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The Birds of Ohio





THE BIRDS OF OHIO

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

BY
WILLIAM LEON DAWSON, A. M., B. D.

WITH INTRODUCTION AND ANALYTICAL KEYS BY

LYNDS JONES, M. Sc.

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.

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1903

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To my first-born son,

Will Oberlin

who is already approving himself in a fond father's eyes as



A YOUNG ORNITHOLOGIST

This book is affectionately dedicated.

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INTRODUCTION.

General appreciation of the birds, their beauty, the charm of their songs, their joyous lives, and their usefulness, is one of the most significant signs of the times. It indicates that as a people we are coming into our own. We are living a life beyond the merely commercial. We are looking out upon a larger world lifted to a higher plane. Americans have always excelled in strength and push and general initiative where material things are concerned, but we have been too busy developing ourselves to see about us the beautiful and pleasing in nature. The grand, indeed, has always appealed to us. Now we begin to have leisure for the graceful and the subtle. We are broadening our lives by closer touch with that which appeals to the higher instincts which have been allowed to remain dormant. It is natural and fitting that birds should appeal most strongly to an American, because they possess that vigor and tireless energy which he recognizes in himself. The birds live at white heat and are never idle. They typify American energy.

The study of birds necessarily takes one out of doors. Our medical advisers are always prescribing more outdoor exercise: but without any other object than getting into the fresh air exercise is pretty stupid. Give one the zest of finding new things which must be searched for, something which requires going after, and the necessity for exercise is forgotten in the interest aroused by the ever receding bird. Enlist a child in bird study and the problem of most serious importance to the parent, how to properly guard the developing life and keep it away from evil influences, becomes greatly simplified. A boy cannot be very bad, nor stay bad, if he has a genuine interest in birds. They keep his mind occupied and direct his energies into healthful channels. Life never falls to a dead level to him who knows and loves the birds. Old age, as we are wont to regard it, will never touch him, for he will not wish to live in the past, but continue his interest in the present which will always be fresh and filled with new things to learn.

The study of birds does not require any unusual leisure. Many business men whose business demands practically their whole time and attention are ardent lovers of the birds, and find the few moments of bird study each day valuable to them in their hours of business. They are able to plan their few short vacations so they will count for the most. There is no haphazard effort

to get the most rest in the shortest time, requiring more effort to execute the plan than the rest is worth, but the calm assurance that they are certainly to find what they wish for. No one, no matter how busy, need think that for him bird study is impossible, because some birds may be seen from any window. Attention is the only requisite. Most present day bird students began their study during their period of least leisure.

This book is offered as a help in enlisting and developing your interest in our native birds. The author has always loved birds, and has spent many years in Ohio with the birds at all seasons and in many places. By education and training he is fitted to express here that intense love and appreciation which has been characteristic of his study during all of the ten years of our fellowship as bird lovers. The many happy days and weeks of our association in field work have served only to deepen my conviction that there are few persons whose sympathetic appreciation and careful training could better fit them for the task of revealing the birds to those who wish to know them. Study in Ohio for a considerable term of years, supplemented by study of the same and other birds in many places outside of the State has given to the author of this book unusual knowledge and equipment for the task. College and Theological training also count much for accuracy of knowledge and facility of expression.

The State of Presidents is also the State of varied bird life. With Lake Erie at one end and the Ohio River, a main tributary of the great Mississippi, at the other, midway between the extreme east and the middle west, Ohio is favorably situated for varied bird life, and for comparative ease in the study of that life. The once almost continuous forests are rapidly disappearing, and with them some of our birds, but there is a compensation in the appearance of many others which do not live in the forests. We are now passing through a transition period from the original conditions before the advent of the dominant race to the modified conditions which he has made necessary. The rising generation will see more changes in the birds of our state than we have or will see. The birds will not disappear so long as there is the keen interest shown in them which we see dawning to-day. Their friendship and trust are worthy of any effort which we may put forth.

LYNDS JONES.

Oberlin, Ohio.

PREFACE.

If any doubt existed in the mind of the author at the inception of his task, that the people of Ohio would welcome a book on the birds of the state, that doubt has quite vanished before the words of encouragement and approbation which have already come in, not only from nature-students but from prominent educators and men of affairs. The love of out-of-doors is a growing passion in the hearts of our people, and the willingness on the part of all classes to sit at Nature's feet is a most hopeful sign of the times. Nature in all her aspects is richly vocal to her true disciples, but at no time does she speak more clearly and sweetly, and in language which may be "understood of the people," than in the voices of the birds. It is with a sense of privilege, therefore, that the author has recorded his observations and impressions of bird-life in this state, and has set forth in orderly fashion a brief summary of our knowledge of our feathered friends. To quicken interest in the birds, to facilitate recognition of their features and observation of their habits and to raise for them, if possible, an army of well-wishers—on the theory that all who really know must love them—has been the author's purpose. Of its accomplishment the future must judge.

A fully illustrated book on the birds of a single state is in a measure a new departure, but the perfection of modern methods, especially that of the three-color process, fortunately makes it possible. With four exceptions, the half-tone cuts in this book are from photographs taken in Ohio, chiefly during the season of 1903. While the aim has been to secure in the pictures both the educational and the artistic interest, the latter has of necessity been occasionally sacrificed.

The treatment of each bird includes both a technical description, of plumage, etc., and a popular account of its habits in Ohio. In the limits prescribed it has at no time been possible to accord any bird the dignity of a genuine life-history, and the sketches as written are by no means exhaustive. In the scientific treatment also it was deemed best not to attempt the elaboration of points in structural ornithology, such as may be found in any standard manual, but to utilize the space thus saved for a more careful analysis of plumage, in so far as local material was available. The plumage descriptions and measurements are based almost entirely upon a first-hand study of the Ohio State University collections, and these are nearly complete

to Ohio species. Where specimens or data were lacking, I have been under obligation to Ridgway's Manual¹, Coues' Key², Chapman's Handbook³, and other treatises.

The scope of this book, it is almost needless to say, is strictly Ohioan. The birds as described are as any one in Ohio might see them. Something may, indeed, be said from time to time as to the bird's behavior in its distant summer or winter home, but our interest centers upon the bird as it appears in this state. The proportionate treatment, therefore, which each one receives, is prescribed by its relative familiarity or importance within our limits. Common birds are not dismissed with a word because they are common, nor rare ones dilated upon at great length because they are rare, but the effort has been rather to give each bird the place which it actually holds in the average scheme of interest.

The order of treatment is substantially the opposite of the one now followed by the American Ornithologists' Union, and is justifiable principally on the ground that it follows a certain order of interest and convenience. Beginning, as it does, with the supposedly highest forms of bird-life, it brings to the fore the most familiar birds, and avoids that rude juxtaposition of the lowest form of one group and the highest of the one above it, which is the confessed weakness of the A. O. U. code.

The summaries under the caption "General Range" are chiefly those furnished by the Second Edition of the A. O. U. Check-list, modified by such more recent information as has come to hand.

While the author's point of view has been that of a bird-lover, some things here recorded may seem inconsistent with the claim of that title. The fact is that none of us are quite consistent in our attitude toward the bird-world. The interests of sport and the interests of science must sometimes come into conflict with those of sentiment; and if one confesses allegiance to all three at once he will inevitably appear to the partisans of either in a bad light. However, a real principal of unity is found when we come to regard the bird's value to society. The question then becomes, not, Is this bird worth more to me in my collection or upon my plate than as a living actor in the drama of life? but, In what capacity can this bird best serve the interests of mankind? There can be no doubt that the answer to the latter question is usually and increasingly, *As a living bird*. We have stuffed specimens enough, nearly; only a limited few of us are fitted to enjoy the pleasures of the chase, and the objects of our passion are about gone anyway; but never while the hearts of men are set on peace, and the minds of men are alert to receive the impression of the Infinite, will there be too many birds to speak to eye and ear, and to minister to the hidden things of the spirit.

¹ A Manual of North American Birds, by Robert Ridgway. Fourth Edition. Philadelphia: J. B. Lippincott Company.

² Key to North American Birds, by Elliott Coues, A.M., M.D., Ph.D. Fourth Edition. Boston: Estes and Lauriat.

³ Handbook of Birds of Eastern North America, by Frank M. Chapman. Sixth Edition. New York: D. Appleton and Company.

The birds belong to the people, not to a clique or a coterie, but to all the people as heirs and stewards of the good things of God.

As to the manner of treatment I need not speak further, save to say that the recent publication of Jones' catalogue of the Birds of Ohio¹, excuses me from the necessity of making a precise or complete enumeration of the records of any bird's occurrence—altho as matter of interest I have done so in a few cases. The reader is referred also to Mr. Jones' excellent list for a more particular account of the distribution of each species throughout the state, and for information as to food habits, not extensively given in this volume.

To mention all the books which have been of service in the preparation of this one would be to give a catalogue of the author's library, supplemented by those of friends—evidently an uncalled-for task. A few of the principal works, however, require to be mentioned. The published results of Dr. J. M. Wheaton's work² have been largely assumed in this book, or used as a basis of comparison and point of departure. Without his painstaking fidelity many state records would have been lost to sight, and we are all under the deepest obligation to him for a wealth of accumulated material well arranged. Dr. Howard Jones generously placed the contents of his monumental work on the Nests and Eggs of Ohio Birds³ at our disposal, and we only regret that the limits of this volume forbade our drawing more largely upon its treasures. Mr. Oliver Davie's "Nests and Eggs of North American Birds" (Fifth Edition) has been consulted, and its pages furnish several records for Ohio. Besides these, Ohio pamphlets and local lists too numerous to mention have contributed their share to the result.

Of the catalogues and lists published in adjacent states that of Prof. Amos W. Butler on the "Birds of Indiana" has proved most valuable, both because of the similarity which exists between Ohio and her sister on the west, and for the unusually abundant data which Prof. Butler's enthusiastic labors have provided. Others which deserve mention are Mellwraith's "Birds of Ontario"; Ridgway and Forbes' Ornithology of Illinois⁴; A. J. Cook's "Birds of Michigan" and Warren's "Birds of Pennsylvania."

Of general works the compendious volumes of Baird, Brewer, and Ridgway, entitled "The Birds of North America", have been most frequently consulted. The first two volumes of Robert Ridgway's "Birds of North and Middle America" have been at hand, and these easily surpass all other purely technical works in importance. Chapman's "Handbook of the Birds

¹ Ohio State Academy of Science, Special Papers No. 6. The Birds of Ohio, A Revised Catalogue, by Lynds Jones, M. Sc. Oct. 15, 1903, pp. 241.

² As embodied in his "Report on the Birds of Ohio", appearing in Vol. IV of the State Geological Survey, pp. 187-628. A limited number of the Author's separates still exist, and may be had of the Wheaton Publishing Company.

³ "Illustrations of the Nests and Eggs of the Birds of Ohio." Published at Circleville in 24 parts: Elephant folio; Hand-colored plates: July, 1880-Dec. 1886. Text by Howard E. Jones. Art work by Genevieve E. Jones, Eliza J. Schulze, Mrs. N. H. Jones, and others. A magnificent work, second only to Audubon. Edition limited to 68 hand-colored copies, of which four still remain unsold, and may be had of the Wheaton Publishing Company.

of Eastern North America" is a model of its class, and its lines—all too brief—have proved a fertile source of inspiration. On the more popular side grateful mention may be made of Langille's "Our birds in their Haunts", and Nehrling's "Our Native Birds of Song and Beauty."

To my friend and ornithological brother, Professor Lynds Jones, I am under the deepest obligations for assistance in the prosecution of this work. Altho having a more accurate knowledge of bird-ways than I, he generously consented to set aside certain plans of his own, and has not spared to give me valued counsel and aid of every sort. To the list of signed sketches which bear his name, should be added the article on the Bob-white, whose signature was inadvertently omitted.

I gratefully acknowledge indebtedness to the State University authorities, and especially to Professors Osborn and Hine, for the use of museum material and for many kindnesses beside; to Mr. C. B. Galbreath of the State Library, and to Mrs. Lida Wheaton for the loan of valuable books; to Rev. Leander S. Keyser, D.D., Dr. Joshua Lindahl, Dr. F. W. Langdon, Dr. Howard Jones, Messrs. C. H. Morris, E. J. Arrick, Wm. Hubbell Fisher, and others, for gracious hospitality; to Rev. W. F. Henninger, Professor Wm. S. Mills, Robert J. Sim, R. L. Baird, Walter C. Metz, R. F. Griggs, and others, for signed sketches, pictures, and data; and to a host of correspondents and friends beside, for hearty cooperation which has made this work a pleasant task and one in a measure representative of the whole state.

To my wife is due a large measure of credit for her painstaking and unselfish work upon the manuscript and in proof-reading. Without her aid the work must have been delayed several months.

I cannot conclude without making grateful acknowledgment also of the sustained interest of my friend and coadjutor, Mr. L. H. Bulkeley, and of the service of all those who in good conscience have wrought upon this book, to give it a comely appearance, a body better, I fear, than the expression of its animating spirit, but not higher, I venture to believe, than its aim.

W. LEON DAWSON.

Columbus, Dec. 15, 1903.

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Drawn by Lynds Jones.

TOPOGRAPHY OF A BIRD.

OUTLINE DRAWING SHOWING POSITION OF PARTS MOST FREQUENTLY REFERRED TO IN TEXT.

ANALYTICAL KEYS

BY

LYNDS JONES, M. Sc.

HOW TO USE THE KEYS.

While these keys are made for the purpose of identifying any bird in the hand, they are not intended to give more than the barest information about the bird. You should at once turn to the description of the bird whose name you have found by means of the keys, and read what may be found there before remaining content. Often an unsatisfactory identification by the keys will give you the clue so that you can turn to the body of the book and there make sure of your bird. The keys, then, are but a means to an end. They are merely for rapid determination, not for any other particular information.

There are three separate keys. First of all, a Key to the Orders; next a Key to the Families under each order; and lastly a Key to the Species under each family. You should always begin with the Key to the Orders to get your bird in the right group. Having found the order to which it belongs turn to the Key to the Families, find the order there by the number which precedes it in the Key to the Orders, and determine to what family it belongs. In like manner turn to the Key to the Species given under each family and there determine the species. The families are numbered in 1, 2, 3, order under each order, but the species are given the number which they bear in the body of the book. While the orders are not serially arranged in the Key to the Orders, they are arranged in 1, 2, 3, order in the Key to the Families. Likewise, while the species are not serially arranged in the Key to the Species they are so arranged in the body of the book.

It is important that you should know how to use the keys unless you are already familiar with most of the birds described in this book. At first sight they may seem confused, but after a little practice in the use of them they will prove very simple. Let us suppose that you now have a bird in hand which you wish to identify. Suppose it is a Green Heron. In the Key to the Orders, "I." calls for a bird with webbed or lobed feet; your bird has neither webs nor lobes, so you must turn to the contrasting character which will be under "II." which so far describes your bird. Next is "A. Legs and Neck long and slender." That is true of your bird. Then the next is "1. Lores (region between the eye and bill bare)." Your bird has bare lores, so it must be one of the Herodiones, Order 6. Turn now to Order 6 in the Key to the Families. Here the first is "1. Bill straight and sharp." That is right for your bird. Your bird belongs to Family 1, Ardeidae. Turn now to the Key to the Species and find Order 6, and Family 1 under it. The first here is also "1. Wing less than 6.00." Your bird's wing measures more than 6 inches, so try "II. Wing about 7.25." You find that it is nearer that length than the others given, so conclude that your bird is a Green Heron, number 213 in the book. Turn to that number and prove it by the minute description given there. Any other case would work out on the same principle.

KEY TO THE ORDERS.

- I. Feet with webs or lobes.
- A. Feet with webs.
1. Webs extending to the base of the toe-nails.
 - a. Legs far back near the tail; tail short or wanting. 16. PYGOPODES.
 - b. Legs near the middle of the body; tail well developed.
 - (1). Hind toe connected to the front one by a web. 14. STEGANOPODES.
 - (2). Hind toe, when present, free and opposed to the front ones.
 - (a). Nostrils opening through tubes. 15. TUBINARES.
 - (b). Nostrils not opening through tubes.
 - (a¹). Bill with tooth-like projections along its sides.
 - (a²). End half of bill bent abruptly down; legs and neck very long and slender. (Not found in Ohio.) ODONTOGLOSSÆ.
 - (a²). Only tip of bill bent down; legs not very long. 13. ANSERES.
 - (b¹). Bill without tooth-like projections; wings long. 12. LONGIPENNES.
 2. Webs not extending to the base of the toe-nails.
- B. Feet with lobes on the sides of the toes.
1. Legs far back; tail wanting. (*Grebes*). 16. PYGOPODES.
 2. Legs near the middle of the body; tail well developed.
 - a. Forehead with a bare shield. (*Coot*, white) (*Gallinule*, red). 9. PALUDICOLÆ.
 - b. Forehead without a bare shield; bill long and slender. 11. LIMICOLÆ.
- II. Feet with neither webs nor lobes.
- A. Legs and neck long and slender.
1. Loes bare. 10. HERODIONES.
 2. Loes not bare.
 - a. Toes four. (*Cranes*). 9. PALUDICOLÆ.
 - b. Toes three. (*Plovers*, etc.) 11. LIMICOLÆ.
- B. Legs and neck not decidedly long and slender.
1. Feet very large, toes long and slender; wings moderate. 9. PALUDICOLÆ.
 2. Feet and toes moderate.
 - a. Lower part of tibia bare. 11. LIMICOLÆ.
 - b. Lower part of tibia feathered.
 - (1). Hind toe short, elevated above the front ones. 8. GALLINÆ.
 - (2). Hind toe, when present, on the same level as the front toes.
 - (a). Nostrils opening beneath a soft, fleshy membrane. 7. COLUMBÆ.
 - (b). Bill without a soft, fleshy membrane.
 - (a¹). Bill with a tough cere at its base. 6. RAPTORES.
 - (a²). 3 toes in front, one behind. 5. PSITTACI.
 - (b¹). Bill without a cere.
 - (a²). 2 toes in front and 2 behind, or 2 in front and 1 behind.
 - (a³). Tail feathers stiff and pointed. 3. PICI.
 - (b³). Tail feathers not stiff. 4. COCCYGES.
 - (b²). 3 toes in front, one behind.
 - (a³). Middle and outer toes joined for half their length. 4. COCCYGES.
 - (b³). Middle and outer toes not joined.
 - (a⁴). Feet and bill very small and weak, mouth large. 2. MACROCHIRES.
 - (b⁴). Bill long and very slender. (*Hummingbirds*). 2. MACROCHIRES.
 - (c⁴). Characters various, but not combined as above. 1. PASSERES.

KEY TO THE FAMILIES.

ORDER 1. PASSERES. Perching Birds.

About three-fourths of all our Ohio birds belong to this order. In size they range from the Crow and Raven to the Kinglets, which are scarcely more than four inches long. They combine most of the habits met in the other orders and introduce some new ones. All colors of the spectrum are theirs. In song they excel all other birds, but some members of the Oscines, even, have no song. It is impossible to characterize the group, yet it is a group the members of which are readily distinguished from all others. One soon instinctively recognizes any passerine bird on first acquaintance.

I. Back of tarsus rounded like the front.

- A. Bill flattened, hooked at tip.
- B. Bill rounded, not hooked.

- 17. TYRANNIDÆ. FLYCATCHERS.
- 6. ALAUDIDÆ. LARKS.

II. Back of tarsus sharp.

A. Bill hooked at the tip.

- 1. Large, over 8.50 inches long.
- 2. Small, under 6.50 inches long.
- 3. With a distinct crest; tail tipped with yellow.

- 15. LANIDÆ. SHRIKES.
- 16. VIREONIDÆ. VIREOS.
- 14. AMPELIDÆ. WAXWINGS.

B. Bill not hooked at tip.

- 1. With only 9 primaries.
 - a. Bill very short, wings long and pointed.
 - b. Wings moderate, bill moderate.
 - (1). Bill straight, cone-shaped.
 - (a). Bill not notched, its base parting the feathers of the forehead.
 - (b). Bill notched, not parting feathers of forehead.
 - (a). Nostrils concealed by feathers.
 - (b). Nostrils exposed.
 - (2). Bill slender, not cone-shaped.
 - (a). Hind claw long and straightened.
 - (b). Hind claw not lengthened.

- 13. HIRUNDINIDÆ. SWALLOWS.
- 2. ICTERIDÆ. BLACKBIRDS, ORIOLES, ETC.
- 3. FRINGILLIDÆ. SPARROWS, ETC.
- 4. TANAGRIDÆ. TANAGERS.
- 7. MOTACILLIDÆ. PIPITS.
- 5. Mniotiltidæ. WOOD WARBLERS.

2. With 10 primaries.

- a. Upper part of tarsus not divided into scales.
 - (1). Wing more than 3.50.
 - (2). Wing less than 2.50.
- b. Whole tarsus divided into scales.
 - (1). Tail feathers stiff, pointed at tip.
 - (2). Tail feathers normal.
 - (a). Nostrils covered by stiff bristly feathers.
 - (b). Nostrils without bristly tufts.
 - (a). First primary about half as long as the longest one.
 - (b). First primary about a third as long as the longest one.

- 8. TURPIDÆ. THRUSHES, ETC.
- 9. SYLVIIDÆ. KINGLETS, GNATCATCHER
- 11. CERCITHIDÆ. CREEPERS.
- 1. CERVIDÆ. CROWS, JAYS.
- 12. TROGLODYTIDÆ. WRENS, THRASHERS, ETC.
- 10. PARIDÆ. TITMICE, NUTHATCHES.

ORDER 2. MACROCHIRES. Goatsuckers, Swifts, Hummingbirds.

At a glance this is also a diverse group, but the Swifts, Nighthawks and Whippoorwills are much alike in external appearances and in food habits. They have long and pointed wings, weak feet and bill, and a large mouth. The Hummingbirds differ in having a long and extremely slender bill and small mouth.

I. Wing over 6.50.

- 3. CAPRIMULGIDÆ. WHIPPOORWILL, NIGHTHAWK.

II. Wing about 5.00.

- 2. MICROPODIDÆ. SWIFTS.

III. Wing under 2.00.

- 1. TROCHILIDÆ. HUMMINGBIRDS.

ORDER 3. PICI. Woodpeckers.

The Woodpeckers all belong to one family, PICIDÆ. Their chisel-like bills and stiff, pointed tail feathers, and their habit of clinging in an upright position to tree trunks are characteristic. They feed upon insects, ripe fruit and the sap of trees, and sometimes acorns and nuts.

ORDER 4. COCCYGES. Cuckoos, Kingfisher.

The two suborders comprising this group have few external characters in common. The Cuckoos eat caterpillars and other insects, the Kingfisher eats fish and probably other aquatic animals. The Cuckoos are woods birds, the Kingfisher is found in the vicinity of water. The Cuckoos are soberly colored, the Kingfisher is distinctly bluish and crested.

- I. Toes 2 in front and 2 behind.
 II. 3 toes in front and one behind.

2. CUCULIDÆ. CUCKOOS.
 1. ALCEDINIDÆ. KINGFISHERS.

ORDER 5. PSITTACI. Parrots.

The Carolina Paroquet has been extinct in the state for more than twenty years.
161. Carolina Paroquet.

ORDER 6. RAPTORES. Vultures, Hawks, Eagles, Owls, etc.

To this order belong the birds which eat flesh. Their feet and bills are adapted for catching and holding the prey, and tearing it into morsels. The vultures have bare heads because they feed upon carrion. The whole group is of so great importance as a balancer of the forces of nature in the animal realm that about half of them are night prowlers; thus, both the diurnal and the nocturnal disturbers of fields and gardens are held in check by the flesh-eaters. Only four of the species which are found in Ohio are harmful to poultry interests.

I. Eyes looking straight forward, set in a striking disk of feathers.

- A. Feathers on back of tarsus growing up.
 B. Feathers on back of tarsus growing down.

1. STRIGIDÆ. BARN OWL.
 2. BUBONIDÆ. HORNED AND HOOT OWLS.

II. Eyes not looking forward, no facial disk.

- A. Head bare.
 B. Head feathered.

4. CATHARTIDÆ. VULTURES.
 3. FALCONIDÆ. HAWKS, EAGLES, FALCONS, ETC.

ORDER 7. COLUMBÆ. Doves and Pigeons.

To this order belongs the single family COLUMBÆ. The Mourning Dove is the only representative of the order now regularly found in the state.

ORDER 8. GALLINÆ. Turkeys, Grouse, Bob-white.

The best representatives of this group are the barn-yard fowls and domestic turkey. They are heavy bodied, short winged birds, which are able to get up from the ground suddenly and fly short distances with great velocity. Their food consists of both vegetable and animal matter in about the proportions of the domestic members of the group.

- I. Size very large—about 4 feet long.
 II. Size smaller—less than 2 feet long.

1. MELEAGRINÆ. TURKEYS.
 2. TETRAONIDÆ. GROUSE, BOB-WHITE.

ORDER 9. PALUDICOLÆ. Cranes, Rails, Coots, Gallinules.

To this diverse group belong the smaller swamp-haunting birds. Only the cranes can be called true waders, living in the more open water, or even in fields away from water; the others are rather sedge haunters, running over the swamp vegetation rather than wading. They feed largely upon swamp animal life.

- I. Tarsus over six inches.
 II. Tarsus under 3.00 inches.

2. GRUIDÆ. CRANES.
 1. RALLIDÆ. RAILS, COOTS, GALLINULE.

ORDER 10. HERODIONES. Herons, Egrets, Bitterns, etc.

The members of this group are preeminently waders, their long legs and long neck enabling them to fish standing in the water. They eat almost any animals which may be found in the swamps and shallow water. They are awkward-appearing birds, but fly well, usually stretching the long legs straight out behind like a rudder when flying.

- I. Bill straight and sharp.
 II. Bill curved downward, blunt.
 A. Wing over 16.00 inches.
 B. Wing under 13.00 inches.

1. ARDEIDÆ. BITTERNs, HERONS, EGRETS.
 2. CICONIIDÆ. WOOD IBIS.
 3. IBIDIDÆ. IBISES.

ORDER 11. LIMICOLÆ. Shore Birds.

While the birds comprising this group have been called waders they are not so much so as the Herodiones. Many species live more on the uplands than in or near the water, but some are true waders in shallow water. Some probe in the soft mud, some glean from the surface of the ground, some glean at the water's edge, some search under stones and drift for their food. While none can be called singers in the proper sense, yet some have calls which are certainly more musical than the cries of the Crow or Grackles, which belong to the Oscines. All are nimble of foot and wing. Many flock while migrating, the whole flock moving and turning as one bird.

I. Sides of the toes with lobate webs.

II. Sides of toes without lobes.

A. Tarsus over 3.50.

B. Tarsus under 3.50.

1. Colors patchy black, white, rufous.

2. Colors not patchy.

a. Toes 3 (except Black-bellied Plover).

b. Toes 4 (except Sanderling).

5. PHALAROPODIDAE. PHALAROPES.

4. RECURVIROSTRIDAE. STILTS, AVOCETS.

2. APHRIZIDAE. TURNSTONES.

1. CHARADRIIDAE. PLOVERS.

3. SCOLOPACIDAE. SNIPES, SANDPIPERS.

ORDER 12. LONGIPENNES. Gulls, Terns, Jaegers.

Members of this order agree in having a well developed tail, long and pointed wings and therefore great powers of flight. They live over the water instead of in it, gleanng from the surface or diving into it for their food. Their great powers of flight enable them to visit any of the bodies of water inland, where they may be found at some time of year.

I. Middle tail feathers longest.

II. Tail square.

III. Outer tail feathers longest.

1. STERCORARIIDAE. JAEGERS.

2. LARINAE. GULLS.

3. STERNINAE. TERNS.

ORDER 13. ANSERES. Ducks, Geese, Swans.

The members of this group are too well known in general to be carefully treated here. They are all excellent swimmers, and all agree in having tooth-like projections or serrations on the sides of the bill to act as strainers for the mud and water taken into the mouth with the food. They walk fairly well, and all fly well, some with almost incredible swiftness. They are 'Game' birds, and suffer much at the hands of sportsmen. None but geese are ever harmful, and they but seldom.

I. Bill long and slender, cylindrical.

II. Bill flattened, duck-like.

A. Lores bare.

B. Lores not bare.

1. Scales on front of tarsus rounded.

2. Scales on front of tarsus square.

a. Hind toe with a flap or lobe.

b. Hind toe without a flap or lobe.

1. MARGINAE. MERGANSERS.

5. CYGNINAE. SWANS.

4. ANSERINAE. GEESE.

3. FULIGULINAE. SEA AND BAY DUCKS.

2. ANATINAE. RIVER AND POND DUCKS.

ORDER 14. STEGANOPODES. Pelicans, Cormorants, etc.

Any member of this order may be known at once by the foot, which has all four toes connected together by three webs. They are strong fliers, and all have a larger or smaller gular sac at the base of the bill. In the pelicans this sac is enormous and is used as a dip-net or scoop for catching small fry in the water.

I. Lores feathered.

II. Lores bare.

A. An enormous pouch below the long bill.

B. With a small pouch and moderate bill.

1. FREGATIDAE. MAN-O'-WAR BIRDS.

2. PELECANIDAE. PELICANS.

3. PHALACROCORACIDAE. CORMORANTS.

ORDER 15. TUBINARES. Albatrosses, Shearwaters, Petrels.

One member of this order has accidentally reached the state. The order must be considered as belonging to the oceans, some members of which may sometimes be blown inland by severe storms.

313. Black-capped Petrel.

ORDER 16. PYGOPODES. Diving Birds.

Members of this order occurring in Ohio are duck-like birds, with the legs situated far back on the body, making an upright posture on land necessary. They walk with great difficulty, using the bill and wings to aid them in hobbling or shuffling along. The wings and tail are short, scarcely reaching the posterior end of the body when folded. The Grebes have no tail. All members of this order are expert divers.

I. With 3 toes.

II. With 4 toes.

A. Toes with lobate webs.

B. Toes with webs.

3. ALCIDAE. AUKS, MURRES, PUFFINS.

1. PODICIPIDAE. GREBES.

2. GAVIIDAE. LOONS.

KEY TO THE SPECIES.

ORDER I. PASSERES. Perching Birds.

Family 1. CORVIDAE. Crows, Jays, Ravens.

The members of this group are too well known to call for comment.

- I. Entirely black.
 - A. Wing about 15.00. **1. Northern Raven.**
 - B. Wing about 13.00. **2. American Crow.**
- II. With much blue in the plumage, crested. **3. Blue Jay.**

Family 2. ICTERIDAE. Blackbirds, Orioles, etc.

Certain members of this group are among the most familiar of our birds. Our shade trees are filled with Grackles and Orioles all summer long, and there is no pasture or meadow without its Meadowlarks.

The Blackbirds, Bobolinks, and Grackles flock together in spring and fall, but the Orioles and Meadowlarks are seldom seen in large numbers together.

- I. Entire under parts black, with or without metallic reflections.
 - A. Tail distinctly rounded. **13. Bronzed Grackle.**
 - B. Tail square or only slightly rounded.
 - 1. Entire plumage bluish-black. **12. Rusty Blackbird.**
 - 2. A red and buff shoulder-patch. **7 & 8. Red-winged Blackbird and Thick-billed Redwing.**
 - 3. Head, neck and throat seal-brown. **5. Cowbird.**
 - 4. Nape buffy, back with much white. **4. Bobolink.**
- II. Under parts black and white, or black with buffy tips to feathers.
 - A. Under parts streaked black and white. **7. Red-winged Blackbird.**
 - B. Under parts black, nape buffy, back with white. **4. Bobolink.**
 - C. Whole body tipped with rusty. **12. Rusty Blackbird.**
- III. Under parts slate-color, chestnut or buffy.
 - A. Under parts slate-color.
 - 1. Wing over 4.25. **12. Rusty Blackbird.**
 - 2. Wing less than 4.00. **5. Cowbird.**
 - B. Under parts buffy or chestnut.
 - 1. Under parts chestnut. **10. Orchard Oriole.**
 - 2. Under parts buffy. **4. Bobolink.**
- IV. Under parts with yellow or orange.
 - A. Throat black.
 - 1. Back black. **11. Baltimore Oriole.**
 - 2. Back greenish. **10. Orchard Oriole.**
 - B. Breast with a black crescent. **9. Meadowlark.**
 - C. Head, neck, throat and breast yellow or orange. **6. Yellow-headed Blackbird.**
 - D. Under parts entirely yellow or orange.
 - 1. Rump and tail orange. **10. Orchard Oriole.**
 - 2. Upper parts greenish. **11. Baltimore Oriole.**
 - 3. Upper parts brownish, streaked. **4. Bobolink.**

Family 3. FRINGILLIDAE. Sparrows, Finches, Buntings, etc.

This is the largest and most varied family of North American Birds. In it are found some of the plainest as well as some of the most brilliantly colored of our birds. Here are grouped those with sweet and varied songs as well as those whose voices can scarcely be distinguished from the shrilling of insects. Some are lowly in habits, nesting on the ground or even scooping out a hollow in which to nest, while some lash their cradles to the topmost twigs of tall trees. All members of the family eat seeds or grains, but all of them also eat some insects. In early spring many species eat the tender buds of trees. Several species eat more insects than vegetable matter. None (except the English Sparrow) seem to be injurious, while all do great service to agriculture in destroying vast quantities of weed seeds.

- I. With conspicuous red in the plumage.
 - A. Mandibles crossed.
 - 1. With conspicuous white wing-bars. **19. White-winged Crossbill.**
 - 2. Without white wing-bars. **18. American Crossbill.**

- B. Mandibles not crossed.
1. Head crested.
 2. Head not crested.
 - a. No red on upper parts.
 - b. Upper parts with red.
 - (1). With white wing-bars.
 - (a). Wing more than 4.00.
 - (b). Wing less than 3.00.
 - (2). Without white wing-bars.
 - (a). Head blue.
 - (b). Head red.
- II. Under parts without streaks.
- A. With distinct yellow in the plumage.
1. Mandibles crossed.
 - a. With white wing-bars.
 - b. Without white wing-bars.
 2. Mandibles not crossed.
 - a. Body bright yellow, wings, tail, crown black.
 - b. Lores yellow, a white throat blotch.
 - c. Lores and bend of wing yellow.
 - d. Black throat-patch, yellow above and below it.
 - e. A broad white wing-patch, bill enormous.
- B. With distinct blue in the plumage.
1. Wing over 3.25.
 2. Wing under 3.00.
 - a. Under parts red.
 - b. Under parts blue.
- C. Head and neck black.
1. Sides with rufous.
 2. Sides without rufous.
- D. Crown plain rufous.
1. A dusky spot in middle of br. ast.
 2. Breast without a dusky spot.
 - a. Bend of wing yellow.
 - b. Bend of wing not yellow.
 - (1). Bill reddish.
 - (2). Bill dark brown to black.
 - (a). Wing less than 3.00.
 - (b). Bill more than 3.00.
- E. Head more or less streaked.
1. 3 white, 4 black streaks on crown.
 2. Three gray, 4 brown streaks on crown.
 3. Ear-coverts rufous, a black spot on breast.
 4. Bend of wing yellow.
- F. Crown unstreaked, not plain rufous.
1. Crown black.
 2. Plumage mostly white.
 3. Plumage mostly brown or slate gray.
 - a. Forehead black, under parts gray.
 - b. Throat black.
 - c. Crown, rump, breast washed with olive yellowish.
 4. Plumage brownish with yellowish wash.
- III. Under parts streaked.
- A. Bend of wing yellow.
1. Center of crown occasionally with an ashy-blue line.
 2. Center of crown with a buffy stripe (sometimes whitish).
 - a. Under parts heavily streaked.
 - b. Under parts lightly streaked.
 3. Crown plain, or with narrow whitish line.
- B. Bend of wing not yellow.
1. Wing under 3.00.
 - a. A cream-buff band across breast.
 - b. No cream-buff band across breast.
 - (1). Base of tail yellow.
 - (2). No yellow on tail.
 2. Wing over 3.00.
44. Cardinal.
45. Rose-breasted Grosbeak.
15. Pine Grosbeak.
20. Redpoll.
- (Hypothetical) Painted Bunting.
16. Purple Finch.
19. White-winged Crossbill.
18. American Crossbill.
21. American Goldfinch.
33. White-throated Sparrow.
27. Grasshopper Sparrow.
47. Dickcissel.
14. Evening Grosbeak.
- (Hypothetical) Blue Grosbeak.
- (Hypothetical) Painted Bunting.
46. Indigo Bunting.
43. Towhee.
37. Junco.
34. Tree Sparrow.
38. Bachman Sparrow.
36. Field Sparrow.
35. Chipping Sparrow.
43. Towhee.
32. White-crowned Sparrow.
32. White-crowned Sparrow.
30. Lark Sparrow.
29. Nelson Sparrow.
31. Harris Sparrow.
23. Snowflake.
41. Swamp Sparrow.
17. English Sparrow.
15. Pine Grosbeak.
21. American Goldfinch.
29. Nelson Sparrow.
26. Savanna Sparrow.
28. Henslow Sparrow.
38. Bachman Sparrow.
40. Lincoln Sparrow.
22. Pine Siskin.
39. Song Sparrow.

- a. Outer tail feathers white.
- b. Outer tail feathers not white.
 - (1). Wing over 4.00.
 - (2). Wing under 4.00.
 - (a). Tail plain bright reddish-brown.
 - (b). Tail grayish-brown.
 - (a¹). Hind claw straightened and lengthened.
 - (b¹). Hind claw normal.

- 25. Vesper Sparrow.
- 45. Rose-breasted Grosbeak.
- 42. Fox Sparrow.
- 24. Lapland Longspur.
- 16. Purple Finch.

Family 4. TANAGRIDAE. Tanagers.

These brilliantly colored birds are strictly woods birds, but the Scarlet Tanager is often found in parks and shade trees. They are fair singers, but their bright colors are the most notable characteristic. They eat buds, seeds and insects. The females are yellowish green birds, harmonizing well with the woods-colors and shades.

- I. Plumage largely red.
 - A. Wings and tail black.
 - B. Wings and tail like the body.
- II. Without red.
 - A. Under parts buffy-yellow.
 - B. Under parts greenish.

- 48. Scarlet Tanager.
- 49. Summer Tanager.
- 48. Scarlet Tanager.
- 49. Summer Tanager.

Family 5. MNIOTILTIDAE. Wood Warblers.

One of the reasons why we are so fascinated by this group of little birds may be because it is wholly American! Certainly one reason is because so few of its members are to be found more than a few weeks, at most, during the entire year, in Ohio. They come and go like fairies, now adding color to the May foliage and making merry in the woods, now as silently and mysteriously stealing away as they came. A few species tarry with us all summer long, but they are so small and so unobtrusive that none but the eager student finds them.

They are called Wood Warblers because they live mostly in the woods, or more exactly speaking, most of them live in the woods when at home. In their passage northward and southward they may be found wherever there are trees, gleaning among the foliage for the insect larvæ or eggs, or for the pupa securely rolled in its cocoon amid the autumn foliage. They are great conservators of our forests and orchards. Some glean like Nuthatches or Woodpeckers, some flutter before a leaf or glean from its under surface, some sally forth like true Flycatchers after flying insects.

It is not possible to give distinctive characters for the whole group in few words. All colors are theirs, all patterns of dress, and many sizes of wing and body. For the most part their dress pattern is patchy, but some are streaked all over, while some are nearly uniform in color. In song they vary greatly, from the insect lisp to the full-voiced, whistled song. There is a quality, however, which is distinctly warblerine to the initiated. When you have been ushered into the mysteries of the group of Wood Warblers your delights in bird study begin.

KEY TO THE SPRING MALES.

- I. Throat red, orange or chestnut.
 - A. Throat chestnut.
 - B. Throat orange or flame-color.
- II. Throat black or dark slate-color.
 - A. Belly white.
 - 1. Back deep blue, a white spot in wing.
 - 2. Back green, cheeks yellow.
 - 3. Back grayish, a large yellow wing-patch.
 - 4. Back black, whole head black.
 - B. Belly yellow.
 - 1. Throat slate-color.
 - a. No white eye-ring, breast with traces of black.
 - b. Eye-ring white, breast without black.
 - 2. Throat black, forehead and cheeks yellow.
- III. Throat yellow, white or whitish, under parts without streaks.
 - A. Large, length over 7.00.
 - B. Length less than 7.00.
 - 1. Throat yellow.
 - a. Whole head, neck and breast bright yellow.
 - b. Forehead and cheeks black, line over eye yellow.
 - c. A broad, rounded black patch on cheeks.
 - d. Head and back olive-green.

- 67. Bay-breasted Warbler.
- 69. Blackburnian Warbler.
- 62. Black-throated Blue Warbler.
- 71. Black-throated Green Warbler.
- 54. Golden-winged Warbler.
- 88. American Redstart.
- 82. Mourning Warbler.
- 81. Connecticut Warbler.
- 85. Hooded Warbler.
- 84. Yellow-breasted Chat.
- 51. Prothonotary Warbler.
- 80. Kentucky Warbler.
- 83. Northern Yellow-throat.
- 73. Pine Warbler.

