and Falkland Islands; east in North America to the Rocky Mountains and southern Texas; casual in the Mississippi Valley and Florida.

Range in Ohio.—Accidental. One record.

IT is a matter of regret that this beautiful Teal is rated merely as "accidental" in our state. Its claim to recognition rests upon a single record, that made by William Harlow, on April 4th, 1895, at the Licking County Reservoir, and reported by Oliver Davie in the fifth edition of his "Nests and Eggs of North America."

The Cinnamon Teal is a common bird west of the Rocky Mountains, and especially in the Pacific Coast States, where it breeds freely. No handsomer spectacle can be conceived by the sportsman or nature lover, than that afforded by a flock of these brilliant chestnut-colored ducks as they rise suddenly from a wayside pond at break of day. It is as tho fragments of the rich red earth, from which we are all made, had been startled by the impact of the sun's rays upon the water, and were fleeing toward heaven—earth, air, fire, and water, all in one burst of momentary splendor.

No. 290.

SHOVELLER.

A. O. U. No. 142. *Spatula clypeata* (Linn.).

Synonyms.—SPOON-BILL DUCK; BROAD-BILL.

Description.—*Adult male*: Head and neck sooty black, overlaid, especially above, with glossy green and glancing metallic blue or purple; lower neck and fore-breast pure white; lower breast, belly, and sides purplish chestnut, the longer side-feathers dusky-barred; back, narrowly, greenish dusky, becoming greenish black on rump and behind, and glossy green on sides of upper tail-coverts; cris-

sum black, separated from belly anteriorly by white, finely undulated with dusky; white flank-patches; inner scapulars white, and inner tertiaries white-striped; wing-coverts and outer webs of outer tertiaries light grayish blue; the posterior row of coverts greenish dusky at base, broadly white-tipped; speculum glossy green bounded on either side by dusky; primaries dusky; axillars and lining of wing white; bill spatulate, the upper mandible much broader at tip than lower and enclosing it; lamellæ prominent, deep black; feet orange-red; iris brown. *Adult female*: Wings much as in male, but duller; scapulars like back and tertiaries not striped; upper parts, except head and neck, plain fuscous glossed posteriorly with greenish; remaining plumage buffy or buffy white, spotted with brownish fuscous; head and neck narrowly streaked with dusky; lower breast tinged with brownish; bill brown above, orange below. *Young male*: Like adult female but colors heavier, and belly tinged with chestnut. *Young female*: Similar to adult but wing-coverts dull slaty gray, only faintly tinged with bluish or greenish; speculum not so extensively glossy green. Length 17.00-21.00 (431.8-533.4); wing 9.00-10.00 (228.6-254.); tail 3.00-3.50 (76.2-88.9); culmen 2.50-2.90 (63.5-73.7); breadth of bill near tip 1.20 (30.5); tarsus 1.50 (38.1).

Recognition Marks.—Smaller than Mallard; bill broadened at tip distinctive; male with white breast and rich chestnut belly.

Nest, on the ground in or near swamp, lined with weed-stalks and grasses, or reeds. *Eggs*, 6-10, pale bluish or greenish gray. Av. size, 2.12 x 1.48 (53.9 x 37.6).

General Range.—Northern Hemisphere. In North America breeding from Alaska to Texas; not abundant on the Atlantic Coast north of the Carolinas.

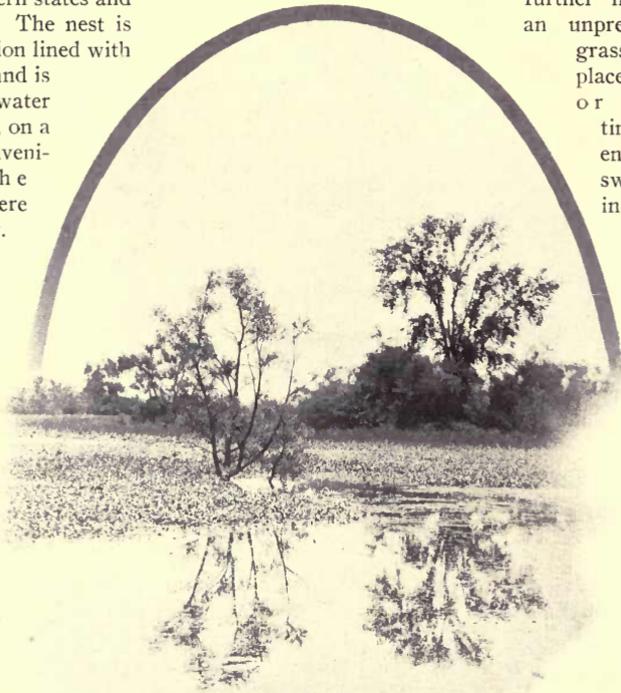
Range in Ohio.—Not common spring and fall migrant. Formerly bred sparingly and locally.

FORTUNATELY the Spoonbill Duck bears about with it a ready mark of identification, so that the diminishing numbers which appear in March or early April do not escape the notice of the ornithologist. The broad flattened bill indicates that its possessor is a gourmet of discriminating taste and unique opportunity. Most of the river ducks are obliged to depend more or less upon the senses of touch and taste rather than sight as they encounter food below the surface of the water, but in the case of the Shoveller these senses are developed to an extraordinary degree. The bird evidently feeds somewhat after the manner of the Right Whale, by filling its mouth at random and then ejecting the water through the mouth-parts, to retain in the lamellæ whatever is of value. The tongue of the duck is also modified, being provided with specialized taste papillæ to enable it to discriminate meat from poison; while as for plain dirt, the bird is probably willing to take its traditional peck any given day. Insects and vegetable matter, as well as minute forms of life of all kinds make up this lowly epicure's fare, and its flesh is everywhere held in high esteem.

During migrations the Shoveller appears usually in small flocks of its own species, or in company with Bluebills. It is occasionally seen upon the smaller ponds and rivers, and in its summer and winter haunts will explore the tiniest ditches and pools.

Dr. Wheaton supposed that these birds nested in the northern part of the state, and they may have done so; but their present breeding range lies almost entirely within the northern tier of western states and Alaska. The nest is a depression lined with down, and is near water from it, on a convenient corner of the anywhere country.

the northern tier further north to an unpretentious grasses and placed either or remote tiny islet, ent corner swamp, or in open



Taken at Buckeye Lake.

Photo by the Author.



PHOTO BY HENRIETTA H. BROWN FOR THE NATIONAL GEOGRAPHIC SOCIETY

PINTAIL
Anas acuta
1/3 Life-size

No. 291.

PINTAIL.

A. O. U. No. 143. *Dafila acuta* (Linn.).**Synonym.**—SPRIG-TAIL.

Description.—*Adult male*: Head and upper neck hair-brown, darker or warmer brown on top of head, with faint greenish or wine-purple iridescence on sides of occiput; a narrow white stripe from occiput obliquely backward and downward to join white of breast; enclosed space on hind-neck blackish; fore-neck, breast and belly white, faintly dusky-barred on lower belly; hind-neck, back, sides of breast, and sides finely wavy-barred dusky and white; posterior scapulars and tertiaries lanceolate, heavily striped, broadly with black, more narrowly with buffy white, light brownish gray, and fuscous; rump and behind with mesial brownish dusky and obscure wavy-barring of fuscous and whitish; central pair of tail-feathers much elongated, blackish or with metallic reflections; crissum white, separated from belly by dull white area and broad flank patches; wing-coverts plain brownish gray, the posterior row tipped with cinnamon-rufous; speculum dull bronzy green or faintly glossy with dusky on either side, and bordered behind by black and terminal white; axillars white with a little mottling of light grayish brown; lining of wings mottled brownish gray and white; bill black, edged with grayish blue; feet and legs grayish blue; iris brown. *Adult female*: Obscurely colored; pale ochraceous or whitish on belly; ochraceous-buff or brownish buff on remaining under parts; much darker, nearly cinnamon-brown on crown; head and neck finely streaked with dusky, except occasionally on upper throat; breast variously spotted and streaked; sides with large irregular U-shaped markings of brownish dusky; upper parts dusky or greenish fuscous, lightly or heavily marked and striped with dull ochraceous or ochraceous-buff; wing much duller than in male, altho pattern traceable; wing-coverts fuscous narrowly white-edged and tipped; the tips of posterior row scarcely broader, white; speculum dusky with faint purplish and greenish gloss; axillars more heavily mottled with grayish brown. *Adult male in breeding plumage*: Similar to adult female, but wing as in ordinary plumage (Ridgw.). *Young male*: Like adult female but more ochraceous below and more uniformly streaked; slightly transverse-barred above, and wing early showing adult characteristics. *Young female*: Similar to adult, but more heavily tinged below, and more heavily streaked and striped above; *speculum light brown* dappled with dusky. Adult male length 26.00-30.00 (660.4-762.); wing 10.60 (269.2); tail 6.25-9.50 (158.8-241.3); bill 2.10 (53.3); tarsus 1.70 (43.2). Females average smaller;—tail 4.00-5.00 (101.6-127.).

Recognition Marks.—Mallard size or less; lengthened tail-feathers of adult male; head hair-brown; fore-neck and below white (adult male). The female and young of this bird present difficulties. Look first for the wedge-shaped tail, and top of head suffused with cinnamon-brown and heavily streaked with blackish; then eliminate other species by careful attention to speculum and wing-coverts.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground, usually in a bunch of tall grass not far from water. *Eggs*, 8-12, pale greenish gray or buffy white. Av. size, 2.20 x 1.48 (55.9 x 37.6).

General Range.—Northern hemisphere. In North America breeds from Iowa and Illinois northward; migrates south to Panama and Cuba.

Range in Ohio.—Common spring and fall migrant. Common winter resident in southern portion.

A bunch of ducks has been marked down in the old 'slough,' and the sight has aroused for the moment feelings which flourish in the youthful breast at the expense of all others. The instinct of the chase, inconsistent, indefensible, perennial, self-sufficient, vital, impels the farmer boy to seize the old shotgun and slip down the lane into cover of the fringing willows, which lead along a tiny sluggish stream to the edge of the swamp. First on hands and knees, then snake fashion, with a scowl for every time the muzzle of the gun scoops mud, and a sinking of heart when a dry twig breaks, the lad works up cautiously to a well-known bush clump which overlooks the pond. There they are, seven beauties, "Sprig-tails," riding high upon the water, graceful, quick and a little restless. Some faint presentiment of danger has overtaken the group, and they have edged over to the other side of the open stretch of water, but one more reckless than the rest is 'tipping' for some hidden roots, leaving his tail to stick straight up in the air like a waving tuft of young bulrushes.

It is a long shot, but there is nothing else for it this time. One barrel for the birds 'on the set'—Bang! And again as the remaining birds rise and crowd together in the first moment of confusion. Bang! goes the other barrel. Seven birds in two shots! Hooray! Luck enough to satisfy the king!

Pintails are very wary, and when mingling on the water with other species are usually the first to give the alarm. Their flesh is excellent, and they are eagerly sought for, but they are still among the common ducks. In spring they move early, passing northward in immense flocks. Their flight is extremely swift, perhaps the most rapid of any of the ducks, so that even with smokeless powder and a repeater, the man behind the gun has a good deal to do. In the fall the flocks are not so large, and they are much more numerous, an indication, perhaps, that their breeding range covers a much larger stretch of country than that allowed them for a winter home.

No. 292.

WOOD DUCK.

A. O. U. No. 144. *Aix sponsa* (Linn.).

Synonyms.—SUMMER DUCK; "THE BRIDE."

Description.—*Adult male*: Of almost indescribable elegance; head, crested, metallic and iridescent green, purple, violet, and black; a white line from angle of upper mandible along crown, and another backward from behind eye, both continued in the feathers of the large occipital crest; throat white, sending up two transverse bars on either side on cheek and hind-neck; fore-neck and breast



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ILLUSTRATION BY GUY W. HUNTING

WOOD DUCK
Aix sponsa
1/2 Life-size

rich chestnut, glossed with purplish on sides of breast, and marked centrally with triangular white spots, which increase in size backward; belly broadly white; sides warm fulvous, minutely waved with black, the tips of the outermost feathers with broad crescentic bars of black and white; chestnut of breast and fulvous of sides separated by two transverse bars, the front one white, the hinder black; upper parts chiefly sooty or velvety black with metallic reflections of blue, purple, green, and bronze; the anterior and marginal coverts and base of primaries (all mostly concealed) plain fuscous; exposed tips of primaries silvery white, on outer web tipped with metallic blue; secondaries white-tipped, the exposed webs metallic; crissum sooty-brown with metallic gloss; flank-patches intense purplish chestnut; axillars and lining of wings white, spotted or barred with dusky; "bill (in life) beautifully varied with jet-black, milk-white, lilac, red, orange, and yellow; legs and feet orange, claws black; iris and edges of eye-lid red." *Adult female and young*: Crest only faintly indicated; top of head purplish brown with faint metallic reflections; throat and space about eye (extending backward to occiput) and some feathering about base of bill, white; rest of head ashy brown; upper parts much as in male but duller, chiefly warm brown in place of black; fore-neck and breast brown, streaked with lighter or dull ochraceous; belly white; crissum mixed fuscous and white. Length adult male 19.00-20.50 (48.2-52.7); wing 9.15 (23.24); tail 3.88 (9.86); bill 1.30 (3.3); tarsus 1.36 (3.45). Female, length 17.00-19.25 (43.18-48.9); other dimensions in proportion.

Recognition Marks.—Smaller than Mallard. Exquisitely variegated plumage of male unmistakable; female unlike that of any other species.

Nest, in a hollow tree, lined with twigs, grasses, and down. *Eggs*, 8-14, buffy white. Av. size, 2.05 x 1.55 (5.21 x 3.94).

General Range.—Temperate North America, breeding throughout its range. Cuba. Accidental in Europe.

Range in Ohio.—Formerly common summer resident and migrant. Now rare throughout the state.

FEW if any more exquisitely beautiful creatures have been fashioned in the workshop of Nature than the Wood Ducks of America. Among the Ducks, certainly only the Mandarin (*Aix galericulata*) of China, a near relative, may vie with this species in brilliancy of coloring and delicacy of mould. Linnæus called the Wood Duck the Bride (Latin, *sponsa*, bride) but, of course, it is the bridegroom who wears the jewels and inherits the products of Oriental dye-stuffs, bequeathed through a thousand generations; for, Males must strut and females must work, is the rule among ducks as among most other birds. Literally all the colors of the rainbow belong to this bird in his nuptial plumage, with black and white thrown in for good measure. And with all this gaudy attire go many accomplishments not attained by any others in the group.

Birds of this species frequent secluded swamps, bayous, and sheltered water-ways. They are swift and graceful fliers, and they are able to traverse the mazes of the forest with the ease of pigeons. They perch readily upon the branches of trees, and even walk along them without hesitancy. To the aquatic fare offered by the surface and depths of woodland pools, is added the flying insects of the forest home, and the tender shoots and leaves of plants in

spring. Acorns are a favorite food in fall, and upon these the birds sometimes stuff themselves to repletion.

Most curious were the nesting habits, with which our fathers were almost as familiar as we are with those of Sparrows. The birds arrived mated in early spring, and in later April, May, or early June, according to latitude, a site was chosen in the hollow of a broken branch of a tree, in a large deserted Woodpecker hole, or in a central hollow of some tree to which admission was gained through a crevice. Those holes which overlooked water were preferred, but in the absence of these the bride and groom would sometimes take up residence a half a mile from the nearest swamp or stream. Within the chosen hollow, from eight to fourteen eggs, "resembling old polished ivory", were placed on a cushion of grasses, leaves, feathers, and down. Occasionally the entrance to the hole would be so narrow that the female in visiting her eggs was obliged to spend some time in squeezing through. As the female sat for four weeks, the male mounted guard in a neighboring tree and apprised her of approaching danger by a strange cry, "oe-eeek", like the crowing of a young cock.

When the young were hatched, they instinctively scrambled to the mouth of the hole and tumbled out, or were urged out by the mother, falling either into the receptive water, or upon the carpet of leaves at the foot of the nesting tree. If the distance was too great, the mother would carry the youngsters to the ground in her bill one at a time, until all were out, and then lead them to the nearest water.

One naturally falls into the past tense in speaking of the Wood Duck's nesting, for while this bird was once easily the most abundant breeding duck in Ohio, it has become positively rare, and no nests have been recently reported. It is difficult to conceive of the abundance of Wood Ducks only twenty-five, thirty, and forty years ago. Dr. Howard Jones of Circleville tells me that thirty years ago these birds were killed in the vicinity by *wagonloads* every spring. Our chief game warden, Mr. J. C. Porterfield, says that in his boyhood home in the western part of the state, Wood Ducks flying to and from their nests were one of the most familiar sights, comparable to Robins and Blackbirds. The other day he received from one of his deputy wardens in that same section the head of a male Wood Duck in full plumage, with the request that he have it *identified*—a task which any twelve-year-old could have performed thirty years ago.

The fact is that the Wood Duck is verging upon extinction, and its fate is sealed unless it is accorded full protection at once and for a considerable term of years. And why should we, the people of Ohio, sacrifice this jewel of the waters, which might gladden all our eyes for all our lives, for the sake of the insignificant mouthfuls of meat, which only one ten-thousandth of our number might enjoy for a few seasons? Let us, if possible, save the Wood Duck from the perdition to which we have consigned the Wild Pigeon and the Wild Turkey.

No. 293.

REDHEAD.

A. O. U. No. 146. *Aythya americana* (Eyt.).**Synonym.**—AMERICAN POCHARD.

Description.—*Adult male*: Angle between culmen and forehead abrupt; head and upper neck bright chestnut, glossed with reddish purple, most heavily on neck; lower neck and breast all around (i. e. including upper back) deep glossy brownish black; belly white; rump, upper tail-coverts, and crissum sooty black; remaining plumage, except wings, and including lower belly (in fact all above the "water-line") finely wavy-barred or vermiculated dusky and white in about equal proportions; wing-coverts ashy gray speckled with white; speculum still lighter,—warm ashy gray, tipped with white; axillars entirely and lining of wings chiefly white; bill dull blue with a black belt at tip; feet grayish blue, with black claws and dusky webs; iris orange. *Adult female*: Much plainer; wing as in male; above and on breast and sides warm or dull grayish brown, more or less tipped with buffy or fulvous, the feathers of back and scapulars sometimes speckled with dusky and white on tips, according to season; darker on back and crown, lighter on sides of head and neck, especially above bill, lightening to buffy white on chin and throat; belly white; lower belly light grayish brown; crissum grayish brown and white; bill lighter than in male. *Immature male*: Like adult female but darker; feathers near base of bill, on sides only, whitish; speculum (always?) creamy white instead of ashy gray. Length 18.00-22.00 (457.2-558.8); wing 8.96 (227.6); tail 2.50 (63.5); bill 1.80 (45.7); tarsus 1.56 (39.6).

Recognition Marks.—Mallard size or smaller; chestnut head, black breast and "canvas" back and sides of male. See distinctions under next species.

Nesting.—Not known to breed in Ohio. *Nest*, in a marsh or near water, of reeds, grasses, etc., well lined with feathers and down. *Eggs*, 8-14, creamy white, or dull greenish buff. Av. size, 2.40 x 1.70 (61. x 43.2).

General Range.—North America, breeding from California, southern Michigan and Maine northward.

Range in Ohio.—Rather common spring and fall migrant.

IT may be confessed of a few of the wild birds that they were made to be eaten. Even with this stolid view of the case, it is matter of regret that such an excellent bird is rapidly decreasing in numbers. Inasmuch as it is strictly a migrant with us, the fault would seem to lie with the inadequacy or lax enforcement of laws in the southern bays and estuaries, where they winter in considerable numbers, and with the utter lawlessness of the far northwest, where the species is no longer able to cope with the rising tide of uninstructed and irresponsible immigration. Nothing will ever be accomplished so long as each state takes a wholly selfish view of the birds which pass through its borders, and disregards the rights and claims of other states and of the birds themselves. It is vain that we should try to raise Wood Ducks in summer

that our southern neighbors may have an abundant supply in winter, and idle to expect the hunters of the Pamlico to refrain from shooting Redheads in January that we may have enough and to spare in March. The only real remedy lies in national legislation, which shall take account of the entire life of a given species, and accord it protection at the times and places of greatest danger, irrespective of local and unenlightened opinion.

The Redhead occurs with us in small flocks, and these sometimes visit the smaller lakes and ponds. Their food consists largely of vegetable matter



Taken at the Licking Reservoir.

Photo by the Author.

WHERE THE REDHEAD COURTS DESTRUCTION.

which they obtain by diving. Like their better known relatives the Canvas-backs, they eat the eel grass (*Vallisneria spiralis* L.), commonly called wild celery; and their flesh cannot then nor at any other time be distinguished from that of the latter birds.

This duck is unusually prolific, and Rev. Herbert K. Job, who has done such excellent work with the waterfowl, once found in a Dakota slough, a set of twenty-two eggs,—all, as he believed, the product of one bird.

No. 294.

CANVAS-BACK.

A. O. U. No. 147. *Aythya vallisneria* (Wils.).

Description.—*Adult male*: Similar to preceding species, but larger, head larger, bill longer, and no evident angle between bill and forehead; head and



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CANVAS-BACK
Aythya collaris
1/3 Life-size

upper neck reddish brown without purplish gloss, blackening on crown and chin; the sides less heavily waved with dusky; the white bars of upper parts much wider than the dusky (hence entire back conspicuously lighter in tone); upper mandible dusky at base, bluish only between nostril and black tip; iris red. *Adult female*: Similar to that of preceding species, but proportioned like male; bill correspondingly different; feathers of back and scapulars more or less wavy-barred with white. The female Red-head is sparingly speckled above with dusky and whitish, but never barred. Length 20.00-23.50 (508.-596.9); wing 9.00 (228.6); tail 2.90 (73.7); bill 2.35 (59.7); tarsus 1.75 (44.5).

Recognition Marks.—Mallard size; slope of culmen continuous with forehead; reddish brown head and light canvas back. For detailed comparison with *A. americana* see above.

Nesting.—Does not breed in Ohio. *Nest*, on the ground of marshes and grassy sloughs, of grasses, etc., lined sparingly with feathers. *Eggs*, 6-10, buffy white with a greenish or bluish tinge. Av. size, 2.45 x 1.75 (62.2 x 44.5).

General Range.—Nearly all of North America, breeding from the northwestern states northward to Alaska.

Range in Ohio.—Not uncommon on Lake Erie during migrations; less common on reservoirs; rare elsewhere in state.

"TELL me what you eat and I will tell you what you are" might be represented by a self-respecting human, but it applies pretty accurately to the flavor of ducks. Various writers are wont to extol a bird's flesh as "tender," "juicy," "sapid," "delicious," or to condemn it as "gamy," "rank," "fishy," "unpalatable," according to traditions which prevail locally; so that often the testimony of no two observers will agree as to a duck's fitness or unfitness for the table. The fact is, however, that the flavor of wild meat is pretty much what the feeding of the last week or so has made it, so that it is possible for a single bird to run the whole gamut from "sapid" to "fishy" in a single season. The early Canvas-backs were found feeding upon the rank grass, or wild celery, of Chesapeake Bay, and from this circumstance has arisen a most extravagant appreciation of its flesh—or the profession of it—which has pursued the poor duck from Manitoba to the Carolinas, and nearly wrought its ruin. But, as Coues says, "there is little reason for squealing in barbaric joy over this over-rated and generally under-done bird; not one person in ten thousand can tell it from any other duck on the table, and then only under the celery circumstance." The pursuit, however, has been so relentless, that there has been little opportunity left for ornithologists to study the species quietly, and recent reports of its nesting in the heavy reeds of North Dakota sloughs, serve only to emphasize our comparative lack of knowledge of the habits and home life of the Canvas-back.

No. 295.

AMERICAN SCAUP DUCK.