- e. Head bluish-gray, white under parts bright yellow.
 f. Forehead yellow, wings bluish.
 g. Head yellow, crown black.
 h. Head bluish, middle of back with a yellow patch.
 (1). Larger.
 (2). Smaller.
2. Throat white or whitish.
 a. Crown with two black stripes.
 b. Crown bluish-ash, back olive-green.
 c. Crown with a partially concealed patch of rufous-brown.
 d. Front of crown bright yellow, wing bars yellow.
- IV. Throat white or whitish, under parts streaked or spotted.
 A. Crown, rump, sides of breast yellow.
 B. No yellow on crown, rump or breast.
 1. With conspicuous wing-bars.
 a. Back bright bluish.
 b. Back grayish, crown black.
 c. Back greenish-yellow, sides chestnut.
 2. Without wing-bars. Walking Warblers.
 a. Middle of crown with a rufous streak.
 b. Crown plain, line over eye buff.
 (1). Smaller.
 (2). Larger.
 c. Crown plain, line over eye white.
 3. Everywhere streaked black and white.
- V. Throat yellow, under parts streaked or spotted.
 A. Belly white.
 B. Belly yellow.
 1. Under parts streaked with rufous-brown.
 a. Crown yellow.
 b. Crown chestnut.
 (1). Under parts bright yellow.
 (2). Under parts soiled yellowish.
 2. Under parts streaked or spotted with black.
 a. Back plain grayish, breast with a necklace of black streaks.
 b. Back streaked with black, crown bluish.
 c. Back streaked with black, crown black, ear-coverts rufous.
 d. Back with a patch of rufous-brown spots.
 e. Back black, tail with a white band across the middle.
55. Nashville Warbler.
 53. Blue-winged Warbler.
 86. Wilson Warbler.
58. Northern Parula Warbler.
 59. Western Parula Warbler, and
(Hypothetical) Parula Warbler.
52. Worm-eating Warbler.
 57. Tennessee Warbler.
56. Orange-crowned Warbler.
(Hypothetical) Brewster Warbler. *(But see page 123.)*
63. Myrtle Warbler.
65. Cerulean Warbler.
 68. Black-poll Warbler.
 66. Chestnut-sided Warbler.
77. Oven-bird.
78. Water-Thrush.
(Hypothetical) Grinnell Water-Thrush.
79. Louisiana Water-thrush.
 50. Black and White Warbler.
70. Sycamore Warbler.
61. Yellow Warbler.
75. Yellow Palm Warbler.
 74. Palm Warbler.
87. Canadian Warbler.
 72. Kirtland Warbler.
60. Cape May Warbler.
 76. Prairie Warbler.
 64. Magnolia Warbler.
65. Magnolia Warbler.
58. Northern Parula Warbler.
 59. Western Parula Warbler.
65. Cerulean Warbler.
 73. Pine Warbler.
68. Black-poll Warbler.
 67. Bay-breasted Warbler.
62. Black-throated Blue Warbler.
 85. Hooded Warbler.
86. Wilson Warbler.
 61. Yellow Warbler.
 55. Nashville Warbler.

KEY TO THE FALL MALES, AND FEMALES.

I. Under parts yellow or yellowish, unstreaked.

A. Tail with white spots.

1. Wings with white bars.

a. Entire under parts pure yellow.

b. Throat yellow, belly white.

(1). Larger.

(2). Smaller.

c. Under parts pale yellowish.

(1). Back bluish, without streaks.

(2). Back olive-green, without streaks,

(3). Back olive-green, streaked.

(a). Under parts pale yellowish-white.

(b). Under parts pale cream-buff.

2. Wings without white bars.

a. A white spot in the wing.

b. No white spot in the wing.

B. Tail without white spots.

1. Entire under parts bright yellow.

a. Upper parts bright olive-green.

b. Upper parts bright greenish-yellow.

c. Upper parts ashy-gray-greenish.

2. Only throat and breast yellow.
 a. Legs flesh-color.
 b. Legs blackish.
3. Under parts uniform yellowish.
 a. Back ashy-greenish.
 b. Back brownish-olive-green.
 c. Back greenish-yellow.
 d. Back bright olive-green.
 (1). A white spot in the wing.
 (2). Under tail-coverts yellow.
 (3). Under tail-coverts white.
- II. Under parts yellow or yellowish, streaked or spotted.
 A. Under parts streaked with rufous brown.
 1. Under parts yellowish-white.
 2. Under parts yellow.
 B. Under parts with black streaks or spots.
 1. Only the sides streaked.
 2. Whole breast more or less streaked.
 a. Cheeks bright yellow.
 b. Cheeks gray.
 (1). Rump and line over eye yellowish.
 (2). Rump dull gray.
 (a). Head and neck olive-green.
 (b). Head and neck brownish-gray.
- III. Under parts white or whitish, streaked or spotted.
 A. Back streaked with black.
 1. Sides streaked with chestnut.
 2. Under parts with black streaks.
 a. Crown black.
 b. Crown olive-green.
 B. Back unstreaked.
 1. Cheeks yellowish, back greenish.
 2. Cheeks and back grayish.
 3. Back brownish.
 4. Base of tail, sides of breast and band in wing yellow.
- IV. Under parts white or buffy, unstreaked.
 A. Tail with white or yellow spots.
 1. Wing-bars white or gray.
 a. Under parts white.
 (1). Back greenish-yellow.
 (2). Back streaked with black and white.
 (3). Back brownish, or grayish-green.
 b. Under parts tinged with buffy.
 2. Wing-bars yellowish, greenish or absent.
 a. Back gray or grayish.
 b. Back brownish.
 c. Back greenish-yellow.
 (1). Under parts pure white.
 (2). Under parts yellowish.
 B. Tail without white or yellow spots.
 1. A white spot in the wing.
 2. No white spot in the wing.
83. Northern Yellow-throat.
 55. Nashville Warbler.
 56. Orange-crowned Warbler.
 55. Nashville Warbler.
 61. Yellow Warbler.
 62. Black-throated Blue Warbler.
 83. Northern Yellow-throat.
 57. Tennessee Warbler.
 74. Palm Warbler.
 75. Yellow Palm Warbler.
 76. Prairie Warbler.
 76. Black-throated Green Warbler.
 60. Cape May Warbler.
 68. Black-poll Warbler.
 72. Kirtland Warbler.
 67. Bay-breasted Warbler.
 50. Black and White Warbler.
 68. Black-poll Warbler.
 71. Black-throated Green Warbler.
 60. Cape May Warbler.
 74. Palm Warbler.
 88. American Redstart.
 66. Chestnut-sided Warbler.
 50. Black and White Warbler.
 73. Pine Warbler.
 67. Bay-breasted Warbler.
 (Hypothetical) Brewster Warbler. (Page 123.)
 88. American Redstart.
 66. Chestnut-sided Warbler.
 61. Yellow Warbler.
 62. Black-throated Blue Warbler.
 83. Northern Yellow-throat.

Family 6. ALAUDIDAE. Larks.

These are the true Larks, singing as they soar upward, and wholly terrestrial in habits. They rarely perch upon anything but a flat or flattened surface. They eat both seeds and insects, and are useful to the agriculturist.

- I. Eyebrow yellow.
 II. Eyebrow not yellow.
 A. Larger and lighter.
 B. Smaller and darker.

Family 7. MOTACILLIDAE. Pipits.

One member of this family is found in Ohio. It resembles the Horned Larks in size and general coloration, and it walks. However, it wags its tail and shows the white outer tail feathers. There is no black patch on the breast, nor any yellow on the throat.

89. Horned Lark.
 90. Hoyt Horned Lark.
 91. Prairie Horned Lark.
 92. American Pipit.

Family 8. TURDIDAE. Thrushes, Robin, Bluebird.

It can hardly be disputed that the Thrushes are the most gifted of our birds in song. There is even reasonable doubt if the famed Nightingale of Europe can approach them in real musical rendition. The songs of the Thrushes are capable of being reproduced by musical instruments, and their phrases reduced to musical notation. The true Thrushes are birds of the woods, the deeper woods, but the Robin and Bluebird have become nearly civilized; and their songs are less musical.

- | | |
|---|---------------------------------|
| I. Back with evident blue. | 99. Bluebird. |
| II. Back blackish, underparts largely rufous. | 98. American Robin. |
| III. Back brown or olive, under parts more or less spotted. | 97. Hermit Thrush. |
| A. Upper parts olive brown, tail rufous. | 93. Wood Thrush. |
| B. Upper parts cinnamon-brown. | 94. Wilson Thrush. |
| 1. Under parts heavily spotted with black. | |
| 2. Under parts pale buffy, lightly marked. | |
| C. Upper parts olive. | 96. Olive-backed Thrush. |
| 1. Throat, breast, cheeks, deep cream-buff. | 95. Gray-checked Thrush. |
| 2. Throat, breast, cheeks, almost white. | |

Family 9. SYLVIIDAE. Old World Warblers.

Only three representatives of this Old World group are found in Ohio, and only one of these remains to nest. Next to the Hummingbirds they are the smallest of our birds, and are therefore easily overlooked amid the foliage. While so small their voices are strong and carry far; particularly the Ruby-crowned Kinglet.

- | | |
|--|-------------------------------------|
| I. With red or yellow on the crown. | |
| A. Crown with yellow or orange bordered by black. | 100. Golden-crowned Kinglet. |
| B. Crown with a concealed ruby patch, without black. | 101. Ruby-crowned Kinglet. |
| II. Without red or yellow on crown. | |
| A. Back ashy blue, tail long. | 102. Blue-gray Gnatcatcher. |
| B. Back olive-green. | 101. Ruby-crowned Kinglet. |

Family 10. PARIDAE. Nuthatches, Titmice.

These are birds of the entire year. Without them in winter our woods would be dreary indeed and well nigh birdless. They are not timid, but on the contrary are more curious than the proverbial woman. They are perfectly at home in any position on any kind of a surface, whether horizontal, inclined or perpendicular, but the Nuthatches prefer to cling head down. They will eat anything in winter, and can readily be drawn to the windowsill with crumbs, nuts or suet. They soon lose any fear of man which they may have had, and perch on the outstretched hand for food.

- | | |
|--------------------------------------|--------------------------------------|
| I. Throat black, crown black. | |
| A. Tail over 2.30. | 107. Chickadee. |
| B. Tail under 2.20. | 108. Carolina Chickadee. |
| II. Throat not black, crown various. | |
| A. Head crested. | 106. Tufted Titmouse. |
| B. Head not crested. | |
| 1. Whole top of head brown. | 105. Brown-headed Nuthatch. |
| 2. Top of head black. | |
| a. Wing over 3.25. | 103. White-breasted Nuthatch. |
| b. Wing under 3.00. | 104. Red-breasted Nuthatch. |

Family 11. CERTHIDAE. Creepers.

Our Brown Creeper may be at once known by its habit of climbing up a tree trunk or branch spirally. It looks a little like a very small Woodpecker, but the bill is slender and curved, and there are three toes in front and one behind instead of two in front and two behind.

- 109. Brown Creeper.**

Family 12. TROGLODYTIDAE. Mockers, Thrashers, and Wrens.

A snap-shot judgment would separate this family into two distinct families, or return the Mockers to the Turdidæ, but more careful comparison and study reveals the logic of the present arrangement. In song and story this group is perhaps better known than any other whole group of birds. Certainly it deserves the distinction, for the Mockingbird alone might well serve to bring the group into prominence. The Wrens are too nearly household birds to escape popular attention, even amid the rabble of English Sparrows. The Wrens, especially, are brimming over with energy, which is fittingly illustrated by the forward pointing tail. They are true Americans.

I. Wing over 3.50.

- A. Slate-color, under tail-coverts rufous.
- B. Back grayish, outer tail-feathers white.
- C. Back rufous, under parts spotted.

- 111. Catbird.
- 110. Mockingbird.
- 112. Brown Thrasher.

II. Wing less than 3.00.

- A. Wings not barred.
- B. Wings barred.
 - 1. Back streaked with white.
 - a. White streaks confined to center of back.
 - b. Wings and whole back white streaked.
 - 2. Back not streaked with white.
 - a. A long white streak over the eye.
 - b. No white line over the eye.
 - (1). Belly, sides, and breast barred.
 - (2). Sides only faintly barred.

- 114. Bewick Wren.
- 118. Long-billed Marsh Wren.
- 117. Short-billed Marsh Wren.
- 113. Carolina Wren.
- 116. Winter Wren.
- 115. House Wren.

Family 13. HIRUNDINIDAE. Swallows, Martins.

The Swallow form and carriage are too well known to call for comment. They are strong, graceful flyers, feeding upon flying insects for the most part, but sometimes gleaning from the grass-tops as they fly over the pastures or meadow. Three or four of the species nest about the habitations of man, one of them, Purple Martin, exclusively. After the breeding season, when the young have become able to fly well, the Swallows gather in large companies preparatory to their southward journey. Telegraph wires along the lake front are then often covered with the birds. None of the Swallows are in any way injurious, but all are useful birds.

I. Upper parts with metallic reflections.

- A. Under parts steel-blue.
- B. Throat chestnut, rufous or brownish.
 - 1. Tail deeply forked.
 - 2. Upper tail coverts rufous or buffy.
- C. Throat gray or white.
 - 1. Entire under parts white.
 - 2. Throat and breast brownish-gray.

- 119. Purple Martin.
- 121. Barn Swallow.
- 120. Cliff Swallow.
- 122. Tree Swallow.
- 119. Purple Martin.

II. Upper parts without metallic reflections.

- A. Throat and breast brownish-gray.
- B. A brownish band across the white breast.

- 124. Rough-winged Swallow.
- 123. Bank Swallow.

Family 14. AMPELIDAE. Waxwings.

The Waxwings are beautiful but inconstant birds. They are here at one time and gone the next. Their tufted head and silky-brownish plumage are always good field marks. They have no true song, but chatter faintly. The Cedarbird is fond of ripe cherries, but always prefers ripe mulberries to anything else. Depredations upon the cherry crop may be prevented by the proximity of a mulberry tree.

I. Wing over 4.50.

- 125. Bohemian Waxwing.

II. Wing under 4.00.

- 126. Cedar Waxwing.

Family 15. LANIIDAE. Shrikes.

The Shrikes are the birds of prey among the Passeres. Their feet and bill are adapted for a predatory life. Mice, snakes, birds and insects are captured and eaten, or impaled on thorns for future use as the occasion demands.

I. Wing over 4.00.

- 127. Northern Shrike.

II. Wing less than 4.00.

- 128. Migrant Shrike.

Family 16. VIREONIDAE. Vireos.

These small birds bear some resemblance to the Shrikes in general structure, but differ widely in habits. They are all woods-hunters, while the Shrikes prefer the open fields. They glean from the surface of leaves or from the bark, and sometimes dart out after a flying insect. Their food is almost wholly insect. They are less brisk of movement than the Warblers, but bear a fairly close resemblance to them in a general way. A novice might easily become confused between the two groups. All of the Vireos are good singers, and the White-eyed is a good mimic. All build pensile nests, sometimes of beautiful pattern and careful workmanship.

I. With distinct wing-bars.

- A. Wing under 2.75.
- B. Wing over 2.75.

- 134. White-eyed Vireo.

1. Throat and breast bright yellow.
2. Throat and breast white.

II. Without wing-bars.

- A. Wing over 3.00.
- B. Wing under 3.00.
 1. Under parts yellowish.
 2. Under parts white.

Family 17. TYRANNIDAE. Flycatchers.

The Flycatchers are so named from their habit of darting out from a perch to catch some flying insect, returning to the same perch for a lookout. The Kingbird sometimes eats quantities of honey-bees, but with this exception the group is a very beneficial one.

I. Tail deeply forked.

II. Tail not forked.

- A. Wing over 3.00.
 1. Tail tipped with white.
 2. Tail with rufous on inner vanes of feathers.
 3. Tail fuscous.
 - a. Wing 4.00 or more.
 - b. Wing under 3.50.
 - (1). Bill black.
 - (2). Lower mandible pale brownish.
- B. Wing under 3.00.
 1. Upper parts with an evident brownish tinge.
 - a. Wing over 2.60.
 - b. Wing under 2.60.
 2. Upper parts without brown.
 - a. Under parts sulphur yellow.
 - b. Under parts only faintly yellowish.

132. Yellow-throated Vireo.
133. Blue-headed Vireo.

129. Red-eyed Vireo.

130. Philadelphia Vireo.
131. Warbling Vireo.

135. Scissor-tailed Flycatcher.

136. Kingbird.
137. Crested Flycatcher.

139. Olive-sided Flycatcher.

138. Phoebe.
140. Wood Pewee.

143. Trail Flycatcher, and (*hypothetical*) Alder Flycatcher.
144. Least Flycatcher.

141. Yellow-bellied Flycatcher.
142. Green-crested Flycatcher.

ORDER 2. MACROCHIRES. Goatsuckers, Swifts, Hummingbirds.

Family 1. TROCHILIDAE. Hummingbirds.

Our Ruby-throated Hummingbird is the smallest of our birds. It is a familiar object about flower gardens, where it may sometimes be mistaken for a large hawk moth; but Hummingbirds seldom feed during twilight, while the moths seldom feed during the day. Hummingbirds eat both nectar and insects.

145. Ruby-throated Hummingbird.

Family 2. MICROPODIDAE. Swifts.

Our Chimney Swift is a familiar object to all. It is in no sense a Swallow. It nests and roosts in chimneys, and is almost never seen sitting still except while incubating or protecting the young. It is a tireless flier, and a very useful bird.

146. Chimney Swift.

Family 3. CAPRIMULGIDAE. Whippoorwill, Nighthawk.

The two species comprising this family are the largest birds found in Ohio belonging to this order. Nighthawk is only partially nocturnal, but Whippoorwill is wholly so. Nighthawk frequently nests on the top of flat-roofed city buildings, but Whippoorwill always nests in the woods. They are famous insect destroyers, and are distinctly beneficial in all respects.

I. A white spot in the wing.

II. No white spot in the wing.

149. Nighthawk.

147. Whippoorwill.

ORDER 3. PICI. Woodpeckers.

Family. PICIDAE. Woodpeckers.

The characters already given for the order are sufficient.

I. Whole top of head red.

- A. Throat red.
 1. Body colors in bands: red, black, white, black.
 2. Colors not in bands. a black crescent on breast.
- B. Throat white.
 1. A black crescent on breast.
 2. Breast and belly black.
 3. Under parts reddish, unmarked.

155. Red-headed Woodpecker.
153. Yellow-bellied Sapsucker.

153. Yellow-bellied Sapsucker.
154. Northern Pileated Woodpecker.
156. Red-bellied Woodpecker.

II. Red on head confined to a band across nape.

A. Under parts black, unspotted.

1. Bill blackish
2. Bill white.

B. Under parts spotted or streaked.

1. Rump white; a black crescent on breast.
2. Head black, red in 2 spots on nape.

C. Under parts white or whitish.

1. Crown gray.
2. Crown black.
 - a. Bill over 1.00.
 - b. Bill under 1.00.

III. Head without red.

A. Bill white.

B. Bill not white.

1. Under parts unmarked.
 - a. Bill over 1.00.
 - b. Bill under 1.00.
2. Under parts spotted or barred or streaked.
 - a. Back wholly black.
 - b. Back black and white.
 - (1). Breast with a black patch.
 - (2). Breast without a black patch.
 - (a). Wing over 5.00.
 - (b). Wing under 5.00.

154. Northern Pileated Woodpecker.
(Hypothetical) Ivory-billed
Woodpecker.

157. Northern Flicker.
151. Red-cockaded Woodpecker.

156. Red-bellied Woodpecker.

149. Hairy Woodpecker.
150. Downy Woodpecker.

(Hypothetical) Ivory-billed
Woodpecker.

149. Hairy Woodpecker.
150. Downy Woodpecker.

152. Arctic Three-toed Woodpecker.

153. Yellow-bellied Sapsucker.

155. Red-headed Woodpecker.
151. Red-cockaded Woodpecker.

ORDER 4. COCCYGES. Cuckoos, Kingfisher.

Family 2. CUCULIDAE. Cuckoos.

The Cuckoos are shy birds, making their way among the tree branches and in the foliage without sound or commotion. Their slender bodies and long tail give them the appearance of snake-like proportions and movement. The popular belief that their peculiar calls indicate the approach of a storm is not well founded, as any one may learn by a little careful study of these birds. Their great value to agriculture and especially to the horticulturalist, lies in their habit of eating quantities of the tent caterpillar and other hairy and spiny caterpillars and larvæ which other birds will not touch. They should be encouraged to nest near the orchard.

I. Lower mandible yellow, wings with rufous.

159. Yellow-billed Cuckoo.

II. Whole bill black, wings without rufous.

160. Black-billed Cuckoo.

Family 1. ALCEDINIDAE. Kingfishers.

The single member of this family inhabiting Ohio may be found about streams and ponds and lakes looking for fish and tadpoles. He is not particularly useful nor particularly harmful. He is a desirable part of a landscape because he is picturesque and interesting. There is no good reason why he should be harmed.

158. Belted Kingfisher.

ORDER 5. PSITTACI. Parrots.

The single species representing this order has long since become extinct in Ohio.

161. Carolina Paroquet.

ORDER 6. RAPTORES. Birds of Prey.

Family 1. STRIGIDAE. Barn Owl.

The single species comprising this family is sufficiently treated in the discussion of that species in the body of this book.

162. Barn Owl.

Family 2. BUBONIDAE. Horned Owls, Hoot Owls, etc.

Most owls are nocturnal in habits, but most of them are also able to fly well by day. Some are seen during daylight except in dark weather, or when startled from their retreats, and some are for the day to hunt in. Their cries are weird and startling. They nest either in hollow trees or in open nests, but seldom if ever make a whole new nest for themselves. Their food varies with the species, but mammals, insects and birds form the greater part of their diet. Only one species, the Great Horned Owl, is distinctly and always injurious. Some are among the most useful of animals and should be carefully protected.

I. With ~~long-plumous~~ ear-tufts.

- A. Wing less than 8.00.
- B. Wing more than 8.00.
 - 1. A large white throat-patch.
 - 2. No white throat-patch.

II. With very short or no ear-tufts.

- A. Wing more than 10.00.
 - 1. Plumage largely white.
 - 2. Plumage brownish.
 - a. Wing more than 15.00.
 - b. Wing less than 15.00 but more than 10.00.
 - (1) Plumage conspicuously barred.
 - (2) Plumage not barred.
- B. Wing less than 10.00.
 - 1. Wing less than 6.00.
 - 2. Wing more than 6.00.

168. Screech Owl.

169. Great Horned Owl.

163. American Long-eared Owl.

170. Snowy Owl.

166. Great Gray Owl.

165. Barred Owl.

164. Short-eared Owl.

167. Saw-whet Owl.

171. American Hawk Owl.

Family 3. FALCONIDAE. Kites, Hawks, Eagles, Falcons, etc.

After a most thorough and careful investigation of the food of all of our birds of prey by our national Agricultural Department, Dr. A. K. Fisher shows that but four of the 28 species which have been found in Ohio are more injurious than useful, and but three members of this family, the Sharp-shinned and the Cooper Hawks, and the American Goshawk, are more harmful than beneficial. Hawks eat the mice and insects which injure grain and fruit. We need to discriminate carefully before killing in cold blood. One may be wholly justified in killing when his poultry or other property is being destroyed, whether the kind doing the killing belongs to a species that is harmful or not.

There is no sure mark by which a hawk may be known from all other birds, but their sharp, curved talons and sharply hooked beaks are good indications of what they eat and how they live. In practical study one soon comes to know a member of this group at sight.

I. Wing over 20 inches long.

- A. Tarsus entirely feathered.
- B. Lower half of tarsus bare.

185. Golden Eagle.

186. Bald Eagle.

II. Wing under 19 inches long.

- A. Under parts streaked or spotted, without bars.
 - 1. Outer primary conspicuously barred.
 - a. Wing under 10.00.
 - (1) Back bright reddish-brown, plain or barred.
 - (2) Back fuscous or slaty.
 - (a) Wing under 7.00.
 - (b) Wing over 7.50.
 - (a¹) Tail over 7.00, rounded.
 - (b¹) Tail under 6.00, square.
 - b. Wing over 10.00.
 - (1) Rump white.
 - (2) Rump not white.
 - (a) Tail over 10.00.
 - (b) Tail under 8.00.
 - 2. Outer primary not, or not conspicuously barred.
 - a. Wing under 12.00.
 - b. Wing over 12.00, under 14.00.
 - c. Wing over 15.00.
- B. Under parts streaked or spotted, with bars.
 - 1. Front of tarsus with distinct rounded scales.
 - 2. Front of tarsus with distinct square scales.
 - a. Bluish-slate color above.
 - b. Pattern various, but in general brownish above.
 - (1) Tail rufous, wholly or mostly.
 - (2) Tail barred with brown and light gray.
 - (a) Wing more than 12.00.
 - (b) Wing less than 12.00.
 - 3. Front of tarsus with indistinct scales or smooth.
 - a. Upper tail-coverts white.
 - b. Upper tail-coverts not white.
 - (1) Wing over 9.00, tail rounded.
 - (2) Wing under 9.00, tail square.

174. American Sparrow Hawk.

177. Sharp-shinned Hawk.

178. Cooper Hawk.

173. Pigeon Hawk.

176. Marsh Hawk.

179. American Goshawk.

172. Duck Hawk.

183. Broad-winged Hawk.

182. Red-shouldered Hawk.

180. Red-tailed Hawk.

172. Duck Hawk.

179. American Goshawk.

180 & 181. Red-tailed Hawk and Western Red-tail.

182. Red-shouldered Hawk.

183. Broad-winged Hawk.

176. Marsh Hawk.

178. Cooper Hawk.

177. Sharp-shinned Hawk.

4. Tarsus entirely feathered.
 C. Under parts neither barred nor streaked.
 1. Under parts not white.
 2. Under parts white.
 a. Tail square.
 b. Tail deeply forked.

184. American Rough-legged Hawk.
 184. American Rough-legged Hawk.
 187. American Osprey.
 175. Swallow-tailed Kite.

Family 4. CATHARTIDAE. Vultures.

The two Vultures found in Ohio are scavengers of great service where they are at all numerous. They feed upon all kinds of carrion and offal, even coming into the streets of towns to gather any garbage which may be carelessly left by those who have contempt for modern sanitary conditions in centers of population. In Ohio they are not so bold nor so numerous as to be very important factors in carrion destruction. On the wing they are stately birds, going straight forward as well as ascending with little or no flapping of the wings. They have mastered the art of utilizing currents of air for propulsion.

- I. Wing about 22 inches long.
 II. Wing about 17 inches long.

188. Turkey Vulture.
 189. Black Vulture.

ORDER 7. COLUMBÆ. Wild Pigeon, Mourning Dove.

Family. COLUMBÆ. Pigeons and Doves.

The two members of this group are too well known to call for extended comment here. They are largely grain eaters and weed seed eaters, and are arboreal in contrast to the grouse forms. The small head and pointed tail form unmistakable field marks.

- I. Wing about 8 inches long.
 II. Wing about 6 inches long.

190. Passenger Pigeon.
 191. Mourning Dove.

ORDER 8. GALLINÆ. Grouse, Turkeys, Bob-white.

Family 2. TETRAONIDÆ. Grouse, Bob-white.

It is, perhaps, needless to say that the members of this group are pretty strictly terrestrial. They feed upon grains and nuts, but also eat some insects. They are prime game birds.

- I. Length about 10 inches.
 II. Length over 15 inches.
 A. Lower half of tarsus bare.
 B. Whole tarsus feathered.

196. Bob-white.
 194. Ruffed Grouse.
 195. Prairie Hen.

Family 1. PHASIANIDÆ. Pheasants and Turkeys.

Of the two species of this group found in Ohio one, the Wild Turkey, is becoming extinct, and the other, the Mongolian Pheasant, is just being introduced. The Wild Turkey is the noblest of the game birds.

- I. Middle tail feathers much lengthened.
 II. Middle tail feathers not much lengthened.

192. Mongolian Pheasant.
 193. Wild Turkey.

ORDER 9. PALUDICOLÆ. Cranes, Rails, Coots, Gallinules.

Family 1. RALLIDÆ. Rails, Coot, Gallinules.

To this group belong the swamp skulkers. The Coot sometimes takes to open water, often seeming to prefer to feed there, but it nests in the swamp vegetation. It is difficult to make the Rails and Gallinules leave their reedy retreats. They are sure of safety among the reeds and sedges and are loth to trust the open air. They glean for food from lily pads and the surface of the water, as well as in the mud and water. They eat insects and tadpoles, and probably some vegetation.

- I. Wing over 6 inches.
 A. General plumage brown.
 B. General plumage purplish-blue.
 C. General plumage slaty-black.
 1. Toes with lobes; shield on forehead white.
 2. Toes without lobes; shield on forehead red.
 II. Wing under 5.50.
 A. Wing under 3.50.
 1. Back blackish, *barred* with white.
 2. Back blackish, *spotted* with white.

197. King Rail.
 202. Purple Gallinule.
 204. American Coot.
 203. Florida Gallinule.
 200. Yellow Rail.
 201. Black Rail.

- B. Wing over 3.50.
 1. Bill over 1 inch.
 2. Bill under 1 inch.

198. Virginia Rail.
 199. Sora.

Family 2. GRUIDAE. Cranes.

The Cranes so closely resemble the Herons in general appearance that one is surprised to note that they are really different. In habits they resemble the Herons in many particulars, but are more often found away from water in the uplands. They nest on the ground instead of in trees, as most of the Herons do. They can eat anything.

- I. Wing less than 19 inches.
 II. Wing over 21 inches.
 A. Primaries black, rest of plumage white.
 B. Plumage brownish gray.

206. Little Brown Crane.
 205. Whooping Crane.
 207. Sandhill Crane.

ORDER 10. HERODIONES. Bitterns, Herons, etc.

Family 1. ARDEIDAE. Bitterns, Herons, Egrets.

All members of this family have long, sharply pointed bills, long legs and neck, and feed standing 'knee' deep in the water. The sharp bill is a formidable weapon of defense as well as offense, while the long neck enables them to dart that weapon out with a lightning stroke. They feed upon frogs and insects, and occasionally fish which find their way into the shallow water.

- I. Wing less than 6.00.
 A. Under parts buffy.
 B. Under parts rufous-chestnut.
 II. Wing about 7.25.
 III. Wing 9 to 11 inches.
 A. General plumage tawny or umber-brown, everywhere streaked with darker.
 B. General plumage slaty-blue.
 C. General plumage white.
 1. Tips of primaries blue.
 2. Tips of primaries not blue.
 IV. Wing over 11 inches.
 A. Wing about 12 inches.
 1. Crown black, not streaked.
 2. Crown streaked.
 B. Wing over 13 inches.
 1. Pure white.
 2. Upper parts bluish.

209. Least Bittern.
 (*Hypothetical*) Cory Least Bittern.
 214. Green Heron.
 208. American Bittern.
 213. Little Blue Heron.
 213. Little Blue Heron (*im.*)
 212. Snowy Heron.
 215. Black-crowned Night Heron.
 215. Black-crowned Night Heron.
 (*im.*)
 211. American Egret.
 210. Great Blue Heron.

Family 2. CICONIIDAE. Wood Ibis.

The Wood Ibis, the only member of this group found in Ohio, is of more southern distribution, but sometimes wanders to the state. It resembles the Herons in habits.

216. Wood Ibis.

Family 3. IBIDIDAE. Ibises.

The Glossy Ibis is accidental in Ohio, its home being well south. In its wanderings it rarely enters regions of our latitude.

217. Glossy Ibis.

ORDER 11. LIMICOLÆ. Snipes, Sandpipers, Plovers, etc.

Family 1. CHARADRIIDAE. Plovers.

The Plovers are short-billed shore birds, and therefore get their food by gleaning from the surface of the ground on the uplands or along shore. They have whistled calls which are somewhat musical.

- I. Toes 4.
 II. Toes 3.
 A. Back streaked or spotted.
 B. Back neither streaked nor spotted.
 1. Rump rufous.
 2. Rump not rufous.

218. Black-bellied Plover.
 219. American Golden Plover.
 220. Killdeer.

- a. Toes webbed at the base.
- b. Toes not webbed at the base.
 - (1). A continuous black breast band.
 - (2). Black band interrupted on center of breast.

- 221. Semipalmated Plover.
- 223. Belted Piping Plover.
- 222. Piping Plover.

Family 2. APHRIZIDAE. Turnstone.

The single species found in Ohio is found along the shore of Lake Erie during the migrations. There it is found gleaning like the Killdeer at the water's edge or among the higher drift.

- 224. Turnstone.

Family 3. SCOLOPACIDAE. Snipes, Sandpipers, Curlews, etc.

The birds comprising this group are for the most part inhabitants of wet places, probing in the soft mud for worms and insects. Some species can move the tip of the bill independently of the rest of the bill, and so are enabled to grasp the morsel of food under ground, or form a hook to draw it out. Some are found on the uplands gleaning from the surface much like the Plovers. During the nesting season many have what might be called songs if these birds belonged to the singers. Many also have whistled calls during the migrations. All nest on the ground.

I. Bill over 2 inches long.

- A. Bill over 5 inches long.
- B. Bill under 4.50.
 - 1. Bill curved downward.
 - a. Bill about 3.75.
 - b. Bill about 2.40.
 - 2. Bill straight or curved upward.
 - a. Bill over 3.00.
 - (1). Upper tail-coverts white.
 - (2). Upper tail-coverts not white.
 - b. Bill under 3.00.
 - (1). Bill widened and pitted at the tip.
 - (a). Wing about 5.75.
 - (b). Wing about 6.00.
 - (2). Bill not widened at the tip.
 - (a). Wing over 7.50.
 - (a¹). Axillars barred.
 - (b¹). Axillars not barred.
 - (b). Wing under 6.00.
 - (a¹). Axillars barred.
 - (b¹). Axillars not barred.

- 249. Long-billed Curlew.
- 250. Hudsonian Curlew.
- 251. Eskimo Curlew.
- 240. Hudsonian Godwit.
- 239. Marbled Godwit.
- 227. Dowitcher.
- 228. Long-billed Dowitcher.
- 241. Greater Yellow-legs.
- 244. Willet.
- 226. Wilson Snipe.
- 225. American Woodcock.

II. Bill under 2.00.

- A. Toes 3.
- B. Toes 4.
 - 1. Tail barred.
 - a. Wing under 4.50.
 - b. Wing over 5.00.
 - (1). Wing over 6.00.
 - (a). Tail feathers showing much white.
 - (b). Tail feathers without white.
 - (2). Wing under 5.50.
 - (a). Upper parts spotted with white.
 - (b). Upper parts not spotted with white.
 - 2. Tail not barred.
 - a. Bill over 1.10.
 - (1). Wing over 6.50.
 - (2). Wing about 6.00.
 - (3). Wing under 5.75.
 - (a). Tarsus over 1.50.
 - (b). Tarsus under 1.50.
 - (a¹). With white in the wing.
 - (b¹). Without white in the wing.
 - (c¹). Without white in wing, belly with black.
 - b. Bill under 1.00.
 - (1). Wing over 4.50.
 - (a). Upper tail-coverts white.
 - (b). Upper tail-coverts fuscous.
 - (2). Wing under 4.00.
 - (a). Toes partly webbed.
 - (b). Toes not webbed.

- 238. Sanderling.
- 248. Spotted Sandpiper.
- 242. Yellow-legs.
- 246. Barttramian Sandpiper.
- 243. Solitary Sandpiper.
- 247. Buff-breasted Sandpiper.
- 230. Knot.
- 245. Ruff.
- 229. Stilt Sandpiper.
- 231. Purple Sandpiper.
- 232. Pectoral Sandpiper.
- 236. Red-backed Sandpiper.
- 233. White-rumped Sandpiper.
- 234. Baird Sandpiper.
- 237. Semipalmated Sandpiper.
- 235. Least Sandpiper.

Family 4. RECURVIROSTRIDAE. Avocets and Stilts.

These long slender billed birds, with the bill turning upward, are striking in appearance. Their long legs make fine waders of them, while the long bill enables them to reach the bottom of the shallow water without the necessity of immersing the whole head and neck.

- | | |
|----------------------|---------------------------------|
| I. Bill over 3.25. | 252. American Avocet. |
| II. Bill under 2.50. | 253. Black-necked Stilt. |

Family 5. PHALAROPODIDAE. Phalaropes.

The Phalaropes are essentially sea birds, but they pass to and fro across the country, sometimes resting on the smaller waters. They swim readily. The female is the larger and brighter colored, contrary to the general rule among birds.

- | | |
|-----------------------------|---------------------------------|
| I. Bill over 1 inch long. | 256. Wilson Phalarope. |
| II. Bill under 1 inch long. | |
| A. Wing under 5.00. | 255. Northern Phalarope. |
| B. Wing over 5.00. | 254. Red Phalarope. |

ORDER 12. LONGIPENNES. Gulls, Terns, Jaegers.

Family 1. STERCORARIIDAE. Jaegers.

The Jaegers are the hawks among the Longipennes. They combine great powers of flight with the nature of a bully, stealing the fish from Gulls and Terns in preference to catching it themselves. They reach Ohio only during the migrations or as wanderers from other localities.

- | | |
|---|-------------------------------|
| I. Length over 20 inches, middle tail feathers not pointed. | 257. Pomarine Jaeger. |
| II. Length under 18 inches, middle tail feathers pointed. | 258. Parasitic Jaeger. |

Family 2. LARIDAE. Gulls and Terns.

The members of this family agree in having long, pointed wings, and a bill without a hook at its tip. The subfamilies differ enough in form and habits to deserve separate treatment.

Subfamily 1. LARINAE. Gulls.

The Gulls comprise the larger members of the family Laridae. They differ from the Terns in having a square tail, a bill slightly bent down, and the head either wholly black or without black on the crown. They fly with the bill pointing forward in a line with the body. They snatch fish or refuse from the surface of the water, often alighting upon the water, but do not dive for fish, as the Terns do.

- | | |
|--|--------------------------------------|
| I. Length over 23 inches. | |
| A. Back dark slaty. | 261. Great Black-backed Gull. |
| B. Back pearl-gray. | |
| 1. Black on outer primaries. | 262. Herring Gull. |
| 2. No black on the primaries. | 260. Iceland Gull. |
| C. Back usually grayish or brownish, usually marked with darker. | |
| 1. Tail dark. | |
| a. Wing over 18 inches. | 261. Great Black-backed Gull. |
| b. Wing under 18 inches. | 262. Herring Gull. |
| 2. Tail light. | 260. Iceland Gull. |
| II. Length under 20 inches. | |
| A. Tail pure white. | |
| 1. Head and neck slaty-black. | |
| a. Outer primary mostly black. | 265. Sabine Gull. |
| b. Outer primary mostly white. | 264. Bonaparte Gull. |
| 2. Head and neck white, or washed with pearl gray. | 259. Kittiwake. |
| 3. Bill crossed by a dark band. | 263. Ring-billed Gull. |
| B. Tail marked with black. | |
| 1. Hind toe without a nail. | 259. Kittiwake. |
| 2. Hind toe with a nail. | 264. Bonaparte Gull. |

Subfamily 2. STERNINAE. Terns.

All of the Terns found in Ohio have deeply forked tails. They fly with the bill pointing downward instead of forward, and dive from over the water for fish which may be seen under the surface. The bill is almost straight and sharply pointed. Most of our species have the top of the head and neck jet black in full plumage. They usually nest in colonies on the sand and gravel of the beach, or in the marshes upon floating decaying vegetation.

- I. Length over 20 inches. **267. Caspian Tern.**
- II. Length under 16 inches.
- A. Length over 13 inches.
1. Whole top of head black.
 - a. Bill wholly or mostly black.
 - (1). Outer tail feathers pure white. **270. Roseate Tern.**
 - (2). Inner web of outer tail feather gray. **268. Forster Tern.**
 - (3). Tail forked for less than 2 inches. **266. Gull-billed Tern.**
 - b. Bill not black.
 - (1). Under parts pure white. **268. Forster Tern.**
 - (2). Under parts grayish. **269. Common Tern.**
 2. Forehead or crown white or gray.
 - a. Whole outer tail feather white. **270. Roseate Tern.**
 - b. Inner web of outer tail feather not white. **268. Forster Tern.**
 - c. Outer web of outer tail feathers darker than inner web. **269. Common Tern.**
- B. Length under 11 inches.
1. Under parts white. **271. Least Tern.**
 2. Under parts black. **272. Black Tern.**

ORDER 13. ANSERES. Ducks, Geese, Swans.

Subfamily 1. Merginae. Mergansers.

To this group belong the "fish ducks" par excellence. They feed largely upon fish which they are enabled to catch with their toothed, hawk-like bills. They dive readily and for considerable distances, pursuing the fish under water. They are found about streams and considerable bodies of water, some individuals of the larger species remaining in the state during the winter where open waters afford good feeding places.

- I. Length under 18 inches. A conspicuous hood. **309. Hooded Merganser.**
- II. Length over 21 inches.
- A. Head and throat black.
1. Under parts white, tinged with salmon. **307. American Merganser.**
 2. Breast brownish, heavily streaked with black. **308. Red-breasted Merganser.**
- B. Head and sides of neck rufous-brown. **307. American Merganser.**
- C. Head and sides of neck grayish-brown, washed with rufous. **308. Red-breasted Merganser.**

Subfamily 2. Anatinae. River and Pond Ducks.

The members of this group may be known at once by the absence of a flap or lobe on the hind toe. They feed in shallow water, immersing only part of the body, and hence are called 'Tippers'. A feeding flock with heads down and tails in the air looks like the scoring end of a bowling alley. They take wing readily from the water.

- I. Length under 17.00 inches.
- A. Under parts chestnut-rufous. **289. Cinnamon Teal.**
- B. Under parts not chestnut-rufous.
1. Lesser wing-coverts blue. **288. Blue-winged Teal.**
 2. Lesser wing-coverts gray. **287. Green-winged Teal.**
- II. Length over 18.00 inches.
- A. Belly not conspicuously streaked or spotted.
1. Head shining dark green. **281. Mallard.**
 2. Center of head white or whitish. **286. Baldpate.**
 3. Crown greenish, throat white. **292. Wood Duck.**
 4. Crown buffy, throat blackish. **285. Widgeon.**
 5. Crown dark olive-brown. **291. Pintail.**
 6. Crown finely streaked with black.
 - a. Wing-coverts with chestnut. **284. Gadwall.**
 - b. Wing coverts without chestnut.
 - (1). Sides barred with black. **291. Pintail.**
 - (2). Sides plain brown. **286. Baldpate.**
 - (3). Sides spotted with black. **284. Gadwall.**
- B. Belly conspicuously marked, or chestnut.
1. Wing-coverts with white.
 - a. Lesser wing-coverts bluish. **290. Shoveller.**
 - b. Lesser wing-coverts brownish-gray.

- (1). Speculum purple.
- (2). Speculum gray or white.
- 2. Wing-coverts without white.
 - a. Legs yellowish, smaller.
 - b. Legs reddish, larger.
- 3. Under parts chestnut.

281. Mallard.
284. Gadwall.

282. Black Duck.
283. Red-legged Black Duck.
284. Gadwall.

Subfamily 3. FULIGULINAE. Sea and Bay Ducks.

This group of ducks inhabits the deeper waters. They dive to a considerable depth, often, for fish. Some are almost as expert divers as the famed grebes and loons. They feed upon almost any aquatic animals or vegetables. Some are considered a table delicacy, while others are of a decidedly fishy flavor.