A. O. U. No. 148. *Aythya marila* (Linn.).**Synonyms.**—GREATER SCAUP; BLUE-BILL; SHUFFLER; RAFT DUCK; BLACK-HEAD.**Description.**—*Adult male*: Head and neck black with green gloss; foreneck all round and breast rich purplish black; a collar around neck obscurely lighter; belly and sides pure white; back and scapulars vermiculate or wavy-barred black and white,—the white bars wider in front, becoming much narrower behind; tertiaries, lower back, and tail-coverts sooty black; flanks sooty brown; wing-coverts blackish, speckled sparingly on tips with white; speculum white, tipped with blackish; axillars and under wing-coverts chiefly white; bill dull blue with black nail, broadening and much hooked at tip; feet dark plumbeous and with darker webs; iris yellow. *Adult female*: Region about base of bill (least on chin) white; head and neck plain snuff brown; fore-neck and breast dark brown, edged and tipped with lighter; sides and crissum dark grayish brown, the former decidedly, the latter obscurely vermiculated with white; belly white, shading into brown marginally; upper parts brownish dusky, the tips of feathers speckled or obscurely vermiculated with white; wings, bill, etc., as in male. Length 17.50-20.00 (44.5-50.8.); wing 8.65 (21.7); tail 2.90 (7.3.7); bill 1.75 (4.4.5); tarsus 1.50 (3.8.1).**Recognition Marks.**—Smaller than Mallard; head, neck and breast black (female brown); belly and sides white (male); bill bluish with black nail. Larger.**Nesting.**—Does not breed in Ohio. *Nest*, on the ground in a grassy swamp, of grasses, etc., lined with feathers and down. *Eggs*, 6-10, pale grayish olive or buffy. Av. size 2.54 x 1.71 (64.5 x 43.4).**General Range.**—North America, breeding far north. South in winter to Guatemala.**Range in Ohio.**—Not uncommon migrant, chiefly on the reservoirs and Lake Erie.

IN general habits this duck resembles the smaller Lesser Scaup, but is everywhere less common. There is no record of its breeding within the state, but it has been found breeding at St. Clair Flats, near Detroit. It migrates a little earlier than the Lesser Scaup, but frequently flocks of the earlier Lesser Scaups contain some individuals of the Greater. In my experience in northern Ohio, the proportions of these two ducks is about 1 to 3, possibly 1 to 4. It is not easy to decide which of the species you have unless the flock contains both, because there is so little difference except in size. The larger bodies of water inland, as well as an our northern border, are resorted to in much greater numbers than are the smaller waters. A large duck loves large water.

LYNDS JONES.

No. 296.

LESSER SCAUP DUCK.

A. O. U. No. 149. *Aythya affinis* (Eyt.).**Synonyms.**—LESSER SCAUP; LITTLE BLACKHEAD; BLUEBILL, etc.**Description.**—*Adult male*: Similar to preceding but smaller; the head not glossed with green,—violet or purplish instead. *Adult female*: Distinguishable from that of *A. marila* only by smaller size. Length 15.00-17.00 (381.-431.8); wing 8.00 (203.2); tail 2.30 (58.4); bill 1.65 (41.9); tarsus 1.40 (35.6).**Recognition Marks.**—See preceding species; smaller.**Nesting.**—Not certainly known to breed in Ohio. *Nest* and *Eggs*, like those of preceding species. Av. size of eggs, 2.25 x 1.58 (57.2 x 40.1).**General Range.**—North America in general breeding chiefly north of the United States, migrating south to Guatemala and the West Indies.**Range in Ohio.**—Common spring and fall migrant. A few linger through the summer, but it is not certain that they breed.A CAREFUL
ducks foundenumeration of the
in Ohio

Taken in Oberlin

Photo by the Author

A FAVORITE WAY STATION.

THE OBERLIN WATER-WORKS RESERVOIR UPON WHICH MORE THAN TWENTY SPECIES OF WATER BIRDS HAVE BEEN RECORDED.

would probably prove this "Little Black-head," or "Little Blue-bill" as he is known to the hunters, the most numerous of all our ducks. It is certainly true that more individuals of this species are seen on our rivers, ponds, reservoirs and lakes than any other ducks. They are wary and wide awake where

danger may threaten, but on the Oberlin water-works reservoir, which lies within the village residence section, they are not usually disturbed at the presence of people standing all about the embankment on Sundays. During the season of migration they rarely occur singly, but in flocks of from five to over a hundred individuals.

Early in the season, during early April, most flocks contain a smaller number of females than males, but near the close of the migrations the females predominate. The early flocks contain about twenty percent of females, the later ones not more than that percent of males. I have never yet seen a flock wholly composed of one sex. Often other ducks associate with the Scaups on the smaller ponds, particularly the Greater Scaups, but in flight the tendency is strong for each species to go its own way alone.

Since the Scaups are sea and bay ducks, they are excellent divers, and feed well below the surface of the water. While they remain upon the Oberlin water-works reservoir there is not so much fishing as resting. Apparently the flocks have learned that the place is secure from danger, because small flocks remain for hours passively floating upon the water with the head turned back, resting upon the shoulders. They scarcely even notice the passing trains, nor people upon the embankment. The purplish-black head and neck, and black breast of the males contrasts strongly with the almost pure white sides and wing speculum. Often the bluish bill shows white in reflections, making the head appear cut away in front. The plain brownish-drab females are often puzzling to many people, but the white patch at the base of the bill should be a mark for certain identification, even if there should be no males present in the flock.

For three summers a pair of these birds has made its nest in the vicinity of Oberlin, making the reservoir the base of supplies. The nest has not been found, to be sure, but the birds make daily visits to the reservoir all summer long, and in the fall pay it a farewell visit with the whole brood. It seems more than likely that a few pairs nest in the northern parts of the state each summer. Most of those which pass us in the migrations spend the summer many miles north of Ohio.

The nest seems to be placed at the edge of running water, in thick grass, rushes, or weeds, slightly sunken, and lined with dry grasses and the down from the mother bird's breast. It is not a well-made nest, but is sufficient to contain the dozen eggs. The birds flush only when danger threatens near at hand, when they get up quickly and are away at great speed. The eggs are a darker drab than is usual with ducks' eggs.

LYNDS JONES.

No. 297.

RING-NECKED DUCK.

A. O. U. No. 150. *Aythya collaris* (Donov.).

Description.—*Adult male*: Head and neck sooty and lustrous black, with slight greenish and strong violet-purple iridescence; a short dense occipital crest; extreme chin white; a broad chestnut collar not clearly defined; fore-neck, breast, and upper parts rich, deep, brownish black, glossed with purplish on the breast, with green on the longer scapulars and tertiaries, minutely dotted with white on the scapulars; lower breast and belly white, becoming purplish on crissum and flanks; a transverse bar of white on side of breast continuous with under parts; sides minutely vermiculated dusky and white (as many as a hundred bars to the inch); wing-coverts grayish brown, becoming dull glossy green on posterior portion; speculum ashy gray tipped with brownish dusky, and bordered interiorly with bluish gray of outer tertials; axillars and lining of wings white; bill black, narrowly pale bluish at base, and crossed by band of same color near tip; feet dull blue with dusky webs; iris yellow. *Adult female*: Black of male replaced by brown,—dark amber brown on crown and upper parts, warm yellowish brown on breast and sides, paling on sides of head and neck to white on throat and whitish about base of bill; belly less clearly or extensively white; wing much as in male. Length 16.00-18.00 (406.4-457.2); av. of six Columbus males: wing 7.54 (191.5); tail 2.26 (57.4); bill 1.88 (47.8); tarsus 1.39 (35.3). Female somewhat smaller.

Recognition Marks.—Between Mallard and Teal size; short¹ occipital crest; chestnut collar; white chin; transverse white bar on breast and wavy-barred sides of male serve to distinguish this bird from the other "Blackheads," which it superficially resembles. Peculiar yellowish brown of sides distinctive for female.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground in grassy marshes or lakeside swamps. *Eggs*, 6-12, indistinguishable in color from those of preceding species. Av. size, 2.25 x 1.60 (57.2 x 40.6).

General Range.—North America, breeding far north and migrating south to Guatemala and the West Indies.

Range in Ohio.—Not uncommon, but rather irregular migrant.

THIS elegant species bears a general resemblance to the Lesser Scaup, but is nowhere so common unless it be in Minnesota, the center of its breeding range. Unlike the Scaup, it is never seen in large flocks, seldom in companies of above a dozen or twenty individuals; it shuns the open water, so much frequented by the Bluebills. In flight the individuals of a flock scatter widely, and they are likely to become still further separated as they feed in the rushes and deeper growth of the swamp. Here they subsist upon crayfish, snails, frogs, insects, and the various sorts of seeds which drop into the water from overhanging vegetation.

When surprised the Ringneck rises upon softly whistling wings, and beats a rapid retreat, while you notice the loose occipital feathers, ruffled by fear into a bushy crest, and observe that there is no white on the head, to cause confusion with other crested species.

No. 298.

AMERICAN GOLDEN-EYE.

A. O. U. No. 151. *Clangula clangula americana* (Bonap.).

Synonyms.—GOLDEN-EYE; WHISTLER; GARROT.

Description.—*Adult male*: Head and upper neck black, with a greenish gloss above and on sides; a circular white spot at base of upper mandible on side, but not reaching upper angle of bill; lower neck all around, under parts, the middle and greater wing coverts, the inner secondaries, and outer scapulars, centrally, pure white; remaining upper parts black, the white scapulars being black-bordered, and the feathers of sides similarly black-bordered along upper margin of the region, and on the lower margin of the elongated posterior feathers; lower belly mottled with dusky; bill black; feet orange with dusky webs and claws; iris orange-yellow. *Adult female*: Head deep snuff-brown, without white spot; the color not reaching so far down on the neck as black of male; remaining black of male generally replaced by grayish dusky; sides of breast, chest, and sides more or less overlaid, or underlaid, with the same; white of wing interrupted by dusky gray, mostly confined to inner secondaries and adjacent tertiaries; bill varied with orange. *Young male*: Like adult female, but darker and with increasing indications of loreal white spot. Adult male, length 18.00-23.00 (457.2-584.2); wing 9.20 (233.7); tail 3.50 (88.9); bill along culmen 1.35 (34.3); bill from frontal angle to tip 1.90 (48.3); depth of upper mandible from frontal angle to tomia .92 (23.4); from anterior margin of white spot to anterior angle of nostril .95 (24.1); from anterior angle of nostril to tip of bill .80 (20.3); tarsus 1.50 (38.1). Female length about 16.50 (419.1). Other dimensions proportionately smaller.

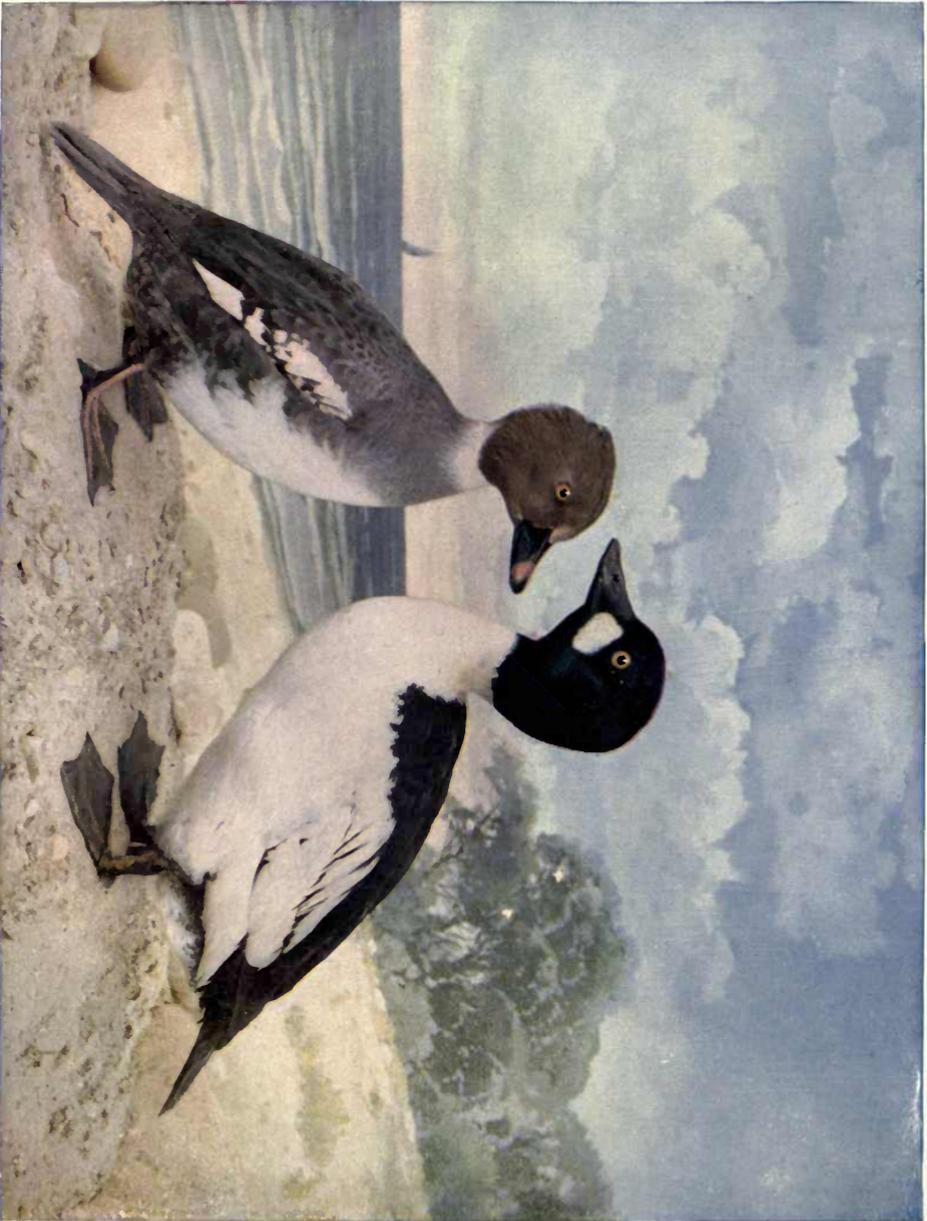
Recognition Marks.—Mallard size; black and white coloration; *round* white spot at base of bill on side; bright yellow eyes.

Nesting.—Does not breed in Ohio. *Nest*, in hollow of decayed tree or stub, lined with grass, feathers, etc. *Eggs*, 6-10, dull greenish or pale bluish. Av. size, 2.35 x 1.70 (59.7 x 43.2).

General Range.—North America, breeding from Maine and the British Provinces northward; in winter south to Cuba and Mexico.

Range in Ohio.—Not common migrant. Sparingly resident in winter in open streams of southern portion.

OF all wing-music, from the drowsy hum of the Ruby-throat to the startling whirr of the Ruffed Grouse, I know of none so thrilling sweet as the whistling wing-note of the Golden-eye. A pair of the birds have been frightened



AMERICAN GOLDEN-EYE

Changia americana

$\frac{1}{2}$ Life-size

GOVERNMENT PRINTING OFFICE: 1935
PHOTO REPRODUCED BY ORDER OF THE NATIONAL ARCHIVES

from the water, and as they rise in rapid circles to gain a view of some distant goal, they sow the air with vibrant whistling sounds. Owing to a difference in wing-beats between male and female, the brief moment when the wings strike in unison with the effect of a single bird, is followed by an ever-changing syncopation which challenges the waiting ear to tell if it does not hear a dozen birds instead of only two. Again, in the dim twilight of early morning, while the birds are moving from a remote and secure lodging place, to feed in some favorite stretch of wild water, one guesses at their early industry from the sound of multitudinous wings above contending with the cold ether.

The Golden-eye is a rather rare winter resident, but is better known as an early spring and late fall migrant. It moves north with the Mallard and the Green-winged Teal, and frequently does not retire in the fall until driven down by closed waters. It is found chiefly about the most retired stretches of open water or upon Lake Erie, and is exceedingly wary. The bird loves chilly waters and dashing spray, and very much prefers the rock-bound shores of mountain lochs, or the crunch and roar of icebergs to the milder companionship of sighing sycamores and waving sedge.

No. 299.

BARROW GOLDEN-EYE.

A. O. U. No. 152. *Clangula islandica* (Gmel.).

Synonyms.—WHISTLER; GARROT.

Description.—*Adult male*: Similar to preceding species, but gloss of head strongly blue-black or purplish; a triangular loreal white spot continuous with base of bill on sides and exceeding it above and below; white wing-patch crossed by transverse bar of back; and white of scapulars somewhat less extensive; tip of bill surrounding nail orange. *Adult female*: Presenting only trifling differences from that of the preceding species; bill of slightly different proportions, averaging stubbier and with slightly broader nail; *the tips of the greater coverts blackish*; bill as in male. Size of preceding, but averaging nearer the larger dimensions. Upper mandible from frontal angle to edge of tomia .92 (23.4); from anterior margin of white spot to anterior angle of nostril .88 (22.4); from anterior angle of nostril to tip of bill .64 (16.3)—(male). Similar dimensions of female .78 (19.8); .75 (19.1); .70 (17.8).

Recognition Marks.—Mallard size; black and white coloration; triangular, or open-wing-shaped white spot at base of bill on side; head with *purplish* gloss. Female like preceding,—distinguishable with certainty only by blackish tips of greater coverts.

Nesting.—Does not breed in Ohio. *Nest* and *Eggs* like those of preceding species. Av. of eggs, 2.47 x 1.77 (62.7 x 45.).

General Range.—Northern North America; south in winter to New York, Illinois and Utah; breeding from the Gulf of St. Lawrence northward and south in the Rocky Mountains to Colorado; Greenland; Iceland; accidental in Europe.

Range in Ohio.—Rare winter visitor.

THIS perpetuated accident of variation does not differ materially in habit from the commoner species, except that it does not often venture so far south. It is a bird of handsome appearance, and if one is so fortunate as to observe it at close range, while it is seated upon the water, he gets the impression of a viking ship with regal prow uplifted.

"It is reported from Sandusky Bay by Professor E. L. Moseley, and has been taken twice in Lorain County, once by Mr. L. M. McCormick, and once by the writer, on the Oberlin water-works reservoir. It should be found in the winter on the waters of the northern part of the state" (Jones).

No. 300.

BUFFLE-HEAD.

A. O. U. No. 153. *Charitonetta albeola* (Linn.).

Synonyms.—BUTTER-BALL; SPIRIT DUCK.

Description.—*Adult male*: Feathers of head puffy, somewhat lengthened along crest and nape; head and upper neck black, sooty below, with brilliant violet, purple, steel-blue, and bronze-green metallic reflections; a broad white space from eye to eye around occiput; back, inner scapulars and tertiaries with touches on coverts and some narrow bordering on the outer scapulars and up-turned side-feathers glossy black; upper tail-coverts and tail ashy gray; remaining plumage, including a broad collar around neck, white; belly silky or washed with pale gray; bill dull bluish with dusky nail and base; feet flesh color, with black claws; iris brown. *Adult female*: Head and neck mouse-brown, darker on crown, lighter on throat; a dull white patch below and behind eye; speculum narrowly white; reminiscences of white coverts of male in shape of two or three central spots on greater coverts; remaining plumage above, grayish dusky, below silky white, shading on sides and hind-neck. Length 14.00-15.25 (355.6-387.4); av. of six Columbus males: wing 6.67 (169.4); tail 2.93 (74.4); bill 1.10 (27.9); tarsus 1.31 (33.3). Female smaller.

Recognition Marks.—Teal size; plumage extensively white; head black, with large sharply defined patch of white from eye to eye behind. Similar spot much reduced, distinctive for female. Expert diver.

Nesting.—Not known to breed in Ohio. *Nest*, in hollow of tree or stump, lined with grasses, feathers, etc. *Eggs*, 6-14, pale olive gray, creamy, or buffy white. Av. size, 1.98 x 1.46 (50.3 x 37.1).

General Range.—North America; south in winter to Cuba and Mexico. Breeds from Maine and Montana northward, through the Fur Countries and Alaska.

Range in Ohio.—Common migrant, especially along streams. Partially resident in winter, according to openness of season.

EACH bird species, like each human family, possesses a character wholly its own. "Butter-ball" and "Butter Duck" are expressive of this duck's close-knit, fat appearance, and the name "Spirit Duck" arises from its appearance of floating in the air above the water, since the white breast and sides, below the field of black, cannot be seen, at first glance, above the water. No doubt its expertness in diving, thus dodging the shot, has also given point to this title. But aside from this superficial appearance, the Buffle-head possesses a character of his own. He rides the water daintily, scarcely wetting his toes, or lies on his side with one foot out of water, or plunges down to great depths, with utter disregard of the fact that he is an air-breathing animal. And too, he is always spick and span, never with so much as a dampened feather. How easy to become master of the water if you could go into it without getting in the least wet!

Buffle-head takes the world easy. He does nobody harm, and assumes that he will be treated equally well. Flocks on the Oberlin water-works reservoir never think of being disturbed by the curious spectators on the bank. One can almost believe that they were raised there.

The glossy, purplish-black, fluffy head with its mark of pure white reaching from eye to eye around the back of the head, makes a pleasant as well as a conspicuous contrast. The females are content with a white spot behind the eye. Females usually accompany the flocks of early males, and males the flocks of late females, but I have seen flocks composed wholly of one sex. In flight the birds form a bunch rather than a flock.

The spring migrations cover the last week in March and almost the whole of April. The birds return in October, and some may remain all winter in favorable winters or in favorable localities. While there seem to be considerable numbers of these birds, they never swarm anywhere. The flocks are usually not large, but the birds keep close together.

Buffle-head nests north of Ohio, but Dr. F. W. Langdon has found individuals in summer in Ottawa County, and it is reported as breeding sparingly on the St. Clair Flats. The nest is in a hollow tree or stump, and the mother bird plucks her own breast for the lining. The eggs range up to twelve in number, and do not differ in color from other duck eggs. It does not seem to be settled whether the old bird carries the young to the water, or whether she drops them to the ground and then guides them there.

LYNDS JONES.

No. 301.

OLD-SQUAW.

A. O. U. No. 154. *Harelda hyemalis* (Linn.).

Synonyms.—LONG-TAILED DUCK; SOUTH-SOUTHERLY; LORD AND LADY (male and female).

Description.—*Adult male in winter:* General plumage rich dark brown, or brownish black, and white; breast, broadly,—continuous with band around upper back—back, centrally,—to end of tail—wings (reddening on secondaries), and patches on sides of neck, brown; sides of head in front, including eyes, warm ashy gray, but eyelids white; superior scapulars elongated, reaching nearly to tip of wing, pale ashy white; sides ashy-tinged; axillars and lining of wings smoky brown; remaining plumage, including crown and throat and neck all around, white; tail graduated, the central pair of feathers much elongated, blackish, the lateral feathers short, white; bill black, saddled with orange toward tip; feet bluish with dusky webs and claws; iris bright red. *Adult male in breeding season:* Head, neck, fore-breast, and upper parts rich chocolate brown or sooty black; fore part of head silvery gray, whitening around and behind eye; back varied by rich fulvous or bright reddish on longer scapulars, etc.; lower breast and upper belly dark sooty gray; below white shaded with pale gray on sides. *Adult female in winter:* Head and neck white; a dark brown patch on head and nape and another on side of neck; upper parts dusky or blackish, varied, especially on scapulars, with considerable light brown or ochraceous; fore-neck and breast light brown above, shading through gray into white of lower parts; tail sharply pointed, but central feathers not lengthened; bill and feet dusky green; iris yellow. *Adult female in breeding plumage:* Similar to winter plumage, but head and upper neck dark grayish brown or blackish; a white space about eye and another on the side of the neck; scapulars with still more ochraceous. *Young:* Like adult female in winter, but more uniformly colored above, the males gradually acquiring the ashy scapulars. Adult male length 20.50-23.00 (520.7-584.2); wing 9.00 (228.6); tail 8.00-9.25 (203.2-235.); bill 1.10 (27.9); tarsus 1.32 (33.5). Female somewhat smaller,—tail 2.50 (63.5).