- I. Whole head and neck black.
 - A. Plumage entirely black.
 - B. Plumage not entirely black.
 - 1. Bill with a bluish band near its tip.
 - 2. Bill plain bluish.
 - a. Back of head with purplish reflections.
 - b. Back of head with greenish reflections.

304. American Scoter.
297. Ring-necked Duck.
296. Lesser Scaup Duck.
295. American Scaup Duck.

- II. Head and neck rufous or rufous-brown.
 - A. Head and neck rufous.
 - 1. Bill under 2.00.
 - 2. Bill over 2.00.
 - B. Head and neck rufous-brown.
 - 1. Wing with a white patch.
 - a. Region at base of bill not white.
 - b. Region at base of bill white.
 - (1). Wing over 8.25.
 - (2). Wing under 8.25.
 - 2. No white in wing.
 - a. Bill over 2.00.
 - b. Bill under 2.00.
 - (1). Wing over 8.00.
 - (2). Wing under 8.00.
 - c. Middle tail feathers long and slender.

293. Redhead.
294. Canvasback.
298 & 299. American and Barrows Golden-eyes.
295. American Scaup Duck.
296. Lesser Scaup Duck.
294. Canvasback.
293. Redhead.
297. Ring-necked Duck.
301. Old-squaw.

- III. Head and throat, steel blue or steel green.
 - A. Steel green.
 - B. Steel blue.

298. American Golden eye.
299. Barrows Golden-eye.

- IV. Head and neck otherwise.
 - A. Wing over 10.00.
 - 1. Bill over 2.00.
 - 2. Bill under 2.00.
 - a. Speculum white.
 - b. Speculum not white.
 - B. Wing under 7.00.
 - 1. Tail feathers normal.
 - 2. Tail feathers stiff and slender.

302. American Eider.
305. White-winged Scoter.
303. King Eider.
300. Bufflehead.
306. Ruddy Duck.

Subfamily 4. ANSERINAE. Geese.

Like the river and pond ducks, the geese feed in the water by tipping instead of diving, for which their large bodies are not adapted. They are vegetarians, and forage a great deal in fields, picking up scattered grain. Rarely large flocks may damage newly sown or newly sprouting fields of grain. They like the tender shoots of grass and grains.

- I. Head black, throat white.
 - A. Length 35 or more.
 - B. Length 34 or less.
- II. Head black, throat black.
 - A. With less white below.
 - B. With more white below.
- III. Whole head or forehead white.
 - A. Forehead white.

279. Canada Goose.
280. Hutchins Goose.

(Hypothetical) Brant.
(Hypothetical) White-bellied Brant.

278. American White-fronted Goose.

xliv.

B. Whole head and neck white, grayish or rusty.

1. Primaries black, rest of plumage white.

a. Wing more than 17.00.

b. Wing 17.00 or less.

2. Back grayish brown.

a. Wings without conspicuous white.

b. Wings with conspicuous white.

(1). Wing more than 17.00.

(2). Wing 17.00 or less.

IV. Head and neck brown, bill yellow.

A. Rump fuscous.

B. Rump gray.

276. Greater Snow Goose.

275. Lesser Snow Goose.

277. Blue Goose.

276. Greater Snow Goose.

275. Lesser Snow Goose.

278. American White-fronted Goose.

277. Blue Goose. (im.)

Subfamily 5. CYGNINAE. Swans.

The general form of the swans is too well known to call for comment here. The long neck enables them to feed upon the bottom of shallow pools without tipping up in the undignified manner of the geese. They migrate in flocks much after the manner of the geese, and seem to feed on both vegetable matter and aquatic insects.

273. Whistling Swan.

274. Trumpeter Swan.

ORDER 14. STEGANOPODES. Pelicans, Cormorants, etc.

Family 1. FREGATIDAE. Man-o'-War Birds.

The single member of this family which has been found in Ohio must be regarded as an accidental visitor, not likely to be found again.

312. Man-o'-War Bird.

Family 2. PELECANIDAE. Pelicans.

The American White Pelican is the only representative of this family in Ohio. It may be known at once by its great size, white plumage and enormous pouch hanging from the lower side of the bill. It is found only about considerable bodies of water, or the vicinity of them, where it must feed.

311. American White Pelican.

Family 3. PHALACROCORACIDAE. Cormorants.

There appears to be but a single species of this family in the Ohio list of birds. Examination of the only specimen of Cormorant taken in the state, and supposed to be the Florida form, fails to verify the supposition that the birds found breeding at the St. Mary's Reservoir many years ago were form *floridanus*. The Cormorants look like geese while flying, but may be distinguished from them by the hoarse croak. The Ohio form is *Phalacrocorax dilophus*.

310. Double-crested Cormorant.

ORDER 16. PYGPODES. Diving Birds.

Family 1. PODICIPIDAE. Grebes.

The Grebes will seldom be seen anywhere except in the water, where they are perfectly at home. They may be readily distinguished from all other swimming birds by the absence of a tail. When suspicious of danger they swim with most or all of the body beneath the water, and if hard pressed will protrude only the bill far enough to breathe. Witch-like escapes may often be attributed to this power.

I. Large, over 18 inches long.

314. Holboell Grebe.

II. Smaller, less than 16 inches long.

A. Bill slender, less than a third as deep at base as long.

315. Horned Grebe.

B. Bill about half as deep as base as long.

316. Pied-billed Grebe.

Family 2. GAVIIDAE. Loons.

All of the Loons which visit Ohio are large birds, seldom visiting small bodies of water in their migrations. They resemble the Grebes in habits, eating much the same aquatic life. Their weird calls, like the laughter of a maniac, have given them their name. Their quickness in diving enabled them to escape the shot from an old flint-lock or percussion cap gun, but modern smokeless powder often proves their undoing.

- I. Throat gray, neck chestnut-brown.
- II. Throat black.
 - A. Head black, a white throat-band.
 - B. Head ashy.
- III. Throat whitish.
 - A. Back spotted with white.
 - B. Back margined with grayish.
 - 1. Wing over 13 inches long.
 - 2. Wing under 13 inches long.

319. Red-throated Loon.

317. Loon.

318. Black-throated Loon.

319. Red-throated Loon.

317. Loon.

318. Black-throated Loon.

Family 3. ALCIDAE. Murres, Auks, Puffins.

One member of this family has been found on Lake Erie after a severe northeast storm. It is not likely that others will be found there again under normal conditions. Birds comprising this family are ocean birds, and being short winged, do not wander inland voluntarily.

320. Brunnich Murre.

TABLE OF COMPARISONS.

	INCHES.
Pygmy size	up to 5.00
Warbler size	5.00- 6.00
Sparrow size	6.00- 7.50
Chewink size	7.50- 9.00
Robin size	9.00-12.00
(Kingfisher size	12.00-14.00)
Little Hawk size	12.00-16.00
Crow size	16.00-22.00
Brant size	22.00-30.00
Eagle size	30.00 and upwards

Besides these, numerous comparisons have been made, Killdeer size, Mallard size, etc., which if not immediately explainable by the context may be determined by reference to the descriptions of these birds.

Measurements are given in inches and hundredths and in millimeters, the latter enclosed in parenthesis.

THE BIRDS OF OHIO.

No. 1.

NORTHERN RAVEN.

A. O. U. No. 486a. *Corvus corax principalis* Ridgw.

Description.—Color, uniform lustrous black; plumage, especially on breast, scapulars and back, showing steel-blue or purplish iridescence; feathers of the throat long, narrow and pointed. Length about two feet, averaging over rather than under; wing 17.00-18.00 (431.8-457.2); tail 10.00 (254.); bill 3.00 (76.2), depth of bill at nostril 1.00 (25.4).

Recognition Marks.—Large size,—about twice as large as a Crow; uniform black coloration; harsh croaking notes.

Nest, a large but compact mass of sticks, lined with grass, wool, etc., placed high in trees or upon inaccessible cliffs. *Eggs,* 2-8, usually 5, pale bluish green or olive, spotted and dashed with greenish brown and obscure lilac or purplish. Av. size, 1.80-2.07 x 1.30-1.40 (45.7-52.6 x 33.-35.6).

General Range.—Northern North America, south to British Columbia, northern Michigan, New Brunswick, Maine, New Jersey, North Carolina, etc.

Range in Ohio.—Abundant in Wilson's time along the Lake Erie shore. Now found only in Fulton County (Jones).

ALTHO so little known to most of us, it seems altogether proper to begin our consideration of the birds of Ohio with one which Professor Alfred Newton calls "the largest of the Birds of the Order *Passeres*, and probably the most highly developed of all Birds." The Raven, too, has been until lately, and from time immemorial, one of the most familiar objects within the ken of man. The Aryan herdsman complained to his fellow of the bird's depredations, while the Dorian fishermen of a later day regaled each other with stories of his sagacity already centuries old. *Korax*, the Greek called him, in imitation of his hoarse cry, *Craack, Craack*, while the Sanscrit name *Karava* reveals the ancient root from which have sprung both Crow and Raven.

Quick-sighted, cunning and audacious, this bird of sinister appearance has been invested by peoples of all ages with a mysterious and semi-sacred character. His ominous croakings were thought to have prophetic import, while his preternatural shrewdness has made him with many a symbol of divine knowledge. A less reverent age has doomed this ancient marauder to an over-hasty destruction. While it is true that he has robbed birds' nests, fallen upon wounded sheep, and taken toll of the tender lambs since the world began, his services as scavenger, insect-eater, and mole-destroyer have been infinitely greater, and for sentimental reasons, if for no other, the world could ill afford to part with the bird whose sable thread has followed all the windings of human history.

The Raven has more dignity, and as a species, less flexibility than the Crow. As a result, altho it is exceedingly wary, the relentless warfare of the pioneers has thrust it almost entirely out of bounds, so far as the Eastern United States is concerned. While Wilson reported it as common in the northern part of this state at the beginning of the last century, only stragglers from the far north are noted nowadays,—unless, indeed, it should prove to be found breeding in Fulton County, as has been recently asserted. In this case the bird should receive rigid protection.

With the Raven's habits we cannot largely concern ourselves here. According to Captain Bendire (who observed a closely allied form in the West) "their ordinary call note is a loud *Craack, craack*, varied sometimes by a deep grunting *koerr, koerr*, and again by a clucking, a sort of self-satisfied sound, difficult to reproduce on paper, in fact they utter a variety of notes when at ease and undisturbed, among others a metallic sounding *klunk*, which seems to cost them considerable effort." The Ravens do not associate very intimately with others of their kind, but a pair of them are mated for life. Each spring the birds indulge in amorous antics which are decidedly *infra dig.*, turning somersaults in the air, trying to fly on their backs, etc. Unlike the Crows, these birds repair the same nest year after year, and their local attachments are very strong. In these circumstances, no doubt, is to be found one element of the racial weakness in the presence of oncoming civilization. On the other hand, Ravens attain a great age, specimens having been kept in captivity upwards of a hundred years.



STANDARD PHOTO BY W. W. BENTLEY, CHICAGO
SPECIES ACQUIRED BY THE U. S. NATIONAL MUSEUM

AMERICAN CROW
Corvus americanus
Life-size

No. 2.

AMERICAN CROW.

A. O. U. No. 488. *Corvus americanus* Aud.

Description.—Entire plumage glossy black, for the most part with greenish-blue, steel-blue and purplish reflections; feathers of the neck normal, rounded. Length 17.00-21.00 (431.8-533.4); wing 12.00-14.00 (304.8-355.6); tail 7.00-8.00 (177.8-203.2); bill 1.80-2.05 (45.7-52.1), depth at base .72-.84 (18.3-21.3). Female averages smaller than male.

Nest, a neat hemisphere of sticks lined carefully with bark, roots and trash, and placed 10-90 feet high in trees. *Eggs*, 4-7, usually 5, same coloring as Raven's. Occasionally fine markings produce a uniform olive-green effect. Av. size, 1.60 x 1.20 (40.6 x 30.5).

General Range.—North America at large, except Arctic regions and Florida. In the latter region replaced by *C. a. pascuus*. Of local distribution in the West.

Range in Ohio.—Of general occurrence. Retires irregularly from the northern portion of the state in winter.



Photo by the Author.

GATHERING STORM AT THE CROW WOODS.

CHESTER HEIGHTS (NEAR COLUMBUS) WAS A WELL KNOWN CROW NESTING RESORT JUST PREVIOUS TO ITS PRESENT OCCUPATION BY STYLISH RESIDENCES.

THE Crow's year properly begins with the disbanding of the winter roost in late February or early March. When the first south wind bursts into the chilly atelier of spring, siezes a brush and paints the eastern sky with somber blues and piled up grays, his picture is incomplete until there is stretched across the canvas a long black line of the hurrying birds. Crows

are the busybodies of early springtime. Once arrived in their familiar haunts, they peer into last year's birds' nests, inspect fence-rows, discuss the changes wrought by the wood chopper, hold noisy caucuses in the beech woods, or gather fagots for the early nesting, and their clamor becomes an integral part of the season's impress.

The dusky bird is a notorious mischief-maker, but he is not quite so black as he has been painted. More than any other bird he has successfully matched his wits against those of man, and his frequent easy victories and consequent boastings are responsible in large measure for the unsavory reputation in which he is held. It is a familiar adage in ebony circles that the proper study of Crow-kind is man, and so well has he pursued this study that he may fairly be said to hold his own in spite of fierce and ingenious persecution. He rejoices in the name of outlaw, and ages of ill treatment have only served to sharpen his wits and intensify his cunning.

That the warfare waged against him is largely unnecessary and partly unjust has been pretty clearly proven of late by the scientists who have investigated the Crow's food habits. It is true that he destroys large numbers of eggs and nestlings, and that, if allowed to, he will occasionally invade the poultry yard,—and for such conduct there can be no apology. It is true also that some damage is inflicted upon corn in the roasting-ear stage, and that corn left out through the winter constitutes a staple article of Crow diet. But it must be remembered that birds and eggs form only about one-half of one per cent of their fare through the year, and that in the case of corn, they perform conspicuous services in raising the crop. Professor A. W. Butler, of Indiana, who has given the matter special attention, says: "Most persons are disposed to note losses oftener and remember them longer than benefits. It (the Crow) is found to eat many insects. May beetles, June bugs, and noxious beetles, and quantities of them, are fed to their young. Grasshoppers are eaten all summer, but form the bulk of their food in August. Besides these, many bugs, caterpillars, cut-worms, spiders, etc., are eaten. . . . It is thought in the more thickly settled portions of the country that the Crow does more good than harm, and if precautions are taken to protect the nests and young poultry and corn, its damage would not be of any considerable consequence."

There is no reasonable question that the Crow is the smartest bird within our borders. He is such a delightful rascal that he makes an interesting pet, as every wide-awake farmer's boy can testify. If taken from the nest and well treated, a young Crow can be given such a large measure of freedom as to fully justify the experiment from a humanitarian standpoint. Altho scattered anecdotes of Crow ways fill the pages of popular literature, it is matter of regret that a complete treatise on the psychology of the Crow has never been produced. Such a work would not only afford entertaining reading, but

would contribute to a sympathetic understanding of the black brother who is only less intelligent than we.

Every one knows that Crows talk. Their cry is usually represented by a single syllable, *caw*, but it is capable of many and important modifications. For instance, *keraw*, *keraw*, comes from some irritated and apprehensive female who is trying to smuggle a stick into the grove. *Kaw-k-kaw-k-kaw-k*, proclaims sudden danger, and puts the flock into instant commotion; while *caw-aw*, *caw-aw*, *caw-aw*, reassures them again. Once, in winter, when the bird-man was screech-owling for sport, a company of Crows settled in the tops of neighboring trees, and earnestly discussed the probable nature of the object half-concealed under a camera cloth. Finally they gave it up and withdrew, as I supposed. It seems that one old fellow was not satisfied, for as I ventured at last to shift ever so little from my strained position, he set up a derisive "*Ca-a-a-w*," from a branch over my head—as who should say, "Aw, ye can't fool me. Y're just a *ma-a-a-n*"—and flapped away in disgust.

The final Crow philology also is still unwritten. The Corvine tongue would be worthy the attention of Professor Garner were it not for the fact that expletives preponderate.

Space fails to describe the elaborate structure of Crow society, to tell of the military and pedagogical systems which they enforce, of the courts of justice and penal institutions which they maintain, of the vigilantes who visit vengeance upon evil-minded owls and other offenders, or even of the games which they play,—tag, hide-and-seek, blind-man's buff and pull-away,—but a word must be spared for that most serious business of life, nesting.

A typical Crow's nest is a very substantial affair, as our illustration shows. Upon a basis of coarse sticks a mat of dried leaves, grasses, bark-strips and dirt, or mud, is impressed. The deep, rounded bowl thus formed is carefully lined with strips of grape-vine bark, twine, horse-hair, wool and



Taken near Columbus

Photo. by the Author.

CROW'S NEST IN BEECH TREE.

the like. When completed, the nest is about seven inches across and three deep inside. The expression "crow's nest," as used to indicate disarray, really arises from the consideration of *old* nests. Since the birds resort to the same locality year after year, but never use an old nest, the neighboring structures of successive years come to represent every stage of dilapidation.

Normally Crows nest at middle heights in convenient trees in small woodlands, but under the stress of persecution they rise to greater heights and choose inaccessible trees, such as shell-bark hickories or giant elms. I once located a nest in the northern part of the state at a height of a hundred and ten feet in an elm tree five feet in diameter. Since the nest did *not* belong to a Swallow-tailed Kite, the eggs were not disturbed. On the other hand, the birds sometimes throw themselves on our mercy and build within fifteen or twenty feet of the ground, and in very climbable trees.

The eggs vary interminably in coloration, but the type is strongly marked.



Photo by Griggs & Tyler.
CROW NESTING.

In a recent monograph¹ it was deemed advisable to give a particular description of fifty sets in order to cover the range of variation. Perhaps the most remarkable set that has come to light, at least in Ohio, was one found in the spring of 1892 near Oberlin. The four eggs which comprise the set are entirely unmarked, of a pale blue color, not unlike that of Cooper Hawk's eggs. They were taken by myself at two different times, under circumstances which would seem to preclude the possibility of mistake in identity. A friend from Ontario, Rev. Giles G. Brown, who saw the eggs, assured me that all which he had ever seen near his native home were of the same description.

April is the usual month for nesting, but birds are sometimes seen gathering nest materials during the first week in March, and incubation is often under way before the end of the month. Only one brood is provided for in a season unless some accident befalls the first, in which case another nest is more hastily prepared at some distance from the scene of former disaster. Deposition of

¹ The American Crow, by Frank L. Burns, Bulletin No. 5 of the Wilson Ornithological Chapter.

eggs may occur on successive or alternate days and the period of incubation is variously estimated at from fourteen to eighteen days.

It has been supposed that the Crow retires from our state except in very mild winters. My impression is that this is not usually the case, but that the birds congregate in vast winter companies or "roosts" of local restriction, and chiefly within our borders. Ten such roosts have been reported by Professor Butler from the neighboring state of Indiana, and it is improbable that the habit of our birds materially differs. I have information of five such roosts (including one across the Ohio River in West Virginia, opposite Gallia County, and which is largely patronized by Ohio birds), noted at different times, but have no definite assurance of their permanency. A complete record of the winter distribution of the Crow in our state is very much to be desired.

Concerning the relative abundance of Crows, as compared with former times, little can be positively determined. The continued denudation of our timber throws many species of birds into false prominence, which may be altogether misleading. Dr. Wheaton reported a notable decrease in the vicinity of Columbus twenty years ago. They are abundant now. The species is subject to an epidemic called "roup," which assails the birds in their winter quarters and materially reduces their numbers. This disease affects the eyes as well as the pharynx and nasal passages, and has given rise to the belief that the birds freeze their eyes at night in cold weather,—an absurd supposition, since the head is securely tucked under the wing during the hours of slumber.



Photo by J. B. Barber.

No. 3.

BLUE JAY.

A. O. U. No. 477. *Cyanocitta cristata* (Linn.).

Description.—Above, grayish-blue with a purple cast; below, smoky or sordid gray; a black collar continues up the sides of the neck and underlies the conspicuous blue-gray crest; frontlet and lores black; throat and sides of head gray with a delicate purplish suffusion; wings and tail brighter blue, finely banded with black; greater coverts and secondaries of wing, and tail feathers, except middle pair, broadly tipped with white; bill and feet black. Length 11.00-12.50 (279.4-317.5); wing 5.00-6.00 (127.-152.4); tail 5.00-6.00 (127.-152.4); bill 1.00-1.25 (25.4-31.8); tarsus 1.00-1.10 (25.4-27.9). A typical male in the O. S. U. collection measures: wing 5.25 (133.3); tail 5.40 (137.2); bill 1.03 (26.2); tarsus 1.09 (27.7). The female averages smaller than the male and is not so brightly colored.

Recognition Marks.—Jay size; bright blue coloring. This is one of four or five species which everybody knows.

Nest, a compact structure of sticks and roots, lined, almost invariably, with fine brown rootlets, and placed in a crotch or branch of a tree, usually near the trunk, ten to thirty feet up. *Eggs*, 3-6, bluish-green, olive-green, ashy-brown, or bistre, dotted and blotched with olive and cinnamon-brown. Av. size, 1.10 x .85 (27.9 x 21.6).

General Range.—Eastern North America to the Plains, and from the Fur Countries south to Florida and Eastern Texas.

Range in Ohio.—Of universal distribution. Resident; common in middle and northern portions, but less frequent southerly.

"BEAUTY and the Beast" find joint representation in this most familiar inhabitant of village and woodland. Beautiful he undoubtedly is in his panoply of blue and white, and we are moved to an admiration which is never quite dispelled; but the heart of him is deceitful and cruel beyond belief. The Blue Jay is the outlaw among birds, no romantic Musolino, beloved by the masses and hated by the few, but a plain bad bird, whose only virtues are such as to merit slight appreciation in the bird world proper. Cunning, mischievous, thieving, cruel, noisy, boastful, quarrelsome, treacherous, wanton—one is tempted to empty the vials of opprobrious epithets upon his devoted head—but the vision of his saucy beauty and the memory of his ringing *delary, delary*, stays, as it always will, the hand of justice.

The trouble with Blue Jay is that we all fall in love with him in the winter when he is being good, but lose sight of him in the spring and summer when he is practicing his villainies. In the winter time the flashing blue of the Jay's plumage, most resplendent then, is a welcome sight among the barren hedge-rows or about the chilly outbuildings, which he explores for stray bits of honest food: or a roistering company of them sweep through the grove and set it ring-

ing with shrill laughter, mocking the frost and bidding defiance to the north wind, until the heart leaps in answer. In early spring, too, the Blue Jays are in highest spirits. They gather about some mock-modest raconteur in the tree-tops, and whisper and snicker in subdued fashion until the point of the story is reached, when they explode with sudden mirth and fall out of the tree shrieking with laughter. If you appear on the scene just then, they proclaim your advance to all creation by shrill cries of *Jay, Jay*, and with an arrogance of

virtue which makes you question your own motives.

But early in April the Blue Jay becomes strangely silent. The nesting season is on, and the bird has good reason to keep the matter quiet. In orchard trees or front-yard evergreens, but oftener in the depth of the forest, the wily birds steal their nests. Not a sound is made while the sticks are laid and the rootlets gathered. No whistle or call betrays the secret of the spotted eggs, and people begin to wonder what has become of the Blue Jays. Meanwhile the Jays are beginning to feast on strange sweets. Many a punctured egg of Sparrow, Vireo, or Robin bears witness to the stealthy visit or open brigandage of these marauders.



Taken near Obolton.

Photo by the Author.

BLUE JAY ON NEST.

NEST PLACED 25 FEET UP AGAINST TRUNK OF FOREST TREE.

When their young are hatched, the pillage and carnage increases fourfold. Every discoverable nest, not successfully defended by its owner, is laid under tribute to provide eggs or tender young for the baby monsters at home. Altho so bloodthirsty, the treacherous blue-coat is not especially brave, and when set upon by the outraged parents, he (or she) usually beats a hasty retreat, screaming at a fearful rate. Even the Robin must guard her treasures with the greatest diligence or this crafty pilferer will desolate her home. The Blue Jays are not over careful either, and the appearance of one in

the Robin tree is the signal for a fight, which is but one of millions in the process of a feud already centuries old.

In view of Blue Jay's sins, it affords a legitimate satisfaction to recall a sight which met my gaze early one morning in May,—a Crow robbing a Blue Jay's nest. Four eggs—one, two, three, four—were extracted by the relentless claw of fate, while the agonized, if unrepentant, parents plead for mercy. The Crow is no saint, but he does not cloak his villainies under a garb of blue and white.



Taken near Bucheye Lake. Photo by the Author.

NEST AND EGGS OF BLUE JAY
FIFTEEN FEET HIGH IN SWAMP WILLOW.

For sheer naughtiness, too, commend us to the pleasant habit which the Blue Jay has of secreting himself in some thicket and imitating the notes of hawks or other birds or beasts of prey. The *ke-ah* note of the Red-shouldered Hawk is a favorite instrument of terror, and the *killy-killy* note of the Sparrow Hawk is no less cleverly handled. Once, in winter, having just heard and seen an authentic Butcher-bird, I hastened over to a copse upon hearing a repetition of the cry. Here I found a Blue Jay holding a company

of Tree Sparrows nearly paralyzed with fright while he produced the well-known clinking and buzzing notes of the Northern Shrike. Is it too much to believe that he chuckled with fiendish glee after this performance?

The notes and cries of this bird are always of interest, and by a little attention one may soon learn to tell from them what kind of mischief is afoot. Pure *jay, jay* is used when alighting or greeting comrades, or in assembling the clan. *Dayick, dayick* is the raucous note of mischief or mere clamor. *Dclary, dclary* is the sound pressed out during those extraordinary springing motions which the bird describes through the whole arc of his physical reach. It seems to be used both to announce a discovery, to summon or warn friends, or as a preparatory flight call. This *dclary* is often preceded by a mellow *toob, toob*, of puzzling origin, and the flight itself is often accompanied by a rich ringing *Che-klung-oo-i*. Besides these, there are, of course, various soliloquizing and conversational notes, and these on occasion may reach the doubtful dignity of song.

If we can say little that is good of the Blue Jay, all must agree that he is an interesting character: and our moral duty toward him and those upon whom he preys will probably be best observed, not by a policy of ruthless extermination, but by keeping the species *within bounds*.



BOBOLINK
Dolichonyx oryzivorus
¾ Längssehen

Illustration von ...
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No. 4.

BOBOLINK.

A. O. U. No. 494. *Dolichonyx oryzivorus* (Linn.).

Synonyms.—SKUNK BLACKBIRD; REED-BIRD; RICE-BIRD; MEADOW-WINK.

Description.—*Adult male, breeding plumage:* Head and below, rich glossy black,—the feathers having at first a buffy edging which wears off as the season advances; a broad nuchal patch of strong buff or cream; scapulars, lower back, rump, and upper tail-coverts pale white; middle back gray; upper back, wings and tail glossy to dead black with various buffy edging; tail-feathers sharply pointed; bill dull black; feet brown. *Adult female:* Ground color of plumage olive-buff,—clearest below, and in median crown, superciliary, and inter-scapular stripes; the remainder black and brownish-fuscous. *Adults in fall, and young:* Like female in spring, but buffier and with less black throughout. Length 7.00-7.50 (177.8-190.5); wing 3.00-4.00 (76.2-101.6); tail 2.75-3.00 (69.8-76.2); bill .55 (14.); tarsus .90-1.00 (22.9-25.4). Female averages a half-inch shorter, with similar proportions.

Recognition Marks.—Chewink size; black, white, and buff plumage of breeding male. The breeding female is a shy and obscurely colored bird, to be recognized by the amateur mainly through the attentions of the male. At other seasons both sexes and all ages may be known by the frequently uttered *dink* cry. In the hand the acute tail-feathers are quite distinctive.

Nest, on the ground in meadows or deserted fields, a slight, grass-lined depression concealed with some art, but not definitely overarched. *Eggs,* 4-7, yellowish clay or stone-gray, heavily spotted and blotched with umber, drab, and even lavender. Av. size, .87 x .63 (22.1 x 16.).

General Range.—"Eastern North America, west to edge of Great Plains, breeding in Northern United States and more southern British Provinces; in winter south to West Indies and South America" (Ridgw.).

Range in Ohio.—"Abundant summer resident in northern, very common spring and fall migrant, less common summer resident and breeding in middle, and migrant only in southern Ohio" (Wheaton).

NEXT after Bluebird, the coming of Bobolink marks the broadest step in that golden stair of springtime, by which we yearly attain the height of ornithological joy. His coming heralds that tidal wave of migration which begins somewhere during the last week in April, and sweeps over us till the middle of May. Without waiting for their more modest mates, the males press northward, hot-winged, to riot for a while over the dank meadows in bachelor companies, and to perfect that marvel of tumultuous song. Oh how they sing! those Bacchanals of springtime. From fence-post or tree-top, or quivering in mid-air, they pour forth such an ecstasy of liquid gurgling notes as must thrill the very clouds. Such exuberance of spirit, such reckless abandon of mirth-compelling joy would cure a sick preacher on blue Monday. As the bird sings he bows and scrapes and pirouettes till, as Wheaton says, "he re-



Photo
by the
Author.

BOBOLINKS.

sembles a French dancing master in uniform, singing, fiddling, dancing, and calling off at the same time."

But when some fine morning about a week later, a shy, plainly attired, brown lady drops from the sky with a soft *dink*, then it is that the passionate soul of the singer is fairly consumed by the inner fires of melody and desire. He dashes like mad after his lady love and pursues her at breakneck speed through the thickets of weeds and about fence-rows until he loses her in the grass. Then he hovers, or rather dances, in the air, over the spot where she vanished, or else retires to a fence-post, hard by, to make frantic protestations of his devotion. *Oh, geezeler, geezeler, gilpity, onkeler, oozeler, oo,* comes from that perfect throat; and

somewhere between two blades of grass the lady is watching him—the sly minx—and chuckling softly to herself.

Once I heard a chorus of bachelors—or was it a musical contest?—where seven birds in the top of a little willow were singing with might and main. The effect of that wild melody of tinkling, palpitating and flute-like notes with its changeful syncopations and melodious discord will not soon be forgotten. It was an all star team of the world's most accomplished mirth makers.

All the world loves a lover, and such ardor as "Robert of Lincoln" displays is not in vain. With a heart completely won the female scrapes a little hollow in the ground amongst the tall grass of a meadow or deserted field. Here upon a slight lining of dried grass, she deposits five or six eggs, clay-colored with amber blotches, wonderfully like the ground. The owner is mistress of the art of concealment, and usually escapes detection even from the most inquisitive. In my experience, the female flushes at long distances, but even when she permits a close approach to the nest she herself skulks a long way before rising. If you care to spend an hour or so hunting for the treasures, the safest way is to mark the spot where the bird rose, and then hunt toward your original position along the line of approach.

During the incubation the male is the same rollicksome fellow that he was during courtship; but he sings faithfully to his sitting mate, and he religiously drives intruders from the critical portion of the field. If several pairs occupy one meadow, as is frequently the case, the males spend a good deal of time trying to compel each other to respect imaginary boundaries.

The moulting of the Bobolink is one of the most interesting phases of

familiar bird life. When the male arrives in the spring he is apt to have some buffy or ashy skirting on his black feathers, but these soon disappear and he stands forth in a perfect livery of black, white and buff. Under the necessity of having to provide for



Taken near Columbia

Photo by the Author.

WHERE BOBOLINKS NEST.

a growing brood, all his gaiety leaves him. He becomes anxious, silent, and careworn. Barely are the youngsters able to shift for themselves, when the father doffs the wedding garments, and puts on a severely plain suit like that of the female. A month or so is spent by both old and young in recruiting strength—a season which is passed for the most part in loose flocks—and then the leisurely journey southward is begun, about the twentieth of August. The sole and characteristic note from this on is a metallic *dink* or *chink*. There is little concert about their southward movement, and the air in our latitude may resound with *dink* cries at any time of night, and often in the daytime, for a month. The birds gather in immense numbers in the reeds of the Chesapeake region, and are slaughtered by thousands for the market, where they are known as "Reed-birds." Later in their retreat they infest the rice-swamps of the Carolinas and Georgia, where they are also killed in great numbers, with perhaps some little show of justice. But surely if our Southern neighbors could realize of how much delicious music they deprive us another year, they would not be so cruel. It is a great pity that the burden of the musician's support does not fall more heavily upon us, for how cheerfully would we bear it!

No. 5.

COWBIRD.

A. O. U. No. 495. *Molothrus ater* (Bodd.).

Synonyms.—Cow BLACKBIRD; CUCKOLD.

Description.—*Adult male*: Head and neck wood-, seal-, or coffee-brown (variable); remaining plumage black with metallic greenish or bluish iridescence. *Female*: Dark grayish brown, showing slight greenish reflections, darkest on wings and tail, lightening on breast and throat. *Young in first plumage*: Like female but lighter below and more or less streaky; above somewhat mottled by buffy edgings of feathers. The young males present a striking appearance when they are assuming the adult black, on the installment plan, by chunks and blotches. Length 7.50-8.00 (190.5-203.2); wing 4.40 (111.8); tail 3.00-3.40 (76.2-86.4); bill .65 (16.5); tarsus .95-1.10 (24.1-27.9). Female, length, wing, and tail one-half inch less.

Recognition Marks.—Chewink size; brown head and black body of male; brown of female.

Nesting.—The Cowbird invariably deposits her eggs in the nests of other birds. *Eggs*, 1 or 2, rarely 3 or 4, with a single hostess, white, often faintly tinged with bluish or greenish, evenly speckled with cinnamon, brown or umber. Av. size, .85 x .65 (21.6 x 16.5), but quite variable.

General Range.—United States from the Atlantic to the Pacific, north into southern British America, south in winter, into Mexico.

Range in Ohio.—Common throughout the state, but less so in heavily timbered regions.

IF it were given us to revise the economy of nature we should certainly place this fellow upon the proscribed list. Judged by every sentiment of justice, human and avian, he is an outlaw, and all other birds at least would thank us if we set a price upon his head. To show how thoroughly accepted the opinion is among ornithologists, I cannot do better than quote Mr. Frank M. Chapman: "As an outcast he makes the best of things and gathers about him a band of kindred spirits who know no law. There is an air about the group which tells the critical observer that their deeds are evil. No joyous song swells the throat of the male. His chief contribution to the chorus of springtime is a guttural bubbling produced with apparently nauseous effort. In small flocks they visit both pasture and woodland, and are given to following cattle, clustering about the feet of the herd, presumably to feed on the insects found there. They build no nest, and the females, lacking every moral instinct, leave their companions only long enough to deposit their eggs in the nests of other and smaller birds. I can imagine no sight more strongly suggestive of a thoroughly despicable nature than a female Cowbird sneaking through the trees

and bushes in search of a victim upon whom to shift the duties of motherhood." The egg thus surreptitiously placed in another bird's nest usually hatches two or three days before those of the foster mother, and thus the infant Cowbird gets a start which he is not slow to improve. Its loud clamoring for food often drives the old birds to abandon the task of incubation; or if the other eggs are allowed to remain until hatched, the uncouth stranger manages to usurp attention and food supplies, and not infrequently to override or stifle the other occupants of the nest, so that their dead bodies are removed to make room for his hogship. It is asserted by some that in the absence of the foster parents the young thug forcibly ejects the rightful heirs from the nests, after the fashion of the Old World Cuckoos. This is emphatically denied by others. I never caught the rascal in the act myself, but I once found a nest which contained only a lusty Cowbird, while three proper fledglings clung to the shrubbery below and one lay dead on the ground. The appearances were certainly against *Molothrus ater*.

When the misplaced tenderness of foster parents has done its utmost for the young upstart, he joins himself to some precious crew of his own blood, and the cycle of a changeling is complete.

It would be easy, not to say picturesque, to record a large number of unpleasant epithets which would justly apply to this bird. Sneak, cuckold, ingrate, are only a few examples. If any comfort at all is to be found from his presence in the bird world, it must be similar to that supplied by the presence of evil in the moral world. And some such value we do see through the expedients to which unwilling victims are driven in their efforts to rid themselves of the despised eggs. Perhaps some are able to remove the foreign egg from their nests, altho this is uncertain. Others promptly desert upon the first glimpse of the interloper. But others, more ingenious, are driven to build a second story to their nests and lay another set of eggs on the new floor. Instances are on record where a bird has thus constructed three stories, having been a second time defeated in the effort to avoid unpleasant responsibilities.

While it is true that the smaller birds, notably the Vireos, the Yellow Warbler, and the Field Sparrow, are most frequently imposed upon, such is not always the case. I have found eggs with the Red-winged Blackbird and the Cardinal. In the latter case the close resemblance of the eggs probably accomplished the deception of the owner herself.

The Cowbird's egg is of a peculiarly generalized form and pattern. While there is no evidence that it is varied for adaptation to particular hosts, it is surprising how closely it resembles the speckled eggs of many species, which are among themselves distinctive. Thus it often requires a second glance to distinguish it among the eggs of the Ovenbird, the Towhee, the Yellow-breasted Chat, the Field, Grasshopper, and Song Sparrows, and even the Yellow Warbler.

Much was formerly made, especially in New England, of the mysterious disappearance of the Cowbirds during the months of July and August. At this season they gather in large flocks, but are not much noticed because of their almost unbroken silence. Late in summer they are moulting and keep pretty closely to out-of-the-way woods during this trying time. In northern Ohio I have repeatedly watched companies of from five hundred to two thousand during August, as they passed silently about the tree-tops, or as they settled to their accustomed roosts in a grove. On the other hand I once spent ten days at the same season, along the Muskingum and Ohio Rivers, without seeing a single Cowbird. Yet I have no reason to doubt that there were as many birds in the latter region as in the former.

Specimens shot in August contained, besides small quantities of wheat gleaned from the ground, large numbers of grasshoppers. If one were ever disposed to be lenient toward this repulsive bird, it might well be during the grasshopper season.



THE BIRDS' MIRROR.

THE BIRDS' MIRROR.

Photo by F. W. C. J. R.

No. 6.

YELLOW-HEADED BLACKBIRD.

A. O. U. No. 497. *Xanthocephalus xanthocephalus* (Bonap.)

Description.—*Adult male*: Head, neck all around, and breast orange yellow; lores and feathers skirting eyes and bill, black; a double white patch on folded wing formed by greater and lesser coverts, but interrupted by black of bastard wing; usually a little yellow about vent and on tibiae; the remaining plumage black, dull or subdued, and turning brown on wing-tips and tail. *Female*: Dark brown; line over eye, throat, and upper breast dull yellow. Length 10.00-11.00 (25.4-27.4); wing 5.30-5.00 (13.4-14.2); tail 4.00-4.50 (10.1-11.4); bill .90 (22.); tarsus 1.25 (31.8). Female smaller, length 8.00-9.50 (20.3-24.3).

Recognition Marks.—Robin size; yellow head and breast.

"**Nest**, a light but large, thick-brimmed fabric of dried reeds and grasses slung to growing ones, 5-6 inches in diameter and about as deep. *Eggs*, 3-6, 1.00-1.15 (25.4-29.2) long by 0.75 (19.1) broad; grayish-green, spotted as in *Scolocophagus*, with reddish-brown, not scrawled as in *Agelaius*" (Coues).

General Range.—Western North America from Wisconsin, Illinois and Texas to the Pacific Coast, and from British Columbia and the Saskatchewan River southward to the Valley of Mexico. Accidental in Middle and Atlantic States.

Range in Ohio.—Of rare and casual occurrence only.

THIS Blackbird is essentially a bird of the Prairies, and it is eminently fitted for obtaining its living on the ground, since its legs and feet are strongly developed as if by and for scratching. Large numbers spend the winter sociably in the tule swamps of Texas and California, breaking up into smaller companies after the migration has been accomplished, and distributing themselves among the inland marshes of the Great Plains, and locally throughout the West, where they breed much after the fashion of Redwings. The species is of a rather roving disposition, one specimen having been taken in Greenland in 1820. Small bunches have several times been recognized on the wing by competent observers here in Ohio, and Wheaton cites the instance of a pair being seen in a low meadow near Groveport, in Franklin County, where it was thought to have bred, in the summer of 1873.

No. 7.

RED-WINGED BLACKBIRD.

A. O. U. No. 498. *Agelaius phœniceus* (Linn.).

Synonyms.—MARSH BLACKBIRD; SWAMP BLACKBIRD; REDWING; RED-SHOULDERED BLACKBIRD.

Description.—*Adult male*: Glossy black; "shoulder patches" (lesser wing coverts) of bright scarlet, partially concealed in repose by black scapulars and bound by a broad buff border posteriorly; bill and feet horn black. *Female*: Brownish gray, mottled and streaked, sharply below, less distinctly above; feath-



Photo by E. B. Williamson.

A TYPICAL NESTING SWAMP.

ers of back edged by buff or bay, shoulders subdued red; throat, chin, cheeks, and superciliary stripe faintly ruddy. *Young*, similar to female, but darker. Young males exhibit every intermediate phase of plumage. *Males in fall* have their uniform black interrupted by whitish, buffy, and tawny edgings of the feathers. The epaulets at this season are a sickly orange-red. Males, length 9.00 (228.6); wing 4.84 (122.9); tail 3.82 (97.); bill .85 (21.6); depth of bill at base .50 (12.7). Female, length about 8.00 (203.2); wing 4.06 (103.1); tail 3.23 (82.); bill .76 (19.3); depth at base .43 (10.9).

Recognition Marks.—Chewink to Robin size; bright red epaulets of male; general streakiness of female.

Nest, a neatly woven but rather bulky basket of grasses and cat-tail leaves, swung usually from upright stalks of the cat-tail; lining of fine grass of uniform size. *Eggs* 4-7, usually 5, light blue, scrawled, blotched or clouded with dark purple or black, and chiefly about the larger end. Av. size, 1.04 x .72 (26.4 x 18.3).

General Range.—“Eastern United States and more southern British Provinces, except Florida and Gulf Coast; west to eastern base of Rocky Mountains; north to Nova Scotia, Province of Quebec, Ontario, Manitoba, etc.” (Ridgway).¹

Range in Ohio.—Common summer resident throughout the state wherever cat-tail swamps or their equivalent are to be found. Markedly decreasing in numbers because of the drainage of the swamps.



Photo by E. B. Williamson.

THE REDWING'S NEST.

IN speaking of Blackbirds three pictures almost invariably present themselves to the mind's eye. One is of a wet day in early March. The untidy land is surfeited with waters, partly from the tardy-melting snows, partly from the iterative dashes of rain which wreak their sullen spite alike on ghostly grove and sodden meadow. But the bird-man has seen a great company of Blackbirds trooping overhead, and settling in the first tree-top to northward; so he hastens after, mauger shower and slop. The birds are swarming in the upper branches, and giving rise to a perfect babel of noises. Clicks, clacks, whistles, squeaks, and ringing challenges make up the boisterous medley of those most sociable and garrulous of birds. It is a mixed company, for Grackles, "Rusties," and

¹ "The Birds of North and Middle America," by Robert Ridgway, Part II, p. 332.

Cowbirds make common cause with Redwings in the northern migrations; but the last named preponderate, and it is they who are most vivacious, most resplendent, and most nearly musical. The Redwing's mellow *kongquerree* or occasional tipsy *whoop-cr-way-up* is the life of the party.

Almost before we know it, our friends, to the number of a dozen pairs or more, have taken up their residence in a cat-tail swamp—nowhere else, if you please, unless driven to it—and here in early May a dozen baskets of matchless weave are swung or lodged midway of the growing plants. Your distant approach is commented upon from the tops of bordering willows by *keyrings* and other notes. At close range the lordly male, he of the brilliant epaulets and proper military swagger, shakes out his fine clothes and says *Kongquerree*, in a voice in which anxiety is quite outweighed by vanity and proffered good fellowship withal. But if you push roughly through the outlying sedges, anxiety obtains the mastery. The alarm is sounded. There is a hubbub in the marsh. Bustling, frowsy females appear, and scold you roundly. The lazy gallants are all fathers now, and they join direful threats to courteous expostulations, as they flutter wildly around the intruder's head. To the mischievous boy the chance frequently to call out these frantic attentions is irresistible, even when no harm is intended.

The third picture is of a cloud of Blackbirds—plain Blackbirds now, male, female, or young, it matters not—bearing down relentlessly upon a field of ripening corn. The terror of the black scourge belonged chiefly to a former day. Besides we will not dilate upon the weaknesses of our friends.

I have said that the Redwing prefers cat-tails for nesting; but in the vicinity of the larger swamps, or wherever there is danger of high water, they take readily to bushes or even small trees. Second broods, too, are more apt to be reared in elevated situations.

The local attachment of Redwings is quite marked, and indeed sometimes almost pathetic. I once visited the region of a famous swamp, the "Goose Pond," in Pickaway County, only to find that the misdirected energies of the local Hans had drained off the water some two years before, leaving the "ancient bottom of unfathomable ooze" as dry as tinder. Of course the drainage of the swamp had involved the total destruction of its characteristic vegetation. Nevertheless a few pairs of Redwings lingered about the scene of their former happiness—their birthplace, no doubt, but now a dessicated waste—quite unable to grasp the meaning of the changed conditions.

No. 8.

THICK-BILLED REDWING.

A. O. U. No. 498d. *Agelaius phœniceus fortis* Ridgw.

Synonym.—NORTHERN REDWING.

Description.—"Similar to *A. p. phœnicus* (preceding species), but decidedly larger and with the bill usually relatively much shorter and thicker" (Ridgw.). Adult female averaging paler than *A. phœnicus*. Adult male, length, av. 8.79 (223.1); wing 4.96 (126.); tail 3.86 (98.); culmen .92 (23.3); depth of bill at base .53 (13.5). Adult female, av. length 7.33 (186.2); wing 4.15 (105.5); tail 3.08 (78.1); culmen .75 (19.1); depth of bill at base .40 (11.8).

Nest and Eggs.—Not distinguishable from those of *A. phœnicus*. Does not breed in Ohio.

General Range.—"Central North America, breeding northward; in migrations from Manitoba south to Illinois, Indian Territory, and Western Texas, westward to and including the Rocky Mountains, and south to Arizona and Chihuahua" (A. O. U.). Also east at least to Ohio, Kentucky (Mason county), etc.

Range in Ohio.—Probably not uncommon during migrations in early spring and late fall. Sparingly resident in winter in south-middle and southern portions of state.

A singularly large and handsome male seen a few miles west of Columbus, while in company with Professor Lynds Jones, on December First last, aroused me to the probable presence of winter stragglers of Mr. Ridgway's newly elaborated subspecies, *A. p. fortis*. A careful examination of several of the large collections affords material which supports the conclusion indifferently well; but fuller study is necessary to prove that the larger-billed variety is habitually present in winter, or to determine whether all the winter specimens of Redwing belong to this form. It seemed to me also last spring that certain differences of voice and note obtain between the local and migrant birds,—the *kongkerce* call of the latter being hoarser and less finished, and their *clack* note of scolding both stronger and more husky. But one cannot afford to be dogmatic on such points just at present.

No. 9.

MEADOWLARK.

A. O. U. No. 501. *Sturnella magna* (Linn.).

Synonyms.—FIELD LARK; MEDLARK; MUDLARK (corruption); MEDLAR (poetical).

Description.—*Male*: General color of upper parts brownish black modified by tawny and buffish gray edgings of the feathers, the latter heaviest on secondaries and upper tail-feathers, where it takes the form of partial bands; cheeks, median, and superciliary lines sordid white; a large crescent on upper breast black; chin, upper throat, breast, middle belly, and line over eye bright yellow; sides and crissum black-streaked on a white or flaxen ground; bill singularly variegated, tawny, black, and white. *Female*: Like male but smaller and paler. The plumage of both sexes is duller in fall and winter, the normal colors being restrained by a profuse buffy overlay. Adult male, length 10.00-11.00 (254.-279.4); av. of four Columbus males, wing 4.66 (118.4); tail 3.10 (78.7); bill 1.26 (32.).

Recognition Marks.—Robin size; yellow with black or blackish collar, below; general streaky appearance above.

Nest, a thin bed of dried grasses on the ground, usually covered or over-arched by growing grass. *Eggs*, 4-6, white, speckled and spotted with cinnamon-brown or purplish. Av. size, 1.12 x .80 (28.5 x 20.3).

General Range.—Eastern United States and southern Canada to the Plains. Breeds from the Gulf of Mexico northward.

Range in Ohio.—Wheaton's words, penned twenty-five years ago, are still apt: "Abundant. Summer resident in northern, in part resident in middle, and resident, but less numerous in winter, in southern Ohio."



Figure of Meadowlark.

A PART OF MEADOWLARK'S DOMAIN.

Photo by the Author.

LAND is, by courtesy, said to belong to this person or that because he happens to hold a parchment whereupon are inscribed certain characters, a deed in legal phrase; but if the earth belongs to those who use it, and if he is a benefactor who causes two blades of grass to grow where was only one before, then, surely, the Meadow Lark has clear title of eminent domain. Fortunately, however, the claims of the farmer and the Lark do not conflict. The Lark asks but shelter, and if the man wants crops, lo! here is his most faithful servitor.

It is difficult to overestimate the economic value of the Meadow Lark. The bird is by choice almost exclusively insectivorous. If, however, when hard pressed, he takes toll of the fallen wheat or clover seed, he is as easily justifiable as is the hired man who consumes the farmer's biscuits that he may have the strength to wield the hoe against the farmer's weeds. Being provided with a long and sensitive bill, the Meadow Lark not only gleans its insect prey from the surface of the ground, but works among the grass roots, and actually probes the earth in its search for wire- and cut-worms, those most dreaded pests. Besides devouring injurious grubs and insects of many kinds, the Lark has a great fondness for grasshoppers, subsisting almost entirely upon these in the season of their greatest abundance. In the matter of grasshopper consumption alone Meadow Larks of average distribution, are estimated by no less an authority than Professor Beal, to be worth about twenty-four dollars per month, per township, in saving the hay crop. To the individual farmer this may seem a small matter, but in the aggregate the saving to the nation amounts to some hundreds of thousands of dollars each year.

Even in winter, when a few individuals or occasional companies of Larks are still to be found, a large proportion of their food consists of hardy beetles and other insects, while weed-seed and scattering grain is laid under tribute, as it were, reluctantly. While not strictly resident to a large extent, the Meadow Lark is likely to occur almost anywhere in winter, and it arrives so early in February and March as to cause frequent confusion with the strict winter residents. Numbers of them also pass through our borders into Ontario. A certain raw day in early spring—March 18, 1889, it was—appeared remarkable for the number of Meadow Larks that were piled up on the Lake Erie shore; not dead, nor literally heaped up, indeed, but gathered thickly in the bordering meadows and bluff pasture lands because of the aspect of the Lake, which was so forbidding that the birds feared to cross it. In a walk of four or five miles, not tens nor hundreds, but thousands were seen, and they made a mighty and incessant chorus throughout the distance. Every now and then a bunch of forty or fifty birds would charge out over the lake, but always reconsidered the motion and beat back hastily to shore; and we saw none actually setting out upon the final passage.



Photo by Rev. W. F. Henninger.

NEST AND EGGS OF MEADOWLARK.

The Meadow Lark's nest is the treasure trove of every farm boy. Eggs may be looked for the first week in May, or earlier as one proceeds south. The female is a close sitter, sometimes allowing approach within a foot or two before flushing. Oftener, however, she leaves the nest at the approach of danger and sneaks away

with consummate skill, until she chooses to discover herself at a distance sufficient to mislead. The nests are well hidden in the deeper grass of meadows and pastures, and are frequently overarched with dried grasses, not so much for the purpose of protection against the weather, as has been suggested, but as a further aid to concealment.

According to Dr. Jones, a favorite way to locate the Meadow Lark's nest is to pass right by the anxious male as he stands on some post twitching his tail nervously and shouting signal calls to his sitting mate. When he thinks the danger past he will, as likely as not, fly straight to the hidden nest, chuckling with self-approbation and eager to tell Mrs. Magna all about it.

Besides the familiar whistling song of three or four notes, Meadow Lark occasionally indulges a perfect whirlwind of bubbling notes, interspersed with whistled "whews," delivered while sailing down on stiffened wing, or fluttering about in an excited circle, always, we may be sure, for the benefit of his enamored mate. He is also much given to a sort of rubbing, rattling cry, very expressive, but very hard to reproduce or describe. This is the language of ordinary Sturnelline intercourse. With it he sputters his indignation at an intruding stranger, or congratulates himself upon having successfully outwitted a passing hawk. In this dialect too he pours forth a flood of blarney and sweet talk during a tete-a-tete with some gracious female.

Meadow Lark has an impressive note of apprehension and strong emotion, *greet*, delivered in a half-crouching posture. Again he boasts another, even more startling, a note of alarm and eminent distrust, *turk*, or *turk, turk*,

delivered while the bird is walking about uneasily, and craning his neck to the utmost to command a view of the fancied danger, accompanying the sound by an emphatic flirt of wings and jerk of tail.

On a sultry July day as I sit by the open window overlooking a large, half-kept city park, I hear the shrill clarion call of a Meadow Lark. It comes to me softened by distance and refined by the gentle filtration of intervening leaves, but I know it for the same sound which thrilled my heart one early day last March. The sun had just leaped above the horizon, and his first rays were caught upon the glowing breast-plate of this high priest of morning, as he mounted a commanding post and blew a golden trumpet, piercing sweet. "*He-ar cheer*", he said, and those who listened felt constrained to heed the summons, moving on with quickened step and clearing brow to face the duties of the coming day.

To me there is something little short of sacred in the message of this lowly bird. No fitter symbol can we find of soul triumphant over matter. He lives in the mud, indeed, but he does not grovel there. Sordid cares cannot bind the winged spirit. He quits the ground. He lifts his voice, and lo! he claims a kinship with the Sun, the Morning and the Heart of all. And shall not all the sons of cheer confess the claim?

No. 10.

ORCHARD ORIOLE.

A. O. U. No. 506. *Icterus spurius* (Linn.).

Description.—*Adult male*: Black and chestnut; head and neck all around, throat, upper back and scapulars glossy black; lesser wing coverts, lower back, and remaining under parts rich chestnut; wings and tail dull black, the feathers of the former edged, and of the latter sometimes tipped, with whitish; bill, slender, slightly curved, black. *Adult female*: Above, dull olive-green, brighter and more yellow on head, rump, and tail, dullest on back; below sordid yellow; wings fuscous, the greater and middle coverts with whitish edging. *Young males*: First year, like females but larger; second year, like females save for a black throat-patch. Older birds show irregular traces of chestnut, and the full plumage is assumed the third season. Length about 7.00 (177.8); wing 3.16 (80.3); tail 3.06 (77.7); bill .63 (16.). Females smaller.

Recognition Marks.—Sparrow size; black and chestnut coloring of adult male; black throat-patch on olive-yellow ground of young male of second year; female and young obscure.

Nest, semi-pensile, or supported more or less from below, not so deep as Baltimore's; a marvelous tissue of interwoven grasses placed in an upright fork ten or fifteen feet up, and usually in an orchard tree or willow. *Eggs*, 3-5, bluish white with specks, spots, and scrawls of brown or sepia, and deep-seated shell marks of a purplish cast. Av. size, .80 x .57 (20.5 x 14.5).

General Range.—Eastern United States north to about Lat. 44° and west to Great Plains; south in winter to Panama. Breeds throughout its range.

Range in Ohio.—Summer resident, generally but sparingly distributed.

CHESTNUT and black make a rich and tasty costume for a bird, altho they render the owner somewhat less conspicuous than is the brilliant Bird of Baltimore. The Orchard Oriole is a familiar resident of orchards, shaded fence-rows, and the wooded banks of streams. His familiarity is delightful, since he improves upon acquaintance; and it is gratifying to note everywhere an increase in numbers, especially southerly.

As a summer boarder none could be more welcome, for in addition to his sprightly ways and pleasing song, his industry in the pursuit of insect pests is indefatigable, and his presence in orchard and garden above reproach. In common with his golden cousin this bird feasts upon the noxious click beetles which scarcely any other bird will touch; and none render more valiant service than he in holding the notorious tent caterpillars and their ilk in check.

The song of the Orchard Oriole is rapid, tumultuous, exultant, the irrepressible outburst of an energetic nature. It lacks the mellow richness of Baltimore's, but has instead a delicious piquancy, a subtle, keen-edged tang like that of Catawba grapes. Interspersed with the music come phrases of vivacious chatter, from which the speaker leaps again to song.

Even males of the second year, who have to content themselves with black neck-ties and suits of modest green, are



*Photo
by the
Author.*

NEST OF ORCHARD ORIOLE FROM ABOVE.

THE NEST IS REALLY DEEPER THAN IT APPEARS TO BE, SINCE WE SEE NOT EGGS BUT THE HEADS OF YOUNG BIRDS.

not a whit behind adults in musical attainments. Indeed, I have sometimes fancied that the handicap of juvenile garb serves only to provoke superlative efforts in song on the part of the youthful aspirant. Certain it is that the two-year-old birds are often happily mated, and their music-loving wives are not always won from the ranks of those whom we should think "o'er young to marry yet."

The nest of the Orchard Oriole is a beautiful and ingenious creation. Green grass blades of the tougher sorts are twisted and wrapped and interwoven with the skill of a lace-maker, until a pouch some three inches wide by four inches deep is formed. This is made fast by the brim to the spreading forks near the tip of some horizontal apple-limb, somewhat after the fashion of the Vireo's; or else, and more commonly, it is slung between two or three spreading, upright forks. In the latter case it is tightly lashed, for its entire depth, to two or more of the ascending branches, thus more closely assimilating certain types of Redwings' nests. Wilson states that when the descending branches of the weeping willow are chosen, the nest is made deeper and less rigid so as to allow for greater freedom of movement in the wind. The same observer once examined a grass-strand taken from the Orchard's nest, and found that in its thirteen inches of length it had been hooked through and returned some thirty-four times.

When first constructed, of bright green grass, this Oriole's nest is at the acme of invisibility, but as the season advances the color bleaches out, so that the young find themselves in a straw-colored cradle, which not infrequently invites rather than forbids attention. In our latitudes soft materials such as wool, plant-down, feathers, or even horse-hair, are used for lining; but further south the nest is said to be usually quite unlined.

No. 11.

BALTIMORE ORIOLE.

A. O. U. No. 507. *Icterus galbula* (Linn.).

Synonyms.—FIREBIRD; HANGBIRD; HANGNEST; GOLDEN ROBIN.

Description.—*Adult male*: Black and orange; head and neck all around, a "tongue" on the lower throat, upper back, and scapulars, wings (except lesser and greater coverts), and greater part of tail above, black.—warm and glossy anteriorly, duller on wings and tail; tips of greater wing-coverts, and edging of quills and secondaries white; the remaining plumage orange. The orange varies in intensity from the paler plumage of the young males to the rich orange-red of the oldest birds. *Female*: General color orange-olive, clearest below and

on rump; on head, throat, and back indistinctly spotted or streaked and clouded with black; wings fuscous; two dingy white wing-bars formed by middle coverts and ends of greater coverts. *Young*: Like female, the males gradually acquiring the adult orange. Length 7.50-8.00 (190.5-203.2); av. of five Columbus males: wing 3.70 (94.); tail 2.94 (74.7); bill .71 (18.).

Recognition Marks.—Chewink size; orange and black coloration. The females, though obscure, is enough like male to be readily distinguished.

Nest, purse-shaped and pensile, being oftenest swung from the very tips of drooping branches; a closely-woven fabric of grass, plant fibers, string, etc. The lining proper is of the softest materials,—cotton, etc. *Eggs*, 3-6, rather elongated, white (greenish or dull), elaborately scrawled and streaked with dark browns or purple. Subdued shell-marking in spots or blotches is also usually present. Av. size, .95 x .63 (24.1 x 16.).

General Range.—Eastern United States, north to Ontario and Manitoba, west nearly to Rocky Mountains; south in winter through Mexico to Colombia.

Range in Ohio.—Common summer resident.

THE warm breath of spring has soothed the violet's last fears, and the orchard trees are crowded with blossoms. Then comes one day warmer than all the rest, when the spice-laden air pulsates with heat, and the heart with expectancy. Suddenly from off some blushing snow-bank of apple-blossoms comes a jubilant whistle.

“Hush! 'tis he!

My Oriole, my glance of summer fire,
Is come at last.”

A gorgeous male—one of the largest and the oldest, and therefore with colors the most intense you will see that season—is helping himself eagerly to the swarming tidbits which infest the flowers, but he stops every moment or so to flute his excited greetings to the joyous villagers in the dear home town. The news spreads rapidly, “The Orioles have come.” That beautiful fleet which silently stole away from our shores last autumn, and went we knew not whither, laden with its precious freight of song and memory, that winged, fiery fleet, has come to port again, and brought our own with usury of flame, and song, and unpent joy. Now spring is spring again!

The Baltimore Oriole is rather partial to the haunts of men, being most frequently found along shady village streets, or in front-yard elms and orchards of country seats, but in many portions of the state they are so abundant as to be forced to hold to the edges of forests and the varied umbrage of river bottoms. The males arrive in spring a week or ten days earlier than the females, and during this period are restless and active. Their song too at this time, as Dr. Brewer notes, is loud and shrill as well as fragmentary. Upon the arrival of the females, the tender mellows the voices and improves the manners of the expectant suitors. During the mating season the rich full notes

of the Oriole are among the most entrancing sounds which haunt our childhood and maintain the freshness of advancing years. The female, too, is something of a singer, and she whistles and chatters or answers her lord with cheerful contentment as she moves about her task.

The task which the Oriole sets herself in building her nest is one of the most exacting in nature, and its fulfilment the most wonderful. Before the advent of civilization she had to rely entirely upon vegetable fibers, especially the inner bark of hemp, but now her preference is for string, silk, rags, and ravelings. It is *her* preference, by the way, for she does the work, while her chosen lord attends her flight, sings snatches of song, or offers gratuitous and unheeded advice. So the poet is slightly in error when he says,

“My Oriole
 Is come at last, and, ever on the watch,
 Twitches the pack-thread I had lightly wound
 Around the bough to help *his* house keeping,—
 Twitches and scouts by turns, blessing his luck,
 Yet fearing me, who laid it in his way.”

But Lowell's lines are so expressive that we readily excuse the oversight and eagerly call for more.

“Heave ho! Heave ho! he whistles as the twine
 Slackens its hold. Once more now! and a flash
 Lightens across the sunlight to the elm
 Where his mate dangles at her cup of felt.”

From the slender tips of some branch, be it drooping, as of elm or willow, or ascending, as of maple or apple, she suspends a closely-woven pouch, which yields to every impulse of the wind, but wins by yielding. By seven inches or more her eggs are removed from alien beak and talon.

Tired of the confinement of the nest, the ambitious fledglings clamber up the sides and perch upon the brim. From this less secure position they are not infrequently dislodged before they are quite ready to face the world. The following incident, which came under my notice some years ago, concerns a young Bullock's Oriole, a closely allied species. A friend of mine secured a fledgling Oriole, by rescuing it from the water where it had evidently just fallen from an overhanging nest. When taken home it proved a ready pet, and was given the freedom of the place. Some two weeks later my friend secured another nestling Oriole from a different brood and put it in the cage with the older bird. The newcomer had not yet learned to feed himself, but only opened his mouth and called with childish insistence. Judge of the owner's delight, and mine as a witness, when the older bird, himself but a fledgling, began to feed the orphan, with all the tender solicitude of a parent. It was irresistibly

cunning and heartsome too, for the bird to select with thoughtful brotherly kindness, a morsel of food, and hop over toward the clamoring stranger and drop it in his mouth; after this to stand back as if to say, "There, baby! how did you like that?" This trait was not shown by a chance exhibition alone but became a regular habit, which was still followed when the older bird had attained to fly-catching. It upset all one's notions about instinct, and made one think of a Golden Rule for birds.

No. 12.

RUSTY BLACKBIRD.

A. O. U. No. 509. *Scolecophagus carolinus* (Mull.).

Synonyms.—RUSTY GRACKLE; THRUSH BLACKBIRD.

Description.—*Adult male in breeding plumage:* Uniform glossy black, with bluish green reflections; iris pale straw. At other seasons the plumage bears rufous or "rusty" tips above, especially anteriorly, and rufescent or buffy tips below, in varying proportions; a light line also over the eye. The full nuptial dress is seldom seen in Ohio, but may be found by narrowly observing the latest migrants in spring. *Adult female in breeding plumage:* Blackish slate, lustrous above, duller below. At other seasons the general cast of plumage is lighter, and the overlay of rusty or buffy is similar to that of the male. Adult male, length 9.00-9.60 (228.6-243.8); wing 4.49 (114.); tail 3.68 (93.5); bill .76 (19.3). Female smaller.

Recognition Marks.—Robin size; plumage usually rusty-tinged during migrations in Ohio. If in full plumage they are the only pure black birds of the size. In the common flocks of "blackbirds" in early spring, the high whistling notes belong to the Rusties.

Nesting.—Does not breed in Ohio. *Nest*, of sticks and coarse grasses held together with mud, lined with fine grasses and rootlets, placed in bushes or high in coniferous trees. *Eggs*, 4-7, grayish or pale green, speckled and mottled with purples or reddish browns, and without streaks or lines. Av. size, 1.00 x .76 (25.4 x 19.3).

General Range.—Eastern and northern North America, west to Alaska and the Plains. Breeds from northern United States northward. Winters from Kentucky and Tennessee southward.

Range in Ohio.—Abundant spring and fall migrant. Winters sparingly in southern portion.

THE great roving hordes of "Blackbirds" in early spring are likely to contain at least a sprinkling of "Rusties," but usually they are not so eager to press on as are the impulsive Redwings, and so they fall out of the ranks by dozens and scores. Succeeding platoons composed of these birds alone keep arriving

from the south during the last weeks in March and the first in April, while many do not depart for their summer home in the far north till the first or even second week in May.

Rusty Blackbirds are to be found chiefly in damp woods and along streams. While with us they are rather retiring, partly because they are pilgrims—and it behooves all such to be modest—and partly because they undergo the spring moult *en route*. The last trace of rusty edging must be removed from the feathers before the breeding ground is reached, tho such as have attained the full dignity of dress suits may declare their hearts to the ladies before they quit Ohio.

In some tiny glade in the heart of the budding forest it is that one comes upon a company of these sojourners, feeding perhaps upon the ground. They walk about with easy grace or shift by little flights, males and females flocking together, and all engaged in a subdued but voluble chatter. An instant hush follows the signal of alarm and the flock rises silently to the neighboring tree-tops or passes to a distant spot, where their conversation is gradually resumed. As the alarm decreases the birds come gradually dropping down, one by one, until confidence is completely restored again.

The notes of the Rusty Blackbird consist of a bubbling medley of l's and r's through which clear, high-pitched whistles or squeaks are interspersed at will. *Gorwhillier* conveys some idea of the liquid quality of the former, and expresses also in part the effort which is required to produce them. The effect of a full chorus is really quite pleasing. If not "music" it is at least among the less disagreeable of noises.

No. 13.

BRONZED GRACKLE.

A. O. U. No. 511b. *Quiscalus quiscula æneus* (Ridgw.).

Synonyms.—CROW BLACKBIRD.

Description.—*Adult male*: Lustrous black, exhibiting strongly three sorts of iridescence; on the head, hind-neck and breast purple, peacock blue, or greenish; on the remaining under parts and back brassy; on the wings and tail a curious combination of the two resulting in a shimmering violet- or purplish-black. *Female*, somewhat similar, but a warm brown rather than black; subdued iridescence shown chiefly on head and breast. Length 12.00-13.50 (304.8-342.9); av. of five Columbus males: wing 5.62 (142.8); tail 5.48 (139.2); bill 1.15 (29.2). Female smaller.

Recognition Marks.—Little Hawk size; glossy black or brown plumage; tail long and rounded.

Nest, a bulky but compact structure of sticks and stalks, plastered inside with mud, and lined with fine grasses; placed fifteen to thirty feet high in evergreen trees or in the orchard. *Eggs*, 4-6, sometimes 7, light blue or greenish blue, irregularly spotted, blotched, or "pen-marked" in zigzags and flourishes with purple or sepia. Av. size, 1.20 x .82 (30.5 x 20.8).

General Range.—Eastern United States from the Allegheny Mountains west to the Rocky Mountains, north from southern New England to Newfoundland and Great Slave Lake. In migrations it invades the southeastern states, except Florida and the Atlantic sea coast south of Virginia.

Range in Ohio.—A commonly distributed summer resident. Stragglers and occasional small companies winter in the state.

AESOP tells of a Crow which, appropriating some cast-off feathers of a Peacock, succeeded in cutting quite a swath among his plain-hued friends, until a clever rival disclosed the sham and brought him into deserved contempt. The Crow Blackbird has improved upon the trick. Without trying to parade feathers manifestly too big for him, he has borrowed the Peacock's sheen, and he struts about, in a manner accommodated to his surroundings, with all the Peacock's pride. He *is* a handsome fellow. See him as in the full sunlight he submits a wing to the critical gaze of his coveted Juliet! Burnished brass, brass over steel, resplendent as a coat of mail! She approves, altho she will not say so. But, La! how insolent he is! She likes that too and snickers softly as he shouts down to you, "*Jup, juh*—What are you doing here in my orchard?" If one is taken unawares he is apt to stammer out, "Why-why, I thought it was my orchard until you spoke."

For all he is so vain, no one ever accused the Grackle of being graceful. He is capable of bold, vigorous flight, but in the spring he chooses to exhibit the dimensions of his rudder-like tail, and sometimes he lets it swing him around in a small circle as though it were a weight from which he was strug-



PREPARED 1906 BY A. W. SANDRICH, CHICAGO.
FIRST PRINTED IN 1906 BY THE AMERICAN FIELD-COLORED P.

BRONZED GRACKLE
Quiscalus quiscula arctica
♂, LALO-SILVER

gling to get free! His love-making antics, too, are all the more ridiculous for being earnest. Perched upon the tip-top of an evergreen tree he thrusts his wings out, spreads his tail, ruffles all his feathers, and then throws his head forward like a person about to obtain relief from seasickness. The outcome of all this effort is a sound by no means ravishing, *flee-c-k-starr*, or simply *fw-e-e-e-t*. When the female has been sufficiently impressed by the accomplishments of this vocal contortionist the pair converse in *jups* of much modified insolence, and in a series of prolonged squeaks of unquestionable affection.



Photo by the Author.

AN EARLY NEST.

"THEY ARE PLACED WITHOUT MUCH REGARD TO CONCEALMENT, AT FIRST.

20th of April, but the advancing season is more lavish of its foliage. The nest is quite a bulky affair of dried-weed stalks and grasses, with a deep cup-shaped matrix of mud and a bountiful lining of grasses and horsehair. As to manner of attachment it combines all known characters, being saddled and settled, as well as anchored by the edges or half swung. The eggs are quaintly spotted and stained or scrawled with umber and purplish black on a dull green or vitreous blue ground.

During the nesting season the Crow Blackbird betrays its affinity with the Crows and Jays by helping itself occasionally to the eggs and young

The tops of evergreen trees have long been favorite nesting places for the Bronzed Grackles, but, in the comparative scarcity of these, apple trees are second choice. While not strictly gregarious during nesting season, the birds often occupy neighboring trees, and a good sized orchard may contain twenty or thirty nests. They are placed without much regard to concealment, at first, since the nesting is often under way by the

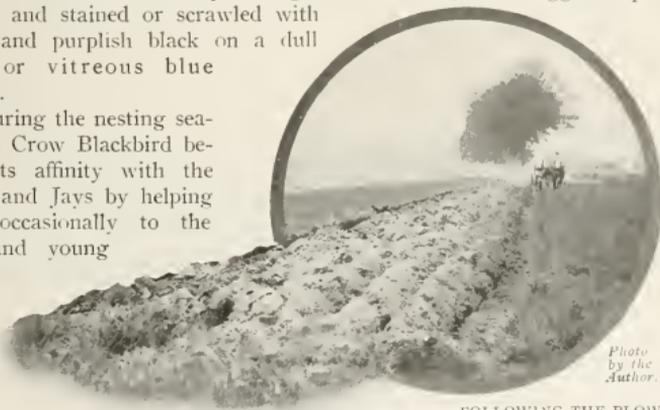


Photo by the Author.

FOLLOWING THE FLOW.

BRONZED GRACKLES ARE FEEDING UPON THE GRUBS UPTURNED WITH THE LAST FURROW.

of other birds. Altho the fault is a grave one, a special investigator¹ does not find that such food bears any sensible proportion to the total amount and concludes that the offense is too infrequent to require discipline at our hands. More serious from an economic standpoint is the charge that these birds consume quantities of grain, especially corn. Altho the mischief is offset by the consumption of an equal amount of insects, and those largely of injurious sorts, it becomes at times unquestionably necessary for the farmer to discourage the depredations of this bird when the corn is in the milk.

Before the breeding season is over the males begin to gather in some favorite "roost" to spend the night, and these companies form the nucleus of large flocks, which are augmented by the arrival of females and young as rapidly as the latter are sufficiently matured. One of these "roosts" comes to include the Grackle population for miles around, and often numbers thousands. If quarters are taken up in a village grove or city park, as is not infrequently the case, the noisy congregation affords occasion for comment and conjecture on the part of hundreds of citizens. Lynds Jones² has prepared a very interesting account of such a roost which has for years occupied a position on the college campus at Oberlin. Similar roosts have become recognized institutions at Elyria, Granville, McConnelville, and a score of other places already reported. Indeed it seems probable that nearly every county will be found to contain in late summer and early fall several divisions, with corresponding camps, of this great Grackle army.



¹ M. F. E. J. Deal "The Crow Blackbirds and their Food." Year Book United States Department of Agriculture, 1894.

² "The Oberlin Grackle Roost." Bulletin No. 15 of the Wilson Ornithological Chapter, July 30, 1897.

No. 14.

EVENING GROSBEAK.

A. O. U. No. 514. *Hesperiphona vespertina* (Coop.).

Description.—*Adult male*: Forehead clear yellow; crown black; remaining fore-parts sooty-olive, shading insensibly through the dull yellow of lower back and belly into clear yellow of under tail-coverts; wings and tail black; a large white blotch formed by ends of inner secondaries and their coverts. *Adult female*: "with prevailing color ashy or only slightly brownish-gray" (Ridgw.). A small, clear white patch at base of inner primaries; white blotches on tips of upper tail-coverts and inner webs of tail-feathers, in varying proportions. Bill, in both sexes, massive, yellow. Length about 8.00 (203.2); wing 4.40 (111.8); tail 3.42 (86.9); bill along culmen .75 (19.1); depth of bill .56-.65 (14.2-16.5). No appreciable difference in size between the sexes.

Recognition Marks.—Chewink size; large, conical bill; olive-brown coloration with black and white in masses.

Nesting.—Does not breed in Ohio. *Nest* principally composed of fine rootlets with some *Usnea* moss and a few sticks, settled upon horizontal branch of pine or fir, near tip, and at considerable heights. *Eggs*, 4, "in color, size, form, texture and markings indistinguishable from those of the Red-winged Blackbird" (Birtwell).

General Range.—"Interior of British America, southward in winter to the upper Mississippi Valley and basin of the Great Lakes" (Ridgway). Of sporadic occurrence in New England.

Range in Ohio.—Of rare and casual occurrence in winter only.

FEW birds have so thoroughly piqued the curiosity of the man of science or have so long resisted his insistent inquisitiveness as has this big-billed, uncanny bird of the mountains. His comings and goings know little law and his geographical route is not yet clearly defined. A screaming company of them may graciously pitch camp in John Smith's orchard in, say, Wisconsin, and they may spend the winter there if Mr. Smith lets them; but the diary of many an ambitious explorer in the north and west fails to contain the coveted record of his appearance.

It remained for Mr. Francis J. Birtwell, in the summer of 1901, to discover the nests of this long-sought bird. This singularly gifted and promising young ornithologist was spending a honeymoon with his bride, in the mountains of New Mexico. He was scarcely over the first elation of success at discovering a colony of breeding Grosbeaks when he lost his life in an attempt to reach a nest placed sixty-five feet high in a giant pine.

The Evening Grosbeak is seen only in winter or early spring at the lower latitudes and altitudes. The birds are strictly gregarious at this season and spend their time closely and rather stupidly feeding upon fallen maple and ash

seeds, or, later in the season, upon the swelling buds of the trees themselves. A flock which I observed one winter in Seattle, Washington, spent two months strictly within the confines of the university campus. In feeding they would drop to the ground one by one, somewhat after the fashion of English Sparrows, but they permitted a rather close approach and seemed quite unacquainted with the treacherous ways of men. During the meal the cracking of refractory maple keys was varied by frequent shrill whistles, or short shrieks, of startling intensity. In the breeding season the male is said to have a clear whistling song not unlike a Robin's, but he stops suddenly midway, as though he were out of breath. It is certain also that the song is not delivered exclusively or even preferably in the evening, as was at first supposed. Hence it appears that the name "Evening" has no appropriateness whatever; but it will doubtless be preserved, if only to point a moral.

This bird is admitted to our avifauna solely on the evidence of Dr. Kirtland who met with it at Cleveland during March, 1860. A great wave of them swept over the farther East in the winter of '89-90, but so far as I am aware none were recorded from Ohio at that time.

No. 15.

PINE GROSBEEK.

A. O. U. No. 515. *Pinicola enucleator leucura* (Muller).

Description.—*Adult male*: Slaty gray, with an overlay of carmine or dull rosy, except on belly, wings, and tail; the rosy color is clearest on head and adjacent parts and on the rump; wings and tail fuscous with faint rosy or whitish edgings; indistinct wing-bars are formed by the white or rosy tips of middle and greater coverts and by the edgings of inner secondaries. *Adult female*: Ground color like male; crown, nape, and upper tail-coverts saffron or olive-yellow; this color also tinges the cheeks, back, fore-breast and rump in varying proportions, and everywhere supplants the rosy of the male save in the oldest (?) birds. *Adult male*, length 8.25-9.00 (209.6-228.6); wing 4.60 (116.8); tail 3.63 (92.2); bill along culmen .53 (13.5); depth of bill .48 (12.2). *Female* somewhat smaller.

Recognition Marks.—Chewink size (only as long as Chewink but stockier; nearer Robin size); stout bill; rosy, or saffron, and gray coloring.

Nesting.—Does not breed in Ohio. "Nest, composed of a basement of twigs and rootlets, within which is a more compact fabric of finer materials. *Eggs*, usually 4, pale greenish blue, spotted and blotched with dark brown surface markings and lilac shell-spots." Av. size, 1.05 x .74 (26.7 x 18.8).

General Range.—Northeastern and central-northern North America, breeding from northern New England northward nearly to the limit of trees; south in winter irregularly into the upper tier of the eastern states,—New England, Wisconsin, etc.

Range in Ohio.—A rare winter visitor.

ANOTHER of our rarer winter birds, whose occasional visits serve only to stimulate a desire on our part for a closer acquaintance, is the Pine Grosbeak. It is almost exclusively a bird of the deep pine forests, so it is not to be wondered at that it so seldom ventures into our state. While found more commonly in Pennsylvania and regularly in New England, it breeds only from the northern portions of the latter region northward. Like many another woodland recluse the Pine Grosbeak often appears dazed when it encounters civilization and may not infrequently be taken with butterfly nets or even with the hand. It is on record that the markets of Boston were abundantly supplied one winter with these birds. It was, of course, in the early days (1835), when the Puritan stomach was less influenced by sentimental considerations. Or it was perhaps before a higher use had been found for them, namely, to decorate ladies' bonnets.

Altho such a timid recluse, with little of the *savoir faire* of the world, the Pine Grosbeak is a born poet and dispenses sweetest music to his neighbors in the Laurentian wilds. The song is described as "clear, sweet and flowing, like that of the Purple Finch," but stronger, of course, as becomes the larger size.

The food habits of this species are as yet imperfectly known. They are known at least to eat small fruit of all sorts with avidity, and specimens obtained in the far Northwest were found to have fared exclusively upon poplar buds. When with us mountain ash trees are sure to be visited, and cedar berries, when obtainable, are very welcome.

It is noteworthy also that the southward moving flocks of winter are composed almost exclusively of young males and sombre-colored females, while the older males remain for the most part in their northern homes.

No. 16.

PURPLE FINCH.

A. O. U. No. 517. *Carpodacus purpureus* (Gmel.).

Description.—*Adult male*: Dull crimson, or deep rosy red, with a slight purplish tinge, brightest on front, breast, and rump, whitening below; wings and tail fuscous with rosy edgings. Area of rosy suffusion reduced in fall and winter specimens. *Female* quite different; ground color, gray or flaxen, everywhere spotted and streaked with olive-brown (the color-bearing feathers are really dusky and heavily edged with olive), in sharply defined streaks and arrow-head marks below, above minutely streaked or nearly uniform; a space in lower throat and belly nearly clear; wings fuscous, edged with olive, not rosy. *Young* like female, but males pass through a bronzy stage. Length 6.00-6.25 (152.4-158.8); wing 3.21 (81.5); tail 2.23 (56.6); bill along culmen .45 (11.4); depth at base .34 (8.6). Females slightly smaller.

Recognition Marks.—Sparrow size; rosy coloration of male, olive streakiness of female. The female bears a superficial resemblance to the Pine Siskin, but the latter is a smaller and yellower bird, with a very much smaller bill.

Nest. composed of weed stalks, grasses, rootlets, etc., lined with soft substances and hair; placed at moderate heights in trees, preferably evergreens, and oftenest on horizontal boughs. *Eggs*, 4 or 5, dull green, spotted and speckled and streaked (or not) with dark brown, chiefly near larger end. Av. size, .85 x .65 (21.6 x 16.5).

General Range.—Eastern North America, from the Atlantic Coast to the Plains. Breeds from Middle States northward.

Range in Ohio.—Spring and fall migrant; of casual occurrence in winter. Formerly a few remained to breed in the northern portion.

HERE comes another band of jolly rovers who have seen sights in the Laurentian highlands, no doubt, or possibly in dismal Labrador, but who are quite content for the nonce to while away the time among the unrifled cones of the evergreen windbreak, or in making an early raid upon the ungarnered crop of rag-weed seed. The migrating instinct urges them southward with only indifferent success. They may be gone tomorrow or they may conclude to spend the winter with you. At any rate they are here now and that is reason enough for pleasant chatter and fragments of remembered song.

One observer would give "its very characteristic utterance" as "a short, rather dull-sounding note, scarcely metallic—the metal pressed the instant the bell is struck"; while another, more generous, or perhaps more enthusiastic, would give it credit for "a musical metallic *chink, chink.*"

Those birds which have not wintered with us straggle back through March and April, and linger sometimes into May. At this season they are oftener found in the heart of the woods along streams, feeding upon the buds of the slippery elm. A company of them may seem at a time very much devoted to the

task, but before long some restless young gallant will burst out with uncontrollable song—a carol delicate and sweet and free, and the whole flock will forget its sordid pursuits and fall to love-making. This has become the all-absorbing pastime by the time the birds quit us for the North, and we may suppose that all throats are plighted under our pleasant roof-tree.

Dr. T. M. Brewer has this to say more fully of the Finch's song: "The song of the Purple Finch resembles that of the Canary, and though less varied and powerful, is softer, sweeter and more touching and pleasing. The notes of this species may be heard from the last of May until late in December (in New England) and in the long summer evenings are often continued until after it is quite dark. Their song has all the beauty and pathos of the warbling Vireo and greatly resembles it, but is more powerful and full in tone. It is a very interesting sight to watch one of these little performers in the midst of his song. He appears perfectly absorbed in his work, his form dilates, his crest is erect, his throat expands and he seems to be utterly unconscious of all around him. But let an intruder of his own race appear within a few feet of the singer and the song instantly ceases, and in a violent fit of indignation he chases him away."

Concerning the reputed nesting of this species in the northeastern counties of the state I have no exact information. The birds prefer evergreen trees for nesting sites, but will put up with orchard trees on occasion. The nests are flatter than is usual with tree nesting sparrows, and are usually well concealed by the foliage. Dr. Howard Jones, who was familiar with the Purple Finch in New York State, writes: "A nest before me, a fair representative of the species, is composed of a foundation and superstructure of brown roots, the coarsest being in the foundation; many of these are one-sixteenth of an inch in diameter by six or eight inches in length. They are arranged circularly and form a ragged looking exterior, about five inches in diameter outside of the loosest rootlets. Within the superstructure is a beautifully wrought lining, with walls about three-eighths of an inch thick, of the very finest light brown rootlets. These are so curly and curved, and interlaced and twisted together at the rim, that the inner nest suggests a piece of silver filigree work. The diameter of the cavity is about two inches; the depth, one inch."