Recognition Marks.—Mallard size; white and sooty brown; head white with ashy and dark patches, or brown with grayish patch; tail (of male) greatly elongated; bill short,—black and orange; face full.

Nesting.—Does not breed in Ohio. *Nest,* on the ground among tall grass or bushes near water. *Eggs,* 6-12, dull grayish green, or light olive-buff. Av. size, 2.05 x 1.50 (52.1 x 38.1).

General Range.—Northern hemisphere; in North America south to the Potomac and the Ohio (more rarely to Florida and Texas) and California; breeds far northward.

Range in Ohio.—Rare winter visitor on Lake Erie. Casual in the interior.

“THIS is a winter duck sometimes passing to the southern border of the state. It is not at all regular even in the northern part, and does not appear to be governed wholly by weather conditions. During some winters it is

decidedly numerous anywhere on the lake front, and may venture well inland upon the smaller lakes and reservoirs, to the Ohio River, and several winters may pass without another visitation. Specimens have been taken from the gill nets off Lorain in five fathoms of water, where they had dived for fish and become tangled in the nets and drowned. Several spent the winter of 1901-02 on the lake shore in Lorain County" (Jones).

The Old-squaw obtains this name and others like it from its habit of vivacious jabbering while in flock upon the water. It has besides a peculiar and rather musical call-note, given as a salutation or summons while the bird is on the wing, a sort of nasal trumpeting quite impossible to represent. The birds are graceful and very swift fliers, and the elongated tail serves a useful purpose in helping to check flight, enabling the bird to alight quickly. A pair of them seated upon the water are handsome enough to merit the name applied to them by the hunters of the Pacific Coast, "Lord and Lady." Their fief is some icy cliff or bleak island in the far north, and they quit home only reluctantly, upon compulsion of the great white scourge.

No. 302.

AMERICAN EIDER.

A. O. U. No. 160. *Somateria dresseri* Sharpe.

Description.—*Adult male*: Top of head (including top of loreal space) black, divided on hind crown by narrow median greenish white; the remainder of head, neck, and breast, upper back, and lower back on sides of rump, scapulars, lesser wing-coverts, and tertiaries white, tinged with cream-buff or pale vinaceous on breast, and with pale green (oil green) on the head behind and on sides, and along the lower border of coronal black for nearly the whole length; rest of plumage deep sooty brown or brownish black; culmen slightly concave; angle of bill on side of forehead broad and rounded; bill at least .45 (11.4) wide across middle. *Adult female and immature*: All ochraceous on head and neck finely streaked with dusky; darker on crown and nape; under-parts sooty gray barred with lighter and darker; the breast strongly tinged with brownish; above dusky, heavily tipped with brownish and buffy-ochraceous;—of obscure coloration, but bill and characters as in male; smaller. Length 20.00-26.00 (508.-660.4) wing 11.50 (292.1); tail 3.50 (88.9); bill from posterior angle of nostril to tip 1.42 (36.1); from anterior extremity of loreal feathering to apex of frontal angle 1.85 (47.); tarsus 1.75 (44.5).

Recognition Marks.—Mallard to Brant size; black and white plumage with light green on hind head; feathers of head dense and puffy; feathers of lore reaching as far as nostril; angle of bill on side of forehead broad and rounded.

Nesting.—Does not breed in Ohio. Nest, on the ground, in cranny of cliff, or in dense beach grass; heavily lined with down. *Eggs*, 4-8, sometimes 10, pale bluish or pale olive green. Av. size, 3.00 x 2.00 (76.2 x 50.8).

General Range.—Atlantic Coast of North America, from Maine to Labrador; south in winter to the Delaware and west to the Great Lakes.

Range in Ohio.—Of casual occurrence on Lake Erie. One record for the interior,—Licking Reservoir, Nov. 11, 1895.

THE chief interest in the Eider Ducks attaches to their use of down in lining their nests. Since they breed so far north—abundantly along the coast of Labrador and beyond—it is desirable that eggs be not exposed to the cold air during the necessary absence of the parent. As the eggs are laid, therefore, in a grass-lined depression on the surface of some barren island or bleak promontory, the bird plucks feathers from her breast; and when the set of six is completed and incubation begun, the eggs are quite buried in an abundance of soft, slate-colored down.

The gathering of Eider-down is an organized industry in many parts of the North, and when it is conducted along legitimate lines, is no more to be deprecated than the poultry business, but the ruthless spoliation of this species in Labrador has left it very much less plentiful than formerly.

No. 303.

KING EIDER.

A. O. U. No. 162. *Somateria spectabilis* (Linn.).

Description.—*Adult male*: General plumage much as in preceding species, but scapulars and tertials black, breast more narrowly white; head quite different; crown, hind-head and nape broadly light grayish blue; sides of head only tinged with light green (oil green); a prominent inverted V-shaped black mark on throat; the lateral base of upper mandible much enlarged into rounded lobe and pushed forward, the anterior upper portion forming an acute angle with the crest of the culmen; feathering immediately contiguous to this process, and a spot on lower eyelid, black. The prominence of enlarged base of bill depends upon season, it being supported to the utmost by underlying fatty tissue during breeding season. *Adult female*: Like that of preceding species, but throat nearly unstreaked and anterior feathering of lores not reaching as far as nostril. Length 20.00-25.00 (508.-635.); wing 10.75 (273.1); tail 3.35 (85.1); bill from nostril 1.00 (25.4); from anterior extension of loreal feathering 1.60 (40.6); tarsus 1.90 (48.3).

Recognition Marks.—Mallard size or larger; many marks as in preceding species; inverted V-shaped mark on throat distinctive for male; feathers not reaching to nostril, distinctive for both sexes.

Nesting.—Does not breed in Ohio. *Nest*, on the ground near pond or marsh, or among rocks, heavily lined with down. *Eggs*, 6-10, pale olive- or grayish-green. Av. size, "2.77 x 1.83" (70.4 x 46.5) (Ridg.).

General Range.—Northern parts of northern hemisphere, breeding in the

Arctic regions; in North America casually in winter to Georgia and the Great Lakes.

Range in Ohio.—Very rare winter visitor on Lake Erie.—Wheaton. One record for the interior.

THIS handsome species has a much wider distribution than the preceding form, being, in fact, circumpolar; and it is, therefore, rather more likely to occur on inland waters, upon those rare occasions when it ventures south at all. Ordinarily the Eiders spend their winters on the open sea well off shore and in northerly latitudes.

There have been no records since Wheaton's time.

No. 304.

AMERICAN SCOTER.

A. O. U. No. 163. **Oidemia americana** Swains.

Synonyms.—AMERICAN BLACK SCOTER; SEA COOT; BLACK COOT.

Description.—*Adult male*: Entire plumage glossy, and sooty, black; outline of feathers at base of bill not peculiar; base of culmen (especially during breeding season) swelled or knobbed,—the knob orange, the rest of the bill, including eyes, black. *Adult female and young*: Sooty gray or fuscous whitening on belly, also on throat, sides of head, and neck, where contrasting with dark fuscous of crown and nape; outline of feathers at base of bill substantially as in male, but culmen not gibbous. Length 18.00-22.00 (457.2-558.8); wing 9.00 (228.6); tail 3.00 (76.2); bill (chord of culmen) 1.70 (43.2); tarsus 1.80 (45.7).

Recognition Marks.—Mallard size; plumage solid black; female fuscous, lightening below, and on sides of neck; loreal feathering not peculiar.

Nesting.—Does not nest in Ohio. *Nest*, on the ground in marshes of the interior or along the sea coasts; of grasses, lined with feathers. *Eggs*, 6-10, pale buff or brownish buff. Av. size, 2.55 x 1.80 (64.8 x 45.7).

General Range.—Coasts and larger inland waters of northern America; breeds in Labrador and the northern interior; south in winter to New Jersey, the Great Lakes, Colorado and California.

Range in Ohio.—Casual winter visitor, chiefly on Lake Erie. Not more than half a dozen records.

THE Sea Coots of this and the following species are abundant in winter along the Atlantic and Pacific Coasts, and are not uncommon upon adjacent inland waters, especially those which afford some open spaces in winter. The Great Lakes, however, because such open water is not guaranteed, are not often or largely visited during winter, nor are they patronized to any great extent during migrations.

In regions of plenty the Scoters lie off shore in great "rafts," which sometimes blacken the water for leagues. They are not so wary as some, but still they usually contrive to keep just out of range. It requires considerable exertion on their part to rise from the water, and they evidently make use of their feet at first, like Coots and Loons. As a flock melts away before one, the air is filled with the sound of hoarsely whistling wings, and one feels, if never before, the glamor of the "sounding seas."

No. 305.

WHITE-WINGED SCOTER.

A. O. U. No. 165. *Oidemia deglandi* Bonap.

Synonym.—WHITE-WINGED COOT.

Description.—*Adult male*: Speculum white; a white spot below and including eye; entire remaining plumage deep brownish black; culmen gibbous at base, but nearly covered by feathers which reach laterally almost to nostrils; loral feathering usually, but not always, extending further forward than frontal feathers; bill black, varied by orange-red on lateral and terminal portions (but not on knob or edges). Black less intense in winter. *Adult female and immature*: Plain dusky brown, a little lighter below; and with two dull whitish spots on side of head, on lore, and ear-coverts; speculum white; extension of loral feathers as in adult male, but bill only slightly gibbous, and with less orange. Length 19.00-24.00 (482.6-609.6); wing 11.00 (279.4); tail 3.25 (82.6); bill along culmen 1.60 (40.6); anterior margin of loral feathering to tip of bill 1.55 (39.4); tarsus 2.00 (50.8).

Recognition Marks.—Mallard size; plumage black or dark brown (female); white wing-patch (speculum) distinctive.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, under a bush, often at a considerable distance from water, lined heavily with twigs, dried plants, and moss, with a few feathers. *Eggs*, 6-10, pale buff or light greenish buff. Av. size, 2.68 x 1.83 (68.1 x 46.5).

General Range.—Northern North America, breeding in Labrador and the Fur Countries, less frequently in the northern tier of Western States; south in winter to Chesapeake Bay, southern Illinois, San Quentin Bay, Lower California.

Range in Ohio.—Casual on Lake Erie in winter. Has been taken on the Reservoirs.

Remark.—The White-winged Scoter was formerly described as *Oidemia fusca* var. *velvetina*, and called the American Velvet Scoter. It differs from the European bird (*O. fusca*) chiefly in the further encroachment of the loral feathering upon the bill. The character is very slight and quite variable, but within limits which are apparently constant.

ALTHO the White-winged Coot is occasionally seen upon inland waters, and is known to breed in the interior, notably in North Dakota and westward.

it is difficult to recall it as anything but a sea-bird. My own memory is quite crowded with visions of a long black line of the coveted birds bobbing and diving in serene content, always at a distance of a gun-shot and a quarter from the edge of the lapping tide.

The Scoters are clumsy about getting to wing, and accomplish the feat only after much noisy flapping, during which the bird's head is brought down as if it were trying to get hold of its own boot-straps; but once going it moves

with great swiftness, and since it is a heavy bird, acquires a considerable momentum. I shall not soon forget a winter afternoon on Puget Sound, when two of us crouched behind drift logs on the neck of a long sand-spit, which encloses the teeming waters of Semiahmoo Bay.

The Scoters had been feeding upon the bay at high tide in immense numbers, but at nightfall they began to retire across the neck to the open sea. On they came by little squads, hundreds of them, moving like volleys of cannon balls, and clearing the brief stretch of land with a wing-rush which tried the tense nerves to the utmost. Bang! Bang! went the guns, and the birds which acknowledged the salute (not all were polite) grounded on the beach beyond with a thud like an aerolite,—at least so it seemed to excited senses.

This species has not been much observed in Ohio, but it should be found sparingly on Lake Erie, and occasionally at the reservoirs, both during migrations and in winter. To the four records given by Professor Jones I am able to add only one, that of a male taken in the fall of 1881 upon the grounds of the Wynous Point Shooting Club, and preserved in their collection.



Taken in Ottawa County.

Photo by Claude Bucher.

A GOOD PLACE FOR SEA DUCKS.

No. 306.

RUDDY DUCK.

A. O. U. No. 167. *Erismatura jamaicensis* (Gmel.).

Description.—*Adult male*: Top of head and nape black; cheeks and chin white; neck all around, chest, sides of breast, sides, and upper parts, rich chestnut-red; wings, lower back (but not upper coverts), and tail, blackish; tail, mostly exposed, widely spread, graduated at sides, composed of eighteen to twenty stiffish feathers, which, *except in the breeding season*, have the tips of the shafts more or less exposed; remaining under parts silvery white (overlying dark brownish gray, which is irregularly and sometimes completely exposed, especially on sides, according to the wear of the plumage), lightly washed, especially on breast, with bright rusty; bill light blue; feet bluish gray with dusky webs; iris brownish red. *Adult female and immature*: Above, including top of head, dark grayish brown or dusky, finely mottled, or sometimes indistinctly barred, on scapulars, etc., with buffy gray; throat and sides of head and neck, contrasting with crown, whitish, usually crossed longitudinally on sides of head by an indistinct dusky band; underparts as in adult male, but underlying brown more extensively outcropping, and fore-neck, chest and sides heavily tinged with bright rusty or ochraceous. Length 14.00-16.50 (355.6-419.1); wing 5.67 (144.); tail 2.65 (67.3); bill 1.60 (40.6); greatest breadth of bill .92 (23.4); tarsus, 1.36 (34.5). Females average a little smaller.

Recognition Marks.—Teal size or slightly larger; chestnut-red coloring of male; dark and light contrasting on side of head in female and young; "chunky" appearance; tail of stiff, usually pointed, feathers, generally upturned while on water.

Nesting.—Not known to breed in Ohio. *Nest*, of reeds, etc., built up in margin or floating in water of pond or sluggish stream; deserted Coots' nests sometimes used. *Eggs*, 6-10, buffy or creamy white, and with finely granulated surface. Av. size, 2.45 x 1.80 (62.2 x 45.7).

General Range.—North America in general, south to the West Indies and through Central America to Colombia; breeds throughout much of its North American range and south to Guatemala.

Range in Ohio.—Rare spring, not uncommon fall, migrant. Not known to breed, but probably has done so.

SINCE the establishment of the new three-acre reservoir for the water supply of Oberlin, I have been agreeably surprised to find this duck a frequent visitor during both migrations. It is usually considered one of the less common ducks, the state over, but here it is seen more often than any but the Buffle-head and Lesser Scaup. It is never numerous in individuals, the flocks seldom numbering over half a dozen. The males usually predominate, but each flock contains at least one female. Sometimes two males, or one male and one female come together and leave together.

This duck is even less wary than the Buffle-head, perhaps because its flesh is not considered a delicacy, and it is not hunted so mercilessly as some



RUDDY DUCK
Erimatura jamaicensis
½ Life-size

other species. It does not furnish good sport for the professional sportsman, because it refuses to be afraid, and will not fly, but prefers to dive instead.

The reddish-brown back and tail pointing stiffly straight up, or even inclining slightly forward, give to these birds a decidedly wren-like appearance. The reddish back and broad white stripe below and behind the eye are good field marks. While the birds dive readily, and obtain their food well below the surface of the water, they do not resort to diving as much as the Buffle-head does when danger threatens. For them danger lies in getting within range of the man with a gun who must kill something, but cares not at all for true sport.

The Ruddy Duck passes across Ohio during April and the first week in May, and returns during October and November. Some may pass the winter within the state where conditions are favorable. In the air the flocks are compact and the flight is rapid. The birds rise from the water together, and do not scatter even when shot at.

It may be that some few pairs nest in northwestern Ohio, but that has not been certainly determined yet. Reports of breeding on the St. Clair Flats seem to need positive confirmation. The nest is placed near water among the grasses and reeds, or over the water, like the nest of a grebe. It is well concealed in the tall reeds, of whose stems it is made, like a roughly woven basket, and it is lined with down from the breast of the mother bird. The down seems to be added little by little, so that nests with a few fresh eggs contain very little, while nests with eggs well along in incubation are well filled, and the eggs almost or quite hidden under the down. This habit is not peculiar to the Ruddy Duck, but seems to be shared by many species. Apparently this duck is one of the later breeders; the most of the nests with full sets should be looked for about the middle of June. LYNDS JONES.

No. 307.

AMERICAN MERGANSER.

A. O. U. No. 129. *Merganser americanus* (Cass.).

Synonyms.—GOOSANDER; SHELLDRAKE; SAW-BILL; FISH DUCK.

Description.—*Adult male*: Head and upper neck greenish black, the hind-neck loosely crested; upper back, inner scapulars, and a prominent short bar formed by exposed bases of greater coverts, black; the primaries and their coverts dusky; lower back and tail ashy-gray; neck all around, outer scapulars, most of the wing coverts, speculum, and entire under parts white, the latter delicately tinged with pale salmon (this generally fading to creamy-white in skins); tertiaries white, bordered narrowly with black; flanks wavy-barred, ashy-gray and white; bill and feet vermilion, the former black on ridge, with black hooked nail; iris carmine.

Adult female and immature: More conspicuously crested on hind-head and nape; the head and upper neck dark cinnamon-brown, white on chin and sides of throat; above ashy blue-gray, with white speculum and black of wings much as in male; under-parts white, shaded on sides with color of back, and faintly tinged with salmon; bill red with dusky ridge; feet chrome-yellow or orange, with dusky webs; eyes yellow. Length 25.00-27.00 (635-685.8); wing 10.75 (273.1); tail 4.25 (108.); bill 2.15 (54.6); bill from nostril 1.50 (38.1); tarsus 1.90 (48.3). Female averaging three or four inches shorter and proportioned accordingly.

Recognition Marks.—Mallard to Brant size; long, narrow bill with prominent serrations on side; under-parts white or pale salmon tinted; *no* rusty or ochraceous on breast. Lovers of swift waters; river divers.

Nest, occasionally on the ground, more commonly in hole of tree or stub lined with moss, grasses, and feathers. *Eggs,* 6-10, yellowish or creamy buff. Av. size, 2.65 x 1.80 (67.3 x 45.7).

General Range.—North America generally, breeding south in the United States to Pennsylvania and the mountains of Colorado and California.

Range in Ohio.—Not uncommon migrant. Winter resident in the southern and perhaps sparingly summer resident in the northern part of the state.

THE first glimpse of this splendid bird ever vouchsafed the writer was upon the rock-bound shore of a certain emerald lake in the West. The bird had been surprised at the water's edge, and winged as he attempted to rise. With instant decision he took to the water and dove sharply. When some twenty feet deep, he turned and paralleled the shore, intending to make a landing at some distance and secrete himself among the rocks. It was a rare sight from my vantage point some forty feet above, to watch the duck cleaving the water with strong concerted strokes of his vermilion feet. In that limpid water the resplendent black of his head and the salmon-tinted sides shone almost as if there was nothing between us. I am almost sorry to add that his ruse was not successful, and that his skin now rests in the Oberlin College museum.

Not only are these Mergansers expert divers, but the sharp "teeth," inclining backward as they do, are calculated to hold the most slippery prey. Fish caught in fair pursuit form the bulk of their food, but frogs, water insects, cray-fish, and other crustaceans, vary the monotony. Since the taking of such prey depends primarily upon unimpeded eye-sight, it goes without saying that these birds prefer clear waters and free course. Hence, they are more often found upon our rivers, even the swiftest running streams, than upon the reservoirs and reed-grown ponds. It is to be feared that when the Fish Duck encounters a lusty school of minnows he does not agree that "enough is as good as a feast." An Arctic authority, Hearne, states that it devours fish in such great quantities as to be frequently obliged to disgorge several before it can rise from the water. It is noteworthy in this connection that the skin of the throat is unusually elastic, so that the bird can accommodate a large catch. Dr. Wheaton mentions having captured one which had swal-



RED-BREASTED MERGANSER
Mergus serrator

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lowed an entire sucker, the head of which had been partially digested, leaving a portion still seven inches long to protrude into the bird's mouth.

Like the Golden-eyes and some other ducks, this bird usually occupies a hollow tree or stub for a nesting site. The cavity is warmly lined with weeds, grasses and rootlets, and plentifully supplied with down from the bird's breast. The eggs are of a clear creamy, or dull buffy tint, and have the "hard-oil-finish" characteristic of all ducks' eggs.

The young when hatched require to be transported to the water in the maternal beak—a rather trying ordeal, we must presume.

No. 308.

RED-BREASTED MERGANSER.

A. O. U. No. 130. *Merganser serrator* (Linn.).

Synonyms.—RED-BREASTED SHELLDRAKE; SHELLDRAKE; SAW-BILL.

Description.—*Adult male*: Head all around black, with a greenish gloss on sides above; a loose crest from crown to nape; middle of neck all around white; lower neck all around (narrowly and impurely behind) and fore-breast, cinnamon-rufous streaked with black; sides of breast, upper back, and inner scapulars black; a tuft of enlarged feathers on sides of breast before wing, each feather white, bordered completely with black; wing-coverts, outer scapulars, speculum, and inner secondaries white, the latter black-edged; two narrow transverse black bars formed by exposed bases of greater coverts and secondaries; primary-coverts, outer secondaries, and primaries blackish; sides and around on rump heavily wavy-barred, black and white; lower back and tail ashy gray, more or less speckled or wavy-barred on tips with black and whitish; lower breast, belly, and crissum white, usually tinged with pale salmon or cream color; bill narrower than in preceding species; bill and feet bright red, the former with dusky ridge; eyes carmine. *Adult female and immature*: Similar to those of preceding species, but head duller, grayish chestnut; white of wing without black bars; position of nostrils distinctive; bill and feet duller-colored. Length 20.00-25.00 (508.-635.); wing 9.60 (243.8); tail 3.25 (82.6); bill 2.20 (55.9); bill from nostril 1.75 (44.5); tarsus 1.75 (44.5). Female somewhat smaller than male.

Recognition Marks.—Mallard size; narrow serrated bill; head loosely crested; reddish of breast and sides wavy-barred black and white, specifically distinctive for male. Females of this species cannot be told out of hand from those of *M. americanus*. In hand the nostril within basal third of bill (as distinguished from nostril just within basal half for *M. americanus*) is diagnostic. River divers.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground among brush-wood, rocks, and the like, near water; lined with leaves, mosses, and feathers. *Eggs*, 6-12, creamy buff or dull buffy green. *Av. size*, 2.56 × 1.76 (65. × 44.7).

General Range.—Northern portions of the northern hemisphere; south in winter throughout the United States.

Range in Ohio.—Rare migrant; casual winter resident in southern part of state.

SWIMMING is the way of nature and flying a slowly acquired art for the Shelldrakes. The adults, indeed, are capable of rising quickly and flying with great rapidity at a considerable height, but oftener they patter over the surface of the water to get a running start, and then with outstretched neck and supple wing skim along close to the water, as tho loth to leave its friendly shelter. Many a time have I seen them in the swiftest part of some rushing stream, repeatedly breasting the current with tireless energy for the sake of being swept along some favorite riffle under water, adding thus the momentum of the stream to their own power of locomotion in enabling them to seize quickly unsuspecting trout.

The young birds swim from the shell, but are nearly full grown before they can fly. A troop of half-grown young under the care of the mother bird affords an interesting study, and not infrequently provokes some novice to make the exertion of his life at the oars. At this time there is scarcely more than a trace of muscular tissue on the breast of the youngsters, but the legs and hinder portions, the swimming gear, is fully developed, so that in motion they look curiously like long-necked water bottles. If pursued in a boat the brood keeps well together, each bird leaning forward, almost standing on the water, and keeping up a motion like a tiny stern-wheeler, the whole flock leaving a wake behind them not unlike that of a small steamer. The anxious mother directs the flight, now dropping into the water to urge the chicks to greater exertions, now flying back to distract the attention of the pursuers, or to develop some ruse to cover the escape. Once when a party of us were pursuing a brood in this manner along the rocky shore of a lake, the mother bird hit upon a very clever scheme. When the flock was becoming winded and we would head in toward them, she would fly between us and the shore, pretending to lead the flock back down the lake. At first we bit eagerly, and pressed in between her and the flock, intent on cutting off the retreat, only to find upon looking about that the cunning mother had made a wide circuit around us and was urging her brood up the lake again at a head-long speed. Finally, when thoroughly tired out, after a three mile chase, the ducklings took to shore and hid successfully in the loose rubble of the beach without the aid of a scrap of vegetation, and near water so clear that a movement could have been detected at a depth of a hundred and fifty feet.

No. 309.

HOODED MERGANSER.

A. O. U. No. 131. *Lophodytes cucullatus* (Linn.).

Description.—*Adult male*: Head with a large compressed semi-circular crest; sides of crest white in large sector, or open-fan-shaped patch; the edge black in a sharply defined border; fore-crown deep brown; remainder of head and neck all around, upper parts, and two transverse crescentic bars on each side invading white of breast, deep brownish black (coal black on lower scapulars); lesser and middle wing-coverts ashy gray; speculum and tips of greater coverts white; two small transverse black bars formed by exposed bases of greater coverts and of secondaries; inner secondaries and tertials white, heavily bordered with black; sides pale to rich cinnamon-rufous, wavy-barred with dusky; bill comparatively short, narrow, black; nostril barely within basal third (measured from anterior margin of loreal feathering); feet light brown; eyes yellow. *Adult female*: Head, neck, fore breast, sides of breast and sides dull grayish brown; the crest much thinner than in male, entirely cinnamon-brown; upper parts deep brown, blackening on lower scapulars; wings the same with traces of white on edges of speculum; lower breast and belly white, shaded with brownish on crissum; bill dusky, orange at base and on lower mandible. *Immature*: Similar to adult female, but crest undeveloped. Length 17.00-19.00 (43.18-48.26); av. of five Columbus males: wing 7.63 (193.8); tail 3.60 (91.4); bill 1.56 (39.6); tarsus 1.28 (32.5). Females average somewhat smaller.

Recognition Marks.—Larger than a Teal; very conspicuously round-crested. The male even at a superficial glance could be confused only with a Bufflehead (*Charitonetta albeola*). It differs from it in that the white of crest does not come to the edge; and, of course, in its entirely different bill. On more quiet waters,—ponds and sluggish streams.

Nest, in a hole of a tree or stump, lined with grasses, etc., and feathers. *Eggs*, 10-12, sometimes more, pale buffy white. Av. size, 2.10 x 1.75 (53.3 x 44.5).

General Range.—North America generally, south to Mexico and Cuba, breeding nearly throughout its range. Casual in Europe.

Range in Ohio.—Rather common migrant. Formerly resident in summer, but probably not now to be found.

THIS smaller species is rather the most common of the group with us, being not infrequently found during migrations in pairs or small groups upon the rivers and ponds. It is a master diver, and if it has room enough, is more apt to seek to escape from sudden danger by diving and hiding, than by flight. Altho its flesh is not highly prized, it suffers periodical persecution along with everything remotely resembling a duck. It has, however, the occasional advantage of being able to dodge at the flash of a gun. Besides, if shot, it has about nine chances of escaping the pot, through its marvellous powers of hiding, utilizing for this purpose the exposed roots of river banks, or even, in extremity, clinging to some object in the bottom of the stream.

There are no recent accounts of the nesting of this bird within the limits of the state, but its present occurrence during the breeding season is well within the bounds of possibility. Like the Wood Duck, it selects for a nesting site a hollow tree or stub in some secluded spot. Dr. Brewer tells of an instance, in the neighborhood of the St. Croix River, in Maine, where the claims of the two birds came into conflict. "Several years ago Mr. Boardman's attention was called to a singular contest between a female Wood Duck and a female of the Hooded Merganser for the possession of a hollow tree. The two birds had been observed for several days contesting for the nest, neither permitting the other to remain in peaceful occupancy. The nest was found to contain 18 fresh eggs, of which about a third belonged to the Merganser; and as the nest was lined with her own dark-colored down, it appeared probable that this bird was the rightful owner of the premises."

No. 310.

DOUBLE-CRESTED CORMORANT.

A. O. U. No. 120. *Phalacrocorax dilophus* (Swain.).

Synonym.—WATER TURKEY.

Description.—*Adults in breeding plumage*: Glossy greenish black; the back and wings slaty brown, each feather bordered with greenish black; a tuft of narrow, loose-webbed, slightly curled, black feathers on each side of crown behind eye; tail of *twelve* feathers; gular sac bright orange. *Adult in winter*: Similar but without head-tufts. *Young male* (?): Head, neck and fore breast grayish brown, lighter below and on sides, darker on crown and behind; remaining under-parts, lower back, etc., rich dark brown; back and wings much as in adult; gular pouch yellowish. *Young female* (perhaps young of the year of both sexes): Like preceding but still lighter; back and wings hoary grayish brown, bordered with lighter brown. Length 29.00-34.00 (736.6-863.6); wing 13.00 (330.2); tail 7.00 (177.8); bill 2.28 (57.9); tarsus 2.60 (66.).

Recognition Marks.—Brant to Eagle size; greenish black plumage; orange gular pouch; heavy but well sustained flight.

Nest, of sticks, in tree or bush, on a cliff or even on the ground. *Eggs*, 2-4, pale bluish white, more or less coated with a chalky deposit. *Av. size*, 2.50 x 1.50 (63.5 x 38.1).

General Range.—Eastern North America, breeding from the Bay of Fundy, the Great Lakes, Minnesota and Dakota northward; south in winter to the Southern States.

Range in Ohio.—Not common spring and fall migrant. Found almost entirely on Lake Erie and the larger reservoirs. Formerly bred in considerable numbers on the Grand Reservoir and probably elsewhere. Said to have bred formerly on the Licking Reservoir;—doubtful.

IT is a matter for the doctors to settle whether the Water Turkey, which formerly bred in numbers at the St. Mary's Reservoir, really belonged to the smaller southern form, called the Florida Cormorant, or whether, as the writer suspects, they were indistinguishable from the typical form *dilophus*, now known only as a bird of passage.

The Double-Crested Cormorant is a heavy bird of rather sluggish habits, altho it is expert at swimming and diving. In flight it moves rather rapidly, but with labored stroke and outstretched neck, something after the fashion of the Great Blue Heron. Much of its time is spent near the water, upon projecting snags or low rocks. From these convenient stations the birds watch intently for the appearance of fish in the depths below, and these, if not secured at the first dart, are pursued relentlessly under water.

The Cormorant is becoming less and less common even as a migrant, being fiercely persecuted by fishermen and thoughtlessly shot by every would-be sportman who can hit a flying barn; and it is no longer known as a resident. I have seen only one bird myself, and that upon the Licking Reservoir, on the second day of December, 1902. It is claimed, however, by residents, that some are to be seen there every year.

Concerning its former abundance at St. Mary's, I follow Dr. Wheaton in quoting Mr. Charles Dury's account of a visit to that locality made in June, 1867:¹

"On the south side of the Reservoir, about seven miles from Celina, was the Water Turkey's rookery. Here I used to go and shoot them with the natives, who wanted them for their feathers; I have helped kill a boat load.

"One season I climbed up to their nests and got a cap full of their eggs. The nests were made of sticks and built in the forks of the branches. The trees (which were all dead) were mostly oaks and covered with excrement. I found from two to four eggs or young to a nest. The young were queer little creatures—looked and felt like India rubber. The old birds flew around and made their croaking notes, indicative of their displeasure at my presence. Some of the trees had ten or twelve nests on them. As the timber has rotted and blown down, the birds have become less and less numerous."

No. 311.

AMERICAN WHITE PELICAN.

A. O. U. No. 125. *Pelecanus erythrorhynchus* Gmel.

Description.—*Adult in breeding plumage:* General plumage white; the primaries blackish touched with hoary gray near tips; secondaries blackish with white basally; a pendant occipital crest of white or pale yellow; lanceolate feathers

¹ Reported by Mr., now Dr., F. W. Langdon in "Observations on Cincinnati Birds,"—*Jour. of the Cin. Soc. of Nat. Hist.* Oct. 1876.

of lesser wing-coverts and chest pale yellow or buff; a thin, elevated, horny protuberance on ridge of culmen a little forward of the middle; bill and pouch reddish; legs and feet bright orange-red. *Adult in winter*: Similar but without horny protuberance on bill; the occipital crest wanting; yellow coloring of chest and wing-coverts paler; bill and feet not so bright. *Immature*: Like adult in winter, but feathers of crown and lesser wing-coverts mixed with brownish gray; chest feathers not modified; a fluffy, short, occipital crest; the bill, pouch, legs, and feet pale yellowish. "Length $4\frac{1}{2}$ to nearly 6 feet; extent $8\frac{1}{2}$ to nearly 10 feet; weight about 17 pounds" (Ridgway). Wing 22.00 (558.9); tail 6.00 (152.4); bill 10.50-15.00 (266.7-381.); tarsus 4.50 (114.3).

Recognition Marks.—Immense size with large bill and gular pouch; white plumage.

Nesting.—Not known to have bred in Ohio. *Nest*, on the ground, a mound of gravel and rubbish with a slight depression on top, on beach or island of large lake. *Eggs*, 2-4, bluish white or pale buffy, often more or less stained, and with chalky deposit on surface. Av. size, 3.40×2.25 (86.4×57.2).

General Range.—Temperate North America, north in the interior to about latitude 61° , south in winter to western Mexico and Guatemala; now rare or accidental in the northeastern states; abundant in the interior and along the Gulf Coast; common on the coast of California.

Range in Ohio.—Casual migrant; seen on Lake Erie and the reservoirs.

THE appearance of a large white bird "bigger than a goose," anywhere upon our interior waters, is a signal for immediate pursuit by boat and gun. Not infrequently it turns out to be a Pelican, and the guileless creature is promptly mummified and placed where he may regard you gravely from some shop-keeper's window—for the museums are already full. A handsome specimen was taken on the Licking Reservoir about May 15th, 1902, and preserved in a local club room, but it was lost in a fire the following winter. In the spring of 1903, three were seen upon the same reservoir, but none secured.

The Pelican lives upon an exclusive diet of fish, and he uses his great gular pouch as a dip-net, or scoop, rather than as a creel for transportation, as was formerly supposed. It sometimes happens, however, that the bird makes a greater catch than he can conveniently handle, or indeed, greater than he has time to swallow during the rush of a successful drive. In either case he retires to shore with a full basket to effect a readjustment, or to discard a clearly proven surplus.

In flight the Pelicans usually follow a leader in line, and flap or sail or settle in unison at his behest. In the West and South, where they are much more abundant, they are sometimes seen performing aerial evolutions, which are very interesting and impressive to the beholder.



AMERICAN WHITE PELICAN
Pelecanus erythrorhynchos
About $\frac{1}{2}$ Life-size

No. 312.

MAN-O'-WAR BIRD.

A. O. U. No. 128. *Fregata aquila* Linn.**Synonym.**—FRIGATE; FRIGATE PELICAN.

Description.—*Adult male*: Entire plumage black, with metallic greenish or purplish gloss on the lanceolate scapulars and interscapulars, duller on the belly. *Adult female*: Duller black; whitish below on breast and sides; varied by grayish brown on lesser wing-coverts, scapulars, etc., unmodified and less metallic. *Immature*: Like adult female but decidedly white below and on head. Length about 40.00 (1016.); extent 7-8 feet; wing 25.00 (635.); tail, forked for more than half its length, about 18.00 (457.2); bill 4.60 (116.8); tarsus about 1.00 (25.4).

Recognition Marks.—Eagle size; black plumage; deeply forked tail and exceedingly slender build with great expanse of wing; small gular pouch.

Nesting.—Does not breed in Ohio. *Nests*, of sticks, in colonies, on low bushes or rocks, near the ocean. *Eggs*, one, pure white with chalky surface, oval or elongated ovate. Av. size, 2.68 x 1.80 (68.1 x 45.7).

General Range.—Tropical and subtropical coasts generally; in America north to Florida and Texas, and casually to Nova Scotia, Ohio, Wisconsin, Kansas, and Humboldt Bay, California.

Range in Ohio.—Accidental. One record: Fairfield County, spring of 1880, by Emmett Adcock.

IT was a piece of rare good fortune which discovered this oceanic species so far inland, but it is strange, now that we think of it, that birds so marvelously gifted in wing, do not oftener take a curious turn ashore. So far as powers of flight are concerned, the Man-o'-War Bird stands easily at the head of winged creation. Not only does it soar at such sublime heights as to appear a mere speck against the sky, or to pass from sight altogether, but it can launch itself from an almost incredible elevation to snatch a flying fish in midair, or to seize some object just below the surface of the water. And not only can the Frigate fly swiftly, but so perfectly has it learned to adjust itself to the wind, that it is able to maintain itself for hours at a time without change of position and without apparent effort.

The Man-o'-War Birds secure only a portion of their food by direct capture; for the rest they prey upon other birds, especially those equipped for taking large catches of fish, wholesalers, as it were, like the Boobies and the White Pelicans. It is difficult to see why a sturdy fisherman like the Gannet should consent to share the product of its lawful toil with this pirate, but Boobies are not the only bipeds who are overmastered by a sharp eye and imperious gestures.

No. 313.

BLACK-CAPPED PETREL.

A. O. U. No. [98.] *Æstelata hasitata* (Kuhl.).

Description.—*Adult*: Head and neck (excepting top of head), upper tail-coverts, basal half of tail, and entire under parts, pure white; remaining upper parts, including top of head, brownish dusky, blackening on wings and tail; the feathers of back, etc., more or less margined with lighter brown; the sides of breast sometimes tinged with brownish gray. Length about 15.00 (381.); wing 11.60 (294.6); tail about 5.00 (127.), graduated for less than half its length; bill 1.35 (34.3); tarsus 1.42 (36.1).

Recognition Marks.—Size of Common Tern; white below, dusky above; upper tail-coverts and base of tail white; cap blackish.

Nesting unknown.

General Range.—Warmer parts of the Atlantic Ocean, straying to Florida, Virginia, New York, Vermont, and Ontario. Also England and France.

Range in Ohio.—Accidental near Cincinnati.

IF a company of ghosts were suddenly to "materialize" before us, make strange gestures and depart silently, leaving only their chilly shrouds behind them for mementoes of their visit, we should know about as much of their whence and whither, their "life histories," in short, as we know now of these strange wanderers from the trackless deep. Three of them were picked up wing-weary and half-starved, on the Ohio River near Cincinnati one day in October, 1898, and are now preserved in Cincinnati museums. Their presence was due to a strong east gale which had blown them inland far from their native mid-ocean. Not even the habitat of the species is clearly known, altho it is surmised to be the South Atlantic and Indian Oceans. The bird is certainly a great wanderer, specimens having been taken in England, France, Hayti, Australia, etc., as well as upon our own Atlantic coasts.

No. 314.

HOLBOELL GREBE.

A. O. U. No. 2. *Colymbus holboëllii* (Reinh.).

Description.—*Adult in nuptial plumage*: Head with short dense occipital crest, heaviest on sides and squarely cut off behind; top of head, including crest, ridge of neck behind, and upper parts, very deep hair-brown, or brownish black with a silky sheen, pure on head and neck and wings, with slight edgings of dull buffy and ochraceous on back; primaries not different; a large white patch on central secondaries (recalling the speculum of ducks); throat and sides of head pale ashy gray, becoming white on borders; neck in front and on sides bright

cinnamon-rufous, shading on fore-breast into the silvery white of remaining under parts; posterior feathers dusky-tinged; bill bluish dusky, varied by yellow on lower mandible; feet and legs black. *Adult in winter and commonly*: Similar but duller and sides of head pure white; the rufous persistent only on sides of neck, and paler, the red replaced by ashy-brown or dull whitish; not crested. *Immature*: Similar to adult in winter but duller; without any rufous; underparts grayish white; neck and breast ashy-fuscous, throat and sides of head lighter, but not white; bill lighter; feet and legs mottled with yellow. Length 18.00-20.00 (457.2-508.); wing 7.70 (195.6); bill 1.90 (48.3); tarsus 2.50 (63.5).

Recognition Marks.—Something under Mallard size; head pattern distinctive in breeding plumage; large size distinctive for Ohio at any season.

Nesting.—Does not breed in Ohio. *Nest*, a heap of half-submerged or floating vegetation in pond or reedy lake margin. *Eggs*, 2-5, dull greenish white; except when fresh, heavily nest-stained. Av. size, 2.25 x 1.35 (57.2 x 34.3).

General Range.—North America at large including Greenland. Also eastern Siberia and southward to Japan. Breeds in high latitudes, migrating south in winter.

Range in Ohio.—Rare migrant. Found chiefly on Lake Erie and the larger reservoirs.

ALTHO lacking the odd head-ornaments which some of the smaller divers boast during the nuptial season, the Holbœll is a handsome fellow, and in the spring plumage the flash of the rufous upon the lower neck, in sharp contrast with the ashy white of throat and cheeks, is unmistakable.

Like all other Grebes the young of this species tumble out of the shell into the water, and the saturated mass of decaying vegetation which for a time held the eggs is never known as home. When the brood is hatched the young birds clamber upon the mother's back, and have a ride quite to their liking. Nothing more convenient than this floating palace could have been devised, besides being a raft and a diving bell(e), it is fitted up with feather-stuffed cushions for repose, and upon it meals are served frequently a la Grebe,—since, it is said, the mother can twist her neck around without difficulty and bestow a selected morsel upon whom she will of the expectant brood.

The adult bird customarily prepares for diving by first giving a little upward spring, and then turning suddenly with the body almost clear of the water to shoot down head foremost. It is however, quite as able as others of the family to flash out of sight without the spring-board motion, or else to fade away after the manner of the polite Frenchman. Last fall upon the Licking Reservoir, as I was lying in wait off shore for ducks, I was approached by what I took to be a bird of this species. Really desirous of securing the specimen I shot at fair range, using an extra rapid smokeless powder. The fellow was possessed,—not only by spirits, but by an inexhaustable fund of good nature, for each time I shot he vanished, I know not how, only to reappear instantly, unscathed and smiling, to paddle a little nearer.

No. 315.

HORNED GREBE.

A. O. U. No. 3. *Colymbus auritus* Linn.

Description.—*Adult in nuptial plumage:* Forehead and crown, with throat and sides of head around on nape, sooty black, deepening and becoming glossy posteriorly; area included by these patches (lores and sides of crown) buffy ochraceous, changing to rufous on lores and the short dense occipital crest; neck in front and on sides and fore-breast rich cinnamon-rufous, shading on breast into the satiny white of belly; sides (well up under wing), and flank patches tinged with rufous and overlaid with some dusky; upper parts grayish black, becoming grayish brown on wings and varied by some edging of lighter grayish brown; primaries clear light brown; secondaries mostly white, forming a quasi speculum; bill black with yellow on lower mandible and tip; feet dusky externally, internally mostly yellow. *Adult in winter and immature:* No rufous anywhere; above uniform grayish black; below, including sides of head, pure white, sometimes tinged on neck and fore-breast with ashy brown; sparingly dusky-shaded on sides; bill with less black. Length 12.50-15.00 (317.5-381.); av. of six O. S. U. specimens: wing 5.37 (136.4); bill .93 (23.6), depth at base .32 (8.1); tarsus 1.82 (46.2).

Recognition Marks.—Teal size; breeding plumage with black and red on head (especially red lores) distinctive for size; slender bill; the pure white of throat and sides of head contrasting with blackish above affords the best field mark in winter.

Nest, of half-submerged or floating vegetation, usually anchored to reeds growing in swamp water. *Eggs,* 2-7, elongated oval, pale bluish white, but usually more or less discolored by nest. Av. size, 1.75 x 1.18 (44.5 x 30.).

General Range.—Northern hemisphere; breeds from northern United States northward.

Range in Ohio.—Common migrant. Of casual occurrence in winter, according to openness of season, in central and southern Ohio.

IT is the sixth day of October. Six dainty Grebes are dancing before me on the gently ruffled surface of the water-works pond. I am within thirty feet of them and in plain sight, altho my line of approach was concealed by the sloping parapet. The one desire of the visitors seems to be to sleep. They probably dropped down just before sunrise to rest after the long night passage from the Georgian Bay. In sleeping they draw the head back and settle it between the shoulders, thrusting the bill down precisely to the right. Now and then one lifts its head and describes a wary circle of reconnaissance, but is soon reassured and resumes its slumbers. While taking these cat naps in my presence they swim and whirl automatically and maintain their general position, as tho gifted with a double consciousness. There are five males in company with one female, and the white of their breasts and throats glistens purely in the

morning sun. The bills are so small and slender that there is no possible danger at this range of confusing them with the commoner Pied-billed Grebe.

At some distance and in the confusion of waving grass or tossing billow, a grebe may at times be mistaken for a duck, but the leaping dive which usually follows discovery or close approach, serves to distinguish it from most ducks. The way of the bird in the air, too, is quite unducklike, since it thrusts its feet out behind at different angles, and moves with the directness of a flying projectile. Upon land the Grebe is almost helpless, and only flounders about awkwardly and pitches forward upon its head.

Concerning the breeding of the Horned Grebe in the state, we have no account except that left us by Dr. Langdon in 1880. During a stay of a week in the Port Clinton marshes, the Doctor saw no birds; but he came upon two sets of eggs of two each, which seemed referable, by elimination, to this species. He says: "These eggs are chalky-white with a faint, tho definite, tinge of pale bluish-green, much like the tint of the Least Bittern's egg, and very unlike the pale whitey-brown of the eggs of *P. podiceps* observed by us. * * That our sets were probably full is indicated by the fact that one of them contained fully developed young, which *swam and even attempted to dive*, on being placed in the water after removal from the egg. The nests were similar to those of *P. podiceps* described below, and the eggs were covered in like manner by decaying vegetation during the day and left for the sun to incubate.

"The young removed from these eggs presented slight but constant differences in the head and neck markings, and the size of the bill as compared with the young of *P. podiceps*, obtained in the same manner,—those supposed to be *P. cornutus* being smaller, with more slender bills, less blotching about the head and neck and none in the median line of the throat."

No. 316.

PIED-BILLED GREBE.

A. O. U. No. 6. *Podilymbus podiceps* (Linn.).

Synonyms.—WATER-WITCH; HELL-DIVER; DABCHICK; DIEDAPPER; DIPPER.

Description.—*Adult in nuptial plumage:* Chin and throat glossy black; top of head and neck black with an admixture of brownish in hair-lines and streaks; the forehead with many shortened, webless, glossy, black shafts; sides of head gray, passing into grayish brown on sides and front of neck; lower neck and breast and sides mostly blackish, heavily tipped in parted hair-lines with fulvous and ochraceous; underparts silky, grayish white mottled with underlying dusky, and heavily shaded on sides and behind; above clear brownish black; secondaries varied and mottled with some white; bill short and stout, bluish white, crossed at the nostril by a heavy black band; feet greenish black. *Adult in winter:* Without black on head; crown dark brown shading on sides of head

to whitish of throat; neck, fore-breast, and sides strongly tinged with brownish ochraceous; belly dingy white, unmottled; bill without black band. *Immature*: Like adult in winter, but sides of head with more or less distinct stripes of brown. Length 12.00-15.00 (304.8-381.); wing 5.10 (129.5); bill .80 (20.3); along gape 1.25 (31.8); depth at nostril .43 (10.9); tarsus 1.55 (39.4).

Recognition Marks.—Teal size; bill short and stout, its black band distinctive during breeding season, its shape sufficiently so at other times; head and neck brownish with dull whitish throat in winter plumage.