No. 17.

ENGLISH SPARROW.

INTRODUCED. *Passer domesticus* (Linn.).

Synonyms.—HOUSE SPARROW; DOMESTIC SPARROW; HOODLUM.

Description.—*Adult male*: Above ashy gray; middle of back and scapulars heavily streaked with black and bay; tail dusky; a chestnut patch behind eye spreading on shoulders; lesser wing-coverts chestnut; middle coverts bordered with white, forming a conspicuous white bar during flight; remainder of wing dusky with bay edging; below ashy gray or dirty white; a black throat-patch continuous with lores and fore-breast; bill and feet horn color. *Adult female*: Brownish rather than gray above; bay edging lighter; no chestnut, unmarked below. Length 5.50-6.25 (139.7-158.8); wing 3.00 (76.2); tail 2.20 (55.9); bill .50 (12.7). Sexes of about equal size.

Recognition Marks.—"Sparrow size"; black throat and breast of male; female obscure brownish and gray.

Nest, a globular mass of grass, weeds and trash, heavily lined with feathers, placed in tree and with entrance in side; or else heavily lined cavity anywhere. Holes in apple trees and cranmies in shale banks are favorite places. *Eggs*, 4-7, whitish, heavily dotted and speckled with olive-brown or dull black. The markings often gather about the larger end; sometimes they entirely obscure the ground color. Av. size, .86 x .62 (21.8 x 15.8).

General Range.—"Nearly the whole of Europe, but replaced in Italy by *P. italiae*, extending eastward to Persia and Central Asia, India, and Ceylon" (Sharpe). "Introduced and naturalized in America, Australia, New Zealand, etc." (Chapman).

Range in Ohio.—"The first importation of this pest into the state directly from Europe was into Cleveland in 1869, twenty pairs. During the same year thirty-three pairs were taken from New York to Cincinnati and Warren. Then followed importations into Marietta, 1870; Coshocton and Portsmouth, 1874; Steubenville about 1880 or 1881; Wapakoneta about 1882, which seems to have been the last importation. Since that time it has spread well over the state, in the more settled districts even invading the country places and farm buildings, until the tendency to nest in the woods grows strong" (Jones).

WITHOUT question the most deplorable event in the history of American ornithology was the introduction of the English Sparrow. The extinction of the Great Auk, the passing of the Wild Pigeon and the Turkey,—sad as these are, they are trifles compared to the wholesale reduction of our smaller birds, which is due to the invasion of that wretched foreigner, the English Sparrow. To be sure he was invited to come, but the offense is all the more rank because it was partly human. His introduction was effected in part by people who ought to have known better, and would, doubtless, if the science of ornithology had reached its present status as long ago as the early fifties. The maintenance and prodigious increase of the pest is still due in a measure to the imbecile

sentimentality of people who build bird-houses and throw out crumbs for "the dear little birdies", and then care nothing whether honest birds or scalawags get them. Such people belong to the same class as those who drop kittens on their neighbors' door-steps because they wouldn't have the heart to kill them themselves, you know.



Taken near Columbus.

Photo by the Author.

NOTHING IS TOO GOOD FOR THEM.

A "QUARRY HOLE" FORMERLY OCCUPIED BY ROUGH-WINGED SWALLOWS BUT NOW ENTIRELY GIVEN OVER TO THE NOISY FOREIGNERS.

The increase of this bird in the United States is, to a lover of birds, simply frightful. Their fecundity is amazing and their adaptability apparently limitless. Mr. Barrows, in a special report prepared under the direction of the Government, estimates that the increase of a single pair, if unhindered, would amount in ten years to 275,716,983,698 birds.

As to its range, we note that the subjugation of the East has long since been accomplished and that the conquest of the West is succeeding rapidly. It is only a question of a few years until it becomes omnipresent in our land.

It requires no testimony to show that the presence of this bird is absolutely undesirable. It is a scourge to the agriculturist, a plague to the architect and the avowed and determined enemy of all other birds. It is, in short, in the

words of Dr. Coues, "a nuisance without a redeeming quality." Altho we assent to this most heartily, we must confess on the part of our race to a certain amount of sneaking admiration for the Sparrow. And why, forsooth? Because he fights. We are forced to admire, at times, his bull-dog courage and tenacity of purpose, as we do the cunning of the weasel or the nimbleness of the flea. He is vermin and must be treated as such, but—give the Devil his due, of course. What are we going to do about it? Wage unceasing warfare as we do against mice and snakes. There is no ultimate issue to regard. The House Sparrow is no longer exterminable, but he can be kept within limits. No doubt there will be English Sparrows in cities as long as there are brick-bats, but the English Sparrow in the country is an abatable nuisance. He can be shot, and he ought to be. There are no English Sparrows about my present home, in a suburb of Columbus. A sensible and determined neighbor has plied the shotgun for several years and as a result Bluebirds, Chipping and Field Sparrows, Woodpeckers of all kinds, Warblers, Robins, Blue Jays, etc. are plentiful hereabouts. I prefer Bluebirds myself.

The Sparrow exhibits a most cosmopolitan taste in the matter of nesting sites. The normal half-bushel ball of trash in the tree-top is still adhered to by some builders, but the cavity left by a missing brick, a Woodpecker's hole—deserted upon compulsion—or a throne upon the scale-pan of Justice—done in stone upon the County court-house, and mercifully blind—will do as well. Of late the choicest rural sites have been appropriated, and the cliffs once sacred to the gentle Swallow, now resound with the vulgar bletherings and maudlin mirth of this avian blot on nature.



AMERICAN CROSSBILL
Loxia curvirostra
Life-size

No. 18.

AMERICAN CROSSBILL.

A. O. U. No. 521. *Loxia curvirostra minor* (Brehm.)**Synonym.**—RED CROSSBILL.

Description.—*Adult male*: Tips of mandibles crossed either way; plumage red, brightest on rump; feathers of back with brownish centers; wings and tail fuscous. Shade of red very variable,—orange, cinnabar, even vermilion, sometimes toned down by a saffron suffusion. *Immature males* sometimes present a curiously mottled appearance with chrome-green and red intermingled. *Female and young*: Dull olive-green, brighter and more yellow on head and rump; below gray overcast by dingy yellow. Adult male, length 5.50-6.25 (139.7-158.8); wing 3.40 (86.4); tail 2.05 (52.1); bill .70 (17.8) or under.

Recognition Marks.—Sparrow size; crossed mandibles; male red and female olive-green; both without white wing-bars.

"Nest, in forks or among twigs of a tree, founded on a mass of twigs and bark-strips, the inside felted of finer materials, including small twigs, rootlets, grasses, hair, feathers, etc. *Eggs*, 3-4, 0.75 x 0.57, pale greenish, spotted and dotted about larger end with dark purplish brown, with lavender shell-markings" (Coues). Av. size, .85 x .53 (21.6 x 13.5) (Brewer).

General Range.—Northern North America, resident sparingly south in the eastern United States to Maryland and Tennessee, and in the Alleghanies; irregularly abundant in winter.

Range in Ohio.—Nowhere of regular occurrence; occasional migrant or winter resident and rare breeder.

THERE are several species of northern birds which behave as if they had been moon-struck on some chilly Arctic night and whose most ardent friends as a consequence cannot deny that they are a little "queer;" the Red Crossbills, for example,—dear unsophisticated mortals who are still following the Julian calendar, and that only spasmodically. Normally confined to the coniferous timber of the Canadian highlands, they nevertheless drift south in straggling flocks and in very unmethodical fashion, and occasionally come upon us in great hordes which even the park policemen notice.

Then in spring, either because they dread to face renewed privations or because they vary their plain fare with the lotus buds of forgetfulness in the balmy Southland, some linger to nest and spend a careless summer. Especially is this the case in the Alleghanies and in the mountain regions of New York and New England. The nesting takes place according to no known law, eggs having been taken in mid-winter where the snow lay deep upon the ground, and again in July. And altho conifers are the sites usually chosen, the birds are not particular in this matter either—a leafless maple will do as well.

The Crossbill owes its peculiar mandibles to an age-long hankering for

pine-seeds—a desire fully satisfied according to the fashion of that Providence which works so variously through nature, and whose method we are pleased to call evolution. The bill of the bird was not meant for an organ of the finest precision, and Buffon, the Deist, once won a cheap applause by railing at the Almighty for a supposed oversight in this direction; but as a matter of fact its wonderful crossed mandibles enable the Crossbill to do what no other bird can, viz., pry open the scales of a pine cone and extract the tiny seed with its tongue. Besides this the bird is not so awkward in the use of its bill as was formerly supposed, since it frequently alights on the ground and picks up the fallen seeds, together with other food. Apples, left hanging, and mellowed by the frosts, are favorite winter tidbits, and the birds have been accused of doing some trifling damage to grain in the field.

Crossbills give out an intermittent rattling cry or excited titter, *teu, teu, teu*, while feeding. The flight note is a short, clear whistle, and a flock composed of separately undulating individuals affords a pleasing sensation to both eye and ear as it rapidly passes. The male is said to have a sprightly whistling song of a most agreeable character, and he sometimes opens the season as early as February.

Specimens kept in captivity exhibit some of the traits of Parrots. Thus, they grasp the wires of the cage with their bill as well as with their feet and move about by its aid. They hang head downward with indifference and they convey food to the mouth by holding it in one foot. It is not surprising that the birds are easily domesticated, even when full grown, since they are so unsuspecting as to admit of capture by the hand. I once caught an adult female in mid-air as a flock fluttered up confusedly from the ground. According to Dr. Brewer, a nest with eggs of this species was once secured early in March by Mr. Charles S. Paine, in East Randolph, Vt. "The nest was built in an upper branch of an elm—which, of course, was leafless—the ground was covered with snow, and the weather severe. The birds were very tame and fearless, refusing to leave their eggs, and had to be several times taken off by the hand. After its nest had been taken, and as Mr. Paine was descending with it in his hand, the female again resumed her place upon it, to protect her eggs from the biting frost."

No. 19.

WHITE-WINGED CROSSBILL.

A. O. U. No. 522. *Loxia leucoptera* (Gmel.).

Description.—*Male*: Rosy-red or carmine all over, save for grayish of nape and black of scapulars, wings, and tail. The black of scapulars sometimes meets on lower back. Two conspicuous white wing-bars are formed by the tips of the middle and greater coverts. Bill slenderer and weaker than in preceding species. *Female and young*: Light olive-yellow, ochraceous, or even pale orange over gray, clearer on rump, duller on throat and belly; most of the feathers with dusky centers, finer on crown and throat, broader on back and breast; wings and tail as in male, but fuscous rather than black; feather-edgings olivaceous. Very variable. Length 6.00-6.50 (152.4-165.1); wing 3.50 (88.9); tail 2.25 (57.2); bill .67 (17.).

Recognition Marks.—Sparrow size; crossed bill; conspicuous white wing-bars of both sexes.

Nesting.—Not known to breed in Ohio. "Nest, of twigs and strips of birch-bark, covered exteriorly with moss (*Usnea*) and lined with soft moss and hair, on the fork of an evergreen, in deep forests. Eggs, 3(?), pale blue, spotted and streaked near larger end with reddish brown and lilac, .80 x .55 (20.3 x 14.)" (Chamberlain).

General Range.—Northern parts of North America, south into the United States in winter. Breeds from northern New England northward.

Range in Ohio.—Of casual occurrence during migrations and in winter.

THE habits of this lesser known species appear to be substantially the same as those of *L. c. minor*. Its summer range lies for the most part further north, altho it also breeds in the mountains of the West. It is much less frequent in winter than the preceding species, altho it occasionally appears in great numbers.

"In the spring of 1869, Mr. Jillson, of Hudson, Mass., sent me a pair of these birds which he had captured the preceding autumn. They were very tame, and exceedingly interesting little pets. Their movements in the cage were like those of caged Parrots in every respect, except that they were far more easy and rapid. They clung to the sides and upper wires of the cage with their feet, hung down from them and seemed to enjoy the practice of walking with their heads downward. They were in full song and both the male and the female were quite good singers. Their songs were irregular and varied, but sweet and musical. They ate almost every kind of food, but were especially eager for slices of raw apples. An occasional larch cone was also a great treat to them. Altho while they lived they were continually bickering over their food, yet when the female was accidentally choked by a bit of eggshell, her mate was inconsolable, ceased to sing, refused his food, and died of grief in a very few days" (Brewer).

No. 20.

REDPOLL.

A. O. U. No. 528. *Acanthis linaria* (Linn.).

Synonyms.—COMMON RED-POLL; LINNET; LINTIE.

Description.—*Adult male*: Crown crimson; breast and shoulders crimson in varying proportions according to season; frontlet, lores, and throat-patch sooty black; remaining lower parts white, flanks and crissum streaked with dusky; above, variegated dusky, flaxen-brown and whitish, the feathers having dusky centers and flaxen edgings; rump dusky and white in streaks, tinged with rosy; wings and tail dusky with flaxen or whitish edgings; two inconspicuous wing-bars formed by white tips of middle and greater coverts. *Female*: Similar but without red on rump and breast, the latter suffused with buffy instead; sides heavily streaked with dusky. *Immature*: Like female but without crimson crown. Length 5.50 (139.7) or less; wing 2.80 (71.1); tail 2.30 (58.4); bill .34 (8.6); depth at base .23 (5.8).

Recognition Marks.—Warbler to Sparrow size; crimson crown-patch in adults; no dusky spot on breast.

Nesting.—Does not breed in Ohio. *Nest*, a bulky affair of twigs and grasses, lined with feathers and placed in trees and bushes. *Eggs*, 4-6, pale blue, dotted and speckled with reddish brown or amber. Av. size, .65 x .50 (16.5 x 12.7).

General Range.—Northern portions of northern hemisphere, south irregularly in winter, in North America to the Middle States.

Range in Ohio.—Of very irregular occurrence. Many winters will pass without any; at other times swarms are to be seen in the northern part of the state. Casual anywhere.

THESE rather rare hyperborean visitants are often allowed to pass for winter Goldfinches when they do occur. Indeed, the resemblance is most striking, both as to form and habits and notes as well. When the eyes have been opened by a near revelation of convincing red, then the ears remember also a slight foreign accent in the "sweetic" call and in the rattling flight notes.

Failure in the food supply in the Hudson Bay regions seems to afford the only excuse for the occasional southern flights of this species, since the birds are absolutely impervious to cold. When they do come they appear to materialize in great numbers out of the leaden sky along with the snowflakes; but they settle to a breakfast of weed-seeds or alder catkins as tho to the manor born, and have no apparent dread of dispossessing the Juncoes and Field Sparrows who already occupy the land. They are fond of pine trees, and if occasion offers, contentedly pick up the crumbs which fall from Master Crossbill's pine-cone table. Redpoll's manner is very confiding. He has had nothing to fear in his Greenland home, and he assumes that you will mind your business and let him mind his.



AMERICAN GOLDFINCH
Astragalinus tristis
1/8 Life size

Illustrated by A. W. MURKIN. THE
REPRINTS IN THIS BOOK BY THE WHISTON PUBLISHING CO.

We are rewarded for our occasional hospitality by the sight of Redpoll at his best. During the actual breeding season, we are told by a competent observer in Greenland, Holbell, the male not only becomes exceeding shy but loses his rosy coloring. It is hardly to be supposed that this loss of color is a protective measure, but rather that it is a result of the exhaustive labors incident to the season. Nature, in that forbidding clime, cannot afford to dress a busy workman in fine clothes. It is noteworthy in this connection that caged Redpolls also lose their rosy tints, never to regain them.

No. 21.

AMERICAN GOLDFINCH.

A. O. U. No. 529. *Astragalinus tristis* (Linn.).

Synonyms.—WILD CANARY; YELLOW-BIRD (wrongly so called); THISTLE-BIRD.

Description.—*Adult male in breeding plumage:* Back and below bright yellow, whitening on upper tail-coverts; crown-patch black; wings black with white-tipped coverts and secondaries; tail black, each feather with white spot on inner web. *Adult female:* Above grayish brown or olivaceous; wings and tail dusky rather than black; below whitish with buffy or yellow suffusion, brightest on throat. *Male in winter:* Like female except that wings and tail are black; the plumage tends also to more positive whites. Length 5.00 (127.); wing about 2.75 (69.9); tail 2.00 (50.8); bill .40 (10.2).

Recognition Marks.—Warbler size; black and yellow contrasting; undulating flight; Canary-like notes.

Nest, a beautiful, compact structure of vegetable fiber, "hemp," grasses, etc., lined with vegetable cottons or thistle-down, and placed at different heights in trees or bushes, usually in upright crotches. *Eggs,* 3-6, pale bluish white, unspotted. Av. size, .65 x .52 (16.5 x 13.2).

General Range.—Temperate North America; winters mainly within the United States; breeds from middle regions north.

Range in Ohio.—Of universal distribution,—perhaps less plentiful in southern part of state.

"HANDSOME is that handsome does," we are told, but the Goldfinch fulfills both conditions in the proper sense, and does not require the doubtful apology of the proverb, which was evidently devised for plain folk. One is at a loss to decide whether nature awarded the Goldfinch his suit of fine clothes in recognition of his dauntless cheer or whether he is only happy because of his panoply of jet and gold. At any rate he is the bird of sunshine the year around, happy, careless, free. Rollicking companies of them rove the country side.

now searching the heads of the last year's mullein stalks and enlivening their quest with much pleasant chatter, now scattering in obedience to some whimsical command and sowing the air with their laughter. "*Perchic-opce*" or "*perchic-ichic-opce*" says every bird as it glides down each successive billow of its undulating flight. So enamoured are the Goldfinches of their gypsy life that it is only when the summer begins to wane that they are willing to make particular choice of mates and nesting spots. As late as the middle of July one may see roving bands of forty or fifty individuals, but by the first of August they are usually settled to the task of rearing young. The nesting also appears to be dependent in some measure upon the thistle crop. When the weeds are common and the season forward, nesting may begin in June; but when thistle down is scarce or wanting the birds seem loth to begin without an abundant supply of their favorite nest lining.

Nests are placed in the upright forks of various kinds of saplings or even of growing plants, in which latter case the thistle, again, proves first choice. The materials used are the choicest obtainable. Normally the inner bark of hemp is employed for warp, and thistle-down for woof and lining, so that the whole structure bleaches to a characteristic silver-gray. In the absence, or scarcity of these, grasses, weeds, bits of leaves, etc. are bound together with cobwebs and the whole felted with other soft plant-downs or even horse-hair. The whole is made fast throughout its depth to the supporting branches and forms one of the most durable of summer's trophies.

From four to six, but commonly five, eggs are laid, and these of a delicate greenish blue. Fourteen days are required for hatching and from the time of leaving the nest the youngsters drone *babce! babce!* with weary iteration, all through the stifling summer day.

During the nesting season the birds subsist largely upon insects of various kinds, especially plant lice, flies, and the smaller grasshoppers, but at other times they feed almost exclusively upon seeds. They are very fond of sunflower seeds, returning as they do to a favorite head day after day until the crop is harvested. Seeds of the lettuce, turnips, and other garden plants are levied upon freely where occasion offers, but thistle-seed is a staple article, and that is varied by a hundred seeds besides, which none could grudge them.

Throughout the winter the Goldfinches are much less in evidence, partly because of their subdued colors, the yellow having given place to dingy white: and partly, it would appear, from the fact that considerable numbers retire more or less regularly to the South at that season. But wherever found the Goldfinch has the same merry notes and sprightly ways, so that he is endeared to the hearts of all.

No. 22.

PINE SISKIN.

A. O. U. No. 533. *Spinus pinus* (Wils.).**Synonyms.**—AMERICAN SISKIN; PINE FINCH; PINE LINNET.

Description.—*Adult male and female:* Above brownish buffy; below creamy-buff and whitish; everywhere streaked with dusky or dark olive-brown; the streakings are finer on the head and fore-parts, coarser on back and breast; wings fuscous, the flight-feathers sulphur-yellow at the base, and the primaries edged with the same color; tail fuscous, all but the middle feathers sulphur-yellow at base. Bill comparatively slender, acute. Length 4.75-5.00 (120.6-127.); wing 2.75 (69.9); tail 1.80 (45.7); bill .43 (10.9).

Recognition Marks.—Warbler size; conspicuous general streakiness, sulphur-yellow markings of wings and tail, most noticeable in flight.

Nest, of grasses, twigs and vegetable fibers, lined with hair, plant-down or feathers, and placed, usually, high in coniferous trees. *Eggs,* 4, greenish or bluish white, spotted with reddish brown. Av. size, .68 x .47 (17.3 x 11.9).

General Range.—North America at large, breeding in higher latitudes and in mountains of the West; also, sparingly, in northeastern United States.

Range in Ohio.—Common but irregular in winter and during migrations in the north; less common southerly. Possibly breeds sparingly in northern portion.

THE Pine Siskin is one of those happy-go-lucky mortals (he is mortal, is he not?) whose habits are the despair of all guide-books. We know him for a northern bird, and by all analogies he ought to quit our hospitable woods not later than the middle of May; but with the most reckless unconcern he lingers through May and into June, until we are disposed to chide him for neglect of the primal instinct, or else to wonder whether the rollicking, roving bands may not have nests to watch that we know not of. Siskins have been found in Northern Ohio during every month of the year, but whether they nest or not is still undetermined.

Their actions were still more puzzling at my home in Eastern Washington. There we lived not above twenty miles from the timber-clad mountains where they might have been supposed to breed, and yet roistering troops of them made free with the shade trees of our front yard, as the whim seized them, throughout every month of the year, save winter. Either these companies were composed of young bachelors too frivolous to love, or else they were made up of communists whose lives were too happy in general to permit them to think of particularizing in their affections. A recent writer¹ asserts that they do nest in small colonies, three or four pairs in a tree, and that it is difficult to determine which particular bird is most interested in a given nest.

¹ C. W. Bowles in "The Condor," January, 1903, p. 15.

In many respects the Siskins resemble their more familiar cousins, the Goldfinches; they cultivate a graceful, undulatory, or looping flight, chirruping as they go; and like them they have "a habit of singing in a lively, rambling sort of way for an hour or more at a time." On the other hand their love of pine trees and the seeds of pine cones links them closely to the Cross-bills and their rattling cry is quite suggestive of the common notes of these birds. They have one note, however, which is entirely distinctive. It is a labored but singularly penetrating production with a peculiar vowel quality (like a German unlauded u), *zuem* or *zœem*. At the same time the bird often displays his wing with its sulphur-colored watermark, and speedy recognition follows.

No. 23.

SNOWFLAKE.

A. O. U. No. 534. *Passerina nivalis* (Linn.).

Synonym.—SNOW BUNTING.

Description.—*Adult male in summer*: Pure white save for bill, feet, middle of back, scapulars, bastard wing, the end half of primaries and inner secondaries, and the middle tail-feathers, which are black. *Female in summer*: Similar, but upper parts streaked all over with black, and the black of wings largely replaced by fuscous. *Adults in winter*: Entire upper parts overcast with browns—rusty or seal brown—clear on crown, grayish and mottled with dusky centers of feathers on back, scapulars, etc.; also rusty ear-patches, and a rusty collar, with faint rusty wash on sides. The black of wing and tail-feathers is less pure (fuscous in the female) and edged with white or tawny. Length 6.50-7.00 (165.1-177.8); wing 4.12 (104.6); tail 2.54 (64.5); bill .40 (10.2).

Recognition Marks.—Sparrow size; conspicuously and uniquely white, with blacks and browns above.

Nesting.—Does not breed in Ohio. "*Nest*, on the ground in the sphagnum and tussocks of Arctic regions, of a great quantity of grass and moss, lined profusely with feathers. *Eggs*, 4-6, very variable in size and color, about .90 x .65 (22.9 x 16.5), white or whitish, speckled, veined, blotched, and marbled with deep browns and neutral tints" (Coues.).

General Range.—"Northern parts of the northern hemisphere, breeding in the Arctic regions; in North America south in winter into the northern United States, irregularly to Georgia, southern Illinois, Kansas and Oregon."

Range in Ohio.—Occurs irregularly in winter,—more commonly northerly.

THE guests of winter form a distinct category in the bird-man's reckoning. There are loyal hearts which no adversity of winter elements (short of sheer freezing, which is brutal) can drive from our midst—Song Sparrows, Titmice, Nuthatches—and to these we pay appropriate honors. But, after all,



SNOWFLAKE
Passerina nivalis
Life-size

Illustration made by A. M. SPOFFORD, based on
specimens collected in 1905 by THE BIRDING FOUNDATION OF

these simple-hearted creatures, who refuse to budge from their native heaths and tree-boles, lack not only the culture of travel in foreign parts, but the dash and wild romance of those who hazard their fortune to the north wind. What treasures of choice spirits are poured out upon us when the winds blow raw and the streams hide their faces! Hardy Norsemen they,—the Redpolls, the Longspurs, the Horned Larks, and the Snowflakes. They burst upon us in the wake of the first storm, and set up in our back pastures a wintry Valhalla, where good cheer of a very sturdy sort reigns supreme.

In spite of striking differences of form and color a strange similarity exists among these northern visitors, so that one may easily construct a mental *genre* picture—or, at most, two such—which will fairly represent them all. Thus the Snowflakes, the Longspurs, the Horned Larks,—and through them even the daft Pipits—have a common fashion of giving themselves to the air to be blown about at hazard; or, when the season advances, of setting their faces also with equal steadfastness against the gainsaying of the blast. Their notes, too, (excepting this time the inane yipping of the Pipit) have a wierd wind-born quality which is inseparable in thought from the shrill piping of the storm. To carry the matter further, the Siskins, the Crossbills, the Purple Flinches and the Redpolls have each a mellow rattle, which lends itself with equal facility to that generic conception of the ice-berg children. The dialect may differ, but in all of them the accent is Hyperborean.

I well remember my first meeting with that prince of storm waifs, the Snowflake. It was in eastern Washington, where the climate is not less hospitable than that of much lower latitudes farther east. A distant-faring, feathered stranger had tempted me far

afield, when, all at once, a fluttering snowdrift, contrary to nature's wont, rose from earth toward heaven. I held my breath while I listened to the mild Babel of *tut-ut-ut-tews* with which the Snow Buntings greeted me. The birds were loath to leave the place, and hovered indecisively while the bird-man drank them in. As they moved slowly off each bird seemed alternately to fall and struggle upward through an arc of five or six feet, independently of his



IN SNOWFLAKE PARK.

Photo
by the
Author.

fellows, so that the flock as a whole produced quite the effect of a troubled snowstorm.

Snowflakes occur singly or associated in flocks of from a dozen to several hundred individuals. Their thrilling, vibrant call note, *te-w* or *te-ew*, may be heard during the falling of the real flakes, when the passing bird is invisible. Careful scrutiny of loosely flocking Horned Larks may occasionally discover a stray Snowflake, as also a few Lapland Longspurs.

Probably no winter passes in which a few of the birds do not reach our northern borders. But they rarely extend below the middle of the state, and only during the most severe winters are they found anywhere in large numbers. While with us they move from field to field in open places, seeking out the weed-seed which forms their almost exclusive diet. A few individuals may linger long enough in the spring to display the deeper browns and blacks of the breeding plumage.

No. 24.

LAPLAND LONGSPUR.

A. O. U. No. 536. *Calcarius lapponicus* (Linn.).

Description.—*Adult male in summer:* Head, throat, and fore-breast black; a buffy line behind eye and sometimes over eye; a broad nuchal patch, or collar, of chestnut; remaining upper parts brownish black streaked with rufous, buffy, or whitish edges of feathers; below white, heavily streaked with black on sides and flanks; tail fuscous with oblique white patches on three outer feathers; bill yellow with black tip. *Female in summer:* Similar, but no continuous black or chestnut anywhere; the black of head mostly confined to centers of feathers,—these edged with buffy; the chestnut of cervical collar faintly indicated as edging of feathers with sharply outlined dusky centers; black of throat and breast pretty thoroughly obscured by grayish edging, but the general pattern retained; sides and flanks with a few sharp dusky streaks. *Adult male in winter:* Lighter above; the black of head, and chestnut of cervical collar partially overlaid with buffy or whitish edging; the black of throat and breast more or less obscured by whitish edging. Length 6.50 (165.1) or less; wing 3.70 (94.); tail 2.53 (64.3); bill .40 (10.2); hind claw .45 (11.4); hind toe and claw .75 (19.1).

Recognition Marks.—Sparrow size; terrestrial habits; black head and breast of male. The species may be readily distinguished from the Horned Lark, with which it sometimes associates, by the greater extent of its black areas, and by the chirruping or rattling cry which it makes when rising.

Nesting.—Does not breed in Ohio. "Nest, of grasses and moss, lined with grasses, on the ground. Eggs, 4-6, bluish white, almost obscured by uniform grayish brown, .82 x .60 (20.8 x 15.2)" (Chapman).

General Range.—Northern portions of the northern hemisphere, breeding far north; in America south in winter to the northern United States, abundantly in the interior, to Kansas and Colorado, irregularly to the Middle States.

Range in Ohio.—A frequent but irregular winter visitor, more common in northern portion of state; casual south.

ONLY now and then does one come upon a company of these hardy Laplanders, for their principal winter range is further west. They are to be found industriously gleaning fallen weed-seed from the ground, pastures, stubble fields, and waste places, or moving about in rather compact flocks through the air. Not infrequently small numbers of them join a winter band of Horned Larks at table in some choice feeding lot for cattle. At such times they move about freely among the other birds, but are readily distinguished from them by their black heads.

If one would get the full effect of Longspur's diagnostic mark, he should creep on hands and knees over a rolling stubble-field on a chilly April day. It will heighten the effect, not of the bird's color, but of the observer's boreal sensations, if a sullen sky be added, and little pellets of sleet be dropped here and there over the field. With eyes agog and glasses in readiness, you advance cautiously. There is nothing but clods and stubble in sight. You feel sure that there are birds all about you, for you saw them settle right there. At length, a long way off, a single anxious black head is descried as it is thrust up into view; but before you level on it, one, two, three, a dozen birds, are up and off, who were within a rod of you. But by and by (it may be only after days) the clods are differentiated, and some kindly resolve themselves into birds' heads, at close range. Even the stubble is gracious, and gradually discloses skulking females of obscure coloration, and who had only been known to you before as voices and things in the air. The chirruping rattle of this bird has, somehow, the power of calling out all the wild instinct of a man, the primitive, wind-forged, and untamable Norse core, which lies ill at ease beneath this thin veneer of spoon-fed civilization. It is like a rune from the elder Edda, challenging the unspoiled spirit to arise and do battle with the fiery flying drake.

According to Mr. E. W. Nelson,¹ who found this species breeding abundantly on the grassy flats near St. Michaels, Alaska, the birds arrive there early in May, while the ground is still largely covered with snow, and by the middle of that month they are common. "The males, as if conscious of their handsome plumage, choose the tops of the only breaks in the monotonous level, which are small, rounded knolls and tussocks. The male utters its song as it flies upward from one of these knolls, and when it reaches the height of ten or fifteen yards, it extends the points of its wings upwards, forming a large V-shaped figure, and floats gently to the ground, uttering as it slowly sinks, its liquid tones which fall in twinkling succession upon the ear, and are,

¹ Quoted by Prof. Butler. "Birds of Indiana," p. 537.

perhaps, the sweetest notes that one hears during the entire springtime of these regions. It is an exquisite jingling melody, having much less power than that of the Bobolink, but with the same general character, and, though shorter, it has even more melody than the song of that well-known bird. The nests are placed on the drier portions of the flats; a hummock or tuft of grass is chosen, or perhaps a projecting bunch of dwarf willow stems, and, as one comes directly upon it, the female usually flutters off under one's feet."

No. 25.

VESPER SPARROW.

A. O. U. No. 540. *Poœcetes gramineus* (Gmel.).

Synonyms.—GRASS FINCH; BAY-WINGED BUNTING.

Description.—*Adults*: General tone of upper parts slaty or grayish brown on the edges of the feathers, modified by the dusky centers, and warmed by delicate traces of rufous; bend of wing bay, concealing dusky centers; wings and tail fuscous with pale tawny or whitish edging,—outer tail-feathers principally or entirely white, the next two pairs white, or not, in varying amount; below sordid white, sharply streaked on breast, flanks, and sides with dusky brown; the chin and throat with small arrow marks of the same color and bounded by chains of streaks; auriculars clear hair-brown, with buffy or lighter center; usually a buffy suffusion on streaked area of breast and sides. Length 5.75-6.25 (146.1-158.8); wing 3.16 (80.3); tail 2.35 (59.7); bill .42 (10.7);—av. of five Columbus specimens.

Recognition Marks.—Sparrow size; general streaked appearance; dusky-streaked breast on sordid ground (in the Song Sparrow, with which alone it could be confused in this particular, the streaking is more rufous and the ground color clearer white); white lateral tail-feathers conspicuous in flight.

Nest, on ground, neatly lined with grasses, rootlets and horse-hair. *Eggs*, 4 or 5, pinkish-, grayish-, or bluish-white, speckled, spotted and occasionally scrawled with reddish brown. Av. size, .82 x .60 (20.8 x 15.2).

General Range.—Eastern North America to the Plains, from Nova Scotia and Ontario southward; breeds from Virginia, Kentucky and Missouri northward.

Range in Ohio.—Abundant summer resident; of general occurrence.

A sober garb cannot conceal the quality of the wearer, even the Quaker gray be made to cover alike saint and sinner. Plainness of dress, therefore, is a fault to be readily forgiven, even in a bird, if it be accompanied by a voice of sweet sincerity and a manner of self-forgetfulness. In a family where a modest appearance is no reproach, but a warrant to health and long life, the Vesper Sparrow is pre-eminent for modesty. You are not aware of his

presence until he disengages himself from the engulfing grays of the stalk-strewn ground or dusty roadside and mounts a fence-rail to rhyme the coming or the parting day.

The arrival of Vesper Sparrow in middle early spring may mark the supreme effort of that particular warm wave, but you are quite content to await the further travail of the season while you get acquainted with this amiable newcomer. Under the compulsion of sun and rain the sodden fields have been trying to muster a decent green to hide the ugliness of winter's devastation. But wherefore! The air is lonely and the fence rows untenanted. The Meadow Larks, to be sure, have been romping about for several weeks



Taken near Oberlin.

NEST AND EGGS OF VESPER SPARROW.

Photo by the Author.

and getting bolder every day, but they are boistrous fellows, drunk with air and mad with sunshine; the winter-sharpened ears wait hungrily for the poet of common day. The morning he comes a low, sweet murmur of praise is heard on every side. You know it will ascend unceasingly thenceforth, and spring is different.

Vesper Sparrow is the typical ground bird. He eats, runs, sleeps, and rears his family upon the ground; but to sing—Ah! that is different!—

nothing less than the top rail of the fence will do for that; a telegraph pole or wire is better, and a lone tree in the pasture is not to be despised. The males gather in spring in such places to engage in decorous concerts of rivalry. The song consists of a variety of simple pleasing notes, each uttered two or three times, and all strung together to the number of four or five. The characteristic introduction is a mellow whistled *he-ho* a little softer in tone than the succeeding notes. The scolding note, a thrasher-like kissing sound, *tsook*, will sometimes interrupt his song if a strange listener gets too close. Early morning and late evening are the regular song periods, but the conscientious and indefatigable singer is more apt to interrupt the noon stillness than not.

Since the Vesper Sparrow is a bird of open country and uplands, it cares little for the vicinity of water, but it loves the dust of country roads as dearly as an old hen, and the daily dust bath is a familiar sight to every traveler. While seeking the food of weed-seeds and insects it runs industriously about upon the ground, skulking rather than flitting for safety. Altho not especially timorous, it appears to take a sort of professional pride in being able to slip about among the weed-stems unseen.

It is, of course, at nesting time that the sneak-ability of the bird is most severely tested. The nest, a simple affair of coiled grasses, is usually sunk so that the brim comes flush with the ground. For the rest the bird seeks no other protection than that of "luck" and its own ability to elude observation when obliged to quit the nest. The ruse of lameness is frequently employed where danger is imminent. At other times the sitting bird is shrewd enough to rise at a considerable distance.

Two and sometimes three broods are raised in a season, the first in late April, the second in late June or early July. Upland pastures and weedy fields are the favorite spots for the rearing of young, but plowed ground is sometimes usurped if left too long, and roadsides are second choice.

There is reason to believe that this species has invaded the state within the historic period, since Audubon expressly states that he did not meet it in Ohio. At any rate it is gradually increasing in numbers and its range extending as the forests dwindle.

No. 26.

SAVANNA SPARROW.

A. O. U. No. 542a. *Passerculus sandwichensis savanna* (Wils.).

Description.—*Adults in spring*: Superciliary line and edge of wing near alula pale yellow (at a distance often not distinguishable from white); a buffy or whitish median crown line separating two broad, blackish stripes; blackish (but poorly defined) maxillary, rictal, and post-ocular stripes,—the last two usually meeting behind and enclosing the buffy auriculars; above, in general, brownish black, the feathers having black centers, bordered first by rufous or ochraceous buff, then by ashy; below, white or sordid, the belly and crissum unmarked; the chin and throat with tiny, and the breast with large, wedge-shaped spots of brownish-black (sometimes coalescing to form central blotch); sides and flanks heavily streaked with the same. At other seasons and in young birds, the yellow is more pronounced and the general pattern is somewhat obscured by a buffy or ochraceous suffusion. Adult male, length 5.30-5.60 (134.6-142.2); wing 2.75 (69.9); tail 2.10 (53.3); bill .40 (10.2). Female averages a little smaller.

Recognition Marks.—Warbler size (but much more robust in appearance than a warbler); general streaky appearance; the striation of the head, viewed from before, radiates in twelve alternating black and white (or yellowish) areas.

Nest, on the ground, sunken flush with surface, lined indifferently with grasses. *Eggs*, 4-6, greenish- or bluish-white, heavily spotted, mottled, or washed with reddish brown or lilac. Av. size, .78 x .56 (19.8 x 14.2).

General Range.—Eastern North America, breeding from the northern United States to Labrador and Hudson Bay territory.

Range in Ohio.—Spring and fall migrant; not very common, and of local distribution. A few remain to breed.

DR. WHEATON'S statement: "Very common spring and fall migrant in southern and eastern, and probably summer resident in northern Ohio", is somewhat puzzling and perhaps a little irritating to one who, having spent at least parts of eleven seasons in the field, has encountered only three isolated examples of the species in the state. The Doctor probably depended greatly upon some favored haunt near Columbus not now known. I find upon inquiry that most available notebooks of the present day contain only scattering and meager references to this rather rare and irregular migrant. Mr. H. C. Oberholser, in his "Birds of Wayne County" says of it: "A transient visitor; apparently rare, though in proper localities usually to be found in spring. Not observed in the fall. It arrived about the middle of April, the sixteenth of this month being the earliest date recorded." Rev. W. F. Henninger in "Birds of Middle Southern Ohio",¹ says, "A common transient, but not so common as a summer resident. Arrival April 28, 1898, April 5, 1899; departure Oct. 17, 1894, Oct. 29, 1897, Nov. 25, 1898." It has no place among the recent records of the Wheaton Club in Columbus.

¹ The Wilson Bulletin, No. 40, Sept., 1902, p. 87.

My two Columbus dates are April 24, 1902, and March 19, 1903, the latter being the earliest of which I have information, a typical example of that wonderful warm wave which amazed the oldest ornithological inhabitants. Prof. A. W. Butler, in his "Birds of Indiana", records it as a rare resident in the lower Wabash Valley and gives a few instances of its breeding in that state. The instance recorded by Dr. Wheaton on the authority of Mr. H. C. Benson of Gambier is the only positive breeding record of this state of which I am aware.

The Savanna Sparrow is found during migrations along the bushy banks of streams, in weedy fields and bottom-land meadows, together with their interrupting fence-rows and hedges. In habits and appearance it most nearly resembles the Vesper Sparrow, but may be instantly distinguished by the conspicuous way in which it "parts its hair". Like the other bird, it pitches suddenly off its perch when disturbed and flies rapidly above the surface of the ground, following every inequality with bewildering precision. Its song is described as a "curious, squeaky affair", as inconspicuous as the bird.

No. 27.

GRASSHOPPER SPARROW.

A. O. U. No. 546. *Coturniculus savannarum passerinus* (Wils.).

Description.—*Adults in spring*: Crown blackish brown, parted by a median stripe of buffy gray; nape gray, spotted with chestnut; remaining upper parts black and fuscous, feathers edged with gray and tipped with rufous in varying proportions (a single feather, as from the greater wing-coverts, will exhibit the four colors); below, buffy gray, brightest on the breast; the sides and flanks washed with rufous; an elongated spot over the eye, bend of the wing, and edge of wing near alula, yellow; bill horn-color above, yellow below; feet yellow. *In winter*: Brighter colored, with less of black and more of chestnut. Length 4.85-5.20 (123.2-132.1); av. of five Columbus specimens: wing 2.48 (63.); tail 174.6 (44.2); bill .43 (10.9). Female slightly smaller.

Recognition Marks.—Warbler size; unmarked below; bright yellow edge of wing; grasshopper notes; an obscure, close-hiding, terrestrial species. Young birds of this species are streaked below, while those of the Henslow Sparrow are unmarked below (Jones).

Nest, on the ground, well concealed by grass tussock; made of grasses, and sometimes lined with hair. *Eggs*, 4-6, clear white, speckled and spotted with reddish brown, chiefly about larger end. Av. size, .73 × .55 (18.5 × 14.).

General Range.—Eastern United States and southern Canada, west to the Plains; south in winter to Florida, Cuba, etc.

Range in Ohio.—Common summer resident. Of local occurrence.

THOSE bird lovers who disclaim all interest in entomology will be slow in discovering the humble species, for its song is nearer like the chirring of some insect than the voice of a bird. There always comes a day in late April when the half-grown meadows and fields are suddenly found to contain from one to six pairs each of these buzzing Sparrows. But with the possible exception of certain warblers, there is no other bird of anything like the abundance of this one, whose very outline is so nearly unknown to all but the experienced bird-watcher. Its coloration is the plainest possible, its station lowly, and its habits secretive. Perched upon some weed-top, or standing on a fence-rail, the male sends out at regular intervals a weak hissing trill which occupies a fraction over a second in delivery. The sound is not exactly like that of any known insect, but is comparable to the clicking of a locust—or better to the shrilling of the corydalis. Again, the opening and closing of a loud-ticking watch, especially if it be opened with a clatter and shut with a snap, is suggestive of the strange performance. Later in the season a longer effort is sometimes heard. First comes the full “chirr”, then slow notes, three or four in number, as tho the progress of the “wheels” were somewhat impeded: after which the burr proceeds with the original or accelerated rapidity—the whole occupying three seconds. The song will carry a hundred yards for a sharp ear, or further if the ear be laid to the ground; but a fresh cold in the head will spoil the concert at thirty feet.