Nest, a floating or half-submerged mound of decayed vegetation in open space of swamp water. *Eggs*, 4-8, dull white or pale greenish buff, usually more or less discolored by contact with water-soaked nest. Av. size, 1.75 x 1.20 (44.5 x 30.5).

General Range.—British Provinces southward to Brazil, Argentine Republic, and Chili; the West Indies and Bermuda, breeding locally nearly throughout its range.

Range in Ohio.—Common migrant. Locally resident in summer. Occasionally resident in winter in open or half-open water.

THE Water-witch is expert at diving and all that pertains to the trade. The skill and success with which it used to avoid at the flash of the muzzle-loading gun, has given rise to several vigorous and sulphurous sounding names, and a genuine belief in some quarters that the bird is in league with the Evil One. When a supposed "duck" is first blown to pieces by the discharge of the musket, and then bobs up serene and smiling a moment later, the only thing to do is to throw down the gun and take to the woods. But devil or no devil, smokeless powder is a little too quick for him, and for this reason alone the Grebe is becoming more scarce each year.

Sometimes instead of diving 'as quick as a flash,' the bird, if it thinks itself unobserved and wishes to escape, will settle slowly into the water and disappear without leaving a ripple behind. Once under water the diver makes marvellous progress, apparently without assistance from the wings. And if it is undesirable to appear on exhibition again it requires only to thrust the tip of the bill to the nostrils above the surface of the water from time to time. Thinking to test their powers both of diving and flight, I once pursued a company of twenty-five Pied-bills about a two-acre opening in the ice of the Licking Reservoir. The birds would neither fly nor try to escape beneath the surrounding ice, preferring rather to play at hide and seek with me in the boat. Some came to the surface and got a single gulp of air, while others fearlessly presented a broad-side view, and others still paddled about with only the head sticking out of water. They are said, however, to take to wing easily and to fly rapidly. On land they are unable to rise, and flounder about quite helplessly.

The Grebe oftenest remains concealed by day, except during migrations and in winter, and for this reason is almost unknown to eye in its own breeding haunts.

Dr. Langdon's account of their breeding in the northern part of the state¹ is still the best extant, and I repeat a few paragraphs by permission:

¹ "Summer Birds of a Northern Ohio Marsh" by Frank W. Langdon. *Journal of the Cincinnati Soc. of Nat. Hist.* Vol. III., No. 3, October, 1880; p. 231.

"The little floating island of decaying vegetation held together by mud and moss, which constitutes the nest of this species, is a veritable ornithological curiosity. Imagine a "pancake" of what appears to be mud, measuring twelve or fifteen inches in diameter, and rising two or three inches above the water, which may be from one to two feet in depth; anchor it to the bottom with a few concealed blades of "saw-grass," in a little open bay, leaving its *circumference entirely free*; remove a mass of wet muck from its rounded top, and you expose seven or eight soiled brownish-white eggs, resting in a depression



Taken on the Licking Reservoir.

Photo by the Author.

IN THE HAUNTS OF THE GREBE.

the bottom of which is less than an inch from the water; the whole mass is constantly damp. This is the nest of the Dabchick, who is out foraging in the Marsh, or perhaps is anxiously watching us from some safe cover near by.

"The anchoring blades of coarse saw-grass or flags, being always longer than is necessary to reach the bottom, permit of considerable lateral and vertical movement of the nest, and so effectually provide against drowning of the eggs by any ordinary rise of the water level, such as frequently occurs during the prevalence of strong easterly winds on the lake. A small bunch of saw-grass already growing in a suitable situation is evidently selected as a nucleus for the nest, and the tops bent so as to form a part of it.

"During the day we invariably found the eggs concealed by a covering of muck, as above described, but, as we ascertained by repeated visits at night and in the early morning, they are uncovered at dusk by the bird, who incubates them until the morning sun relieves her of her task."

The eggs are probably covered thus only when there is danger of their being discovered by predatory Gulls and the like, as I have found them in certain Illinois swamps, where no such danger existed, quite exposed.

The hardness of the unhatched chick may be inferred from the preceding account. I once took a set of four eggs so incrustated with filth that not even soap and water and a bristle-brush would restore the original color. Finding time two days later to remove their contents, I was somewhat disconcerted when the disimprisoned young ones cheeped lustily, *forty hours from the nest*.

No. 317.

LOON.

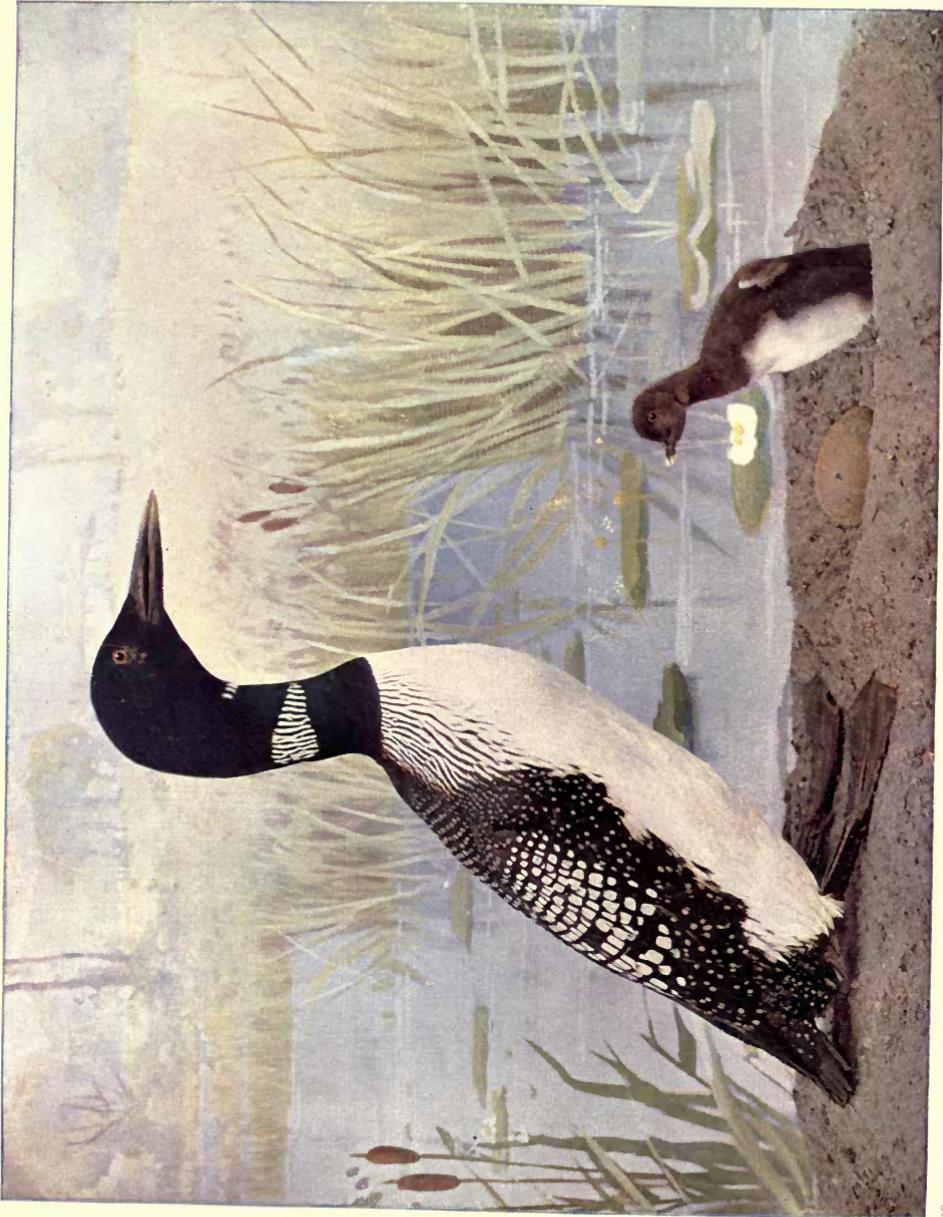
A. O. U. No. 7. *Gavia imber* (Gunn.).

Synonym.—GREAT NORTHERN DIVER.

Description.—*Adult in summer:* Head and neck black with metallic reflections, most intense on lower neck; middle of the throat crossed by a narrow bar of white streaks; a similar but wider bar on each side of neck lower down; under-parts pure white; upper parts greenish black, sharply spotted with white in regular transverse rows,—the spots mostly squarish, smallest on the upper back and rump, largest on lower scapulars; the sides black, similarly ornamented with rounded spots; sides of cervix black and white, streaked or striped; wing-quills blackish, with warm purplish reflections; bill black; feet and legs black externally, yellow internally; iris carmine. *Adult in winter and immature:* Above dark brown, clear and greenish glossed on crown and back of neck, feathers of the back, etc., more or less heavily tipped with ashy gray or dull buffy; entire under-parts, including sides, white, shading on sides of head or alternating with brown of upper parts in large dentations; bill light blue with dusky ridge; feet brownish dusky externally, yellowish internally. Length 28.00-36.00 (711.2-914.4); wing 14.00 (355.6); tail 2.60 (66.); bill 3.00 (76.2); along gape 4.00 (101.6); tarsus 3.40 (86.4).

Recognition Marks.—Brant to Eagle size; back black speckled with white; head and neck black interrupted by white-streaked spaces; below white; large, pointed bill. Large size distinctive as compared with other divers.

Nest, a mere depression in sand or gravel, etc., near the edge of lake or pond. *Eggs,* 2, dark brown or olive-brown, faintly and sparingly spotted with darker or blackish. Av. size, 3.50 x 2.25 (88.9 x 57.2).



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LOON
Gavia immer
About 1/3 Life-size

General Range.—Northern part of northern hemisphere. In North America breeds from the northern tier of states northward; ranges* in winter south to the Gulf of Mexico and Lower California.

Range in Ohio.—Not uncommon migrant; less common than formerly; sparingly resident in winter in southern portion. Formerly bred in northern part of state.

AS we gaze at some ocean greyhound lying at her moorings, we note with kindling eye the graceful lines of bow and stern, the suggestive inclination of mast and funnel, and we declare her perfect for her chosen element, the sea. We know that a transatlantic liner would cut a sorry figure on land and a sorrier still in the air, but we do not allow ourselves to be disturbed by such comparisons. Viewed strictly as a water bird, as Nature intended, the Loon is a paragon of beauty. Alert, supple, vigorous, one knows himself to be in the presence of the master wild thing, when he comes upon a Loon on guard in his native element. The bird seems to move about almost without effort, a single backward kick of one of those immense paddles serving to send it forward at any desired speed, while the head is turned inquiringly from side to side as if to take your measure. A shout, a false motion, the flash of a gun, and the wild thing has vanished, leaving scarcely a ripple to mark its recent resting place. It reappears, if at all, at a surprisingly great distance, and if really alarmed, only the head is thrust out of water, to take breath, get the bearings, and disappear again.

A Loon is not invulnerable, but an educated bird must be secured by stealth or guile if at all. Generations of gun practice have made the bird such an expert diver that, given room enough in which to dive, it is all but impossible to shoot one. Once on a wild mountain lake in the West, when I was really desirous of securing a specimen, I concealed myself behind an eminence with a Winchester rifle, and shot down at a supposedly unsuspecting Loon. After the first shot the bird turned and paddled slowly toward the ambuscade with what seemed like an amused smile playing about his features. After the seventh shot, the disappearing target tired of the game and vanished altogether. Poor marksmanship? Not a bit of it! Expert diving! On the other hand I shall never recall without a surge of shame another bird just off shore who was only to have been frightened. I was in full view, and brought up the shot-gun without attempt at concealment. The bird never flinched. Sheer butchery! How is one to tell an ingenu from an old-timer? I have done with Loon shooting.

Under water the Loon moves with great rapidity, using its wings to assist its progress. It is thus able easily to overtake a fish, which it transfixes by a stroke of its dagger-like beak and brings to the surface for consumption.

When the water is clear enough to admit of it, it is a delight to watch the air-bubbles which cling to the diver in the translucent depths, like a silvery coat of mail, and which he shakes off only upon emerging at the surface again.

In singular contrast to the Loon's facility and grace in the water, is its behavior upon land. Since its feet are placed so far back, it must stand nearly upright, Penguin fashion, and its walk



Taken in Morgan County.

Photo by the Author.

A BIT FROM THE LOON'S SKETCH-BOOK.

is an awkward, shuffling gait; or else, as is more likely to be the case, the bird flounders along on all fours. It is said not to be able to take wing from the ground. In rising from the water the diver must have considerable space in which to get under way, first by rapid floundering, then by running upon the water, patting the surface with its great webs, until the wings have attained a proper motion. Once started, the Loon's flight is swift and powerful, the wings accomplishing by rapid vibration what they lack in expanse. In alighting there is no graceful moderation of flight, but the bird circles about a chosen spot with ill-restrained velocity and in seeming helplessness until it can make up its mind to let go, when it plumps into the water like a spent meteor.

Because of its infirmity the Loon usually nests quite near the water's edge, so that it may glide into the water unobserved at the approach of danger. Because the eggs are of such a perfect mud-color themselves, there is little

attempt made to conceal the nest. On the contrary, a position on some promontory or plain stretch of shore is chosen so that the bird may command a wide sweep of territory. The eggs are sometimes placed on the bare sand, but oftener upon a loose heap of trash or upon a grassy bog. If at some distance from the water, a path or runway marks the connection.

Soon after the chicks are brought off the parents separate for the rest of the season, the male retiring either to some unfrequented lake or to the sea-coast to undergo the summer moult. At this season both birds cast their feathers so thoroughly as to be for a time quite incapacitated for flight.

The Loon is famous, especially in its northern breeding ground, for its far-sounding and unearthly cry. Of this performance, Rev. J. H. Langille says: "The notes of this bird being most frequent before a storm are remarkable. Beginning on the fifth note of the scale, the voice slides through the eighth to the third of the scale above in loud, clear sonorous tones, which on a dismal evening before a thunder storm, the lightning already playing along the inky sky, are anything but musical." The bird has also a softer and less awful cry of weird laughter, which resounds from shore to shore in some mountain solitude with strange ventriloquistic effect.

No. 318.

BLACK-THROATED LOON.

A. O. U. No. 9. *Gavia arctica* (Linn.).

Synonym.—BLACK-THROATED DIVER.

Description.—*Adult in summer*: Somewhat similar to preceding species but smaller; top of head and nape bluish gray; a short transverse bar of white streaks on throat, and the sides of the neck between the black and the gray similarly streaked in longitudinal series; sides of breast more widely black and white striped than in *G. imber* (in which only the sides of the cervix so striped) nearly meeting in front; a blackish bar across base of lower tail-coverts; under parts pure white; above and on sides of back, marked and spotted with white. *Adult in winter and immature*: Corresponding closely with the similar stages in *G. imber* and distinguishable with certainty only by smaller size. Length 27.00 (685); wing 11.00 (279.4); bill 2.00 (50.8); tarsus 2.60 (66.) (Chapman).

Recognition Marks.—Brant size; like *G. imber* but smaller; top of head and nape, in summer plumage, bluish gray.

Nesting.—Does not breed in Ohio. *Nest and Eggs* as in preceding species. Av. of eggs 3.15 x 2.05 (80. x 52.1).

General Range.—Northern part of the northern hemisphere. In North America of casual occurrence in autumn and winter in the northern United States east of the Rocky Mountains.

Range in Ohio.—Casual winter visitor. Several specimens have been captured since that recorded by Dr. Wheaton (Jones).

THE Black-throated Loon is not only a rare bird in Ohio, but it seldom occurs anywhere so far south. The immature birds migrate more freely than the adults, being apparently less able to stand the winter rigors of the Arctic seas; and it is they which are usually seen in the United States. The habits of this species are essentially similar to those of the preceding, save in the matter of migration.

No. 319.

RED-THROATED LOON.

A. O. U. No. 11. *Gavia lumme* (Gunn.).

Synonym.—RED-THROATED DIVER.

Description.—Adult in summer: Top of head and hind-neck along crest black, the latter streaked with white; throat and sides of head and neck plumbeous gray; front of neck rich chestnut; sides of breast heavily streaked or striped with black and white; upper parts and sides brownish dusky, spotted rather finely with white, the spots mostly oval or elongate oval and largest on lower scapulars and tertiaries; remaining under parts white; the longer under tail-coverts and a bar across the base of shorter ones dusky; tail narrowly tipped with white; bill black. *Adult in winter and immature:* Without chestnut on neck; appearing much as in corresponding stage of *G. imber*, but the back, etc., always more or less spotted with white. Length 24.00-27.00 (609.6-685.8); wing 11.00 (279.4); tail 1.80 (45.7); bill 2.00 (50.8); tarsus 2.80 (71.1).

Recognition Marks.—Brant size; somewhat like *G. imber*, but smaller, chestnut of throat distinctive in summer, and spotting of upper parts unique in winter.

Nesting.—Does not breed in Ohio. *Nest and Eggs* as in preceding species. Av. of eggs, 2.80 x 1.75 (71.1 x 44.5).

General Range.—Northern part of northern hemisphere, migrating southward in winter nearly across the United States.

Range in Ohio.—Rare migrant; more nearly common on Lake Erie.

SINCE these birds enjoy a more northerly distribution during the breeding season than the common species, being found to the limits of the Arctic shores, they are also much less numerous and regular in fall and winter. Moreover, because of the lack of strong diagnostic marks and because of the prevalence of immature birds, they are difficult to distinguish during the migrations. While the species cannot be reckoned uncommon, at least on Lake Erie, reliable records are mostly confined to those accidentally shot or found entangled in the meshes of fish-traps.

No. 320.

BRUNNICH MURRE.

A. O. U. No. 31. *Uria lomvia* (Linn.).

Description.—*Adult in summer*: Upper parts sooty black, the secondaries narrowly tipped with white; chin, throat, fore-neck, and sides of head and neck snuffy brown; remaining under parts pure white; bill black, the "basal portion of cutting edge of upper mandible thickened and conspicuously light-colored." *Adult in winter and immature*: Similar, but entire under parts, including chin, throat, fore-neck, and sides of head and neck, white. Length 16.50 (41.9); wing 8.25 (209.6); tail 1.85 (47.); bill 1.45 (36.8); depth at angle .55 (14.); tarsus 1.40 (35.6).

Recognition Marks.—Duck size; black above, white below; small wings and tail; upright posture on land or water; rapid flight.

Nesting.—Does not breed in Ohio. "*Nests* in communities, side by side on the bare ledges of rocky cliffs." *Eggs*, one, subpyriform, varying from dull white or buffy to bluish, bluish-green and emerald-green, strikingly spotted, blotched and scrawled with deep chocolate, and obscurely with lilac. Av. size, 3.15 x 2.00 (80. x 50.8).

General Range.—Coasts and islands of the North Atlantic and eastern Arctic Oceans; south to the lakes of northern New York and the coast of new Jersey. Breeding from the Gulf of St. Lawrence northward.

Range in Ohio.—Accidental in considerable numbers during December, 1896.

THOSE of us who experience poignant regret upon hearing the tales of Wild Pigeons which "darkened the sun"—thinking that we were perhaps born a generation too late—would probably have our longing for the "tumultuous rushing of myriad wings" thoroughly satisfied could we visit the breeding haunts of the Guillemots in Spitzbergen or off the coast of Alaska. Sober observers tell us that in some places during the breeding season, the roar of a Guillemot rookery will drown the sound of the thundering sea in time of storm; and a gentleman who once visited St. George Island, one of the Pribylov group, affirmed that the flying males of this species at certain hours of the day "form a dark girdle of birds more than a quarter of a mile broad and thirty miles long, whirling round and round the island."

In the winter of '96-7 a driving storm from the Labrador coast caught up a considerable number of these multitudinous sea-fowl and swept them far inland. When the storm had spent its fury the Murres were found promiscuously stranded in the lakes and water-ways, or wandering about dazed and helpless in the fields of Ohio, Indiana, and neighboring states. Many specimens were taken by the hand and others shot at scattered localities; and the village oracles were often sorely put to it to tell what this strange fowl might be. The first published record¹ for Ohio was of the one taken by Rev.

¹ Bulletin No. 13, Wilson Ornithological Chapter, p. 16.

J. M. Keck, of Mentor, on December 19, 1896. A score of others have since come to light, all taken at about the same time or a few days later. This memorable inundation by Brünnich Murres was general throughout the Eastern States and records were made as far south as South Carolina.

APPENDIX A.

HYPOTHETICAL LIST.

This list includes those species which are believed to occur or to have occurred in Ohio, but whose claim to admission rests only upon presumptive or inconclusive evidence, or whose status as species is not yet clearly established.

No. 1.

BLUE GROSBEAK.

A. O. U. No. 597. *Guiraca caerulea* (Linn.).

Description.—*Adult male*: Prevailing color deep purplish ultramarine blue, paling somewhat on lower belly and crissum, where the feathers are narrowly tipped with white; lores black; wings and tail blackish with blue edging, the former crossed by two transverse bars of rufous formed by the tips of the middle and greater coverts, the posterior bar narrower; bill turgid, black above, paler,—dusky—below, lightening toward the tip; feet blackish. *Adult female*: Above rather light grayish brown, often with traces of blue; wings fuscous, the bars ochraceous-buff; tail fuscous, with some margining of bluish gray; under parts pale fulvous or brownish buff. *Young*: Like adult female, but showing more ochraceous. Length 7.00 (177.8); wing 3.50 (88.9); tail 2.75 (69.9); bill .66 (16.8); depth at base .55 (14.). Female somewhat smaller.

Recognition Marks.—Sparrow size; prevailing color ultramarine blue without greenish shade. Its larger size and rufous wing-bars will serve to distinguish it from the Indigo Bunting (*Passerina cyanea*), which it somewhat resembles both in appearance and habits.

Nest, of dried grasses, in tall weeds or bushes. *Eggs*, 3 or 4, pale bluish white. Av. size, .82 x .65 (20.8 x 16.5).

General Range.—Eastern United States from southern New Jersey, southern Illinois and central Nebraska, south to Cuba and Mexico. Casually northward to New England.

Supposed Occurrence in Ohio.—Reported as well seen by Laura Gano, College Hill, Cincinnati, June 12, 1899.

No. 2.

PAINTED BUNTING.

A. O. U. No. 601. *Cyanospiza ciris* (Linn.).

Synonym.—NONPAREIL.

Description.—*Adult male*: Head and neck, except chin and throat, purplish blue; back of scapulars bright yellowish green; rump and upper tail-coverts purplish red; greater wing-coverts parrot green; middle coverts dull reddish purple; lesser coverts dull purplish blue; wing-quills dusky with purplish and green edgings; tail-feathers dark reddish or purplish; under parts, including chin and throat, vermilion red; eye-ring vermilion; iris brown. *Adult female*: Upper parts plain dull green; under parts olive-yellow, becoming clear yellow posteriorly (Ridgway). Length 4.75-5.50 (120.6-139.7); wing 2.70 (68.6); tail 2.50 (63.5); bill .42 (10.7).

Recognition Marks.—Warbler size; varied plumage of bright colors.

General Range.—South Atlantic and Gulf States to western Texas, north to North Carolina and southern Illinois, and south to Panama.

Supposed Occurrence in Ohio.—"Reported from Sandusky by Professor E. L. Mosely. No specimen was secured. This record, if authentic, would seem to be a case of escaped cage-bird. It is likely that wanderers may sometimes reach the vicinity of Cincinnati" (Jones).

No. 3.

LAWRENCE WARBLER.

A. O. U. No. H. 20. **Helminthophila lawrencei** (Herrick).

Description.—*Adult male*: Similar to *H. chrysoptera*, but cheeks and median lower parts pure yellow (gamboge); back, scapulars, and rump, bright olive-green; the sides tinged with olive, and the wing-bands (usually) white; the wing-bands narrower and more widely separated than in *H. chrysoptera*. *Adult female*: Similar to *H. chrysoptera*, but dingy olive-green on checks and throat (Ridg.). Probably a hybrid of *H. chrysoptera* and *H. pinus*; but see discussion on page 123.

General Range.—New Jersey, New York, Connecticut, etc.

Probable Occurrence in Ohio.—This hybrid (?) form is less common than *H. leucobronchialis*, but it should occur wherever that form and its antecedents (?), *H. pinus* and *H. chrysoptera* are found.

No. 4.

BREWSTER WARBLER.

A. O. U. No. H. 21. **Helminthophila leucobronchialis** (Brewst.).

See description and comment on page 123.

No. 5.

CINCINNATI WARBLER.

A. O. U. No. H. 22. **Helminthophila cincinnatiensis** (Langd.).

Description.—*Adult male*: Much like *H. pinus* in color, but without wing-bars or white blotches on tail; lores and portions of ear-coverts black (which, together with concealed black on crown, resembles an incomplete mask of *Oporornis formosa*); bill with rictal bristles. Length 4.75 (120.6); wing 2.50 (63.5); tail 1.85 (47.); bill .44 (11.2).

This bird is known only from one specimen described from Cincinnati by Dr. Langdon,¹ and is believed to be a hybrid between the Blue-winged and Kentucky Warblers (*H. pinus* and *O. formosa*). As such it is, of course, properly relegated to the hypothetical list of the A. O. U. committee.

No. 6.

PARULA WARBLER.

A. O. U. No. 648. **Compsothlypis americana** (Linn.).

Description.—Similar to *C. a. usneae* (q. v. page 131), but slightly smaller; coloration not so rich,—blue of upper parts lighter, black of lores less intense, pattern of under parts less clearly defined, etc.

General Range.—Southern portions of Atlantic and eastern Gulf Coast districts of United States, breeding from Florida northward to Virginia, and irregularly to New Jersey, Massachusetts, etc.; also occasionally in more southern portions of the interior (Ridgway).

Probable Range in Ohio.—Certain specimens in the O. S. U. collection seem to be referable to this type, and it is antecedently probable that the species will be found at least occasionally in the southern and southeastern portions of the state.

No. 7.

GRINNELL WATER-THRUSH.

A. O. U. No. 675 a. **Seiurus noveboracensis notabilis** (Ridg.).

Description.—*Adult*: Similar to *Seiurus noveboracensis*, but larger, darker olive-brown, approaching sooty on back; superciliary stripe not so distinctly fulvous; under parts less often or less distinctly yellowish. Length 5.50-6.50 (139.7-165.1); wing 3.14 (79.8); tail 2.35 (59.7); bill .51 (13.); tarsus .87 (22.1) (Ridgway).

¹ Jour. Cinti. Soc. Nat. Hist., July 1880, 119, 120. pl. 4.

General Range.—Western United States from Illinois and Indiana west to California, and north into British America. Casual in migration eastward to Atlantic Coast. Winters from southern border of United States southward to Lower California, Mexico, and northern South America.

Supposed Occurrence in Ohio.—Reported as not uncommon in Indiana during migrations, especially in the Valley of the Wabash. I have seen specimens afield near Columbus which I strongly suspect were of this form.

No. 8.

ALDER FLYCATCHER.

A. O. U. No. 466 a. **Empidonax traillii alnorum** Brewst.

Description.—Similar to *E. pusillus*, but averaging more decidedly olivaceous above, and more distinctly tinged with yellow beneath; the bill shorter and broader, and tarsus shorter" (Ridgway). (Cf. Brewster, *The Auk*, XII. April, 1895, pp. 159-161). I have little faith in the distinctions urged, and none at all in the propriety of elaborating a separate subspecies because of them. Distinctions between species are puzzling enough in this genus, without raising the problem to the second power.

General Range.—Eastern North America from the Maritime Provinces and New England, westward at least to northern Michigan, etc., breeding from the southern edge of the Canadian fauna northward; in winter south to Central America.

Supposed Range of Ohio.—Not reported, because practically indistinguishable from *E. pusillus*. Should be found not uncommonly during migrations.

No. 9.

IVORY-BILLED WOODPECKER.

A. O. U. No. 392. **Campephilus principalis** (Linn.).

Description.—*Adult male*: General plumage lustrous black; tips of inner primaries and terminal half or two-thirds of secondaries and under wing-coverts white; a white stripe beginning in either cheek and proceeding upward and backward, meeting fellow on lower back; a hollow lengthened crest scarlet on sides and tip; nasal tufts white; bill ivory-white; tail graduated, the three central pairs of feathers lengthened and modified, the third pair fitting into the second, and the edges of all sharply decurved, thickened, and stiffened into six or more parallel rows of bristling barbs. *Adult female*: Similar but without red in crest. Length 19.00-21.00 (482.6-533.4); wing 10.00 (254.); tail 6.50 (165.1); head from tip of bill to tip of crest 6.20 (157.5); bill 2.50-2.75 (63.5-69.9).

General Range.—Formerly South Atlantic and Gulf States from North Carolina to Texas north in the Mississippi Valley to Missouri, southern Illinois and southern Indiana. Now restricted to the Gulf States and the lower Mississippi Valley, where only locally distributed.

Supposed Occurrence in Ohio.—Recorded as probable by Langdon¹ on authority of Dr. Haymond, who found the bird in Franklin County, Indiana, not far from the Ohio line.

No. 10.

CORY LEAST BITTERN.

A. O. U. No. 1011. **Ardetta neoxena** Cory.

Description.—*Adult male*: Similar to *Ardetta exilis*, but back with stronger greenish gloss; lesser wing-coverts at bend of wing black; brownish buff of median wing-coverts replaced by cinnamon-rufous; wing-quills without rufous tips; under parts distinctly rufous, sometimes mingled with black or white on belly and flanks; *lower tail-coverts dull black*. *Female*: "Similar to adult male, but crown slightly and back decidedly duller." *Immature*: "Similar to adult male, but black of the head and back somewhat duller, the outer margins of the interscapulars slightly tinged with chestnut" (Chapman).

Nest and Eggs. similar to those of *A. exilis*.

General Range.—Southern Florida; Ontario; Michigan; Wisconsin.

Range in Ohio.—One record by C. C. Smith of Hamilton (doubtful). Probably not uncommon. "It has been found breeding in Ontario, hence its migration route must cross Ohio" (Jones).

¹ Revised List, Jour. Cin. Soc. Nat. Hist., 1, 1879, 178; reprint 12.

No. 11.

BRANT.

A. O. U. No. 173. **Branta bernicla** (Linn.).

Description.—*Adult*: Head and neck all around and fore breast (all around, i. e., with corresponding lateral and dorsal portions) sooty black; a narrow stripe or broken half-necklace of white spots on side of neck; lower belly and under tail-coverts well around on sides to include lateral third and longer feathers of upper tail-coverts, pure white; remaining plumage sooty brownish gray or slaty brown, darker on back, lighter on belly; the feathers of sides and some on wing-coverts tipped with dull white; wing-quills and tertials blackening toward tips; tail black, but mostly concealed by white coverts; bill and feet black. In the specimen from which this description is made, a male in full plumage taken in Labrador, the gray of breast does not fade to white on lower belly (Ridgway et al.) but contrasts abruptly with it, at the point of insertion of the legs, as well as with the black of fore-breast. *Immature*: "Similar but with less white on the sides of the neck and wing-coverts, and secondaries tipped with white" (Chapman). Length 24.00-30.00 (609.6-762.); wing 13.00 (330.2); tail 5.00 (127.); bill 1.50 (38.1); tarsus 2.10-2.40 (53.3-61.) (R.).—the Columbus specimen 2.60 (66.).

Recognition Marks.—"Brant size"; dark coloration,—sooty black on head and neck, dark fuscous elsewhere, with conspicuous white of lower belly and tail-coverts.

Nest, on cliffs or sandy beaches, of moss and grasses, lined with copious feathers and down. *Eggs*, 4-6, creamy or dirty white. Av. size, 2.70 x 1.80 (68.6 x 45.7).

General Range.—"Northern parts of the northern hemisphere; in North America chiefly on the Atlantic Coast; rare in the interior or away from salt water." Probably the true *bernicla* is much less common in North America than formerly supposed.

Supposed Occurrence in Ohio.—Doubtfully admitted to Wheaton's list on the basis of general statements by Kirtland and Langdon. On May 30th, 1902, Professor Lynds Jones and I came upon a bird in the Licking Reservoir which we had every reason to believe was a Brant, but whether of this species or the next it is impossible to say.

No. 12.

WHITE-BELLIED BRANT.

A. O. U. No. 173a. **Branta bernicla glaucogastra** (Brehm).

Description.—Similar to preceding species but with more white below. "It has the under parts below the breast almost pure white, and the white on the sides of the neck does not meet in front" (as distinguished from *B. nigricans* of the Pacific Coast) (Seeböhm).

General Range.—Imperfectly distinguished as yet from that of *B. bernicla*. "Extreme northern part of the northern hemisphere, including Arctic America, migrating southward in winter."

Supposed Range in Ohio.—It is possible that all alleged Brant records for the state belong to this imperfectly known subspecies.

No. 13.

FLORIDA CORMORANT.

A. O. U. No. 120a. **Phalacrocorax dilophus floridanus** (Aud.).

Description.—Quite similar to *P. dilophus*, but decidedly smaller. Length 22.00-30.00 (558.8-762.); wing 11.75 (298.5); tail 6.00 (152.4); bill 2.18 (55.4); tarsus 2.45 (62.2).

Recognition Marks.—Brant size; as in preceding species; smaller.

Nest, and *Eggs* not peculiar. Av. size of eggs, 2.35 x 1.45 (59.9 x 36.8).

General Range.—South Atlantic and Gulf States, northward in the Mississippi Valley to southern Illinois.

Supposed Occurrence in Ohio.—The birds which formerly bred at the Grand Reservoir were referred by Messrs. Langdon, Dury and others to this subspecies, but the evidence is not clear.

APPENDIX B.

CONJECTURAL LIST.

This list includes those species which have been reported from the adjacent states of Pennsylvania, Indiana, and Michigan, or from Ontario, and which might with some reasonable probability be supposed to occur at least casually in Ohio. Those of accidental occurrence and those which occupy definitely restricted areas, or which occur under conditions manifestly unlike those found in Ohio are omitted.

1. (528b). *Acanthis linaria rostrata* (Coes).
GREATER RED-POLL.
Indiana.—One record.—Butler.
Michigan.—Occasional straggler.—Gibbs (Cook).
2. (548). *Ammodramus leconteii* (Aud.).
LECONTE SPARROW.
Indiana.—Rare migrant, Brookville, Lebanon, Lake County, etc.—Butler.
3. (561). *Spizella pallida* (Swains.).
CLAY-COLORED SPARROW.
Indiana.—Rare migrant; one record.—Butler.
Michigan.—A very rare migrant in Washtenaw County.—A. B. Covert (Cook).
4. (638). *Helinaia swainsonii* Aud.
SWAINSON WARBLER.
Indiana.—Breeds in Knox County.—Ridgway (Butler).
5. (329). *Ictinia mississippiensis* (Wils.).
MISSISSIPPI KITE.
Pennsylvania.—Rare straggler.—Warren.
Indiana.—"Rare summer resident in the lower Wabash Valley; accidental visitor elsewhere."—Butler.
Michigan.—One record, by D. D. Hughes of Cass County.—Cook.
6. (199). *Hydranassa tricolor ruficollis* (Gosse).
LOUISIANA HERON.
Pennsylvania.—Straggler.—Warren.
Indiana.—Rare summer visitor.—Butler.
Michigan.—Exceedingly rare; two records.—Cook.

7. (42). **Larus glaucus** (Brunn).
GLAUCOUS GULL; BURGOMASTER.
Indiana.—Occasional visitor on Lake Michigan.—Butler.
Michigan.—Rare.—Cook.
Ontario.—Lake Ontario.—McIlwraith.
8. (58). **Larus atricilla** Linn.
LAUGHING GULL.
Pennsylvania.—Not common migrant on Delaware river and larger streams.—Warren.
Michigan.—Divergent opinions as to abundance, but several positive records.—Cook.
9. (59). **Larus franklinii** Sw. and Rich.
FRANKLIN GULL.
Indiana.—Occasional Migrant; has been several times seen in Michigan City.—Butler.
Michigan.—Not rare on Lake Michigan during winter and Spring.—Gibbs (Cook).
Ontario.—Hamilton, two records; others probable.—McIlwraith.
10. (65). **Sterna maxima** Bodd.
ROYAL TERN.
Pennsylvania.—Very rare and irregular visitor.—Warren.
Michigan.—Rare on Lake Michigan.—Cook.
11. (71). **Sterna paradisaea** (Brunn).
ARCTIC TERN.
Pennsylvania.—Very rare straggler in eastern Pennsylvania.—Warren.
Michigan.—Cook.
Ontario.—McIlwraith.
12. (155). **Histrionicus histrionicus** (Linn.).
HARLEQUIN DUCK.
Michigan.—Very rare.—Cook.
Ontario.—Lake Ontario, rare.—McIlwraith.
13. (166). **Oidemia perspicillata** (Linn.).
SURF SCOTER.
Pennsylvania.—Rather rare migrant and winter resident. One specimen obtained from flock of twenty at Erie.—Warren.
Michigan.—Very rare; winter visitor.—Cook.
Ontario.—Lake Ontario in limited numbers.—McIlwraith.

APPENDIX C.

CHECK-LIST OF OHIO BIRDS

Arranged in the order prescribed by the Check-List of the American Ornithologist's Union (second edition)¹ together with.

MIGRATION TABLES

Giving average dates of arrival and departure for each species resident in summer or winter, and the average duration of the passage of spring and fall migrants.²

Compiled for the approximate Latitudes of Cincinnati, Columbus, and Cleveland.³

	CINCINNATI.		COLUMBUS.		CLEVELAND.	
	Arrive	Depart.	Arrive	Depart.	Arrive	Depart.
2. <i>Colymbus holboellii</i> (Reinh.). Holboell Grebe. 314.	Rare.		Rare.		Rare.	
3. <i>Colymbus auritus</i> (Linn.). Horned Grebe. 315.	c. Apr. 20. Sept. 18, Oct. 24.		c. Apr. 25. Oct. 15.	Dec. 2.	Apr. 15—May 1.	Oct. 6.
6. <i>Podilymbus podiceps</i> (Linn.). Pied-billed Grebe. 216.	Mar.-Apr.	Nov.—Dec.	Mar.-Apr.	Oct.-Dec.	Mar. 20—May 15.	Sept.-Nov.
7. <i>Gavia imber</i> (Gunn.). Loon. 317.	April.	Oct.-Nov.	April.	Oct.-Nov.	c. Apr. 25.	c. Oct. 5.
9. <i>Gavia arctica</i> (Linn.). Black-throated Loon. 318.					Rare.	
11. <i>Gavia lumme</i> (Gunn.). Red-throated Loon. 319.	Mar. 21, 1898.				Rare.	
31. <i>Uria lomvia</i> (Linn.). Brunnich Murre. 320.					Accidental.	
36. <i>Stercorarius pomarinus</i> (Temm.). Pomarine Jaeger. 257.					Casual.	
37. <i>Stercorarius parasiticus</i> (Linn.). Parasitic Jaeger. 258.					Sept. 13, '99.	Oct. 6, '95

1 The number placed after the name of each species is that used in the body of the book.

2 Two dates separated by a dash indicate either the time within which species resident in summer (or winter) may be expected to arrive or depart, or within which migrant species may be seen passing or resting *en route*. Oftener an approximate estimate is given of the time at *about* (c. *circum*, about) which the bird may be looked for. Specific dates in connection with the commoner species indicate unusual or unseasonable appearances. In the case of little-known species, or others not accurately observed, a single specific date is given to indicate a record or a capture.

3 Cincinnati records are largely supplemented by the observations of Rev. W. F. Henninger in Pike and Scioto Counties; Columbus records are based on the observations of the author at Columbus and the Licking Reservoir, supplemented by the recorded notes of Dr. J. M. Wheaton; Cleveland records are based upon the work of Prof. Jones and the author in Lorain County, supplemented by notes contributed by Prof. E. L. Mosley of Sandusky, and others.

	CINCINNATI.	COLUMBUS.	CLEVELAND.
40. <i>Rissa tridactyla</i> (Linn.). Kittiwake. 259.			Casual.
43. <i>Larus leucopterus</i> Faber. Iceland Gull. 250.			Winter visitor.
47. <i>Larus marinus</i> (Linn.). Great Black-backed Gull. 251.	Mar. 21, 1900.		
51. <i>Larus argentatus</i> (Brunn.). Herring Gull. 252.	Mar. 8, 1901.	Feb. 13, '03. c. Mar. 30 November.	c. Mar. 20. Sept.-Dec.
54. <i>Larus delawarensis</i> Ord. Ring-billed Gull. 253.		Rare.	Rare.
60. <i>Larus philadelphia</i> (Ord.). Bonaparte Gull. 254.	Sept., 1878.	Ap. 3, '03. Ap. 22, '75. Nov. 4, 1878.	Apr. 20—May 20. June 3, 1903.
62. <i>Xema sabinii</i> (Sab.). Sabine Gull. 254.			Casual.
63. <i>Gelochelidon nilotica</i> (Hasselq.). Gull-billed Tern. 256.			Casual.
64. <i>Sterna caspia</i> Pallas. Caspian Tern. 257.	Oct. 8, 1882.	June 1, 1902.	Oct. 9, 1896.
69. <i>Sterna forsteri</i> Nutt. Forster Tern. 258.	May 4, 1879.		
70. <i>Sterna hirundo</i> Linn. Common Tern. 259.	Nov. 11, 1898.	c. May 1. Apr. 4, '03. October.	May 1-10. Aug. 20—Oct. 20.
72. <i>Sterna dougalli</i> Montag. Roscate Tern. 270.	Casual.		Rare.
74. <i>Sterna antillarum</i> (Less.). Least Tern. 271.	Rare.	Rare.	
77. <i>Hydrochelidon nigra surinamensis</i> Black Tern. 272. (Gmel.).	Aug. 17, 1879 Sept. 15, 1878.	c. May 1, May 30, '02. Sept. 9, 1902.	May 1-10. c. Sept. 1.
[98.] <i>Aestrelata hasitata</i> (Kuhl.). Black-capped Petrel. 313.	Accidental.		
120. <i>Phalacrocorax dilophus</i> (Swain.). Double-crested Cormorant. 310.		Apr. 1, 1878 Dec. 2, 1903.	October.
125. <i>Pelecanus erythrorhynchos</i> Gmel. American White Pelican. 311.		May 15, 1902.	Rare.
128. <i>Fregata aquila</i> Linn. Man-o'-War Bird. 312.		Accidental.	
129. <i>Merganser americanus</i> (Cass.). American Merganser. 307.	Winter resident.	Mar 20—Apr. 20. Nov.-Dec.	Apr. 1-20. Nov.-Dec.
130. <i>Merganser serrator</i> (Linn.). Red-breasted Merganser. 308.	Dec. 5, 1899.	Apr. 4, 1903. Nov. 4, 1878.	c. Apr. 1. Nov. 15, 1890.
131. <i>Lophodytes cucullatus</i> (Linn.). Hooded Merganser. 309.	c. Apr. 1. November.	Mar. 20. Apr. 20. Mar. 7, 1876. November.	c. Apr. 15.
132. <i>Anas boschas</i> Linn. Mallard. 281.	Winter resident.	Feb. 15—Apr. 1. c. Nov. 15.	March. c. Nov. 15.
133. <i>Anas obscura</i> Gmel. Black Duck. 282.	Feb. 28, 1899, Mar. 27, 1902. Oct. 7, 1899.	Mar. 1—Apr. 10. Oct.-Dec.	Mar. 1—Apr. 20. Oct.-Dec.
133a. <i>Anas obscura rubripes</i> Brewst. Red-legged Black Duck. 283.		See preceding species.	
135. <i>Chauleasmus streperus</i> (Linn.). Gadwall. 284.		Mar. 28, 1877.	

	CINCINNATI.	COLUMBUS.	CLEVELAND.
136. <i>Mareca penelope</i> (Linn.). Widgeon. 285.		Accidental.	
137. <i>Mareca americana</i> (Gmel.). Baldpate. 286.	March.	November.	c. Apr. 1. c. Oct. 20.
139. <i>Nettion carolinensis</i> (Gmel.). Green-winged Teal. 287.	Feb.-March.	Oct.-Dec.	March. Oct.-Nov. Mar.-Apr. October.
140. <i>Querquedula discors</i> (Linn.). Blue-winged Teal. 288.	April.	October.	c. Apr. 20. Sept. 10-Oct. 15. c. Ap. 25. Ap. 3,'99. Sept.-Oct. 15.
141. <i>Querquedula cyanoptera</i> (Vieill.). Cinnamon Teal. 289.			Accidental.
142. <i>Spatula clypeata</i> (Linn.). Shoveller. 290.	Mar. 28, 1900.	Mar. 1-Apr. 15. Oct.-Dec.	Mar. 10-Apr. 15. Oct.-Nov.
143. <i>Dafila acuta</i> (Linn.). Pintail. 291.	c. Feb. 15.	Oct.-Dec.	c. Mar. 1. Oct.-Dec. March. Oct.-Dec.
144. <i>Aix sponsa</i> (Linn.). Wood Duck. 292.	c. Apr. 1.	October.	Mar. 28, '77. April. October. c. Apr. 15. October.
146. <i>Aythya americana</i> (Eyt.). Redhead. 293.	c. Mar. 15.	Nov.-Dec.	c. Apr. 1. November. Mar. 15-Apr. 15. Oct. 15-Nov. 30.
147. <i>Aythya vallisneria</i> (Wils.). Canvas-back. 294.	Mar. 20-Apr. 15.	Oct.-Nov.	Mar. 20-Apr. 15. Oct.-Nov. Mar. 20-Apr. 20. Oct.-Nov.
148. <i>Aythya marila</i> (Linn.). American Scaup Duck. 295.	Apr. 20, 1900.		Mar. 15-Apr. 15. Oct. 20-Nov. 30. Mar. 20-Apr. 20. Oct. 20-Nov. 20.
149. <i>Aythya affinis</i> (Eyt.). Lesser Scaup Duck. 296.	May 14, 1902.		Mar. 10-May 1. Oct. 15-Nov. 15. Mar. 25-May 5. Oct. 10-Nov. 10.
150. <i>Aythya collaris</i> (Donov.) Ring-necked Duck. 297.	March.	November.	March. November. Mar. 1-Apr. 15. Oct. 20-Nov. 20.
151. <i>Clangula clangula americana</i> (Bonap.). American Golden-eye. 298.	February.	December.	March. November. 30. March. November.
152. <i>Clangula islandica</i> (Gmel.) Barrows Golden-eye. 299.			Winter visitor.
153. <i>Charitonetta albeola</i> (Linn.). Buffle-head. 300.	c. Apr. 1.		c. Apr. 12. Oct.-Nov. Mar. 25-Apr. 15. Oct.-Nov. 20.
154. <i>Harelda hyemalis</i> (Linn.). Old-squaw. 301.	Winter visitor.		Winter visitor. Winter visitor.
160. <i>Somateria dresseri</i> Sharpe. American Eider. 302.			Casual. Casual.
162. <i>Somateria spectabilis</i> (Linn.). King Eider. 303.			Casual. Casual.
163. <i>Oidemia americana</i> Swains. American Scoter. 304.			Casual. Casual.
165. <i>Oidema deglandi</i> Bonap. White-winged Scoter. 305.			Casual. Casual.
167. <i>Eristamatura jamaicensis</i> (Gmel.). Ruddy Duck. 306.	April.	October.	c. Oct. 15. Apr. 15-May 10. October.
169. <i>Chen hyperborea</i> (Pall.). Lesser Snow Goose. 275.			Rare.
169a. <i>Chen hyperborea nivalis</i> (Forst.). Greater Snow Goose. 276.	Rare.		Mar. 19, 1874. Rare.
169.I. <i>Chen caerulescens</i> (Linn.). Blue Goose. 277.			Oct. 28, 1876. Oct. 28, 1896.