Only once did I see a Grasshopper Sparrow holding forth from the top of a tall sapling in a fence-row. Surely he must have atoned for his boldness by skulking among the grass roots for two days thereafter. The birds require to be nearly stepped upon — technically “kicked out” — before they will take wing. Some will move off in a flurried zig-zag, but others with a direct buzzing flight like a bee, — in both cases to plump down into the weeds at no great distance.

The nest, a rather careless affair of curled grasses, is placed at the foot of a clover plant or grass tussock, and its discovery is usually due entirely to accident since the female is a close sitter. One might find a needle in a haystack by remov-



Photo by the Author.

THE HAYSTACK.

THERE IS A SPARROW'S NEST SOMEWHERE IN THE FOREGROUND BUT PRECISELY WHERE DEPONENT SAITH NOT.

ing his shoes and trampling vigorously. Some such method would doubtless discover Grasshopper Sparrows' nests, but it is not recommended. The eggs are quite unlike any others found in similar situations, but are likely to be foredoomed by the presence of one or more of those of the wily Cowbird. Two broods are usually raised in a season.

The Grasshopper Sparrow is somewhat irregular in distribution, being abundant in some localities and unaccountably absent in others apparently no less favorable. There is reason to believe that it is extending its range, especially northward and eastward. Thus, it made its first appearance in Lorain County in the spring of 1894, and has never been missing since.

No. 28.

HENSLOW SPARROW.

A. O. U. No. 547. *Ammodramus henslowii* (Aud.).

Description.—*Adult*: Head above, nape, and sides of neck bright olive-buff; crown glossy black separated by median buffy line, gradually mingling with the olive behind and passing out on the nape in a series of black spots; the feathers of the back and scapulars black, broadly margined with chestnut, and narrowly edged with whitish; wings chestnut, but bend and edge pale yellow, and flight-feathers fuscous; rump tawny saffron with black streaks; middle rectrices and upper coverts rufous, with black shafts; below warm buff, paler and unmarked on chin, with heavy sagittate spots on breast and sides; middle of belly white; crissum tawny; lores and cheeks buff; maxillary and post-ocular stripes and rictal stripes enclosing auriculars, black; bill reddish brown; feet yellow. *Young birds* lack much of the olive-buff above, and are white rather than buffy below. Length 4.61 (117.1); wing 2.07 (52.6); tail 1.93 (49.); bill .42 (10.7). Females slightly smaller.

Recognition Marks.—Warbler size; olive-buff of head and neck above contrasting with chestnut and black of back; warm buff with black markings of breast and sides.

Nest, similar to that of preceding species. *Eggs*, 4 or 5, pale greenish- or grayish-white, heavily dotted and blotched with reddish brown and lilac. Av. size, .75 × .57 (19.1 × 14.9).

General Range.—Eastern United States west to the Plains, north to southern New England and Ontario.

Range in Ohio.—Very rare or casual summer resident. Found in Lorain county, and during the season of 1894, only.

DR. WHEATON admits this Sparrow to a place on the Ohio List upon the sole ground of a statement by Audubon, that it was accidental in Ohio. This statement, so far as I am aware, has received positive confirmation only once, but the bird is known to breed regularly in northern Indiana, and eggs have been taken in southern Michigan.

On the evening of June 4th, 1894, near Oberlin, while returning in a buggy with my friend, Lynds Jones, from a collecting trip along the Lake Erie shore, we heard a strange bird-note in a neighboring wheat-field. It was the same season in which the Grasshopper Sparrow first made its appearance at Oberlin and we were prepared for novelties. Mr. Jones, who was familiar with this species in Iowa, had previously described the note to me so perfectly that we both exclaimed "Henslow's!" and sprang from the buggy. The ventriloquial voice with its lisping notes, "*it-sc-tsc-tsip*" led us a merry chase in the gathering dusk, and our devious wanderings through the growing grain brought out a vigorous protest from the owner of the field. But we muttered something about "state record" just as Jones pressed the trigger, and the farmer nobly forgave us in the name of Science. Fumbling in the dark for the little body which, unfortunately, meant more to us dead than alive—Science is so skeptical—we hurried home with the treasure. Mr. Jones saw other birds in the vicinity of Oberlin later that season, and they undoubtedly bred there, but no other occurrences have been reported in the state.

The Henslow Sparrow is a shy recluse of old fields and lowland meadows. It is a persistent 'songster', but shuns doubtful applause and scurries through the grass like a wood mouse, when alarmed. When it thinks it is being pursued it is apt to thrust its head under leaves or grass and pause motionless in fancied security, leaving the unhidden portion to shift for itself.

No. 29.

NELSON SPARROW.

A. O. U. No. 549.1. *Ammodramus nelsoni* (Allen).

Description.—*Adult*: Crown rich dark brown, without distinct median stripe; feathers of back, and especially scapulars, umber brown with conspicuous white, or pale buffy, edgings; breast, sides, and flanks deep buff or ochraceous, the breast marked, if at all, with a few narrow dusky streaks, the sides more heavily and broadly marked in chains; the buffy sides of the head include slaty auriculars and a dark brown post-ocular stripe, which turns up at the posterior extremity; throat and belly clear white. "Length 5.50 (139.7); wing 2.25 (57.2); tail 1.90 (48.3); bill .43 (10.3)" (Dwight).

Recognition Marks.—Warbler size; heavy buffy coloration on breast and sides, obscurely streaked; shy, secretive habits.

Nesting not well known; described as similar to that of the Leconte Sparrow. *Nest*, of grasses, carefully concealed in tussock or on ground. *Eggs*, 4 or 5, greenish-, or grayish-white, thickly speckled or spotted, chiefly about larger end, with browns and blacks.

General Range.—Fresh marshes of the interior, from northern Illinois northward to North Dakota and Manitoba; south in winter to Texas; in migrations visits the Atlantic Coast, New England, and lower Hudson Valley to Charleston, South Carolina. Accidental in California.

Range in Ohio.—One record, Ashtabula, Jefferson county, by Robert J. Sim, 1902.

IF in moments of insight we are sometimes tempted to bless our obscurity, we have good example for it in this shy little Sparrow. The probabilities are that the bird trespasses upon our borders yearly, yet, so far, only one sharp eye has caught him poaching. Certain it is that he is abundant in the interior, and certain it is that he is not uncommon on the Atlantic coast in winter. Ergo—he must pass over Ohio, at least occasionally; and what more natural than that he should pause for breakfast somewhere in the hospitable swamps which line the southern shores of Lake Erie? It gives ornithologists a properly chastened sense to realize that here is one bird at least which is still too clever for him. But on second thought we pocket our chagrin good naturedly; for here is one bird, too, whose humble, stealthy ways deliver him from the seat of scorn upon mi-lady's bonnet and whose eggs are not found in every small boy's sawdust box.

The Nelson Sparrow was first described from the Calumet marshes near Chicago in 1877. Since then it has been found numerously in the prairie marshes of the West, but as yet comparatively little is known of its life history. Col. Goss (*Birds of Kansas*, 1891, 449) speaks of the song as "a short, weak, unmusical twittering warble." Certain parties¹ are said to have found it

¹ Mr. Walter Raine and Mr. G. F. Dippie. See Davie, "Nests and Eggs of N. A. Birds," p. 374.

breeding in Manitoba. It is a skulker of the deeper swamps, and as such is consistently opposed to any course of action calculated to bring it before the public eye.

With reference to the single occurrence in Ohio, Mr. Sim says: "My specimen of the Nelson Sparrow was taken near the mouth of Cowles Creek, Geneva, Ohio. The bird was first seen at 7 P. M. (May 17, 1902) skulking among the weeds of a barren tree-fringed knoll several acres in extent. It finally ascended to the lower branches of a stunted thorn-tree overhanging the beach of the lake. It regard to the color and markings this was the most exquisite little Sparrow that I have seen. The upper parts were striped as evenly as the back of a chipmunk and the stripes of the head were beautiful in their contrast and arrangement. But the large feet, small wings, and short tail gave the bird an odd look—almost railish."

No. 30.

LARK SPARROW.

A. O. U. No. 552. *Chondestes grammacus* (Say).

Synonym.—QUAIL-HEAD.

Description.—*Adult*: Head variegated black, white, and chestnut; lateral head-stripes black in front, chestnut behind; auriculars chestnut, bounded by rictal and post-orbital black stripes; narrow loreal, and broader submalar black stripes; malar, superciliary, and median stripes white, the two latter becoming buffy behind; upper parts buffish gray-brown, clearest on sides of neck, streaked by blackish brown centers of feathers on middle back and scapulars, persisting as edging on the fuscous wings and tail; tail-feathers, except middle pair, broadly tipped with white; below white, purest on throat and belly, washed with grayish buff on sides and crissum, also obscurely across fore-breast, in which is situated a central black spot. Length 6.25 (158.8); wing 3.39 (86.1); tail 2.62 (66.6); bill .46 (11.7).

Recognition Marks.—Sparrow size; head variegated black, white, and chestnut; fan-shaped tail broadly tipped with white and conspicuous in flight (thus easily distinguished from the Vesper Sparrow with square tail and lateral white feathers).

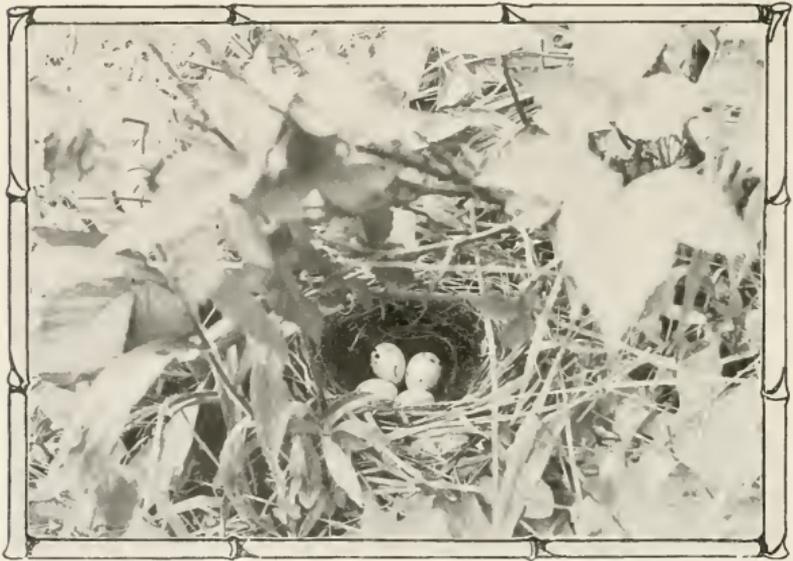
Nest. of grasses, lined with finer grass, rootlets and occasionally horse-hair, on the ground or, rarely, in low bushes or trees. *Eggs*, 3-5, white, pinkish or bluish white, spotted and scrawled in zigzags and scrolls with dark browns or purplish blacks, chiefly at the larger end. Av. size, .82 x .65 (20.8 x 16.5).

General Range.—Southern Ontario, and Mississippi Valley region, from Ohio, Illinois and Michigan to the Plains, south to southern Texas and north-western Alabama. Accidental near Atlantic Coast.

Range in Ohio.—Not common summer resident in central and southern, rare in northern Ohio. Of local distribution, but probably on the increase.

DUSTY roadsides, sunny pastures and areas of broken ground harbor this plainly colored bird from the time of its late arrival in spring until the young are ready to fly. As the heat of summer increases the birds retire to the seclusion of sparsely wooded pastures or fence-row thickets.

The males sing upon arrival, selecting for this purpose a station upon the summit of some outlying tree. The song is best described in the words of Mr. Ridgway who had ample opportunity to study it in Illinois and the extreme West, and who has done more than anyone else to bring the bird into



Taken near McConnellsville.

Photo by the Author.

NEST AND EGGS OF THE LARK SPARROW.

well-deserved prominence. He says¹: "This song is composed of a series of chants, each syllable rich, loud and clear, interrupted with emotional trills. At the beginning the song reminds one somewhat of that of the Indigo Bird (*Passerina cyanea*) but the notes are louder and more metallic, and their delivery more vigorous. Though seemingly hurried, it is one continuous gush of sprightly music; now gay, now melodious, and then tender beyond description.—the very expression of emotion. At intervals the singer falters, as if exhausted by exertion, and his voice becomes scarcely audible; but suddenly

¹ "Birds of Illinois," Vol 1, p. 262.

reviving in his joy, it is resumed in all its vigor, until he appears to be really overcome by the effort."

This bird more frequently than others is found singing in the middle of the very hottest days in summer. At such times his tremulous song comes to the ear like the gurgling of sweet waters. Next after the Bachman I would accord him the highest place in song among all sparrows.

The accompanying illustration tells the story of nest and eggs perhaps better than words. It is worth while to note that the picture was taken at McConnelsville, in Morgan County, which must be quite near the limit of the bird's present range. Dr. Wheaton first recorded the Lark Sparrow as an Ohio bird in 1861. Since that time it has steadily increased in numbers, altho it is nowhere a common bird.

No. 31.

HARRIS SPARROW.

A. O. U. No. 553. *Zonotrichia querula* (Nutt.).

Synonym.—HOODED CROWN SPARROW.

Description—*Adult male*: Crown, face, and throat jet black; sides of head ashy white; breast and below white; sides, flanks, and crissum with a tawny wash and obscurely streaked; above, brown of various shades, inclining to bay on the nape, decidedly olivaceous on rump and upper tail-coverts; feathers of upper back, scapulars, and wing-coverts black centrally; wings and tail fuscous; bill coral-red. *Female*: Similar but with black of head and throat restricted. *In winter* the plumage of both sexes is toned down by ochraceous wash of upper parts and sides, and the feathers of the crown are bordered narrowly with ashy or buff. Length 6.75-7.75 (171.5-196.9); wing 3.20-3.60 (81.3-91.4); tail 3.30-3.75 (83.8-95.3) (Ridgway).

Recognition Marks.—Chewink size; black hood (especially throat) of adults.

Nesting.—Known only from Bendire's description of a set not certainly identified. *Eggs*, similar in appearance to those of a Cardinal, but smaller.

General Range.—Middle United States from Illinois, Missouri, and Iowa west to middle Kansas and the Dakotas, and from Texas north to Manitoba. Accidental on Vancouver Island and in British Columbia and Oregon.

Range in Ohio.—Accidental; one record, Columbus, Ohio, April 28, 1889, by Mr. J. E. Gould—reported by Mr. Oliver Davie.

FOUR or five of these birds were observed by Mr. Gould as they fed in a thicket in company with White Throated Sparrows (*Z. albicollis*), some two miles north of Columbus. One specimen was secured and presented to Mr. Oliver Davie. It is now in the O. S. U. collection.

The Harris Sparrow appears casually in Illinois and Wisconsin during migrations, but no other instance of its occurrence has been reported from any point further east.

No. 32.

WHITE-CROWNED SPARROW.

A. O. U. No. 554. *Zonotrichia leucophrys* (Forst.).

Description.—*Adult*: Crown pure white, becoming gray behind; lateral crown-stripes meeting in front, and post-ocular stripes, jet black, separated by white stripe beginning at anterior angle of eye; remainder of head, neck all around, and entire under parts slaty gray, darkest on nape, whitening on chin and belly, with a tawny wash on flanks and crissum; back and scapulars brown (burnt umber) edged with gray; rump and upper tail-coverts tawny olivaceous; wings and tail fuscous, the tertials dark-centered with edgings of bay and white; middle and greater coverts tipped with white, forming two inconspicuous wing-bars; rectrices with brown shafts and tawny edgings; bill reddish brown with tip of maxilla black. *Young* of the year have the black of head replaced by deep chestnut, and the white by ochraceo-fuscous or gray; in general darker and browner above than adult. Length 6.50-7.00 (165.1-177.8); av. of seven Columbus specimens: wing 3.14 (79.8); tail 2.90 (73.7); bill .43 (10.9).

Recognition Marks.—Sparrow size; broad white crown and jet black lateral stripes strongly contrasting; throat not definitely nor abruptly white.

Nesting.—Does not breed in Ohio. *Nest*, on the ground or in bushes, of weeds and grasses lined with fine grass. *Eggs*, 4 or 5, pale bluish green, speckled and spotted with reddish brown, chiefly at the larger end. Av. size, .01 x .61 (23.1 x 15.5).

General Range.—North America at large, breeding chiefly in the Rocky Mountains, the Sierra Nevada, and northeast to Labrador. South in winter to the Valley of Mexico.

Range in Ohio.—A regular spring and fall migrant, sometimes lingering into summer; not so common as the next species.

THIS handsome and courtly gentleman, with his no less polished wife, is far more modest than his talents would warrant. Already this season we have leveled the glasses on a hundred heads, only to drop them again and exclaim "White-throat," in a tone of mild disgust. But here at last on the tenth of May, we have come upon a company of the better birds holding court in a long, dense rose-briar thicket, which lines a sheltered fence. Our attention was attracted by a soft, varied whistle of gentle melancholy, a performance which seemed to report correctly the sentiments of the whole party, for it was caught up and repeated at courteous intervals by half a dozen throats.



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WHITE-CROWNED SPARROW
Zonotrichia leucophrys
Life-size

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Now there is not a bird to be seen, but an occasional sharp *dzink* is heard in the brush, or a suppressed titter of excitement as two birds jostle in their effort to keep out of sight. We are being scrutinized, however, by a dozen pairs of sharp eyes, and if we are quiet and well-behaved one bird and then another will hop up to a taller branch to see and be seen.

What distinguished looking foreigners they are, indeed, with their white crowns slightly raised and sharply offset by the black stripes which flank them! The bird has an aristocratic air which is unmistakable, and appears to expect deference as his due; so perhaps we ought not to wonder at the royal reserve which shrinks from the contemplated profanation of the vulgar eye.

These birds are thought by Burroughs to bear the proportion of about one to twenty of their White-throated kin during the migrations. They are slow travelers, but not above two or three flocks are to be seen in a season, and there is no suspicion of their tarrying within our borders to breed.

No. 33.

WHITE-THROATED SPARROW.

A. O. U. No. 558. *Zonotrichia albicollis* (Gmel.).

Synonym.—PEABODY-BIRD.

Description.—*Adult male*: Crown black, divided by a pale white median line; an elongated spot in front of the eye above, yellow; remainder of superciliary line white; throat white squarely cut off below; obscure blackish rictal and post-orbital lines; below gray, sordid or slaty on fore-breast, extending up and mingling with brown on cheeks, washed with brownish on sides and flanks; above warm brown inclining to bay, feathers with blackish centers most conspicuous on scapulars and ends of tertiaries; rump tawny-olivaceous or bister; wings and tail fuscous-edged and tinged with bay or tawny; edge of wing yellow. *Adult female*: Similar to and not always distinguishable from male, but usually duller; black of head with admixture of brown; loreal spot paler; white of throat restricted and sordid, or flecked with dusky. *Young*: Still duller and browner; the throat sometimes scarcely distinguishable from the sordid under parts. Length 6.75 (171.5); wing 2.90 (73.7); tail 2.70-3.00 (68.6-76.2); bill .43 (10.9).

Recognition Marks.—Sparrow size; yellow above lores and on edge of wing; white throat-patch; narrow median crown stripe, as distinguished from *Z. leucophrys*.

Nesting.—Not known to breed in Ohio. "Nest, of coarse grasses, rootlets, moss, strips of bark, etc., lined with finer grasses, on the ground or in bushes. *Eggs*, 4 or 5, bluish white, finely and evenly speckled, or heavily and irregularly blotched with pale rufous brown. Av. size, .82 x .60 (20.8 x 15.2)" (Chapman).

General Range.—Eastern North America, west to the Plains, north to Labrador and the Fur countries. Breeds from the northern tier of states northward, and winters from Massachusetts southward.

Range in Ohio.—An abundant spring and fall migrant. Winters in large numbers in the extreme southern part of the state.

BOTH in spring and fall immense numbers of these Sparrows pursue a leisurely course through our state, while the southern quarter of it conveniently marks the northern limit of their winter distribution.

Brush-piles, the tops of fallen trees, and the thickets of second-growth clearings furnish rendezvous for little companies of from twenty to a hundred of these birds. Here they scratch among the fallen leaves, kicking absurdly with both feet, after the fashion of Towhee, or else cull clammy sweets of slug and bug from rotting logs.

The greater part of the day is spent in seclusion, resting and recuperating for or from the long journey, but like all birds, except Owls, they are quite active in the early morning. In common with the Owls, however, they enjoy the evening hours. As the sun begins to sink in the west, the White-throats gather from scattered pastures to indulge a game of tag, chasing each other about with merry calls and cries, or stopping now and then to snatch a last morsel of food. As the shades of twilight deepen they bestow themselves for the night in some chosen thicket, not without much jostling and sniggering, quite like healthy children after a romp.

Being a sociable bird White-throat makes frequent use of a penetrating *tseep*, by which to trail his companions through the brushy mazes. They have also a metallic *chink*, still sibilant—if such a combination may be conceived—to express alarm and protest. In springtime the song proper is perfected, as we suppose, before the birds leave for the higher latitudes. It consists normally of six drawing, mournful, whistled notes, of which the last three or four have a slightly tremulous quality. The initiatory note is either much lower or a little higher than the others, which are given on one key or else descend by fractional tones. The whole may be represented as, *Oh dear, dear, de-e-car, de-e-car, de-car*, or, *Hoo, he-ew, he-ew, he-e-e-ew, he-e-ew, he-e-ew*. Most western writers, when consulted upon this point, dutifully repeat the tradition, said to have originated in New England, that the bird says "*Peabody, peabody, peabody*," and hence is properly called the Peabody Bird. One cannot predict what may happen further north or east, but I lift the voice of one crying in the wilderness that the bird does not utter anything remotely resembling the word Peabody while in Ohio.

No. 34.

TREE SPARROW.

A. O. U. No. 559. *Spizella monticola* (Gmel.).

Description.—*Adult*: Crown bright chestnut, bordered by broad gray superciliary line; obscure chestnut streaking on side of head on gray ground; above, feathers of back black with rufous and flaxen edgings; scapulars, greater coverts, and outer webs of secondaries broadly edged with rufous; middle and greater coverts tipped with white, forming two fairly conspicuous wing-bars; remainder of wing and tail blackish, edged with whitish; below gray, slaty, or sordid white; a partially concealed dark spot in center of breast; a chestnut patch on side of the breast; sides and flanks tawny in varying proportions; bill blackish above, yellow below, with dark tip. *In winter specimens*, the chestnut of crown is slightly veiled centrally by ashy, and the chestnut on the sides of the breast variously distributed or almost dispelled. Av. of six Columbus specimens: Length 6.00 (152.4); wing 2.96 (75.2); tail 2.57 (65.3); bill .37 (9.4).

Recognition Marks.—Warbler size, but stockier; chestnut crown and rufous tone of upper parts; white wing-bars; partially concealed dusky spot on breast; gregarious habits, in winter.

Nesting.—Does not breed in Ohio. "Nest, in low bushes or on the ground, loosely constructed of bark strips, weeds and grasses, warmly lined with feathers. Eggs, 4-6, or even 7, pale green, minutely and regularly sprinkled with reddish brown spots" (Coues.). Av. size, .75 x .60 (19.1 x 15.2).

General Range.—Eastern North America, west to the Plains, and from the Arctic Ocean south in winter, to the Carolinas, Kentucky, and eastern Kansas. Breeds north of the United States east of the Rocky Mountains.

Range in Ohio.—Abundant in winter, especially northerly.

THE sight of the first Tree Sparrow in the fall serves perfectly to call up a vision of impending winter. Here are the hurrying blasts, the leaden skies, the piling snow-driits, all ready to make the beholder shiver. But here, too, in some unburied weed-patch or thicket of rose-briars, is a company of Tree Sparrows, stout-hearted and cold-defying, setting up a merry tinkling chorus, as eloquent of good cheer as a crackling Yule-log. How many times has the bird-man hastened out after some cruel cold snap, thinking, "Surely this will settle for my birds," only to have his fears rebuked by a troupe of these hardy Norsemen reveling in some back pasture as if they had found their Valhalla on this side the icy gates. Ho! brothers! here is food in these dainty capsules of mustard or mallow; here is wine distilled from the rose-hips; here is shelter in the weedy mazes, or under the soft blanket of the snow. What ho! Lift the light song! Pass round the cup again! Let mighty cheer prevail!

The Tree Sparrow is easily the most abundant bird in the state during winter. A half day's ramble in the northern part will discover from three

to a dozen flocks of them, varying in numbers from a dozen to three or four hundred each. In the nature of the case their food is found near the ground, consisting as it does of weed-seed and dried berries; and so, for the season, the name Tree Sparrow seems inconsistent. When persistently annoyed, however, the flock will rise to the tree-tops in straggling fashion, and either await the disappearance of the enemy or make off through the trees at a good height. The warm days of early spring, too, bring out their true character. Some of the males mount the trees at various heights to tune up for the spring concert season, while the more frivolous play at tag among the branches, dashing about with a recklessness which causes one to open his eyes in astonishment, if he has known the birds before only as babbling and slow-flitting seed-gatherers.

The song of the Tree Sparrow is unusually sweet and tuneful, affording a pleasing contrast to the monotonous ditty of the Chipping Sparrow. Snatches of song may be heard, indeed, on almost any mild day in winter, but the spring awakening assures a more pretentious effort. A common form reminds one somewhat of Towhee's Sunday-go-to-meeting best, but the notes are much finer and of most flattering tenderness, *Swee-ho, sweet, sweet, sweet*. There is in it also just a touch of Goldfinch's rollick.

By the middle of April all but a few stragglers of the "Winter Sparrow" host have left for their homes in the distant north. Dr. Wheaton, however, quotes Mr. M. C. Read as saying, "A few remain and spend the entire year with us: have raised them from the nest." The statement is explicit and comes from one of the trusted authorities of the early days. There is nothing left for us but to whistle softly and exclaim, "How *very* unusual!" Certain it is that Tree Sparrow has not repeated the indiscretion during the fifty years or more since Mr. Read's time.

No. 35.

CHIPPING SPARROW.

A. O. U. No. 562. *Spizella socialis* (Wils.).**Synonyms.**—CHIPPY; HAIR-BIRD.

Description.—*Adults:* Forehead black divided by short gray line; crown chestnut flecked with black behind; a gray line over eye, and a black line through it; entire under parts ashy-gray, unmarked; back separated from head by gray of nape, strongly streaked by black, pale rufous, and ochraceous; wings and tail fuscous, edged with whitish; bill black; feet pale. *Immature* birds have bill yellow below; the chestnut of crown mixed with black; and a buffy suffusion of breast and sides in varying proportions. Very young birds are streaked below. Length 5.00-5.50 (127-139.7); wing 2.75 (69.9); tail 2.37 (60.2); bill .36 (9.1).



Photo by J. R. Park.

WHO GETS THE WORM?—A CHIPPING SPARROW FAMILY.

Recognition Marks.—Warbler size; blackish forehead and chestnut crown; song a monotonous trill.

Nest, a compact structure of fine twigs, grasses, and (most commonly and often exclusively) rootlets, heavily lined with horse-hair: placed anywhere in bushes or small trees, but preferably on horizontal branches of apple-trees or evergreens. *Eggs,* 4 or 5, greenish blue, speckled freely or narrowly about the larger end with reddish brown or black. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern North America, west to the Rocky Mountains, north to Great Slave Lake, and south to eastern Mexico, breeding from the Gulf States northward.

Range in Ohio.—A common, and universally distributed summer resident. Sparingly resident in winter in southern portion.

WHO has not seen this little pensioner of doorstep and lawn? Wilson was quite correct in naming him *socialis*, sociable; the more so if the word be not construed in its ordinary sense of gregarious, but made to witness to the bird's preference for human society. The Chipping Sparrow hops fearlessly about our yards in search of food, or flutters up with a load of nesting material, from our very feet, not with brazen impudence like the English Sparrow, but with the quiet confidence of a trusted friend. No bird is more likely than he to accept the proffered hospitality of honeysuckle vine or trellis, and instances are beyond number where the gentle "Chippy" has been coaxed to eat from the hand.

Of all homely sounds the monotonous trill of the Chipping Sparrow is the

most homely—and the most easily forgivable. As music it scarcely ranks above the rattle of castanets, but the little singer pours out his soul full earnestly, and his ardor leads him to sustained effort throughout the sultry hours when more brilliant vocalists are sulking in the shade; and for this we come to prize this homely ditty like the sound of plashing waters. It is the Chipping Sparrow too that may usually be depended upon to open the morning chorus at about 3:15, and that were service enough to endear him to the heart of the ornithologist.

Chippy's nest is a frail affair at best, but often most elaborately constructed of rootlets and fine grasses and plentifully lined with horse-hair. In many instances the



Taken in Fairfield Co.

Photo by the Author.

CHIPPING SPARROW'S NEST IN APPLE TREE.

last named material is exclusively employed, and Dr. Wheaton mentions two nests composed entirely of white hair. A horizontal branch of an apple tree is a common situation, but nests are placed in evergreens and other shade trees, or in hedge-rows and the like. They are often so loosely related to their immediate surroundings as to give the impression of having been constructed elsewhere and then moved bodily to their present site. Some are set as lightly as feathers upon the tips of evergreen branches, and a heavy storm in season is sure to bring down a shower of Chippies' nests.

Dr. Brewer in his monumental work¹ states emphatically that in no instance has he known of the Chipping Sparrow's nest on the ground. Yet Dr. Wheaton mentions

such an instance, and in the spring of 1903 I came upon a nest with one egg, in the very shadow of an apple-tree, indeed, but thoroughly settled upon the ground under the protection of a grass-tussock.

Chipping Sparrows are devoted parents, and raise at least two



Photo by J. B. Parker.

PLEASE, FATHER, I WANT SOME GRUB.
THE FEMALE IS BROODING THE FLEDGELINGS ON A VERY WARM DAY, BUT
ONE YOUNGSTER IS HUNGRY AS WELL AS HOT.

broods each season. Their fidelity to their young and their confidence in man make them frequent subjects of the photographer's skill, and their portraits are among the most pleasing in collections.

The Cowbird finds these gentle creatures among her easiest victims. After the dusky changeling has stifled or ejected the rightful heirs, he usurps the full attention of his foster parents, and one of the saddest sights to see in the bird-world is that of a mother Chippy, slender and care-worn, standing on tiptoes to cram food into the mouth of some squawking, pot-bellied, cuckold squab of twice her size.

¹ North American Birds, Baird, Brewer & Ridgway: Land Birds, Vol. II., p. 10.

No. 36.

FIELD SPARROW.

A. O. U. No. 503. *Spizella pusilla* (Wils.).

Description.—*Adults*: Crown dull chestnut with a slight admixture of ashy gray; auriculars bordered with chestnut; nape gray; feathers of back rufous with black central streaks and buffy edgings; wings dusky, the primaries edged with whitish and the rest with rufous, the middle and greater coverts tipped with white, forming two inconspicuous bars; tail fuscous; below ashy gray, unmarked save for slight brownish suffusion of breast and flanks; bill pale reddish; feet pale. Length 5.25-5.75 (133.3-146.1); wing 2.57 (65.3); tail 2.05 (67.3); bill .36 (9.1).



Taken near Chicago.

Photo by Mrs. A. J. H. H.

FIELD SPARROW'S NEST IN GRASS CLUMP.

Recognition Marks.—Warbler size; crown *not* bright chestnut; bill uniform pale reddish; unmarked below. This bird has few positive marks, and is oftenest "sensed," or determined by elimination.

Nest, in low bushes or on the ground, a neat but simple structure of dried grasses, sometimes, but rarely, lined with horse-hairs. *Eggs*, 3-5, white, bluish- or pinkish-white, with numerous small spots of reddish brown, generally distributed or gathered loosely about larger end. Av. size, .70 x .51 (17.8 x 13.).

General Range.—Eastern United States and southern Canada, west to the

Plains, south to the Gulf States and Texas. Breeds from South Carolina, southern Illinois, and Kansas northward.

Range in Ohio.—Common summer resident.

OF plainer appearance even than the Chipping Sparrow, this humble wayside bird excels in song. Its trill is generically related to that of the other bird, but its notes are purest music. *Te-w, te-w, te-w*,—the first three or four notes come full and clear, but then comes a rapid accelerando through which they swiftly pass into a delicious trill, and so fade out. The tones are tender and sweet, and possess a subtle spiritual quality which lifts them out of the realm of common things. One never quite gets over wondering at the excessive plainness of the singer in contrast with the exalted sentiment he utters. It is as tho a clod took voice and a soul escaped in song.

Within certain pretty clearly defined limits the Field Sparrow's song is capable of great individual variation. Thus it becomes comparatively easy to distinguish a half dozen birds in a field by their songs alone. In some the opening notes are prolonged, as, *He-w, he-w, he-w, he-w, he-w, he-w, he-w, he-w, he-w*. In others they are distinctly doubled and have the accent transferred to the second syllable, *Tu-ct', tu-ct', tu-ct', tu-ct', wect, wect, wect, tr*. One individual heard in August differed from all others in the neighborhood in having such a double note, *Cher-ic, cher-ic, cher-ic, te-w, te-w*, etc. The following spring the singer returned to the same station, and two others about a hundred yards away developed the same peculiarity. It is fair to suppose that these last were children of the first.



Photo by the Author.

A NESTING SITE.

THE NEST SHOWN IN THE PRECEDING ILLUSTRATION OCCUPIES A CENTRAL POSITION IN THE MAIN TUSsock

A bushy pasture or undergrowth flanking the woods affords a suitable refuge for the Field Sparrow, or else it finds lodgment along over-grown fences and in the ephemeral sprouts which line the road. The bird is rather shy and retiring, neither seeking the haunts of men nor courting observation in its bushland haunts.

According to Dr. Howard Jones, "The nests seem to be about equally divided between the ground and the bushes. When in the former position a little depression is chosen and the structure is neatly fitted into it with the rim about level with the surrounding earth. When in the latter position it is placed in any arrangement of twigs that will support it; it is not built about and cabled to them as is the nest of the Summer Warbler, but it is simply loosely arranged upon the stems or wedged in among them so that it will not topple over, and nearly always it can be lifted out without tearing it in the least. It is seldom if ever over five feet from the ground, and commonly is within two or three." Occasionally a nest is taken from the growing grass, which is so complete in itself and so little adjusted to its surroundings that it looks as if it might have been dropped there by a careless hand.

In construction the nest is simple, but loose or compact according to the skill of the owner. The illustration shows one of the best quality, compactly built and plentifully supplied with horse-hair lining. Another taken the same season from a clump of "suckers" seven feet high on the trunk of an apple tree, was as flimsy as a Grosbeak's, a mere wisp of twisted grasses which held up four eggs to easy inspection from below.

No. 37.

SLATE-COLORED JUNCO.

A. O. U. No. 567. *Junco hyemalis* (Linn.).

Synonyms.—SNOW-BIRD; EASTERN SNOW-BIRD.

Description.—*Adult male in summer*: Upper parts, throat and breast slaty black, the bluish tinge lacking on wings and tail; below, abruptly white from the breast, the flanks ashy slate; the two outer pairs of tail-feathers entirely, and the third pair principally white; bill flesh-color, usually tipped with black. *Adult female*: Similar to male; throat and breast paler; a brownish wash over the upper parts, deepest on nape and upper back; wings brownish fuscous rather than black, and sides tawny-washed. *Adult male in winter*, becoming like female, but still distinguishable. Length 6.00-6.50 (152.4-165.1); wing 3.07 (78.); tail 2.80 (71.1); bill .49 (12.5). Female averages slightly smaller than male.

Recognition Marks.—Sparrow size; slaty or brownish black and white contrasting; white lateral tail-feathers.

Nest, on the ground, usually under cover of a protecting root, log or the like, composed of grasses, roots and trash, lined with fine grass or hair. *Eggs*,

4 or 5, white or greenish white, speckled freely with reddish and dark brown. Av. size, .77 x .58 (19.6 x 14.7).

General Range.—North America, chiefly east of the Rockies, breeding in the hilly portions of the Northern States northward. South in winter to the Gulf States.

Range in Ohio.—Abundant winter resident. Possibly breeds sparingly (formerly "in great numbers."—Kirtland) in northeastern part of state.

A summer in *Laurentia* is certainly good for the health, for when Junco returns in the fall he is chock-full of animal spirits and good cheer. He is a very energetic body at any time of year, but his high spirits are especially grateful to the beholder when the numbing cold of winter has silenced all feathered kind but the invincible Tree Sparrows and Snow-birds. The plumage of the Junco exactly matches his winter surroundings—"Leaden skies above; snow below," Mr. Parkhurst says—and he proceeds to make himself thoroughly at home. Not content to mope about within the limits of a single brush-patch, like Tree Sparrows, large companies of Snow-birds rove restlessly through tree-tops and weedy dingles as well, and cover considerable areas in a day.

On such occasions, and commonly, they employ a peculiar twitter of mingled greeting and alarm,—a double note which escapes them whenever any movement of wing is made or contemplated. I have called this the "banner" note, partly because it is uttered when the bird, in rising from the ground or fluttering from twig to twig, displays the black and white banner of its tail, and partly because it sounds like the double clank-clank of a railroad switch when the heavy trucks pass over it. The connection between a banner and a railroad switch may not be perfectly obvious at first, but anyone who is not color-blind is hereby respectfully challenged to forget if possible the lurid colors which decorate the average assemblage of militant switch-posts.

Junco, while a very reckless fellow to appearance, is not indifferent to the comfort of well-appointed lodgings. His nights are spent in the thickest cover of cedar hedges, under logs or sheltered banks, along streams, or else buried in the recesses of corn-shocks. One crisp November evening a year or two ago, with my ornithological chum, Mr. Lynds Jones, I watched a company of Juncos to bed. The birds would steal along from shock to shock with titters of inquiry until they found an empty bed or one to their taste, and then would settle well down into the top, not without considerable rustling of dry leaves. When the company was quiet, we started out, boy-like, to undo the work. We saluted the shocks in turn with distantly flung clods which shivered to powder as they struck the stalks and made a noise like the Day of Judgment. Out dashed the Juncos by twos and threes from every shock thus rudely assaulted, and many were the pertinent remarks made in most emphatic Juncese when the mischief-makers were discovered. Oh,



Taken in Columbus.



WHERE JUNCO SLEEPS.



Photo by the Author.

well, they really wer'n't scared quite out of their wits, and they had plenty of time to get back into bed after we were gone. Besides, variety is the spice of life—even of a Snowbird's. But the boys! Say, Jones, how old are you, anyway?

When the first warm days of March bring up the Bluebirds and the Robins, the Juncos get the spring fever. But they do not rush off to fill premature graves in the still snowy north. The company musters instead in the tree-tops on the quiet side of the woods, and indulges in a grand eisteddfod. I am sure that the birds are a little Welch and that this term is strictly correct. All sing at once a sweet little tinkling trill, not very pretentious, but tender and winsome. Interspersed with this is a variety of sipping and suckling notes whose uses are hard to discern. Now and then also a kissing note, of repulsion instead of attraction, is heard, such as is employed during the breeding season to frighten enemies. During the progress of the concert some dashing young fellow, unable fully to express his emotion in song, runs amuck and goes charging about through the woody mazes in a fine frenzy, without, however, quite spilling his brains. Others catch the infection, and I have seen a score at once in a mad whirl of this harmless excitement.

Juncos linger surprisingly late sometimes, well on into April or even

May. Perhaps this is because they are so near the southern limit of their breeding range that they cannot be sure they care to move. The birds are said to breed still in the wilder portions in the northeastern part of the state, but of this I have no certain knowledge.

No. 38.

BACHMAN SPARROW.

A. O. U. No. 575a. *Peuceea æstivalis bachmanii* (Aud.).

Description.—*Adults*: Above bluish gray streaked with dark chestnut or bay; back, usually, with a few black streaks centrally; wings and tail fuscous with various edgings of gray, rufous or white; loreal area and line over eye buffy, becoming gray behind; a narrow ashy or whitish median line more or less distinct or obsolete (according to season?); below gray, washed with brownish or dingy buff, the overcast being heaviest on breast and sides; edge of wing yellow; bill horn-color, darkest above; feet light brown. *Young* in first plumage are streaked on breast. Length 5.50-6.25 (139.7-158.8); wing 2.45 (62.2); tail 2.60 (66.); bill .56 (14.2).

Recognition Marks.—Warbler to sparrow size; mixed bay and gray of upper parts. To be carefully distinguished from the Field Sparrow by its larger bill, and more distinct buffy suffusion of breast, etc.



Photo by
H. C. J. J. J.

Taken in Cincinnati.

A HAUNT OF THE BACHMAN SPARROW

HERE THAT THE SPECIMEN REFERRED TO IN THE TEXT WAS TAKEN.

Nest, usually described as a domed cylinder of dried grasses, on the ground (but see fuller account below). *Eggs*, 3-4, pure white. *Av. size*, .75 x .60 (19.1 x 15.2).

General Range.—The Carolinas and Gulf States north to southern Illinois, Indiana and Ohio. Florida in winter.

Range in Ohio.—Rare, but probably on the increase southerly; only recently noted: Columbus, by C. M. Weed; Portsmouth, by W. F. Henninger, April 23, and May 6, 1897; Cincinnati, by Miss Laura Gano, April 25, 1901; etc.

IT is very gratifying to be able to report the recent invasion of the state by this delightful vocalist from the south. To Rev. W. F. Henninger, then of Scioto County, belongs the honor of first discovery. A specimen was secured by him near South Webster, April 23, 1897, but it was, unfortunately, not preserved. On April 23, 1903, the author in company with Miss Laura Gano and a party of scientists, took a singing male on Rose Hill, Cincinnati, and the specimen is preserved in the Cincinnati Museum of Natural History. On the following day three others in full song were found upon another of those beautiful wooded hills for which the Queen City is justly famous. These last, I rejoice to say, were not sacrificed even in the name of science. Miss Gano first noted the species at Cincinnati, April 25, 1901, and had seen it on at least two occasions since.

Later in the same season, June 10th and 11th, I came upon the Bachman Sparrow upon one of the hills near Sugar Grove, in Fairfield County. A nest was found in a clover field, which, altho deserted at the time, belonged upon the strongest presumptive evidence to this bird. One of



Taken near Sugar Grove.

Photo by the Author.

TUMBLE-DOWN FENCES ARE ALSO FAVORITE RESORTS.

the young birds was easily caught and its picture taken both in the hand and in the nest, as shown in the accompanying illustrations. A few days later Ralph and Will Bumgardner took a set of four eggs from the ground in the same meadow. The eggs were pure white and could hardly have belonged to any other than this species.

The song of the Bachman Sparrow is a thing of surpassing beauty. In delivering it the bird chooses a prominent station at the top of weed-stalk, fence-post, or sapling, or stands well out on a bare limb of a tree. Here he throws his head back and draws, as it appears, a full breath, in a note of ravishing sweetness; then sends it forth again in a tinkling trill of uniform or varied notes. Nothing can excel the fine poetic rapture of the inspired note. It sets the veins a-tingle and makes one wish to put his shoes from off his feet. The characteristic opening note is given with constantly varying pitch and intensity. Sometimes it sounds like a dream voice floating gently from the summer land of youth, and again it vibrates with startling distinctness like a present call to duty. Occasionally a dainty trill is substituted for this inspired and inspiring opening, while the remainder of the song may consist of a half dozen notes precisely alike, or of a succession of groups three or four in number. There is a soulful quality, an ethereal purity, and a caressing sweetness about the whole performance which makes one sure the door is opened into the third heaven of bird music.



*Taken near
Sugar Grove*

*Photo by the
Author*

A NEST SITE.

THE NEST MAY BE MADE OUT WHERE THE PRINCIPAL STALKS
IN THE FOREGROUND CONVERGE.

Once as I sat entranced before this new found Orpheus a Lark Sparrow broke into song at half the distance. In pained astonishment and wrath I turned upon him—him even! "Oh, please not now! Mon enfant! Please not now!"



Photo by the Author

Cohen Jour Sugar Grove

A YOUNG BACHMAN SPARROW.

No. 39.

SONG SPARROW.

A. O. U. No. 581. *Melospiza cinerea melodia* (Wilson).**Synonym.**—SILVER-TONGUE.

Description.—*Adult*: Crown dull bay with black streaks, divided by dull gray line; superciliary stripe of lighter gray; rufous-brown post-ocular and rictal stripes, enclosing grayish brown auriculars; remaining upper parts reddish brown, varied on scapulars, inter-scapulars, and inner quills by blackish centers and grayish edgings; wing-quills fuscous, broadly edged with rufous; tail rufous with dusky shafts and often obscure transverse barring of dusky; below, white or sordid, heavily streaked on sides of throat, breast and sides by black and rufous; markings wedge-shaped, confluent on sides of throat as maxillary stripes, and often on breast as indistinct blotch, elongated on sides and flanks; bill horn-color above, lighter below; feet pale brown. The streaking both above and below is sharper and heavier in summer and fall than in spring, due to the wearing away of the white or rufous edgings. Individual variations are quite marked, but always conform to the general pattern. Length about 6.30 (160.); av. of five Columbus specimens: wing 2.50 (65.8); tail 2.61 (66.3); bill .47 (11.9).

Recognition Marks.— Sparrow size; the heavy streaking of breast and back is distinctive.

Nest, a bulky mass of dead leaves, twigs, grasses, etc., lined with fine grass, rootlets, and sometimes horse-hair; placed indifferently in bushes or on the ground. *Eggs,* 4-6, greenish-, grayish-, or bluish-white, heavily spotted and blotched with reddish browns which often conceal the background. Av. size, .80 x .59 (20.3 x 15.).

General Range.—Eastern United States to the Plains, breeding from Virginia and the southern portion of the Lake States to the Fur Countries.

Range in Ohio.—Of universal distribution; abundant during breeding season save in southern portion. Resident in middle and southern, and sparingly resident in northern Ohio.



Phot. by T. B. Parker.

SILVER-TONGUE.

THERE are those who do not know the Song Sparrow by sight or by name, but surely there are none, even the dwellers in "sky-scrapers," who have not at some time in their lives heard the sweet strain of this modest bird. Scattered as it is throughout the length and breadth of our land, along the fence-rows and in the lowland thickets, but especially in the backyard shrubbery, unfortunate indeed must be the boy or girl who has not been cheered and made better, if only subconsciously, by this tender minstrel of common life. Perched upon some post or bush, he greets his childish listeners with "*Peace, peace, peace be unto you, my children.*" And that is his message to all the world, "*Peace and good will.*"

Silver-tongue's melody is like sunshine, bountiful and free and ever grateful. Even in winter the brave-hearted bird avails himself of the slightest

pretext,—an hour of sunlight or a rise of temperature—to mount a bush and rehearse his cheerful lay. The song is not continuous, but it is frequently repeated through periods of several minutes, and at intervals of nine or ten seconds. But there! Who could hope to sum up all the commonplace poetry and fond enspiriting of Silver-tongue's music by an estimate of intervals and seconds! It is of the soul and one of the most sincere things in nature.

But no matter how gentle a bird's disposition may be, there is ample use, alack! for the note of warning and distrust. Song Sparrow's scolding note, a single *chip* or *chirp*, is more musical than some, but still very earnest. In winter the resident birds deny themselves even this characteristic cry, and except for the occasional outbursts of full song, they are limited to a high nasal *tss*, quite indistinguishable from that of the Tree Sparrow, with which they are more or less associated through similarity of haunts. Song Sparrows are not really gregarious birds, but a wayside swamp which attracts one pair is as likely to support a dozen, while



Taken
near
Tinn.

Photo by
Rev. W. F.
Henninger.

A GROUND NEST OF THE SONG SPARROW.

the northward moving host spreads over the northern part of the state about the middle of March in such numbers as to leave each bird well within cry of a score of his fellows.

Silver-tongue is a bird of the ground and contiguous levels. When hiding he does not seek the depths of the foliage in trees, but skulks among the dead leaves on the ground, or threads his way through brush piles. If driven from one covert the bird dashes to another with an odd jerking flight, working its tail like a pump-handle, as tho to assist progress. Ordinarily the bird is not fearful, altho retiring in disposition. Occasionally, however, one sneaks so persistently or flies so wildly as to attract undesirable notice, and unconsciously to set a price upon his own head. If Red-eyed Vireos and Song Sparrows would remember *always* to look natural, their sorrowing friends would not need to bewail the day of impulsive collectors.

The question of food supply is least troublesome to a bird of this type. If an oft-repeated adage is correct, the Sparrow's diet must be reckoned very spicy. Seeds of many sorts,—but no large proportion of grain,—

beetles, bugs, slugs and worms form the bulk of its food. I have even seen the bird catch minnows at the edge of a stream, while water insects of several sorts contribute their share of unquestionable spice.

In a season of all around nesting, about one-fifth of the nests found will be those of the Song Sparrow. This is because the bird nests everywhere at lower levels, and because it raises two or three, or sometimes four, broods in a season. The period of incubation is twelve days, and the young are ready to leave the nest in as many more. They do not require much care after they are



*Photo by
J. B. Parker.*

GENTLE MINISTRATIONS.

IT IS A WARM DAY AND THE FEMALE SONG SPARROW IS BROODING HER YOUNG TO PROTECT THEM FROM THE BURNING SUN; WHILE THE MALE FROM TIME TO TIME BRINGS FOOD FOR MOTHER AND CHILDREN.

full grown, altho the parent birds, especially the father, may exercise some slight supervision over them, even while busy with a second nest.



Taken in Columbus

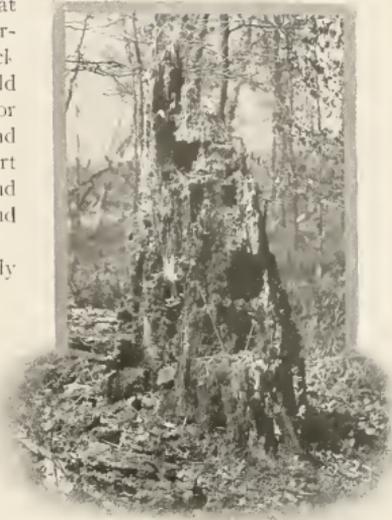
Photo by G. E. Jennings.

SONG SPARROW'S NEST IN FERN.

At this rate we should be overrun with Song Sparrows if there were not so many agencies to hold the species in check. A young Song Sparrow

is the choice morsel of everything that preys,—cats, skunks, weasels, red squirrels, hawks, crows, jays, shrikes, black-snakes, and garter snakes. How would this motley company fare, were it not for the annual crop of Song Sparrows? And the wonder of it is that the brave heart holds out, and sings its song of trust and love with the wrecks of three nests behind it, and the harvest not yet past.

The nest of this species is usually carefully constructed of weed-stalks, vegetable fibers, and grasses, with dead leaves and trash in endless variety. It is deeply cup-shaped, with a rim neatly turned, lined with fine grasses, grass-stems or horse-hair. Probably more than half are upon the ground, sunk flush with the surface or bedded in trash, commonly under the protection of root, stick, or grass tussock. Half as many more occupy grass tussocks at some distance from the ground; while the remainder are placed in briar tangles, fence-corners, declining limbs of trees, forks of trees, etc. On two occasions I have found nests occupying little caves in the punk of decayed stumps. Others appear in tussocks of saw grass, entirely surrounded by water. Cattails are a favorite place. One female in a ground nest regularly required about three seconds in which to extricate herself from the tangle of her own ingenuity. Another chose a retreat underneath a chance limb which a wind had blown down upon a perfectly smooth woodland lawn. The nest shown in the illustration on the preceding page was found placed in the center of a spreading fern in a green-house on the Ohio State University grounds, and the young were successfully raised. In short, there is no place out of doors, or nearly so, where a man with his feet planted on the soil may not expect to find a Song Sparrow's nest.



Taken near Licking Reservoir. Photo by the Author.
AN UNUSUAL NESTING SITE.

A NEST CONTAINING FOUR EGGS OCCUPIES THE UPPER-
MOST NICHE IN THE STUMP.

No. 40.

LINCOLN SPARROW.

A. O. U. No. 583. *Melospiza lincolnii* (Aud.).

Synonym.—LINCOLN'S SONG SPARROW.

Description.—*Adults*: Above, like preceding species, but crown brighter rufous, and with more decided black markings; back browner and more broadly and smartly streaked with black; the gray of back sometimes with a bluish and sometimes with an olivaceous tinge; below, throat and belly white, the former never immaculate, but with small arrow-shaped black marks; sides of head and neck and remaining under parts creamy buff, everywhere marked by elongated and sharply defined black streaks; bill blackish above, lighter below; feet brownish. Length about 5.75 (146.1); av. of six Columbus specimens; wing 2.48 (63.); tail 2.11 (53.6); bill .40 (10.2).

Recognition Marks.—Sparrow size; bears general resemblance to Song Sparrow, from which it is clearly distinguished by buffy band, and narrow, sharp streaks of breast.

Nesting.—Does not breed in Ohio. "Nesting like that of the Song Sparrow, and eggs not distinguishable with certainty" (Cones).

General Range.—North America at large, breeding chiefly north of the United States (as far north as Fort Yukon) and in the higher parts of the Rocky Mountains and Sierra Nevada; south in winter to Panama.

Range in Ohio.—Not uncommon spring and fall migrant, but seldom observed because of extreme shyness.

MODESTY is a beautiful trait and I suppose if we had always to choose between the brazen arrogance of the English Sparrow and the shy timorousness of this bird-afraid-of-his-shadow, we should feel obliged to accept the latter. But why should a bird of inconspicuous color steal silently through our woods and slink along our streams with bated breath as if in mortal dread of human eye? Are we such hobgoblins?

The first and only day in Ohio that I ever saw this bird, two of us followed a twinkling suspicion along a shady woodland stream for upwards of a hundred yards. Finally we neared the edge of the woods. There was light! exposure! recognition! With an inward groan the flitting shape quitted the last brush-pile and rose twenty feet to a tree-limb. Just an instant—but enough for our purpose—and he had whisked over our heads and was hot-wing over the dusky back trail. That same day we came again upon a little company of them, halted by the sight of the great north water, and tarrying for the day in the dense thickets which skirted a sluggish stream emptying into Lake Erie. Here they were skulking like moles, in spite of the bright sunshine and fragrant air. Finally by working along one on each side of the creek, we succeeded in "cutting out" a single bird. First Mr. Jones forced him to the water's edge (always along the ground) and from across the stream

I noted eagerly his head-stripes, similar to those of a Swamp Sparrow, his pale streaked breast, and his very demure airs. Then I retired while Mr. Jones put him across the creek, where I held him for my companion to study. During this whole manœuver the bird favored us now and then with a few delicate snatches of a sweet but very weak song. Is it any wonder that the Lincoln Sparrow is so little known to fame?

Further west the case is somewhat different. Mr. Trippe in writing of the birds of Colorado, says, "Lincoln's Finch is abundant and migratory. It breeds from about 9,500 or 10,000 feet up to the timber line. It arrives at Idaho Springs early in May, and soon becomes very common, haunting the thickets and brush-heaps by the brooks, and behaving very much like the Song Sparrow. During the breeding season it is most abundant among the bushes near and above timber line, nesting as high as it can find the shelter of willows and junipers. Reappearing in the valleys in October, it lingers by the streams for a few weeks and then disappears."

No. 41.

SWAMP SPARROW.

A. O. U. No. 584. *Melospiza georgiana* (Lath.).

Description.—*Adult*: Forehead black; crown and occiput rich chestnut, bordered posteriorly with blackish streaks; superciliary line, and sides of head and neck all around ashy gray; indistinct blackish markings on side (rectal and post-ocular stripes) outlined against the gray; scapulars and interscapulars broadly and strikingly streaked with black margined with rufous and buffy; rump clearer ochraceous; tail-coverts again streaked with black on rufous ground; tail rufous with brighter edgings and dusky shafts, and sometimes indistinct fine cross-bars (as in *M. melodia*); wings plain rufous, coverts and inner quills with black centers; edge of wing white; below, gray or sordid white, with strong tawny wash on sides, flanks and crissum, the flanks faintly streaked with black; bill black above, lighter below. The purity of chestnut on head varies considerably according to age and season, having a large admixture of black in younger birds, and in adults in winter. In the fall also the pileum is divided by an indistinct gray line, and the breast is tinged with brown. Length, about 5.75 (146.1); wing 2.40 (61.); tail 2.35 (59.7); bill .46 (11.7).

Recognition Marks.—Warbler size but stockier; very like a Song Sparrow, but forehead black, and crown uniform chestnut; breast *not* streaked.

Nest, and eggs not clearly distinguishable from those of the Song Sparrow. *Eggs* average perhaps a little smaller, say, .75 × .56 (19.1 × 14.2).

General Range.—Eastern North America to the Plains, north through the British Provinces, including Newfoundland and Labrador. Breeds from the

Northern States northward, and winters from Massachusetts south to the Gulf States.

Range in Ohio.—Common migrant along streams and in low places. Breeds only casually.

THE Swamp Sparrow is well named, but its designation must be understood in the broadest sense. Not only is it to be found in the sedgy fastnesses of the more pretentious swamps, but in the wayside bog, and along the tangled edges of woodland watercourses as well. In many respects it deserves to be classed with the inhabitants of that under-world of muck and sedge where the Rails and Gallinules live and move and have their being. Shy and secretive to a degree, the Swamp Sparrow will often worm through the intricacies of a half-submerged brush-heap and splash its way afoot to another rather than take wing. Again, if the observer is quiet, the bird will hop about carefully through the reeds and survey him from all sides with the curiosity of a Wren. Several times in spring I have seen them feeding along the shallows of the Olentangy River in company with Water Thrushes, wading about and dabbling in the water with almost the freedom of a Sandpiper, but upon the first hint of alarm the Sparrows would scuttle off to the shelter of the brush.

One is slow to suspect such a demure bird of having a sprightly song. On several occasions, however, while wading about knee deep in some shaded pool, I have been startled by a sudden trill of unusual energy and distinctness, which undoubtedly proceeded from this bird. On some occasions the song is almost as peremptory as that of the Water Thrush, while at others it seems more like the vivacious ditty of the Palm Warbler rendered fortissimo. It has frequently been likened to that of the Field or Chipping Sparrows, but in my opinion, comparison with any other Sparrow song will not be found helpful.

Only one instance is known as yet of the bird's breeding within the state. Late in May, 1881, Dr. Howard Jones of Circleville secured a nest of five eggs, together with the parent bird. Dr. Jones had been walking slowly along a small ditch which drained a field of wet grassland, and was about to step across it when the mother bird flew from under his feet. After some search he found the nest hidden under a bunch of long grass. "It is made principally of coarse grasses and frayed weed-stems—a few rootlets are to be seen in the foundation, and the lining is composed of grasses. The diameter of the cavity is two inches, its depth one and one-half inches. When in position, the rim of the nest was on a level with the surrounding sod, and a long tuft of grass concealed it from above and protected it from the weather."

Dr. Jones says further: "This is the only nest of the species I have found, altho I have frequently searched for it. The kind of country inhabited by

this Sparrow, its retiring habits, and general inconspicuousness, all combine to make its home hard to find and its habits hard to study. Even in sections where it is common it is but infrequently seen, and it might breed and remain throughout the year in many localities in the state and escape observation by any one able to distinguish it from other Sparrows."

The Swamp Sparrow is known to breed sparingly in Pennsylvania throughout the state, having been studied there by Wilson and others. Professor A. W. Butler reports its breeding commonly in northern Indiana. Mr. E. W. Nelson regards it as more abundant than the Song Sparrow in Cook County, Illinois, during the breeding season, while Mr. Ridgway finds it wintering in immense numbers in the southern parts of that state.

No. 42.

FOX SPARROW.

A. O. U. No. 585. *Passerella iliaca* (Merr.).

Description.—*Adult*: Upper parts rusty red in spots and streaks, on an ashy or olive-gray ground, smaller and sharper on the crown; broader and deep on interscapulars; all wing feathers more or less margined with rufous, and with dusky inner webs; middle and greater coverts tipped with whitish; edge of wing white; upper tail-coverts clear bright rufous; tail rufous with (mainly) dusky inner webs; below white, heavily spotted and blotched on sides of head and throat and on breast with rusty red; on sides and flanks with elongated or sagittate streaks of deeper ferruginous, and on lower breast with open arrow-shaped markings of brownish black; bill dark above, yellow below; feet pale. Length 6.50-7.50 (165.1-190.5); av. of five Columbus specimens: wing 3.44 (87.4); tail 2.77 (70.4); bill .45 (11.4).

Recognition Marks.—Sparrow size, but appearing at times almost as large as Chewink; rusty red coloring and heavily spotted breast; bright rufous of upper tail-coverts and tail.

Nesting.—Does not breed in Ohio. *Nest*, in low bushes or on the ground, of coarse grasses, moss, and vegetable fibers, lined with fine grass and feathers. *Eggs*, 4-5, pale bluish, speckled and blotched with reddish brown or chocolate. Av. size, .80 x .63 (20.3 x 16.).

General Range.—Eastern North America west to the Plains and Alaska, and from the Arctic Coast south to the Gulf States. Breeds north of the United States; winters chiefly south of the Ohio and Potomac Rivers.

Range in Ohio.—Common spring and fall migrant.

It may be set down as a maxim for the encouragement of the faithful that all birds which should sing at all do sing sometimes during migrations. There is the Fox Sparrow, a bird of most engaging appearance, nearly as

large as a Thrush and quite as fine. We feel sure that he is concealing a rare gift of song under that rusty cloak of reserve. As for him his one ambition seems to be to slip away unobserved, unless indeed it be to steal a sly glance at you from behind some tree-bole. His only note as he speeds with strong wing into cover is a thrasher-like *chuck* of alarm. Year after year, it may be, one comes upon shy companies of these handsome fellows in brush-strewn woods or in the undergrowth of river bottoms, but never a song do they vouchsafe. Dr. Wheaton died without having heard the song of the Fox Sparrow.

Finally on some favored day—there is not a breath to tell you of the good fortune in store—a clear, strong, exultant song bursts upon your ears from some half-distant copse, *Chee-hoo, ker-woooo, wooo, wooo, wooo*. The Fox Sparrow has found his voice.

There is a sweetness and vivacity about the song which wins our admiration at once. It speaks so eloquently of anticipated joy, that we must envy the bird his summer glade in wild Keewatin. Our Vesper Sparrow whistles a somewhat similar tune, but he is all contentment, realization now, and at half the cost. Professor T. C. Smith, who has been exceptionally favored at Columbus, says in this connection¹: "The voice of the Fox Sparrow in its full power is clear, sustained, and rendered rich by overtones. It has not, of course, the metallic, vibrant ring of the Thrushes or the Bobolink, it is rather the Sparrow or Finch voice at its best, a whistle full of sweetness with continual accompanying changes of timbre.

"Unlike most of the Sparrows the Fox Sparrow displays an ability to let his notes drop into one another by a quick flexible slide, usually accompanied by a slight change in timbre, which is the characteristic of the warbling birds such as the Vireos—in this respect he surpasses all of his race that I have ever heard except the Rose-breasted Grosbeak and the Cardinal."

More frequently the Fox Sparrows are heard singing—sometimes in chorus—in a subdued tone or half-voice. The effect at such a time is very pleasing, but one does not get any adequate impression of the bird's powers of modulation or sweetness.

¹ See an excellent article by Professor Smith on the "Song of the Fox Sparrow" in the *Ohio Naturalist*, April, 1904.

No. 43.

TOWHEE.

A. O. U. No. 587. *Pipilo erythrophthalmus* (Linn.).**Synonyms.**—CHEWINK; GROUND ROBIN; RED-EYED TOWHEE.

Description.—*Adult male*: Glossy black; belly abruptly white; sides chestnut to yellowish brown; flanks and crissum tawny; whitish marks on inner quills; outer primaries edged with white at base on outer web, and at an interval along margin increasing inwards, forming a white spot with a "tail"; three outer pairs of tail-feathers broadly tipped with white, the outermost pair for half its length; black feathers of throat with concealed white bases; bill black; feet pale brown. *Adult female*: Like the male except black replaced by warm brown, brightest on breast, darkening behind; somewhat smaller. Adult male, length, 7.50-9.00 (190.5-228.6); av. of five Columbus males: wing 3.44 (87.4); tail 3.66 (93.); bill .52 (13.2).



Taken near Circleville.

WHERE TOWHEE HIDES.

Photo by the Author.

Recognition Marks.—Chewink size; black, white, and chestnut in masses; "Chewink" cry; semi-skulking, terrestrial habits.

Nest, on the ground, of dead leaves, strips of bark, etc., lined with fine grasses. *Eggs*, 4 or 5, white, thickly and evenly speckled with reddish brown. Av. size, .95 x .71 (24.1 x 18.).

General Range.—Eastern United States and southern Canada, west to the Plains, breeding from the lower Mississippi Valley and Georgia northward; in winter from the middle districts southward.

Range in Ohio.—Common and universally distributed. Winters sparingly in central, and (at least the males) commonly in southern Ohio.

THE impulse to name birds according to what their songs and calls seem to indicate in human language surely had a large part in the final adoption of Towhee for this bird's name. *Toawhee* for the song that he gives to all the world from the topmost twig of some tree growing amid his tangled retreat, *Cheewink* for the call of warning when his rights are threatened, and *Wink-wink* when he is nearly frantic at the danger to his family of eggs or young. The song is seldom simply double syllabled, but the two prominent notes are all that many persons seem to hear. The loud song may be *Toawhee-c-c*, *O, toawhee-c-c-c*, or even *Chip, ah, toawhee-c-c*. Its beginning is subject to many changes, but its close is almost invariably a trill of greater or less length on "c," and always high pitched. I never could make the song spell "*Chuck, burr, pilla-will-a-will.*" But different ears hear the same song differently. The alarm call may be shortened to "*swink,*" or "*wink.*" The birds even shorten their vocal expression to "*Chuck, chuck,*" when the nest is in great danger. Before the arrival of the female from the south the male sometimes gives a rarely beautiful performance as a sort of soliloquy as he sedately walks about among the leaves under a thick bush. It is totally unlike his ordinary song, and baffles any attempt at a description. It is soft and does not carry beyond twenty feet. The tree-top rendition is clearly his altruistic song, while this other one is as truly his egotistic song.

Towhee has been called Ground Robin, probably because his sides are strongly washed with rufous and because he builds his nest on the ground. In general habits he is wholly unlike the Robin. One must look in the brushy woods, or brush tangles, not in the open woods for this bird. He is a nervous fellow, emphasizing his disturbance at your intrusion with a nervous *fluff, fluff* of the short wings, and a jerk and quick spreading of the long, rounded tail, as if he hoped the flash of white at its end would startle the intruder away.

Occasionally hardy males may be found all winter even as far north as Oberlin, but the true migration begins late in March, and the most of the birds have gone south by the first of November. Numbers spend the winter in the southern half of the state.

Nesting begins about the first of May, earlier south, and earlier in early springs. While the nest is usually placed on the ground, often even in a slight depression, it may sometimes be placed in a bush several feet from the ground. It is made largely of leaves, with some plant stems, bark and grass, with a lining of rootlets. The birds do not search far for material, but are

satisfied with that which is near at hand. Sometimes the nest is arched over after the fashion of the Oven-bird. The nest site is usually some distance from a roadway or path, often in moderately deep woods where there is little underbrush, but oftener in brushy thickets, or shrubbery fringing woods. The accompanying illustration of a nest and eggs was taken from a nest placed in a pasture in an open field, some fifty rods from a woods, and ten feet from any brush. Here at Oberlin I have found more nests in the second growth near swampy places than elsewhere.

While Towhee does not seem to be a stupid bird, it is a wonder to me that he will permit the parasitic Cowbird to fill his nest, sometimes to the complete exclusion of his own eggs, and serenely hatch and care for the foster young. Twice I have found a Towhee's nest containing 4 eggs of Cowbird and none of the rightful owner, on which the female Towhee was sitting as contentedly as though the eggs belonged to her. Most nests contain one or more eggs of Cowbird. Possibly the explanation lies in the fact that the Towhee and Cowbird eggs are much alike in appearance. However, the Cowbird eggs are marked with grayish-brown, while the Towhee eggs are marked with reddish-brown, and average larger.

Because Towhee seems able to adapt himself to changing conditions of the landscape, which is inevitable with fuller settlement of the land, we may hope that he will be a permanent member of sylvan society. A woods without a Towhee to herald the morning would lose half its glory.

LYNDS JONES.



Taken near Oberlin.

Photo by Lynds Jones

NEST AND EGGS OF THE TOWHEE.

No. 44.

CARDINAL.

A. O. U. No. 593. *Cardinalis cardinalis* (Linn.).

Synonyms.—RED-BIRD; CARDINAL RED-BIRD; CARDINAL GROSBEEK.

Description.—*Adult male in spring:* Region about base of bill (the capistrum) and throat black; rest of plumage vermilion,—brightest on crest, sides of head, and below, darker and with a rosy tinge above; feathers of back and rump with grayish skirting; inner webs of wing-feathers fuscous; bill light red; feet brown. *Adult female:* Capistrum grayish black; wings, tail, longer feathers of crest, and a spot above the eye dull red; occasionally faint tinges of red on the cheeks, lower throat, and tibiae; remainder of plumage ashy brown, duller above, brighter and more ochraceous on breast, paler below. Males vary considerably in the amount of gray on upper parts. *Young birds,* like adult female, save that the bill is dark, and males are tinged below with vermilion in varying proportions. Very variable as to size. *Adult male,* length, 7:50-9.00 (190.5-228.6); av. of ten Columbus specimens: wing 3.67 (93.2); tail 3.82 (97.); bill, length along culmen .63 (16.); depth at base .62 (15.8).

Recognition Marks.—Chewink size; cardinal-red at least on wings, tail, and crest; black or blackish face mask; large, thick bill.

Nest, usually of rather careless construction, of twigs, coarse grass and trash, lined with fine grass and rootlets, and placed in thickets or low in trees. *Eggs,* 3 or 4, sometimes 5, white, or with bluish, greenish or grayish tint, spotted regularly, or irregularly blotched and dotted with reddish browns, grays, or lavender. Av. size, 1.00 x .71 (25.4 x 18.).

General Range.—Eastern United States, north to the lower Hudson Valley and the Great Lakes, casually further north, and west to the Plains. Resident in Bermuda.

Range in Ohio.—Abundant resident. Less common but increasing northerly.

PROBABLY four persons out of five—at least in the southern half of the state—if asked to name their favorite songster, would reply promptly, the Red-bird. For who is there to the manor born, whose heart does not flood with pleasant memories as he listens to our poet, Naylor's words?

“Along the dust-white river road

The saucy red-bird chirps and trills:

His liquid notes resound and rise

Until they meet the cloudless skies

And echo o'er the distant hills.”

Not merely for the splendor of his plumage, but for the gentle boldness of his comradeship and the daily heartening of his stirring song, the Cardinal is beloved of all who know him.

Some years ago the Cardinal had good reason to complain of our fondness, but now that wise legislation has forbidden his imprisonment he sings



CARDINAL
Cardinalis cardinalis
3/4 Life-size

Illustration from "The Birds of the United States" by Audubon and Silliman, 1826. Reprinted by permission of the American Ornithologists Union.

unfettered at many a door where he was formerly unknown. Always abundant in the south the species has of late increased rapidly in the north as well; and the time is not far distant when our Canadian neighbors can no longer say of it, "Casual only in southwestern Ontario."

Wherever known the birds are resident or nearly so. In winter they may gather in loose companies to enjoy the shelter of some favorite copse or lowland thorn-brake. At such a time it is a rare treat for two or three observers to "drive" the birds from cover. They will slip along unnoticed in unsuspected numbers until the last bush is reached; whence they will break for distant cover in twos and threes not without much remonstrance of sharp *chips*, and manifest reluctance to draw the gaze of a world in white. Thus I have seen them, a whole college of Cardinals, rudely disturbed in secret session, but have always sought and found prompt shrift.

Both males and females sing, the latter perhaps with less force and frequency. A warm day in winter is welcomed as an excuse for song, but the male is most indefatigable during the nesting season. Fearless now he seeks some outlying branch or mounts the tip of the tallest tree and challenges attention. The whistled notes of the Redbird, assertive, interrogatory, staccato and accelerating, are too well known to require characterization. The following syllabizations may serve to recall a few of the leading forms:

1. *Ché-péw, ché-péw, wé-oo, wé-oo, wé-oo.*
2. *Whé-tew, whé-tew, whe-oo, whe-oo.*
3. *We-oo, we-oo, we-oo, we-oo, we-oo.*
4. *Chitikew, chitikew, he-wéét, he-wéét.*
5. *Tshew, tshew, tshew, tshew, tshew.*
6. *Who-ý? who-ý? who-ý? who-ý?*
7. *Bird'-ic, bird'-ic, bird'-ic, tshew, tshew, tshew.*
8. *Bird'-ic, bird'-ic, bird'-ic, bird'-ic.*

By the merest good luck I found out one day how the Cardinal got his red beak. Secreting myself in a log pile I imitated the notes of the Screech Owl—a favorite method of securing a muster of the local bird population. True to life a Cardinal came charging up in great haste. Between his mandibles was a half-eaten wahoo berry from which the rich red juice was flowing, staining the bird's bill completely and running down upon his breast. The suggestion might lead further, but I do not press it.

The Cardinal is first of all granivorous; but this term must be understood to cover the consumption of weed-seeds of many sorts, including some hard-coated specimens which few other birds are able to crack open. Insects are also eaten freely, and berries "in season." If encouraged the bird will glean about our premises in winter, haunting the grape-trellis and garden, and roosting, it may be, in the *arbor vitæ*. The young are fed for the first

week by regurgitation, but after that the parents supply them grain and insects directly or assist them in cracking seeds.

After the Robin the Cardinal's nest is the easiest to find, and perhaps the most common in middle and southern Ohio. Nesting begins early in the season, and two, sometimes three, broods are raised. April 15th, 1901, before a green leaf had shown itself in Columbus, I found a full set of eggs



Taken near Circleville.

THE CARDINAL'S NEST

Photograph by the Author.

in a rude nest placed in a bunch of drift material which had caught from a recent flood. Others have reported eggs as late as August 28th.

Nests are usually placed low in bushes, or at moderate heights in thickets and saplings. Grape-vine tangles and porch trellises are favorite places, and occasionally nests are saddled upon horizontal limbs of trees. Miss Gertrude F. Harvey of Bond Hill (Cincinnati) kept a most interesting diary of a pair which nested in her conservatory. The nest was placed in a Marechal Neil rose-bush, to which the birds found access first through a roof ventilator and then through the open window.

In construction the nest varies from tidy to disreputable, according to skill and season. A typical one is composed externally of long stiff weeds and leaf-stems, and measures roughly seven inches across, with an extreme

of thirteen inches. Next comes a mat of dead leaves, mostly beech. Inside this in turn is a tough basket-work of grape-vine bark and a lining of fine fresh grass cured in the nest. It measures, inside, three and a quarter inches in width and two and a half in depth.

The eggs are quite variable; even those in the same nest are hard to reconcile, both as to shape and markings. Because of the similarity in appearance, Cowbirds' eggs are easily imposed upon the Cardinal. Professor Jones and I once found a nest with the bird on, whose three eggs were to the best of our judgment the combined product of as many Cowbirds.

The young hatch out in about fourteen days, and are ready to leave the nest in ten days more. The father is especially devoted to his offspring, and often cares for them while the female is busy with another nest.

Rev. W. F. Henninger informs me that a German farmer of his acquaintance near Tiffin kept a Cardinal in captivity for almost exactly thirty years. The bird was not taken from the nest by its long-time owner and its age at the time it came into his possession was not known. The captive songster became a great favorite and was for years regarded almost as a member of the family. Its death in December, 1902, followed within a day or so that of the farmer's wife.

No. 45.

ROSE-BREADED GROSBEAK.

A. O. U. No. 595. *Zamelodia ludoviciana* (Linn.).

Description.—*Adult male*: Head and neck all around and upper parts glossy black; below white; a rich carmine or rose-red crescentic or shield-shaped patch on the breast bordering the black of the throat, and produced irregularly down the middle of the lower breast; lining of wings rose; middle coverts and a large spot at base of primaries white; rump white; much concealed white on cervix and back, and a slight fuscous edging of feathers; white blotches near extremity of tail-feathers on three outer pairs; flanks sometimes tawny, with dusky streaking; bill light or white; culmen much curved; feet dark brown. *Adult female*: Quite different; above dusky brown in streaks, with obscure whitish median, and conspicuous white superciliary lines; feathers of crown and back heavily edged with flaxen or buffy; coverts and inner quills merely tipped with whitish; wings and tail fuscous, lining of wing saffron-yellow,—no black anywhere; below white with slight buffy or tawny suffusion on sides, breast and flanks; sharply and finely streaked with dusky on sides of throat, breast and sides; auriculars hair-brown; bill light brown; feet dusky. *Young*: Like female, the males gradually acquiring adult characters and first known by rosy lining of wings. Adult male, length, 7.75-8.50 (196.9-215.9); av. of six Columbus males:

wing 3.95 (100.3); tail 2.84 (72.1); bill, length, .66 (16.8); bill, depth, .51 (13.). Female somewhat smaller.

Recognition Marks.—Chewink size; male easily known by the black, carmine, and white of fore-front; female by large bill with white eye-brow, sharply streaked breast, and general streaky appearance above.

Nest, oftenest a careless bunch of grass-stems or weed-stalks, but sometimes carefully constructed, in bushes of thickets or in low trees. *Eggs,* 3 or 4, dull greenish, spotted and blotched with reddish browns. Av. size, 1.00 x .73 (25.4 x 18.5).

General Range.—Eastern United States and southern Canada, west to Manitoba and the eastern border of the Plains, breeding from Kansas and the mountains of the Carolinas northward; south in winter to Cuba, Central America, and northern South America.

Range in Ohio.—A regular, but not very common summer resident; less common or wanting in southern part of state.

WE are none of us likely to forget our first meeting with this distinguished bird. It was probably on a perfect morning early in May, when we were poking about in a brushy patch near the river, all on the qui vive with the spring expectancy. *Thkimp!* What was that? *Thkimp!* again the nasal explosive, half inquiring, half disturbed. Ah, there he is, quitting cover for a bunch of leafless weed-stalks that he may for a moment see and be seen. "What a beauty!" we exclaim, "and to come so far north!" For we feel instinctively that we are beholding a scion of tropical stock. And such indeed he is, altho he has long since become naturalized in the middle north and Canada.

Yet for all he is a northern pioneer, he is no mere adventurer. His every movement betrays the culture of good breeding and conscious quality. His dress, too, is faultless, as becomes a perfect gentleman. A black suit with white cuffs,—or maybe several pairs, no matter—an immaculate white vest, and an ample red cravat, all complete. His wife will not be along for a few days yet; that is, not until the head of the expected family has done the rough work of pioneering; and when she does come you will not know her for the mate of such a brilliant lord, until you catch them one day exchanging confidences, *sotto voce*.

During migrations this Grosbeak often keeps to the highest tree-tops where his bright colors almost escape notice amidst the newly bursting verdure; but he is most at home in second-growth thickets and swampy tangles. In either case he sings freely, a rich, rolling, continuous warble, which is among the finest of woodland notes. The song is most nearly comparable to that of the Scarlet Tanager, but it is to be distinguished by its rounder quality and the entire absence of phrasing. When singing to his mate the bird sometimes stands on tiptoe with excitement, and makes the thickets vibrate with long-drawn melody. Sometimes, especially if you are known

to be watching near, the music is interrupted by the harsh nasal *thkimp*, or *kimp* of distrust and warning.

The nest is usually a flimsy affair of twigs, weed-stalks, and rootlets, placed at moderate heights in thorn bushes, swamp willows, orchard trees, and the like. One nest that I found in Black Swamp in Lorain County, was composed entirely of fine grass-stems; and the two eggs which it contained were perfectly visible from below. Another, to which the male bird



Taken in Ely Park,
Elyria.

Photo by the Author.

A FAVORITE HAUNT OF THE GROSBEEK.

was kind enough to call my attention, by singing as he sat, was made of dried sedge leaves. This carelessness of nest construction is considered evidence of the fact that the bird was formerly accustomed to a warmer climate, to a tropical range in fact, where warmth of bedding would be no object. The male bird shares faithfully the duties of incubation; and is sedulously devoted to the care of his little flock. In this case at least, fine feathers have made a fine bird.

The food of the Rose-breasted Grosbeak consists largely of seeds and wild fruits; but insects, especially grubs and beetles, furnish a portion of its fare. In some localities it has won the ill-sounding but certainly meritorious name of "potato-lug bird."

No. 46.

INDIGO BUNTING.

A. O. U. No. 598. *Cyanospiza cyanea* (Linn.).

Synonym.—INDIGO-BIRD.

Description.—*Adult male*: Indigo-blue, clear and intense upon head and throat, passing insensibly into greenish or cerulean blue elsewhere; lores black; wings and tail blackish with some greenish blue edging; bill black above, lighter below, with narrow black stripe along gonys. *Adult female*: Quite different; warm gray-brown, most intense on back and crown, paler below and with obscure smoky streakings on breast and sides—the lesser wing coverts with the edges of primaries and rectrices exhibit a greenish tint. *Young male*: Like female but browner, soon showing traces of blue. *Adult male in winter*: Like female but darker; blue only partially suppressed. Length 5.50-5.75 (139.7-146.1); av. of eight Columbus males: wing 2.66 (67.7); tail 1.98 (50.3); bill .41 (10.4). Females smaller.

Recognition Marks.—Warbler size; male indigo-blue; female warm brown, unstreaked above.

Nest, a compactly built cup of weeds, grasses, vegetable fibers, dead leaves, etc., neatly lined with rootlets, grasses, and horse-hair; usually placed in crotch of bush not far from ground. *Eggs*, 4, bluish or greenish white, unmarked; sometimes pure white. Av. size, .72 x .54 (18.3 x 13.7).

General Range.—Eastern United States, west to Plains, north to about latitude 47°. South in winter to Central America.

Range in Ohio.—Common summer resident; breeds throughout the state.

TO a casual observer the male and female Indigo-birds appear to live in separate spheres and to have very little in common. This is partly because the female is such a plain-looking "brown bird" that it requires the closest scrutiny to discover upon her shoulders faint traces of the royal blue which marks her lord. Then, again, she is a most prosaic creature, skulking about through thickets and briar patches or fussing with the children, while her handsome mate spends his time in the tree-tops singing with his little might and main. As a result, the Indigo-bird proper is one of the most familiar features of wood's edge and wayside, while the Indigo-bird, by courtesy—or shall we say by marriage?—is one of the least known of Sparrows.

The singing bird makes no attempt at concealment, but seeks the most prominent position possible on telegraph wire or tree-top, and repeats at frequent intervals a piercing but not very melodious warble, which rises and falls in sharp cadences, and finishes with a hasty jumble of unfinished notes.

as tho the singer were out of breath. This song is kept up through the greater part of the day, and the singer is at his very best during the warm months of July and August. At this time his is often the only voice which relieves the monotony of a sultry day, and his efforts have won warm admiration on this account. Now and then the bird dives down to earth to attend to some domestic duty, but he is back again presently "climbing a golden



Taken near Columbus.

Photo by the author.

A WOODSIDE MUCH FREQUENTED BY INDIGO BUNTINGS.

THE BLACKBERRY PATCH IN THE FOREGROUND CONTAINS A NEST, WHILE
THE TREES ABOVE AFFORD A COMMANDING VIEW SUCH AS
THE MALE INDIGO DEARLY LOVES.

staircase of song" as he flits from branch to branch, until he has gained his topmost perch again. Here he sings for a time with such vigor that we are sure he is glad to be quit of his vexatious cares.

If one looks in the bushes or crowded, rank weeds for the Indigo's nest, he will soon be joined in the search by a wild-eyed female, who dogs his every step and expostulates with him by vigorous *chips* for every movement of the foliage. The maternal Indigo is the soul of suspicion, and her protests are so

emphatic that the inquisitor believes himself "hot" when he may be a dozen yards away. As a result the nest is rather hard to find; and the number found in a season's nesting will be out of all proportion to the abundance of the birds.