	CINCINNATI.	COLUMBUS.	CLEVELAND.
171a. <i>Anser albifrons gambeli</i> (Hartl.). American White-fronted Goose. 278.	Rare winter resident.	Rare.	Rare.
172. <i>Branta canadensis</i> (Linn.). Canada Goose. 279.	November. Feb. 20—Apr. 10.	c. March. c. Nov.	Mar. 1—Apr. 15. Nov. Dec. 5, '96.
172a. <i>Branta canadensis hutchinsii</i> (Rich.). Hutchins Goose. 280.		Casual.	
180. <i>Olor columbianus</i> (Ord.). Whistling Swan. 273.		Mar. 19, 1879.	Mar.—Apr. Nov. 19, 1896.
181. <i>Olor buccinator</i> (Rich.). Trumpeter Swan. 274.	Apr., 1900. Dec., 1876.		
186. <i>Plegadis autumnalis</i> (Hasselq.). Glossy Ibis. 217.			Accidental.
188. <i>Tantalus loculator</i> Linn. Wood Ibis. 216.	Casual.		Accidental.
190. <i>Botaurus lentiginosus</i> (Montag.). American Bittern. 208.	c. Mar. 25. c. Nov. 1.	c. Apr. 1. Oct. 20—Nov. 20.	c. Apr. 5. c. Oct. 20.
191. <i>Ardetta exilis</i> (Gmel.). Least Bittern. 209.	c. May 1. c. Sept. 20.	c. May 5. c. Sept. 15.	c. May 10. c. Sept. 15.
194. <i>Ardea herodias</i> Linn. Great Blue Heron. 210.	March. December.	March. Oct.—Nov.	c. Mar. 20. c. Oct. 15.
196. <i>Herodias egretta</i> (Gmel.). American Egret. 211.	July-August. Casual.	July, August. Casual.	July-August. Casual.
197. <i>Egretta candidissima</i> (Gmel.). Snowy Heron. 212.	July-August. Casual.	July, August. Casual.	July-August. Casual.
200. <i>Florida caerulea</i> (Linn.). Little Blue Heron. 213.	August. Casual (?)	August. Casual.	August. Casual.
201. <i>Butorides virescens</i> (Linn.). Green Heron. 214.	c. Apr. 20. c. Oct. 1.	c. Apr. 20. c. Oct. 1.	c. Apr. 20. c. Oct. 1.
202. <i>Nycticorax nycticorax naevius</i> (Bodd). Black-crowned Night Heron. 215.	Nov. 18, 1898.	Apr. 30, 1901. Oct. 17, 1874.	
204. <i>Grus americana</i> (Linn.). Whooping Crane. 205.	c. Apr. 1.	c. Apr. 1. Nov. 26, 1876.	c. Apr. 1.
205. <i>Grus canadensis</i> (Linn.). Little Brown Crane. 206.		Accidental.	
206. <i>Grus mexicana</i> (Mull.). Sandhill Crane. 207.	c. Apr. 1.	c. Apr. 1.	c. Apr. 1.
208. <i>Rallus elegans</i> Aud. King Rail. 197.	c. May 1. October.	c. May 1. October.	c. May 7. October.
212. <i>Rallus virginianus</i> Linn. Virginia Rail. 198.	c. May 1. October.	c. May 1. c. Oct. 1.	c. May 7. Sept. 1-15.
214. <i>Porzana carolina</i> (Linn.). Sora. 199.	c. Apr. 25. October.	c. May 1. Apr. 17, 1876. May 5, 1902. October.	c. May 7. Apr. 18, 1896. October.
215. <i>Porzana noveboracensis</i> (Gmel.). Yellow Rail. 200.		Apr. 24, 1879.	
216. <i>Porzana jamaicensis</i> (Gmel.). Black Rail. 201.	May 17, 1890.		Sept., 1902.
218. <i>Ionornis martinica</i> (Linn.). Purple Gallinule. 202.	c. May 1. Casual.		Apr. 28, 1896. Casual. Sept. 2, 1894.
219. <i>Gallinula galeata</i> (Licht.). Florida Gallinule. 203.	Nov. 16, 1898.	Apr. 20, 1876.	c. May 1. c. Sept. 15.

	CINCINNATI.	COLUMBUS.	CLEVELAND.
221. <i>Fulica americana</i> (Gmel.). American Coot. 204.	c. Mar. 25. Oct.-Nov.	c. Apr. 1. Oct. 15-Nov. 30.	c. Apr. 1. Oct. 15-Nov. 1.
222. <i>Crymophilus fulcarius</i> (Linn.). Red Phalarope. 254.			Casual.
223. <i>Phalaropus lobatus</i> (Linn.). Northern Phalarope. 255.		Rare.	Rare.
224. <i>Steganopus tricolor</i> Vieill. Wilson Phalarope. 256.			c. May 5. Rare.
225. <i>Recurvirostra americana</i> (Gmel.). American Avocet. 252.		Nov. 10, 1882.	
226. <i>Himantopus mexicanus</i> (Mull.). Black-necked Stilt. 253.		rare.	
228. <i>Philohela minor</i> (Gmel.). American Woodcock. 225.	March. November.	March. November.	c. Mar. 20. c. Nov. 1.
230. <i>Gallinago delicata</i> (Ord.). Wilson Snipe. 226.	Mar.—Apr.—Jan. 27, 1898. November.	Mar. 27-May 7. October.	Apr. 1—May 10. October.
231. <i>Macrorhamphus griseus</i> (Gmel.). Dowitcher. 227.	Apr.—May. August.		Apr.—May. August.
232. <i>Macrorhamphus scolopaceus</i> (Say.). Long-billed Dowitcher. 228.	Very rare.		
233. <i>Micropalama himantopus</i> (Bonap.). Stilt Sandpiper. 229.			Very rare.
234. <i>Tringa canutus</i> Linn. Knot. 230.		May 27, 1878.	May. c. Sept. 10.
235. <i>Arquatella maritima</i> (Brun.). Purple Sandpiper. 231.			One record.
239. <i>Actodromas maculata</i> (Vieill.). Pectoral Sandpiper. 232.	Mar. 28-30, 1900.	Apr. 10-20. Aug.-Oct.	Apr. 15—May 5. Mar. 25, 1897. July 25—Oct. 1.
240. <i>Actodromas fuscicollis</i> (Vieill.). White-rumped Sandpiper. 233.	Sept. 6, 1879.	Oct., 1875.	
241. <i>Actodromas bairdii</i> Coues. Baird Sandpiper. 234.	Oct. 27, 1878.	Sept. 1, 1876. 9, 1877.	Nov.
242. <i>Actodromas minutilla</i> (Vieill.). Least Sandpiper. 235.	Apr. 27, 1898.	c. May 10. August.	c. May 15. July 25—August.
243a. <i>Pelidna alpina pacifica</i> (Coues.). Red-backed Sandpiper. 236.		c. Apr. 25. Oct. 18, 1876.	c. May 1. July 25. Oct. 25.
246. <i>Ereunetes pusillus</i> (Linn.). Semipalmated Sandpiper. 237.		c. May 5. Aug. July 24. Oct. 30.	c. May 5. August.
248. <i>Calidris arenaria</i> (Linn.). Sanderling. 238.	c. Sept. 15.	May. Sept. 10, 1902. Oct. 7, 1874.	May. Aug. 15—Sept. 20.
249. <i>Limosa fedoa</i> (Linn.). Marbled Godwit. 239.		Apr. 21, 1879.	
251. <i>Limosa haemastica</i> (Linn.). Hudsonian Godwit. 240.	Rare.	c. May 1. Rare.	Rare.
254. <i>Totanus melanoleucus</i> (Gmel.). Greater Yellow-legs. 241.	Mar 15—May 1.	April. Aug. 15—Nov. 15.	Apr. 20-May 10. Sept. 15—Oct. 15.
255. <i>Totanus flavipes</i> (Gmel.). Yellow-legs. 241.	Apr. Mar. 18, 1891.	Apr. 15-May 15. Aug. 15-Oct. 15.	Apr. 15—May 15. Aug-Sept.
256. <i>Helodromas solitarius</i> (Wils.). Solitary Sandpiper. 243.		c. Apr. 20.	c. Apr. 20. c. Oct. 20.

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258. <i>Symphemia semipalmata</i> (Gmel.). Willet. 244.	Rare.		
[250.] <i>Pavoncella pugnax</i> (Linn.). Ruff. 245.		Apr. 28, 1878. Nov. 10, 1872.	
251. <i>Bartramia longicauda</i> (Bechst.). Bartramian Sandpiper. 246.	Mar. 21, 1902. c. Oct. 25.	c. Apr. 15. c. Oct. 20.	c. Apr. 15. c. Oct. 15.
252. <i>Tryngites subruficollis</i> (Vieill.). Buff-breasted Sandpiper. 247.		Aug. 31, 1876.	Rare.
263. <i>Actitis macularia</i> (Linn.). Spotted Sandpiper. 248.	c. Apr. 25. c. Sep. 15.	Apr. 10-20. September.	c. Apr. 17. Sept. 10.
254. <i>Numenius longirostris</i> Wils. Long-billed Curlew. 249.		May 31, 1902.	
255. <i>Numenius hudsonicus</i> Lath. Hudsonian Curlew. 250.	Rare.		Rare.
256. <i>Numenius borealis</i> (Forst.). Eskimo Curlew. 251.		Oct., 1869.	
270. <i>Squatarola squatarola</i> (Linn.). Black-bellied Plover. 218.	Apr. 15-May. Aug. 20-Oct. 1.	May 12, 1876.	May. Aug.-Sept.
272. <i>Charadrius dominicus</i> Mull. American Golden Plover. 219.	Apr. 15-May. Sept.-Oct.	Apr. 15-May 20. Oct. 30, 1875.	Apr. 20-June 1. Aug.-Sept. Oct. 18, 1899.
273. <i>Oxyechus vociferus</i> (Linn.). Killdeer. 220.	Resident.	Feb. 24-Mar. 8. c. Nov. 1.	c. Mch. 6. Mch. 1,'94 c. Nov. 1.
274. <i>Aegialitis semipalmata</i> Bonap. Semipalmated Plover. 221.	Sept. 15, 1878.	May. July 25-Sept. 15.	May. July 25-Sept. 15.
277. <i>Aegialitis meloda</i> (Ord.). Piping Plover. 222.	Rare.	Rare.	Rare.
277a. <i>Aegialitis meloda circumcincta</i> Ridgw. Belted Piping Plover. 223.			June 26, 1902. Breeds.
283. <i>Arenaria interpres</i> (Linn.). Turnstone. 224.	Rare.		c. May 20. June 4,'03. Aug.-Sept. 15.
289. <i>Colinus virginianus</i> (Linn.). Bob-white. 196.	Resident.	Resident.	Resident.
300. <i>Bonasa umbellus</i> (Linn.). Ruffed Grouse. 194.	Resident.	Resident.	Resident.
305. <i>Tympanuchus americanus</i> (Reich.). Prairie Hen. 195.		Extinct.	Extinct.
310. <i>Meleagris gallopavo silvestris</i> (Vieill.). Wild Turkey. 193.	Resident?	Extinct.	Extinct.
315. <i>Ectopistes migratorius</i> (Linn.). Passenger Pigeon. 190.	Extinct.	Extinct.	Extinct.
316. <i>Zenaidura macroura</i> (Linn.). Mourning Dove. 191.	Resident.	Mar. 10-Apr. 1. Oct.-Nov.	Mar. 10-Apr. 1. October.
325. <i>Cathartes aura</i> (Linn.). Turkey Vulture. 188.	Partially resident.	March. March 10, '02 November.	Mar. 15-Apr. 15. Mar. 7. Oct.-Nov.
325. <i>Catharista urubu</i> (Vieill.). Black Vulture. 189.	Rare, perhaps res. Seen in winter.		
327. <i>Elanoides forficatus</i> (Linn.). Swallow-tailed Kite. 175.	Aug., 1898, last rec- ord.		
331. <i>Circus hudsonius</i> (Linn.). Marsh Hawk. 176.	Winter resident.	Partially winter res.	March. c. Oct. 15.

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332. <i>Accipiter velox</i> (Wils.). Sharp-shinned Hawk. 177.	Resident.	Partially resident.	April. October.
333. <i>Accipiter cooperii</i> (Bonap.). Cooper Hawk. 178.	Resident.	Partially resident.	c. Apr. 15. c. Oct. 20.
334. <i>Accipiter atricapillus</i> (Wils.). American Goshawk. 179.	Winter visitor.	Winter visitor.	Winter visitor.
337. <i>Buteo borealis</i> (Gmel.). Red-tailed Hawk. 180.	Resident.	Resident.	c. Mar. 1. Partially resident.
337b. <i>Buteo borealis calurus</i> (Cass.). Western Red-tail. 181.		Accidental.	
339. <i>Buteo lineatus</i> (Gmel.). Red-shouldered Hawk. 182.	Winter resident.	Resident.	c. Mar. 1. Partially resident.
343. <i>Buteo platypterus</i> (Vieill.). Broad-winged Hawk. 183.		Resident (W).	Mar. 5, 1898. Partially resident (?)
347a. <i>Archibuteo lagopus sancti-johannis</i> (Gmel.). American Rough-legged Hawk. 184.	Winter visitor.	Winter visitor.	Winter visitor.
349. <i>Aquila chrysaetos</i> (Linn.). Golden Eagle. 185.	Rare winter visitor.	Rare winter visitor.	Rare winter visitor.
352. <i>Haliaeetus leucocephalus</i> (Linn.). Bald Eagle. 186	Winter visitor.	Resident and W. V.	Resident.
356. <i>Falco peregrinus anatum</i> (Bonap.). Duck Hawk. 172.	Rare winter visitor.	Rare winter visitor.	Rare winter visitor.
357. <i>Falco columbarius</i> Linn. Pigeon Hawk. 173.	Winter resident.	Winter resident.	Rare res. and W. V.
360. <i>Falco sparverius</i> Linn. American Sparrow Hawk. 174.	Resident.	Resident.	Partially resident.
364. <i>Pandion haliaetus carolinensis</i> (Gmel.). American Osprey. 187.	Partially resident.	Resident.	c. May 1.
365. <i>Strix pratincola</i> Bonap. American Barn Owl. 162.	Resident.	Rare resident.	Rare resident.
366. <i>Asio wilsonianus</i> (Less.). American Long-eared Owl. 163.	Rare winter visitor.	Winter visitor.	Resident.
367. <i>Asio accipitrinus</i> (Pall.). Short-eared Owl. 164.	Winter resident.	Winter resident.	Rare winter visitor.
368. <i>Syrnium varium</i> (Barton). Barred Owl. 165.	Resident.	Resident.	Resident.
370. <i>Scotiaptex nebulosa</i> (Forst.). Great Gray Owl. 166.		Very rare.	Very rare.
372. <i>Nyctala acadica</i> (Gmel.). Saw-whet Owl. 167	Rare winter visitor.	Resident.	
373. <i>Megascops asio</i> (Linn.). Screech Owl. 168.	Resident.	Resident.	Resident.
375. <i>Bubo virginianus</i> (Gmel.). Great Horned Owl. 169.	Resident.	Resident and W. R.	Resident and W. R.
376. <i>Nyctea nyctea</i> (Linn.). Snowy Owl. 170.	Rare winter visitor.	Rare winter visitor.	Winter visitor.
377a. <i>Surnia ulula caparoch</i> (Mull.). American Hawk Owl. 171.	Rare winter visitor.		Rare winter visitor.

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382. <i>Conurus carolinensis</i> (Linn.). Carolina Paroquet. 161.	Extinct.	Extinct.	Extinct.
387. <i>Coccyzus americanus</i> (Linn.). Yellow-billed Cuckoo. 159.	c. May 5. c. Sept. 25.	c. May 8. c. Sept. 20.	c. May 10. c. Sept. 15.
388. <i>Coccyzus erythrophthalmus</i> (Wils.). Black-billed Cuckoo. 160.	c. May 1. c. Oct. 1.	c. May 5. c. Sept. 25.	c. May 6. c. Sept. 20.
390. <i>Ceryle alcyon</i> (Linn.). Belted Kingfisher. 158.	Resident.	Mar. 12-20. Partially resident.	Mar. 15-Apr. 1. November.
393. <i>Dryobates villosus</i> (Linn.). Hairy Woodpecker. 149.	Resident.	Resident.	Resident.
394. <i>Dryobates pubescens medianus</i> Downy Woodpecker. 150. (Swains.).	Resident.	Resident.	Resident.
395. <i>Dryobates borealis</i> (Vieill.). Red-cockaded Woodpecker. 151.		Accidental.	
400. <i>Picoides arcticus</i> (Swains.) Arctic Three-toed Woodpecker. 152.		Rare winter visitor.	Rare winter visitor.
402. <i>Sphyrapicus varius</i> (Linn.). Yellow-bellied Sapsucker. 153.	c. Apr. 1. c. Oct. 10.	Apr. 1-20. c. Oct. 1.	Ap. 1—May 1. c. Ap. 14. c. Oct. 1.
405a. <i>Ceophloeus pileatus abieticola</i> Bangs. Northern Pileated Woodpecker 154.	Rare resident.		Rare resident.
406. <i>Melanerpes erythrocephalus</i> (Linn.). Red-headed Woodpecker. 155.	c. Apr. 25. Occasional W. R.	c. Apr. 28. c. Oct. 1. Occasional W. R.	c. May 1. c. Sept. 25. Occasional W. R.
409. <i>Centurus carolinus</i> (Linn.). Red-bellied Woodpecker. 156.	Resident.	Resident.	Resident.
412a. <i>Colaptes auratus luteus</i> Bangs. Northern Flicker. 157.	Resident.	Partially resident.	Partially resident.
417. <i>Antrostomus vociferus</i> (Wils.). Whip-poor-will. 147.	c. Apr. 21. c. Sept. 20.	c. May 1. c. Sept. 15.	c. May 4. c. Sept. 10.
420. <i>Chordeiles virginianus</i> (Gmel.). Nighthawk. 148.	c. Apr. 26. c. Sept. 15.	c. May 5. c. Sept. 10.	c. May 15. c. Sept. 5.
423. <i>Chaetura pelagica</i> (Linn.). Chimney Swift. 146.	Apr. 12-21. c. Oct. 15.	Apr. 12-21. c. Oct. 15.	Apr. 12-21. c. Oct. 15.
428. <i>Trochilus colubris</i> Linn. Ruby-throated Hummingbird. 145.	c. May 1. Apr. 17,'96. c. Sept. 15.	c. May 15. c. Sept. 15.	May 5-10. c. Sept. 15.
443. <i>Muscivora forficata</i> (Gmel.). Scissor-tailed Flycatcher. 135.	Accidental.		
444. <i>Tyrannus tyrannus</i> (Linn.). Kingbird. 136.	c. Apr. 21. c. Sept. 10.	c. Apr. 26. c. Sept. 7.	c. Ap. 30. Ap. 12,'96. c. Sept. 5.
452. <i>Myiarchus crinitus</i> (Linn.) Crested Flycatcher. 137.	c. Apr. 26. c. Oct. 15.	c. Apr. 28. c. Oct. 10.	c. May 1. c. Oct. 1.
456. <i>Sayornis phoebe</i> (Lath.). Phoebe. 138.	March. Oct.-Nov. 10.	c. Mar. 21. Mar. 9, 1879. October.	Mar. 20-30. October.
459. <i>Nuttallornis borealis</i> (Swains.). Olive-sided Flycatcher. 139.		Sept. 21, 1902.	
461. <i>Contopus virens</i> (Linn.). Wood Pewee. 140.	Apr. 28-May 5. c. Oct. 10	Apr. 28-May 5. c. Oct. 1.	May 1-10. c. Sept. 15.
463. <i>Empidonax flaviventris</i> Baird. Yellow-bellied Flycatcher. 141.		May 8-22.	
465. <i>Empidonax virescens</i> (Vieill.). Green-crested Flycatcher. 142.	May 1-10. c. Sept. 21.	May 1-10. Sept. 10-20.	May 1-10. Sept. 7-15.

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466. <i>Empidonax traillii</i> (Aud.). Traill Flycatcher. 143.	May 5-20. c. Sept. 1.	May 8-20. c. Sept. 1.	May 10-20. c. Sept. 1.
467. <i>Empidonax minimus</i> Baird. Least Flycatcher. 144.	May 22, 1897. May 23, 1898. September.	Apr. 25-May 12. Aug. 20-Sept. 20.	Apr. 25-May 15. c. Sept. 1
474. <i>Otocoris alpestris</i> (Linn.). Horned Lark. 89.		Nov.-Dec. Feb.-Mar.	Nov.-Dec. Feb.-Mar.
474b. <i>Otocoris alpestris praticola</i> Hensh. Prairie Horned Lark. 91.	Resident?	Resident?	Resident?
474k. <i>Otocoris alpestris hoyti</i> Bishop. Hoyt Horned Lark. 90.		Nov.-Dec. Feb.-Mar. Winter resident.	Nov.-Dec. March. Winter resident.
477. <i>Cyanocitta cristata</i> (Linn.). Blue Jay. 3.	Resident.	Resident.	Resident.
486a. <i>Corvus corax principalis</i> Ridgw. Northern Raven. 1.			Nov. 21, 25, 1896.
488. <i>Corvus americanus</i> Aud. American Crow. 2.	Resident.	Resident.	Feb. 20-Mar. 10. Nov.-Dec.
494. <i>Dolichonyx oryzivorus</i> (Linn.). Bobolink. 4.	Apr. 25-May 10. September.	c. Apr. 25. Apr. 12, 1903. Sept. Oct. 16, 1902.	c. Apr. 25. c. Sept. 15.
495. <i>Molothrus ater</i> (Bodd.). Cowbird. 5.	March. October.	c. Mar. 15. Mar. 6,'03. October.	c. Mar. 20. October.
497. <i>Xanthocephalus xanthocephalus</i> (Bonap.). Yellow-headed Blackbird. 6.		Accidental.	Accidental. Oct. 9, 1896.
498. <i>Agelaius phoeniceus</i> (Linn.). Red-winged Blackbird. 7.	March. November.	Mar. Feb. 20, 1877. c. Nov. 1.	March. October.
498d. <i>Agelaius phoeniceus fortis</i> Ridgw. Thick-billed Redwing. 8.	Feb.-Mar? Nov.-Dec?	Feb.-Mar? Dec. 1, 1902.	Feb.-Mar? Oct. 25, 1890.
501. <i>Sturnella magna</i> (Linn.). Meadowlark. 9.	Resident.	c. Mar. 1. Nov. and resident.	c. Mar. 5. November.
506. <i>Icterus spurius</i> (Linn.). Orchard Oriole. 10.	Apr. 17-30. September.	Apr. 26-May 7. c. Sept. 1?	May 1-9. Apr. 17,'96 c. Sept. 1,7
507. <i>Icterus galbula</i> (Linn.). Baltimore Oriole. 11.	c. Apr. 26. September.	Apr. 20-May 1. September.	Apr. 20-May 1. c. Sept. 5.
509. <i>Scolecophagus carolinus</i> (Mull.). Rusty Blackbird. 12.	Winter resident.	Mar. 10 May 3. Oct.-Nov.	Mar. 7-May 7. Sept. 15-Nov.
511b. <i>Quiscalus quiscula aeneus</i> (Ridgw.). Bronzed Grackle. 13.	c. Mar. 7. November.	Mar. 1-20. November.	Mar. 1-30. c. Nov. 10.
514. <i>Hesperiphona vespertina</i> (W. Cooper). Evening Grosbeak. 14.			Rare winter visitor. Jan. 30, 1890.
515. <i>Pinicola enucleator leucura</i> (Mull.). Canadian Pine Grosbeak. 15.			Winter visitor. Jan. 1, 1902.
517. <i>Carpodacus purpureus</i> (Gmel.). Purple Finch. 16.	Winter resident.	Winter resident.	Winter resident.
521. <i>Loxia curvirostra minor</i> (Brehm). American Crossbill. 18.	Irregular.	Irregular. June 18, 1878. Oct. 11, 1903.	Irregular. Apr. 1. May 29, '97. Nov. 26, 1896.
522. <i>Loxia leucoptera</i> Gmel. White-winged Crossbill. 19.	Casual.	Casual.	Casual. Jan. 1902. Nov., 1903.
528. <i>Acanthis linaria</i> (Linn.). Redpoll. 20.	Jan. 15, 1898.	Kare.	

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529. <i>Astragalinus tristis</i> (Linn.). American Goldfinch. 21.	Resident.	Resident.	Resident.
533. <i>Spinus pinus</i> (Wils.). Pine Siskin. 22.	Irregular.	Irregular.	Irregular. Feb. 13. May 6, 22, June 20, 1897.
534. <i>Passerina nivalis</i> (Linn.). Snowflake. 23.	Rare winter visitor.	Rare winter visitor.	Winter visitor.
536. <i>Calcarius lapponicus</i> (Linn.). Lapland Longspur. 24.	Rare winter visitor.	Rare winter visitor.	Apr. 23, 1894. Winter visitor.
540. <i>Pooecetes gramineus</i> (Gmel.). Vesper Sparrow. 25.	Mar. 15. Apr. 15. Mar. 6, 1898. c. Nov. 1.	Mar. 20. Apr. 6. Mar. 2, 1877. c. Oct. 15.	Mar. 20—Apr. 6. October.
542a. <i>Passerculus sandwichensis savanna</i> Savanna Sparrow. 25. (Wils.).	April. Oct.-Nov.	Apr. 6-30. Mar. 19,'03. October.	Apr. 15-30. Mar. 21,'03 Sept.-Oct.
546. <i>Coturniculus savannarum passerinus</i> . Grasshopper Sparrow. 27. (Wils.).	c. Apr. 25. c. Oct. 1. 1878.	Nov. 17, c. Apr. 28. Apr. 14,'03. c. Oct. 1.	Apr. 24-May 1. c. Oct. 1.
547. <i>Ammodramus henslowii</i> (Aud.). Henslow Sparrow. 28.			June 4, 1894.
549.1. <i>Ammodramus nelsoni</i> (Allen). Nelson Sparrow. 29.			May 17, '02.
552. <i>Chondestes grammacus</i> (Say). Lark Sparrow. 30.	c. Apr. 24.	Apr. 19-30. September.	c. May 1. September.
553. <i>Zonotrichia querula</i> (Nutt.). Harris Sparrow. 31.		Accidental.	
554. <i>Zonotrichia leucophrys</i> (Forst.). White-crowned Sparrow. 32.	May 1-10. October.	Apr. 23—May 10. October.	May 1-20. c. Oct. 15.
558. <i>Zonotrichia albicollis</i> (Gmel.). White-throated Sparrow. 33.	c. Oct. 1. Winter resident.	c. May 1. Apr. 1-20. October.	Apr. 15—May 15. Sept. 20-Oct.
559. <i>Spizella monticola</i> (Gmel.). Tree Sparrow. 34.	Oct.—Nov. Mar.-Apr.	October. April.	c. Oct. 10. c. Apl. 15.
560. <i>Spizella socialis</i> (Wils.). Chipping Sparrow. 35.	Partially resident.	c. Apr. 1. Mar 24,'79 October.	April. Oct. 1-15.
563. <i>Spizella pusilla</i> (Wils.). Field Sparrow. 36.	c. Mar. 25. Mar. 12, 1897. October. Nov. 15.	c. Mr. 25. Mr. 17,'03 October.	c. Mar. 25. Apr. 6,'99. c. Oct. 15.
567. <i>Junco hyemalis</i> (Linn.). Slate-colored Junco. 37.	c. Oct. 7. c. Apr. 15.	c. Oct. 4. Apr. 15—May 1.	c. Oct. 1. Apr. 15-May 1.
575a. <i>Penueca aestivalis bachmanii</i> (Aud.). Bachman Sparrow. 38.	c. Apr. 23.		
581. <i>Melospiza cinerea melodia</i> (Wils.). Song Sparrow. 39.	Resident.	Resident.	Mar. 15-Apr. 1. Partially resident.
583. <i>Melospiza lincolni</i> (Aud.). Lincoln Sparrow. 40.	April. October.	c. May 15. c. Oct. 15.	May 17, 1898.
584. <i>Melospiza georgiana</i> (Lath.). Swamp Sparrow. 41.	Apr. 15, 1898.	Apr. 20—May 1. Oct. 1-30.	Apr. 21, May 15. Sept. 20-Oct. 20.
585. <i>Passerella iliaca</i> (Merr.). Fox Sparrow. 42.	March. Oct. 15—Nov. 14.	c. Mr. 12. Feb. 27,'77. Oct. 15—Nov. 16.	c. Mar. 15-Apr. 20. October.
587. <i>Pipilo erythrophthalmus</i> (Linn.). Towhee. 43.	c. Apr. 15. c. Nov. 15. Males resident.	Mar. 15-30. c. Nov. 1.	Mar. 15-30. c. Nov. 1.
593. <i>Cardinalis cardinalis</i> (Linn.). Cardinal. 44.	Resident.	Resident.	Resident.
595. <i>Zamelodia ludoviciana</i> (Linn.). Rose-breasted Grosbeak. 45.	May 13, 1897.	c. May 5. Apr. 22,'02.	c. May 1. c. Sept. 15.

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598. <i>Cyanospiza cyanea</i> (Linn.). Indigo Bunting. 46.	Apr. 24—May 9. Oct. 10.	c. May 1. c. Oct. 5.	c. May 1. c. Oct. 1.
604. <i>Spiza americana</i> (Gmel.). Dickcissel. 47.	Apr. 13, 1896. Apr. 24, 1901.	Apr. 28—May 11.	May 17, 1894. Oct. 10, '96.
608. <i>Piranga erythromelas</i> Vieill. Scarlet Tanager. 48.	c. May 1. Apr. 19, '78. c. Sept. 25.	c. May 1. c. Sept. 25.	c. May 1. c. Sept. 25.
610. <i>Piranga rubra</i> (Linn.). Summer Tanager. 49.	c. Apr. 30. September.		
611. <i>Progne subis</i> (Linn.). Purple Martin. 119.	Mar. 20-30. c. Oct. 1.	c. Mar. 25. Sept 25.	c. Mar. 25. Sept. 15.
612. <i>Petrochelidon lunifrons</i> (Say). Cliff Swallow. 120.	Apr. 20—May 1. c. Sept. 25.	Apr. 20—May 7. c. Sept. 20.	Apr. 20—May 7. c. Sept. 15.
613. <i>Hirundo erythrogaster</i> Bodd. Barn Swallow. 121.	Apr. 1-20. c. Sept. 20.	Apr. 1-20. c. Sept. 10.	c. Apr. 15. c. Sept. 1.
614. <i>Iridoprocne bicolor</i> (Vieill.). Tree Swallow. 122.	c. Apr. 1. Mar. 23, '79 September.	Ap. 1-15. Mar. 28, '77 September.	Apr. 12-20. Mar. 30, 1897. September.
616. <i>Riparia riparia</i> (Linn.). Bank Swallow. 123.	c. Apr. 20. c. Sept. 15.	c. Apr. 23. c. Apr. 10.	c. Apr. 23. c. Sept. 1.
617. <i>Stelgidopteryx serripennis</i> (Aud.). Rough-winged Swallow. 124.	Apr. 15-25. c. Sept. 15.	c. Ap. 25. Ap. 18, '03. c. Sept. 10.	c. Apr. 27. c. Sept. 1.
618. <i>Ampelis garrulus</i> Linn. Bohemian Waxwing. 125.			Rare.
619. <i>Ampelis cedrorum</i> (Vieill.). Cedar Waxwing. 126.	Resident.	Irregular. Sometimes resident.	Irregular. Sometimes resident.
621. <i>Lanius borealis</i> Vieill. Northern Shrike. 127.	c. Oct. 7. Winter resident.	c. Oct. 4. c. Mar. 20. Winter resident.	c. Oct. 1. c. Apr. 1. Winter resident.
622. <i>Lanius ludovicianus</i> Linn.	c. Mar. 15.	c. Mr. 15. Mr. 11, '03	c. Mar. 15.
622a. <i>Lanius ludovicianus excubitorides</i> Migrant Shrike. 128. (Swain.).	October.	c. Oct. 10.	c. Oct. 1.
624. <i>Vireo olivaceus</i> (Linn.). Red-eyed Vireo. 129.	c. Apr. 25. October.	Apr. 24—May 1. October.	Apr. 25—May 1. c. Oct. 25.
626. <i>Vireo philadelphicus</i> (Cass.). Philadelphia Vireo. 130.	Apr. 30, 1898. c. Oct. 1.	Apr. 22, 1902.	
627. <i>Vireo gilvus</i> (Vieill.). Warbling Vireo. 131.	Apr. 19-26. c. Oct. 15.	Apr. 22—May 1. c. Oct. 1.	Apr. 28—May 1. c. Sept. 15.
628. <i>Vireo flavifrons</i> Vieill. Yellow-throated Vireo. 132.	c. Apr. 25. September.	c. May 1. September.	May 1-7. September.
629. <i>Vireo solitarius</i> (Wils.). Blue-headed Vireo. 133.	Oct. 19, 1900.	c. May 1. c. Sept. 25.	Apr. 28—May 15. c. Sept. 15.
631. <i>Vireo noveboracensis</i> (Gmel.). White-eyed Vireo. 134.	c. May 3. c. Sept. 10.		
636. <i>Mniotilta varia</i> (Linn.). Black and White Warbler. 50.	c. Apr. 25. Sept. 15-30.	c. Ap. 26. Ap. 18— Sept. 5, 1903.	c. Apr. 28. Sept. 1-25.
637. <i>Protonotaria citrea</i> (Bodd.). Prothonotary Warbler. 51.		Ap. 28, '02. Ap. 30, '03.	
639. <i>Helmitheros vermivorus</i> (Gmel.). Worm-eating Warbler. 52.	c. Apr. 25. c. Sept. 10.	Ap. 30, '03. Ap. 18, — c. Sept. 1.	
641. <i>Helminthophila pinus</i> (Linn.). Blue-winged Warbler. 53.	c. May 1. c. Sept. 15.	c. May 1. Ap. 18, — c. Sept. 10.	c. May 1. c. Sept. 10.

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642. <i>Helminthophila chrysoptera</i> (Linn.). Golden-winged Warbler. 54.	Apr. 29, 1879.	Apr. 22, —	May 1-8.
645. <i>Helminthophila rubricapilla</i> (Wils.). Nashville Warbler. 55.	c. Oct. 1.	c. May 6. Sept. 15-Oct. 1.	May 1-23. 1897. Apr. 28. September.
646. <i>Helminthophila celata</i> (Say.). Orange-crowned Warbler. 56.		c. Ap. 25. Ap. 22, '02.	May 1-7.
647. <i>Helminthophila peregrina</i> (Wils.). Tennessee Warbler. 57.	Sept. 24-Oct. 4.	May 2-18. Sept. 1—Oct. 10.	May 4-20. September.
648a. <i>Compsothlypis americana usneae</i> Brewst. Northern Parula Warbler. 58.	Sept. 22, 1900.	May 1-15. Sept. 15, '74 (?)	May 1-15.
648—. <i>Compsothlypis americana ramalinae</i> Ridgw. Western Parula Warbler. 59.	c. May 1 (?)		
650. <i>Dendroica tigrina</i> (Gmel.). Cape May Warbler. 60.	Apr. 24, 1897. Sept. 18—Oct. 3.	c. May 1. September.	May 11, '97. May 12, '03 c. Sept. 15.
652. <i>Dendroica aestiva</i> (Gmel.). Yellow Warbler. 61.	c. Apr. 20. Apr. 5, '97. c. Sept. 1.	Ap. 18-30. Ap. 15, '78. c. Sept. 1.	Apr. 22-30. c. Sept. 1.
654. <i>Dendroica caerulescens</i> (Gmel.). Black-throated Blue Warbler. 62.	Apr. 15-25. Aug. 25-Oct. 10.	c. Apr. 30. Sept. Oct. 7.	c. May 1. Aug. 20-Oct. 1.
655. <i>Dendroica coronata</i> (Linn.). Myrtle Warbler. 63.	Mar.-Apr. Oct.-Nov.	c. Ap. 25. Ap. 22, 02. Sept. 20-Nov. 10.	Apr. 15—May 1. Sept. 20—Oct. 20.
657. <i>Dendroica maculosa</i> (Gmel.). Magnolia Warbler. 64.		c. Oct. 1.	May 1-20. Apr. 22,— September.
658. <i>Dendroica rara</i> Wils. Cerulean Warbler. 65.	c. Apr. 20. c. Aug. 15.	May 1-15. Ap. 19, '78.	May 1-15. c. Sept. 25.
659. <i>Dendroica pensylvanica</i> (Linn.). Chestnut-sided Warbler. 66.	Apr. 25, 1879. Sept. 28, 1899.	May 5-21. September.	May 1-15. Sept.
660. <i>Dendroica castanea</i> (Wils.). Bay-breasted Warbler. 67.	Aug. 25—Oct. 15.	c. May 16. May 17, 1874, 1901. Aug. 20—Oct. 7.	May 5-22. Aug. 15—Sept.
661. <i>Dendroica striata</i> (Forst.). Black-poll Warbler. 68.	Aug. 25—Oct. 1.	May 17-26. Aug. 20—Oct. 17.	May 12-25. Aug. 15—Sept. 30.
662. <i>Dendroica blackburniae</i> (Gmel.). Blackburnian Warbler. 69.	September.	Apr. 30—May 20, Apr. 22, —.	May 1-21. Aug. 15-Sept. 25.
663a. <i>Dendroica dominica albilora</i> Ridgw. Sycamore Warbler. 70.	c. Apr. 23. Sept. 28, 1899.		October-Nov. 21 '96.
667. <i>Dendroica virens</i> (Gmel.). Black-throated Green Warbler. 71.	Sept. 15—Oct. 10.	Apr. 22—May 10. Mar. 28, 19— Sept. 1—Oct. 10.	c. Apr. 27—May 20. Aug. 25—Oct. 1.
670. <i>Dendroica kirtlandi</i> Baird. Kirtland Warbler. 72.	c. May 5. Aug. 28, 1902.		c. May 12.
671. <i>Dendroica vigoensis</i> (Aud.) Pine Warbler. 73.	Apr. 15, 1880. Apr. 24, 1879. Oct. 8, 1894.	May 3, 1875.	c. Apr. 25.
672. <i>Dendroica palmarum</i> (Gmel.). Palm Warbler. 74.	Apr. 23, 1897. May 2, 1898. Sept. 22—Oct. 4.	Apr. 21—May 6. Oct. Nov. 7, '74.	Apr. 22—May 7. September.
672a. <i>Dendroica palmarum hypochrysea</i> Ridgw. Yellow Palm Warbler. 75.		Apr. 22, 1902.	Apr. 10, 1892.
673. <i>Dendroica discolor</i> (Vieill.). Prairie Warbler. 76.	Oct. 8, 1894.	May 15, 1875.	Apr. 20-30. (Jones).
674. <i>Seiurus aurocapillus</i> (Linn.). Oven-bird. 77.	c. Apr. 20. September.	Apr. 20—May 6. Sept. Oct. 16, '02.	Apr. 24—May 7. c. Oct. 1.

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675. <i>Seiurus noveboracensis</i> (Gmel.). Water-Thrush. 78.	c. Apr. 23. Oct. 1, 1898.	c. Apr. 25. Apr. 15— May 15. Sept. Oct. 17, '74.	c. May 3. May 1-22. Aug.-Sept.
676. <i>Seiurus motacilla</i> (Vieill.). Louisiana Water-Thrush. 79.	Apr. 10-20. Sept. 1. Oct. 15.	c. Apr. 21. September.	Apr. 15—May 1. Aug.-Sept.
677. <i>Geothlypis formosa</i> (Wils.). Kentucky Warbler. 80.	c. Apr. 25. Sept. 22, 1900.	Apr. 30, 1902 (?)	May 12, 1903.
678. <i>Geothlypis agilis</i> (Wils.). Connecticut Warbler. 81.	Aug. 10, 1899.	May 22, 1875. Oct. 8, '98. Oct. 7, '01.	May 24, 1902.
679. <i>Geothlypis philadelphia</i> (Wils.). Mourning Warbler. 82.	Aug. 7, 1895.	May 10-20. Aug-Sept.	May 10-20. August (?)
681d. <i>Geothlypis trichas brachidactyla</i> (Swains.). Northern Yellow-throat. 83.	c. Apr. 24. Sept. 22, 1900.	Apr. 20—May 1, c. Oct. 1.	Apr. 25—May 3. c. Oct. 1.
683. <i>Icteria virens</i> (Linn.). Yellow-breasted Chat. 84.	Apr. 25—May 4. c. Sept. 10.	Apr. 26—May 7. c. Sept. 5.	May 1-7. c. Sept. 1.
684. <i>Wilsonia mitrata</i> (Gmel.). Hooded Warbler. 85.	May 6, 1897. Aug.-Sept. 30.	Apr. 29, '03. May 20, '01	May 9, 1901, 1903.
685. <i>Wilsonia pusilla</i> (Wils.). Wilson Warbler. 86.	Apr. 25, 1897. May 15, 1899. Aug. 25, 1898.	Apr. 30, '02. May 22, '73 September.	May 1-20. Aug. 15—Sept. 15.
686. <i>Wilsonia canadensis</i> (Linn.). Canadian Warbler. 87.	Aug. 25, 1903. Oct. 24, 1898.	May 1-21. Aug. 25-Sept.	May 5-23. Aug. 15—Sept. 25.
687. <i>Setophaga ruticilla</i> (Linn.). American Redstart. 88.	c. May 1. Apr. 23, '97. Sept. 25.	Apr. 25-May 5. September.	c. May 1. Sept. 25.
697. <i>Anthus pensilvanicus</i> (Lath.). American Pipit. 92.	"March"—Langdon. Oct.-Nov.	Apr. 10 - May 10. Mar. 18, 1903. Oct.-Nov.	Apr. 15—May 20. October.
703. <i>Mimus polyglottos</i> (Linn.). Mockingbird. 110.	Rare. Occasionally resident.	Casual.	Casual.
704. <i>Galeoscoptes carolinensis</i> (Linn.). Catbird. 111.	Apr. 20-30. c. Sept. 30.	Apr. 18-27. c. Sept. 25.	Apr. 24—May 2. Apr. 11, 1896. c. Sept. 10.
705. <i>Toxostoma rufum</i> (Linn.). Brown Thrasher. 112.	c. Apr. 10. c. Oct. 1.	Ap. 7-15. Mr. 27, '03. c. Oct. 1.	Apr. 10-20. c. Oct. 1.
718. <i>Thryothorus ludovicianus</i> (Lath.). Carolina Wren. 113.	Resident.	Resident.	Not common resident.
719. <i>Thryomanes bewickii</i> (Aud.). Bewick Wren. 114.	Resident.	Not common resident.	
721. <i>Troglodytes aedon</i> Vieill. House Wren. 115.	c. Apr. 14.	c. Apr. 20. c. Oct. 1	c. Apr. 24. c. Oct. 1.
722. <i>Olbiorchilus hiemalis</i> (Vieill.). Winter Wren. 116.	c. Oct. 1. c. Apr. 15. Not common W. K.	Oct.-Nov. April. not common W. K.	April-May 10. October.
724. <i>Cistothorus stellaris</i> (Licht.). Short-billed Marsh Wren. 117.	Casual. Oct. 17, 1894.		Casual.
725. <i>Telmatodytes palustris</i> (Wils.). Long-billed Marsh Wren. 118.	Oct. 4, 1901.	c. May 1. c. Oct. 15.	May 1-5. c. Sept. 15.
726. <i>Certhia familiaris americanus</i> (Bonap.). Brown Creeper. 109.	Winter resident.	Winter resident.	c. Oct. 1. c. May 1. Occasional. W. K.
727. <i>Sitta carolinensis</i> Lath. White-breasted Nuthatch. 103.	Resident.	Resident.	Resident.
728. <i>Sitta canadensis</i> Linn. Red-breasted Nuthatch. 104.	September. Apr. 15—May 15. Winter resident.	September. Apr. 20-May 15. Winter resident.	Sept. Apr. 25—May 15. Occasional W. K.

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729. <i>Sitta pusilla</i> Lath. Brown-headed Nuthatch. 105.			Accidental.
731. <i>Baeolophus bicolor</i> (Linn.). Tufted Titmouse. 106.	Resident.	Resident.	Resident.
735. <i>Parus atricapillus</i> Linn. Chickadee. 107.	Rare winter resident.	Resident.	Resident.
736. <i>Parus carolinensis</i> Aud. Carolina Chickadee. 108.	Resident.	Resident.	
748. <i>Regulus satrapa</i> Licht. Golden-crowned Kinglet. 100.	c. Oct. 15. Winter resident.	c. Oct. 5. Winter resident.	c. Oct. 1. Winter resident.
749. <i>Regulus calendula</i> (Linn.). Ruby-crowned Kinglet. 101.	c. Apr. 15. c. Oct. 15.	c. Apr. 15. Oct. 1-21.	c. Apr. 15. c. Oct. 1.
751. <i>Polioptila caerulea</i> (Linn.). Blue-gray Gnatcatcher. 102.	c. Apr. 10. c. Sept. 15.	Apr. 7-15. c. Sept. 15.	Apr. 15-25. c. Sept. 15.
755. <i>Hylocichla mustelina</i> (Gmel.). Wood Thrush. 93.	Apr. 20-25. c. Oct. 1.	Apr. 20-25. Sept. Oct. 16, '02.	c. Apr. 25. Sept. 20.
756. <i>Hylocichla fuscescens</i> (Steph.). Wilson Thrush. 94.	c. Apr. 30. c. Sept. 30.	Apr. 20—May 20. September.	c. May 1. c. Sept. 10.
757. <i>Hylocichla aliciae</i> (Baird). Gray-cheeked Thrush. 95.	May 2, 1898. Sept. 16, 1879.	Apr. 28—May 7.	May 1-10.
758a. <i>Hylocichla ustulata swainsonii</i> (Cab.). Olive-backed Thrush. 96.	May 18, 1879. c. Sept. 25.	Apr. 23—May 21. September.	Apr. 25-May 21. Sept.
759b. <i>Hylocichla guttata pallasii</i> (Cab.). Hermit Thrush. 97.	April. Oct.-Nov.	Apr. 5-20. Mar. 19,'03. October.	c. Ap. 15. May 8,'03. c. Oct. 10.
761. <i>Merula migratoria</i> (Linn.). American Robin. 98.	Resident.	Feb. 20—Apr. 10. Feb. 13, 1903. c. Nov. 10. Occasional W. R.	c. Mar. 1—Apr. 10. c. Nov. 1. Occasional. W. R.
766. <i>Sialia sialis</i> (Linn.). Bluebird. 99.	Resident.	c. Mar. 1. Jan. 29, 1903, migrating. c. Nov. 15. Partially resident.	c. Mar. 1. c. Nov. 10. Occasional. W. R.
— <i>Phasianus torquatus</i> Gmel. Ring-necked Pheasant. 192.	Introduced.	Introduced.	Introduced.
— <i>Passer domesticus</i> (Linn.). English Sparrow. 17.	Resident.	Resident.	Resident.

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