The nests, while usually bulky, are models of neatness and strength. Dead leaves and grasses make up its mass, and there is a copious lining of fine grasses with an admixture of horse-hair. Often two, and sometimes three, broods are raised in a season.

The eggs are of a beautiful pale blue, warmed, while fresh, by the color of the contents. Of their occasional variation Dr. Coues says: "The egg is variously described as pure white, plain blue, or bluish speckled with reddish. The fact appears to be, not that these statements are conflicting or any of them erroneous, but that different eggs vary accord-



Taken near Oberlin.

Photo by Lynds Jones.

NEST AND EGGS OF THE INDIGO-BIRD.

ingly. It seems to be the general rule with normally bluish eggs that they range in shade from quite blue to white, and are occasionally speckled."

No. 47.

DICKCISSEL.

A. O. U. No. 604. *Spiza americana* (Gmel.).**Synonym.**—BLACK-THROATED BUNTING.

Description.—*Adult male*: Head and neck above and on sides dark gray, tinged with yellow on crown; a yellow superciliary stripe, and a yellow maxillary spot; chin and sides of throat white, nearly enclosing an apron-shaped patch of black; breast lemon-yellow; sides and flanks smoky gray fading into dingy white of belly; remaining upper parts light brown, modified by dusky stripes of middle back, and fuscous of wings and tail; lesser and middle wing-coverts bright bay; edge of wing yellow. *Adult female*: Similar but without black patch on throat, and with less yellow; scattering maxillary and pectoral black streaks; bay of wings merely indicated by rufous edgings. The plumage of the adults is brighter in the fall. Length 6.00-7.00 (152.4-177.8); wing 3.28 (83.3); tail 2.31 (58.7); bill .54 (13.7). Female smaller.

Recognition Marks.—Sparrow size; black throat and yellow breast of male (somewhat like the Meadowlark's); female obscure, but showing traces of same coloration.

Nest, a bulky but well made structure of weed-stalks, grasses and leaves, lined with finer grasses, rootlets, etc.; placed low in trees or bushes, or on the ground. *Eggs*, 4 or 5, pale blue, glossy. *Av. size*, .80 x .63 (20.3 x 16.).

General Range.—Eastern United States, west to Rocky Mountains, north to Ontario and the Dakotas; rare easterly. South in winter through Central America to northern South America; southwest in migrations to Arizona.

Range in Ohio.—Not uncommon in western and central portions, but locally restricted; rare or wanting in the northern and eastern portion.

NATURE is a harmonious whole and her language is in a sense above criticism. But her various voices must be heard each in its appropriate setting. The scream of the eagle befits the crag alone, and the lisping of the wood warbler must be accompanied by the tender rustle of unfolding green. Similarly the song of Dickcissel, that dear droning midsummer sound, requires the setting of ample meadow or boundless prairie to be rightly understood. Nothing could be more absurd or more monotonous to the point of madness than the iterative clatter of a Dickcissel pent within four walls. But sprinkle about a dozen of him over the bending daisies of a forty acre field, set a light breeze blowing, turn on the music, and nothing could be more eloquent of the delights of haying time and harvest than the earnest tautophony of this same bird. It is the sub-dominant note of out-of-doors, blending alike with the clink-clank of the smitten scythe, the clattering din of the twine-binder, or the chorus of the reapers' song.

The bird usually selects the highest point available,—a commanding tree-top, a passing telegraph wire, or a stout clover-stem if nothing better offers. Here with head erect or nodding with the rythm, he pours forth by the hour

those clinking syllables, which because of their very simplicity have been so variously interpreted: *Sheep, sheep, shear, shear, sheep*; or *See, see, see me here, see*; or better still, *Dick, dick, dickcissel*. The three sentences just given fairly represent the range of variety in accent as well as in tempo.

The female is a shy bird and her movements are known only to her attentive spouse. Once the nest is built she relies upon her mate's diplomacy in conducting visitors out of bounds, while she sticks to her knitting. Sometimes if danger is quite imminent she will slip off the nest, but so quietly as to afford no clue for the



*Taken near Columbus.
Photo by the Author.*

A DICKCISSEL MEADOW.

search. Once off she manifests a singular indifference to all that is transpiring, and as likely as not refuses to appear upon the witness stand at all. The male sings only somewhat more energetically when the nest is being robbed, as if quite unable to comprehend the meaning of such a heartless proceeding.

The nest is commonly placed upon the ground, flush with the surface or slightly elevated. In either case it is apt to be a slovenly affair incapable of transportation. Sometimes, however, the nest is a close-knit structure placed from two to six feet high in wayside weed-clumps, bushes, or trees. Two broods are commonly raised each season, after which the birds become quite silent and prepare for an early departure in September.

This prairie-loving species is an invader from the south-west. Audubon



SCARLET TANAGER, TANGARA ERYTHROGASTRA, FROM A PHOTOGRAPH BY W. H. BURNETT, COURTESY OF THE BIRD CLUB OF ALABAMA

SCARLET TANAGER
Tangara erythrogastra
Nearly Luteo-size

reported it as rare in Ohio, while to Kirtland it was unknown. Dr. Wheaton considered it very common from 1860 on. It is somewhat irregular in its appearance, and while certain sections may swarm with them one year, it may be unknown in the next county and may disappear entirely the following season. It is doubtful whether its numbers have increased with us during the past quarter of a century.

No. 48.

SCARLET TANAGER.

A. O. U. No. 608. *Piranga erythromelas* Vieill.

Description.—*Adult male*: Scarlet vermilion; wings and tail black; lining of wing white; bill and feet blackish. *Adult female*: Entirely different; above olive-green; below greenish yellow; wings and tail dusky with greenish edging; bill and feet brown. *Young male and adult male in winter*: Similar to female but brighter; wings, tail and bill black. During moults and irregularly at other times the males show anomalous variegation of black, olive-green, scarlet, and dusky in patches. Length 6.50-7.50 (165.1-190.5); av. of eight Columbus specimens: wing, 3.81 (96.8); tail, 2.61 (66.3); bill, length along culmen .61 (15.5); breadth at nostril, .34 (8.6). Sexes equal sized.

Recognition Marks.—Sparrow size, but appearing larger because of bright colors; scarlet and black of male; olive-green and dusky of female.

Nest, rather loosely constructed of twigs, weed-stalks and bark-strips, lined with rootlets, blossom-stems, etc.; shallow and flat; placed from ten to fifty feet high on horizontal limb in orchard or grove. *Eggs*, 3-4, greenish blue, with spots and blotches of reddish brown, tending to run together in patches. Av. size, .95 x .64 (24.1 x 16.3).

General Range.—Eastern United States, west to Plains, north to Manitoba, Ontario, etc. In winter south to West Indies, Mexico, Central America and northern South America.

Range in Ohio.—Of general distribution, but less common southerly. Summer resident.

THOSE who haunt the woods in maying time are almost sure to see a vision of scarlet and black revealing itself for a moment in the higher tree-tops, but swallowed up again all too soon by the consuming green. If, however, the leaves are not yet fully sprung the Tanager will move about quietly or sit rather stupidly in the middle branches, as tho bored by the lack of green and at a loss what to do with his brightness. At this time his *chic burr*, or *chip-bird* cry is readily traced to its source and soon becomes one of the more familiar sounds of the woodland. The female is more modestly attired in a habit which blends perfectly with the foliage; but altho so different in color from her mate she is not hard to recognize, for she has much the same build

and carriage, and is oftenest seen in close company with him. Both birds are rather sedate in movement and have the habit of inclining the head to peer down at the observer with dignified interest.



Taken at Lily Cove
Elyria.

Photo by the
Author.

“*Terr-qué-e-ry, zé-er-ve, péés-eroo, be-zoor.*”

The males arrive a few days in advance of their mates and at such times only may be found in close proximity to each other. Never shall I forget the day, when in treading an overgrown path by the riverside I came suddenly upon four males on a single limb not twenty feet away. The vision smote me like a blinding flash. The two oldest of the group were certainly among the most magnificent birds ever seen in Northern latitudes. Their coats were re-dyed to the point of scarlet saturation, and as they moved off slowly the memory of the bird-man received an indelible image of the Most Beautiful Four.

Sheltered woodlands, especially in broken country, shady hillsides, and the banks of streams, are favorite places for this bird; while second-growth clearings, open groves, and the trees which overlook unfrequented roads, also furnish acceptable nesting sites. In such places the Tanager's song may be heard throughout the morning hours. It is remotely comparable to that of the Robin, but it is more stereotyped in form, briefer, and uttered at

intervals rather than continuously sustained. The notes are sharp-edged and rich in r's, while the movement of the whole, tho deliberate, is varied, and the tone cheerful. *Terr-qué-c-c-ry, zé-cruc, péés-croo, be-zoor'*, may give a hint of the quality and tempo. The Tanager's note requires to be carefully distinguished from that of the Rose-breasted Grosbeak, which is smoother and more rolling in character.

The nest of this bird is not often so substantial as that shown in the illustration. It is usually placed on a horizontal branch of a tree, either saddled loosely upon it, settled among diverging twigs, or supported by forks. "From five to fifteen feet up," is given by some authors, but I have seen several nests at heights of forty or fifty feet, and do not believe that they are exceptional.



Taken near McCannasville.

Photo by the Author.

NEST AND EGGS OF THE SCARLET TANAGER.

THE NEST WAS CUT DOWN FROM THE TOPMOST BRANCH OF A YOUNG ELM AND BROUGHT TO THE GROUND FOR PHOTOGRAPHING.

No. 49.

SUMMER TANAGER.

A. O. U. 610. *Piranga rubra* (Linn.).

Synonym.—SUMMER RED-BIRD.

Description.—*Adult male*: Rosy vermilion, darker above (madder brown), lighter below; wings dusky on exposed ends and unexposed inner webs; bill pale; feet darker. *Adult female*: Above orange, olive-green or olive-brown; lighter with large admixture of yellow below (often ochrey or saffron); wings dusky as in male; bill and feet pale. *Young male*: Like adult female, but brighter. The red of the maturing bird comes in patches, but without black anywhere. Length 7.50 (190.5); wing 3.70 (94.); tail 2.70 (68.6); bill, length .71 (18.), breadth at nostril .38 (9.7).

Recognition Marks.—Sparrow to Chewink size; uniform red of male; olive and saffron of female; bill light, larger than *P. erythromelas*.

Nest, usually a shallow and frail structure of bark-strips, leaves, and vegetable fibres, placed near extremity of horizontal limb, ten to thirty feet up. *Eggs*, 3-4, light green or bluish white, dotted, spotted, and blotched with reddish or olive-browns. Av. size, .95 x .66 (24.1 x 16.8).

General Range.—Eastern United States west to Plains, north to about latitude 40°, casually to Massachusetts and Ontario. South in winter to middle and northern South America.

Range in Ohio.—Common summer resident in southern and southeastern, rare in middle, and casual in northern Ohio.

ALTHO occasional at Columbus and casual anywhere, this Tanager is nearly confined to the southern third of the state. Here it is much more common than its black-winged relative and much more familiar, not hesitating to establish itself in orchard or shade trees, and frequently visiting city parks. Dr. Jones reports it as abundant near Circleville where it is nearly confined to woods of oak and hickory. It seems to find an especially congenial home in the wooded, broken hills which line the Ohio River and the major streams which flow into it.

The scolding note of the summer Red-bird is such only in name, for no one could take offence at the mellow, mildly inquisitive *pittuc* or *pittit-it-ituc* with which the bird greets strangers. Its song, too, is not so sharp-edged as that of the Scarlet Tanager, altho the generic resemblance is quite marked. Consisting as it does of a succession of disconnected rolling phrases, it reminds one also not a little of the song of the Red-eyed Vireo.

The birds are very deliberate in movement, and give one the impression that they are taking a leisurely summer vacation and have plenty of time at their disposal. They are adroit, however, in catching insects on the wing, and do not shun the irksome duty of berry-picking.

According to Dr. Jones: "The nest is generally placed upon two or three small horizontal branches, and is supported at two or three points on its circumference by small upright twigs. The position selected is usually near the end of a limb, from five to twenty feet from the ground, ten or twelve feet being the usual height. Dead grass of various kinds is the chief material of construction. It is sometimes well selected and of a light straw-color; at others it is poor in quality and dirty-brown in color. The foundation and superstructure are ordinarily inseparable. * * Within the dingy and loosely-interwoven walls of the nest is commonly a bright and clean lining, composed



Taken in Morgan County

Photo by the Author.

AT THE MOUTH OF DOU'DA RUN.

A FAVORITE HAUNT OF THE SUMMER Tanager.

of slender blades of nicely bleached grass, and split and round grasses arranged in orderly fashion, and forming a smooth and elastic covering to the walls of the cavity. There is but little art displayed in the structure, being so poorly made that the early fall winds blow it from its supports."

No. 50.

BLACK AND WHITE WARBLER.

A. O. U. No. 636. *Mniotilta varia* (Linn.).

Synonym.—BLACK-AND-WHITE CREEPER.

Description.—*Adult male*: Black and white in streaks and stripes; two lustrous black stripes separated by broad median white stripe on head, and produced to cervix; superciliary stripe and under eyelid white; extreme chin and malar stripes white; ear-coverts and throat black; exposed tips of primaries and tertiaries and primary coverts dusky rather than black; tips of median and greater coverts broadly white; tail blackish with white or bluish white edgings; two outer pairs of feathers blotched with white on the inner webs near tip; upper tail-coverts black; belly white; remaining plumage black and white in streaks, broadest on breast and sides, finest on sides of neck; bill and feet black. *Adult female*: Similar to male, but throat white, and remaining under parts with fewer streaks, and sides washed with brownish. *Immature*: Similar to female, but with more streaks on under parts. Length 4.50-5.50 (114.3-139.7); wing 2.75 (69.6); tail 1.90 (48.3); bill .45 (11.4).

Recognition Marks.—Medium Warbler size; black and white in streaks and stripes.

Nest, on the ground, usually sheltered by stump, log, or projecting stone; of leaves, bark-strips, and grasses, with a lining of fine rootlets and hairs. *Eggs*, 4 or 5, white or creamy white, speckled and spotted with chestnut or umber, chiefly in a wreath about the larger end. Av. size, .67 × .55 (17. × 14.).

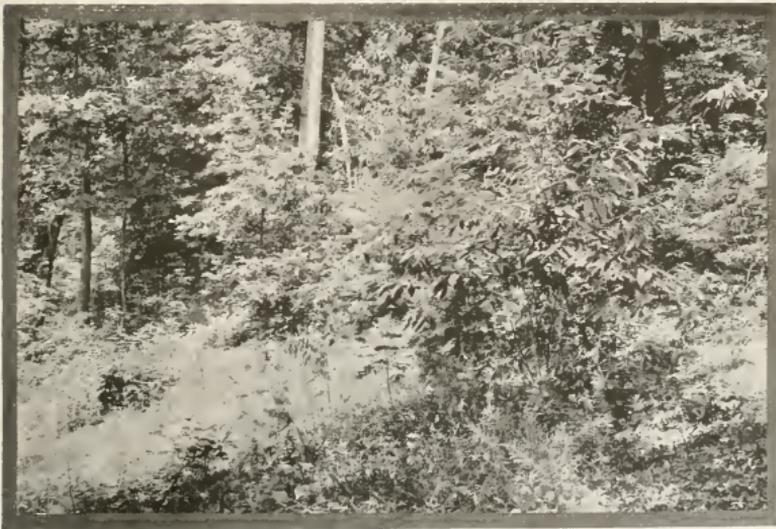
General Range.—Eastern United States to the Plains, north to Fort Simpson; south in winter through Central America and West Indies to Venezuela and Colombia. Breeds from Virginia to southern Kansas northward, and winters from Florida and the Gulf States southward.

Range in Ohio.—Common during migrations. Breeds sparingly throughout the state in wilder portions.

ALTHO placed at the head of the family of Wood Warblers, this modest bird comes more naturally into comparison with Creepers and Nuthatches. "Claws were made before wings," he grumbles to himself, and while his more gaily dressed kinsmen are fitting restlessly in and out among the tree-tops he clings and creeps, or rather hops, along the bark of the trunk and the larger branches. He lacks much, it is true, of being the methodical plodder that the Brown Creeper is; he covers a great deal more surface in a given time and is content, it must be confessed, with a rather superficial examination of any given territory. Then again he secures variety, not merely by tracing out the smaller limbs, but by moving in any direction,—up or down or sidewise—or even by darting into the air now and then to capture an insect which he has startled. Not infrequently he may be seen gleaning from the bark of bushes and saplings near the ground, or again in the tops

of the very tallest elms. Apple trees are cherished hunting grounds, and it is here that one may cultivate a really intimate acquaintance.

The Black-and-White is among the earlier migrant warblers, coming as it does during the last week in April and before the leaves are well out. At this time it is quite a conspicuous bird, in spite of the fact that its striped coat roughly approximates to the lights and shadows in the bark of a tree; but it is usually silent. When it does speak, a few days later, its voice is not altogether such as to command attention. Indeed its wiry squeaking song is likely to be lost to ear altogether amid the full chorus of



Taken near Sugar Grove.

A BIT OF BLACK AND WHITE'S DOMAIN

Painted by the Author.

warbler week; but when the rush is over, the singer, now indefatigable, will come to light again. At best the song is a tiny sibilation of no great carrying power: *Squeech, weech, weech, weech, weech*, is one rendering, while another carefully studied near Sugar Grove, lisped out, *Pss, wss, wuss, wuss, wuss, wuss, wss, wss*, in two keys, as indicated.

While common as a migrant, the Black-and-White Warbler is comparatively scarce as a breeding bird, being found sparingly only in the more densely wooded and broken regions of the state and about the larger reservoirs. Wheaton speaks of it indeed, as a common breeding bird, but I am not aware

of a nest's having been definitely reported within the state. During the second week in June birds were seen feeding full grown young in the ravines opening into the valley of the Hock-hocking near Sugar Grove. The scene represented in the accompanying illustration was persistently haunted by two anxious parents, but the particular objects of solicitude were not discovered. The tree which appears in the middle distance provided a favorite line of descent to the male bird on his frequent errands of mercy; and, standing as it does in contrasting sun and shadow, it affords a curious reminiscence of the bird itself.

The nest of this Warbler is invariably placed upon the ground, a bulky collection of bark-strips, leaves and trash, carefully lined with fine grasses, rootlets and hair. It often courts the protection of some over-shadowing bush-clump, stump, or log, and not in vain, as our still empty collections testify.

No. 51.

PROTHONOTARY WARBLER.

A. O. U. No. 637. *Protonotaria citrea* (Bodd.)

Description.—*Adult male, in highest plumage:* Head and neck all around and under-parts down to crissum, golden yellow (Indian yellow), paler below, an orange tint sometimes perceptible on crown and throat; back, and hind-neck on sides, olive; rump bluish ash; wings dusky, overlaid with bluish ash on secondaries and narrowly on outer webs of primaries, and touched with olive on the coverts; tail-feathers bluish ash with dusky centers and tips, the outer pairs broadly and decreasingly blotched with white on the inner webs; crissum white; bill black; feet dark brown. Except in the highest plumage the olive of the back encroaches more or less upon the crown and the sides of the neck. *Adult female:* Similar, but paler yellow, and with white on belly; crown always overlaid with olive; bluish ash of wings and tail duller. Length 5.50 (139.7); wings 2.77 (70.4); tail 1.87 (47.5); bill .55 (14).

Recognition Marks.—Medium warbler size; head and under-parts, golden yellow; back olive; wing and tail bluish ash; bill black; wings without white (thus distinguished, as well as by superior size, from *Helminthophila pinus*).

Nest, in cavities, deserted woodpecker holes and the like, in small trees standing in or near the water, one to eight feet up, and heavily lined with moss. *Eggs,* 3-7, white or creamy-white, heavily spotted with rich chestnut, sometimes nearly concealing ground color. Av. size, .68 x .55 (17.3 x 14).

General Range.—Eastern United States, west to Nebraska and Kansas, north to Virginia, southern Michigan and Iowa, casually to New England, Ontario and Minnesota; in winter, Cuba and northern South America. Breeds throughout its United States range.



PROTHONOTARY WARBLER
Protonotaria citrea
About Life-size

Range in Ohio.—Rare during migration. Summer resident in restricted localities, such as the Grand and Licking Reservoirs, and the major streams draining into the Ohio. Casual elsewhere.

PRE-EMINENT in a galaxy of beauties is this truly "golden" Warbler of the swamps. He does not come over hill and dale with a rush and flutter of wings and a nervous anxiety to get on, such as characterizes most of the northern migrants, but proceeds rather in leisurely fashion along the valleys of the larger streams. Sedate in movement and fearless, but not bold, in bearing, this rare bird appears to bring with him something of the languorous air of the South-land from which he hails. His chosen haunts, too, flooded lowland woods, are even more strongly suggestive of those watery fastnesses of the south, where the species is found in greatest abundance.

Indeed, it is within comparatively recent times that the Prothonotary Warbler has become known as a bird of Ohio. Dr. Wheaton first reported it in 1862 on hearsay evidence. It was afterwards found breeding at the St. Mary's reservoir by Mr. Charles Dury, of Cincinnati. In the spring of 1902, Mr. Irving A. Field of Granville found it breeding at several places about the Licking Reservoir, where I also had the pleasure of studying it, both at that time and during the season of 1903. On the 28th of April, 1902, I observed a male on the banks of the Olentangy near Columbus, and again two days later.

As one walks along that portion of the containing levee of Licking Reservoir shown in our first illustration, a glance to the right discovers only the lapping waves and the rough rubble of the levee, but at the left the gaze falls



*Photo by the
Author.*

A PROTHONOTARY WARBLER'S FRONT YARD.

A NEST IS SITUATED JUST OVER THE LEVEE WITHIN 20 FEET OF THE WATER'S EDGE. LICKING RESERVOIR, LICKING COUNTY, OHIO.



Photo by the Author.

WHERE THE PROTHONOTARY NESTS.

A NESTING HOLE APPEARS IN THE FOREGROUND IN THE CENTRAL PANEL.

upon a veritable fairy dell of woods and water, which even a Prothonotary Warbler will go far to see. The seepage through the levee furnishes the surrounding area with about two feet of standing water, at a level substantially twenty feet below that of the main reservoir. Here the essential characteristics of a southern swamp are reproduced,—tiny islands, verdant at the water's edge, but bristling with willow stubs and weighted with decaying tree trunks: dark, oozy channels and uncertain depths between; and a high wall of half open forest all about. Here above the ringing chorus of a bright May morning one hears the high droning of the monarch, *wick, wick, wick, wick, wick*. Downy Woodpeckers have prepared the way, so generously, in fact, that one peers into a half dozen likely-looking holes before coming upon one, three or four feet above the water, which contains a heavy cushion of moss and grass and horse-hair, upon which rest five or six large heavily-colored eggs. Or else a natural cavity is found in some hollow limb, in which case an immense amount of material is required to fill up the space to within a moderate distance of the top.

The Prothonotary Warbler is, so far as known, the only one of the family to build regularly in holes in trees. We infer that it has drifted into this custom within zoologically recent years, since its eggs are unusually dark colored, while those of all strictly hole-nesting birds are pure white. The eggs of this Warbler exhibit two types of coloration, with, of course, every variety of intermediate form. Those of the first type are heavily and rather evenly spotted and dotted with dull brown, and show pale lavender shell-marks. The other sort are boldly blotched with reddish brown, so heavily at times that the ground color is nearly obscured.

According to Professor Butler, the females construct the nests and perform all the duties of incubation. A few days are allowed to elapse after the completion of the nest before laying begins. An egg is laid each day until the set is complete, and two broods are often reared each season, especially southerly.

During the mating season the males are exceedingly irascible. One hapless wight I saw, who, choosing the wrong platform for his song, was set upon vigorously by a jealous rival. At the first onslaught the pair fell fighting to the ground. They picked themselves up hastily, and one, probably the original assailant, chased the other about for as much as three minutes. In and out they wound, now coming straight toward one like golden bullets, now threading the mazes of a tree-top like flashes of fire. But the fugitive was plucky, too, after a fashion, and altho he thought of nothing but flight, it was always within the bounds of the disputed territory. Finally the chase languished somewhat, and I left the contestants, faint yet pursuing.



Phot. by C. H. Meritt.

No. 52.

WORM-EATING WARBLER.

A. O. U. No. 639. *Helmitheros vermivorus* (Gmel.).

Description.—*Adults*: Head striped above; a narrow black stripe from either nostril, broadening behind; and a stripe of the same color through either eye; alternating stripes, and sides of head dingy buff; remaining upper parts dull olive; below dingy buffy, brighter on breast; bill dusky above, pale below; feet pale. Length 5.50 (139.7); wing 2.86 (72.6); tail 1.91 (48.5); bill .58 (14.7).

Recognition Marks.—Medium warbler size; black and buff stripes on head; dingy coloration.

Nest, on the ground, often sheltered by bush clumps, roots, projecting stones and the like; of leaves, bark, and trash, lined with grass, moss, or hair. *Eggs*, 4-6, of variable shape, white, lightly or heavily spotted and blotched with lavender and chestnut. Av. size, .68 x .54 (17.3 x 13.7).

General Range.—Eastern United States, north to southern New York, and southern New England, west to eastern Kansas and Texas; south in winter to Cuba and northern South America. Breeds throughout its United States range.

Range in Ohio.—Not uncommon summer resident in southern and south-eastern Ohio. "Ranges northward in eastern portion to and including Cuyahoga and Ashtabula Counties" (Jones).

DAMP woods, shady hillsides, and heavy undergrowth are required to attract this modest Warbler even in the southern part of our state, where alone it is common. Here the bird glides about over fallen logs, scuttles under brush-heaps or projecting stones, scratches vigorously among the fallen leaves, or clambers about the bushes, pursuing always a relentless search for the spiders, grubs, and worms, which form its almost exclusive diet. It is mainly a silent bird, and apart from nesting considerations regards your intrusion into its dusky haunts with little concern. Given, however, a sitting mate, or babies in the vicinity, and the bird's expostulations are most emphatic. *Chip—chip—chip*, it says with an energy which shakes the little frame: and presently every bird on the hillside joins in berating you.

There is little danger, however, for the bird. The nest is lodged somewhere upon the hillside, half buried by festoons of running vines and mosses, or else tucked away under the shadow of a log amidst a riot of dead leaves. Mere search is useless. The bird will guide you to her nest—perhaps. If not, why try again next year.

If caught upon the nest the bird sits close and braves the threatening hand, or else flutters out and tumbles down the hill with every symptom of acute and most inviting distress. Of course the distress is only mental, and the invitation is withdrawn in the nick of time.

The nest consists of a copious swathing of bark-strips and dead leaves, open at the top or side, according to the nature of the ground, and carefully lined with fine grass, hair, or moss.

Upon one occasion only does the Worm-eating Warbler avail himself freely of the more elevated perches which his forest home affords. In

singing the bird mounts a limb twenty or thirty feet high and pours forth a torrent of notes not unlike those of the Chipping Sparrow. So close is the resemblance that one is almost sure to be deceived by them the first time; but closer attention discloses their more rapid utterance and somewhat finer quality. One individual heard near Sugar Grove wound up his trill with an odd musical quirk quite out of character, and which he had borrowed, I fancy, from a Hooded Warbler nesting near.



Taken in Oregon county.

From the author.

THE HAUNT OF THE WORM-EATING WARBLER.

No. 53.

BLUE-WINGED WARBLER.

A. O. U. No. 641. *Helminthophila pinus* (Linn.).

Synonym.—BLUE-WINGED YELLOW WARBLER.

Description.—*Adult male*: Forehead and fore-crown bright yellow with a tinge of orange (Indian yellow); sides of head and entire under parts, except crissum, rich lemon yellow; a black line through eye; wings and tail bluish ash over dusky; tips of middle and greater coverts white, the former with yellowish tinge; three outer pairs of tail-feathers blotched with white on inner webs; remaining upper parts bright olive-green, clearest and with most yellow on rump; crissum white. *Adult female*: Similar but with yellow of head restricted to forehead; under parts paler yellow; bill blackish; feet dark brown. Length about 4.75 (120.6); wing 2.37 (60.2); tail 1.72 (43.7); bill .41 (10.4).



Taken near Oberlin.

From the author.

THE BLUE-WINGED WARBLER'S DOMAIN.

THE NEST SHOWN IN THE FOLLOWING ILLUSTRATION OCCUPIES A POSITION NEAR THE CENTER

Recognition Marks.—Smaller; yellow on forehead and below; *bright* olive-green above; black line through eye; white wing-bars and smaller size as distinguished from the Prothonotary Warbler.

Nest, on the ground, at edge of thicket or black-berry patch, of leaves, grape-

vine bark, etc., lined with fine grass. Eggs, 4 or 5, white, faintly and thinly speckled with cinnamon-brown or umber. Av. size, .63 x .51 (16. x 13.).

General Range.—Eastern United States from southern New York, southern New England and southern Minnesota southward, west to Texas and Nebraska. In winter south to Guatemala and Nicaragua.

Range in Ohio.—Of general distribution in summer throughout the state.

ALTHO appearing in our latitudes as early as May first, the Blue-winged Yellow Warbler seems to bring summer with it. This is partly because its bright plumage suggests the fullest measure of sunshine, but more because its drowsy, droning song better befits the midsummer bush than it does the strife of tongues which marks the May migrations. *Swe-c-c-zze-c-c-c-c-* the bird says, and it is as if the Cicada had spoken. The last syllable especially has a vibrant clicking quality like the beating of insect wings.

Like most warblers this bird makes nice discriminations in the choice of its summer home. If one knows exactly what sort of cover to look for it is not difficult to locate a Blue-wing, but one might ransack a township at haphazard and find never a one. Low, moist clearings which have been allowed to fill up again with spice-bush, witch-hazel, and saplings are favorite places, especially if here and there a larger tree has been spared, from which the singing Warbler may obtain at will a commanding



Taken near Oberlin

Photo by Lynds Jones.

NEST AND EGGS OF BLUE-WINGED WARBLER.

view. When suited to a "t" the bird will buzz into the late hours of the morning, when other songsters are silent.

Active and sprightly in habit, in spite of its tranquilizing song, the Blue-wing is seen to best advantage when nest-hunting or nest-building. Selecting a promising spot the bird will approach it by degrees, first dropping down some sapling ladder, rung by rung, until the lowest branch is reached; thence flitting to the top of a bush-clump, and descending in like manner to the ground. Here diligent inspection is made about the roots of the bush, the leaf supply, drainage, and cover being duly considered. If the outlook is promising the mate is summoned and the situation reconsidered.

The nest is placed upon the ground or upon the trash which covers it, and is usually so surrounded by descending stems as to be well hidden and quite secure. It is made out of rather coarse materials,—principally grape-vine bark and dead leaves,—bulky and deep, with ragged or indefinite edges, and often boasting nothing better than finely shredded bark for a lining. The female is a close sitter and may not infrequently be taken by the hand.

In June, 1902, I found a typical Chat's nest placed four feet high in blackberry vines, but which contained three tiny eggs of uniform size, quite like those of the Blue-winged Yellow Warbler. In response to my "screep" of inquiry a Blue-wing promptly appeared, not once only but twice, and scolded me roundly; while a Chat joined in at twice the distance. I was thoroughly puzzled, baffled; it was impossible to tell from the appearances which bird owned the eggs. Moreover my time was short. "When in doubt take the nest." The set is now in the Oberlin College collection, but we shall never know whether to label it "Chat" or "Blue-wing."

No. 53. H.

BREWSTER WARBLER.

A. O. U. No. H. 21. *Helminthophila leucobronchialis* (Brewst.).

Description.—*Adult male*: More or less like *H. pinus* (i. e. forehead and forecrown pure yellow, a black line through eye, etc.), but upper parts bluish gray (instead of olive-green); the wing-bars yellow; under parts pure white, tinged on breast only with yellow and on sides with ashy gray. In the fall more heavily washed with yellow below, and margined with olive-green above. *Adult female*: Like the male, but yellow of crown not so bright; wing-bars usually white.



Taken near Oberlin.

A HAUNT OF THE BREWSTER WARBLER.

Photo by Geo. Arthur.

The status of this bird is not yet fully determined. It may be a color phase of *H. pinus* or a hybrid between *H. pinus* and *H. chrysoptera* or possibly a nascent species. Certain it is that its affinities are strongly with *H. pinus*. Upon this point Ridgway's note is at least suggestive and perhaps solvent, "This puzzling bird apparently bears the same relation to *H. pinus* that *H. lawrencci* does to *H. chrysoptera*. In a large series of specimens every possible intermediate condition of plumage between typical *H. pinus* and *H. leucobronchialis* is seen, just as is the case with *H. chrysoptera* and *H. lawrencci*. If we assume therefore that these four forms represent merely two dichroic species, in one of which (*H. pinus*)

the xanthochroic (yellow) phase and in the other (*H. chrysoptera*) the leucochroic (white) phase represents the normal plumage,—and admitting that these two species in their various conditions, hybridize (which seems to be an incontrovertible fact),—we have an easy and altogether plausible explanation of the origin of the almost interminably variable series of specimens which have found their way into the waste-basket labelled *H. leucobronchialis*."

IN the spring of 1903 four individuals of this puzzling form, all singing males, were observed near Oberlin. The first one seen haunted the same spot—a little opening in a thicket of tall saplings—in which we had closely studied a Golden-winged Warbler the previous season. His song too reminded us strongly of the other bird, except that he usually sang three notes, *Swee-see-see*, where the other had always given four, *Zwee, see, see, see*. Another Brewster in a wood three miles removed exhibited the same peculiarity; while a third seen in the "Old South" woods with the first, rendered a typical Blue-wing song of two drawling syllables. Here on another occasion a Blue-wing and a Brewster were seen chasing each other about through the smaller trees, and their excited songs hinted strongly of rivalry in love.

The case of the Brewster Warbler is very perplexing—delightfully so—but there is no reason why it should not find its solution here in Ohio.

No. 54.

GOLDEN-WINGED WARBLER.

A. O. U. No. 642. *Helminthophila chrysoptera* (Linn.).

Description.—*Adult male*: Above and on sides bluish gray; a crown-patch, including forehead, and a large patch on the wing, formed by tips of median coverts, and outer webs of greater coverts, bright yellow; a black patch through eye, including lore and ear-coverts, separated from crown by a narrow, and from throat by a wide, white stripe; throat black, broadening below; remaining under parts white, tinged more or less with blue-gray; rest of wing and tail dusky, with narrow blue-gray edgings; three outer pairs of tail-feathers with white blotches on the inner web; bill slender, acute, blackish; feet dark brown. *Female*: Like the male, but crown duller, and black of cheeks and throat partially obscured; touched with bright olive above, especially on margins of inner quills. *Immature*: Like female. Length 5.00-5.25 (127-133.3); wing 2.54 (64.5); tail 1.87 (47.5); bill .44 (11.2). This bird crosses freely with the preceding species, *H. pinus*. See description of preceding form, also *H. lawrencei* in Appendix A.



GOLDEN-WINGED WARBLER
H. lutescens chrysoptera
Life-size

Recognition Marks.—Medium size; bright yellow crown and wing-patches, and black throat.

Nest, much like that of the commoner *H. pinus*, on the ground or just above it, in tussock or weed clump, of leaves, grass, etc., lined with fine grasses. *Eggs*, 4-6, white, spotted and dotted, chiefly about larger end, with chestnut, umber and lilac-gray. Av. size, .62 x .49 (15.8 x 12.5).

General Range.—Eastern United States north to southern New England, southwestern Ontario, and southern Minnesota, breeding from northern New Jersey and Northern Ohio northward, and southward along the Alleghenies to South Carolina, Central America and northern South America in winter.

Range in Ohio.—Rare summer resident, in northern, locally common in southern portions of state.



*Photo by the
Author.*

AT THE MOUTH OF DOUDA RUN—"MORGAN COUNTY'S BEST."

THE first glimpse of a new Warbler is always memorable, but an introduction to this dashing young fellow is especially so. You may have looked for years in vain, when suddenly one May morning you come upon him in the swampy woods, restless, full of life, and in the highest spirits. The young hickories are just about to open their reluctant palms; the gallant mounts a high bud, throws back his head, and sputters out *Zee, zee, zee, zee*, at double time in comparison with his drowsier relative, the Blue-wing. Without waiting for applause he charges after a vagrant fly, snaps him up, and takes to a sweet-smelling spice-bush for another round of music. A passing

Vireo, who by the way was born thereabouts, is fiercely assailed by the swaggering stranger, and retires in confusion. What impudence! you exclaim with rising resentment. But not so fast! A coy female, smartly dressed,



Taken in Morgan County.

Photo by C. H. Moore.

GOLDEN-WINGED WARBLER AT NEST.

base of a bush clump, and its five eggs reposing in a rude half-sphere of leaves, bark-strips and grasses.

if not so brightly as her mate, hops up out of a brush pile. The adoring lover darts to her side, but she avoids him through a hazel thicket, and he sets off in hot pursuit. Ho, ho! you chuckle: so that's the secret. Happy fellow!

After a merry chase the birds suddenly bethink themselves what effect your presence may have upon their future plans and join in berating you by energetic *scolds*. If you are inconsiderate enough to intrude a few days later, you will find the nest where you have found the Blue-wing's, at the

The Golden-winged Warbler is quite irregular in distribution, and varies unaccountably from year to year. While it is always rare in most localities, certain are reported where it is always to be found. The nest shown in the illustration occupied a central position in the copse beyond the fence in "Morgan County's Best"; and Messrs. Morris and Arrick feel that they are sure of finding the species there each season.

No. 55.

NASHVILLE WARBLER.

A. O. U. No. 645. *Helminthophila rubricapilla* (Wils.).

Description.—*Adult male*: Head above and on sides bluish ash, with a partially concealed bright chestnut crown patch; a whitish eye-ring; remaining upper parts bright olive-green; wings and tail dusky without distinct white, but with whitish edgings on inner, and olive-green edgings on outer webs; below, bright yellow, including crissum, whitening on belly; bill small, short, acute, blackish above, brownish below; feet brown. *Female*: Like male but somewhat duller below; ashy of head less pure, glossed with olivaceous; chestnut crown-patch less conspicuous or wanting. *Immature*: Olive-green without ashy above; below dull olive-yellow, clearing on belly and crissum. Length 4.25-5.00 (108-127.); wing 2.34 (59.4); tail 1.66 (42.2); bill .38 (9.7).

Recognition Marks.—Smaller; yellow under parts usually clearer and brighter than in *H. cclata*, and more extensive than in any other species unmarked below. Head contrasting more or less with back, as further distinguished from succeeding species.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground in second growth thickets and brushy pastures, of bark-strips, leaves, moss, etc., lined with fine grasses and rootlets. *Eggs*, 4 or 5, white or creamy-white, thickly speckled, chiefly along larger end, with rufous-brown or lilac. Av. size, .64 x .46 (16.3 x 11.7).

General Range.—Eastern United States to the Plains, north to the Fur Countries, breeding from the northern United States northward. Mexico and Guatemala in winter.

Range in Ohio.—Common migrant throughout the state.

ALTHO rightly accounted common during the migrations, this trim little Warbler is by no means obtrusive and may easily pass unnoticed except by the closest observers. It is a rather leisurely traveler, spending with us about two weeks in spring and requiring twice as much time to pass in fall. In spring it shows preference for young, second-growth timber and moist brush-lots, but is not uncommon in the tree-tops, especially on the border of the woods. On the autumn passage they are lured by the abundance of

rank weeds into more open situations. The birds appear to know instinctively how well their colors harmonize at that season with the massing golden-rod and the sere leaves of the wayside willow.

During the vernal movement the males are in full song, and the quality of their notes has given rise to much learned discussion. The aggregate of testimony goes to show that the song appears in two phases, and that the two are frequently combined in various proportions in one utterance. The second phase, or phrase, as the case may be, closely resembles the trill of the Chipping Sparrow, while the first is likened to the song of the Yellow or Chestnut-sided Warbler or—more appropriately, I think—to that of the Black-and-White. Mr. Minot, having in mind the Warbler type, hears, *wcc-see, we-see, wit-a-wit-a-wit*. Rev. J. H. Langille combines both as *ke-tse, ke-tse, ke-tse; chip-cc-chip-cc-chip-cc-chip*. While Professor Jones represents "the more Chippy-ward song" by "*k-chip; k-chip; k-chip; k-chip; che-che-che-che*." Of course the use of comparisons at all implies that the notes are among the lesser known and less distinctive woodland sounds.

No. 56.

ORANGE-CROWNED WARBLER.

A. O. U. No. 646. *Helminthophila celata* (Say).

Description.—*Adult*: Above ashy olive-green, clearing and brighter on the rump; crown with patch almost concealed, of orange-red (Saturn red) feathers; wings and tail fuscous with some olive edging; below greenish-yellow, dingy or vaguely streaked with olive on breast and sides. *Immature*: Without orange of crown; more ashy above; duller below; eye-ring whitish. Length about 5.00 (127.); wing 2.40 (61.); tail 1.95 (49.5); bill .42 (10.7).

Recognition Marks.—Small warbler size; orange crown-patch is distinctive, but seldom seen in life; under parts duller and greener than last, not so white as next species; no contrast between general color of head and back.

Nesting.—Does not breed in Ohio. *Nest*, on the ground among clumps of bushes, of coarse strips of bark, grasses, and plant-stems, lined with fur and hair. *Eggs*, 4-6, white or creamy-white, finely speckled with reddish brown, and with fainter markings of purplish slate (Kennicott). Av. size, .64 x .46 (16.3 x 11.7).

General Range.—Eastern North America, breeding as far north as the Yukon and Mackenzie Rivers and southward through the Rocky Mountains; wintering in the South Atlantic and Gulf States and Mexico. Rare east of the Alleghanies, north of Virginia.

Range in Ohio.—Rare spring and fall migrant.

H. celata is one of the rarer migrant Warblers, of which comparatively little seems to be known. In its breeding haunts, which extend up to well within the Arctic Circle, it is found to be a bird of the undergrowth and open thickets; but during its migrations it is at least as likely to be seen in the tree-tops along with the stricter denizens of the woods. A few of us report seeing the species every year or so, and a conscientious shot every fourth year confirms the record.

Dr. Wheaton once came upon a male in full song. He describes the notes as loud, emphatic, and rather monotonous, consisting of the syllables, *chicky-tick, tick, tick, tick*. Professor Lynds Jones renders the song, *chce, chce, chce, chw, chw*, and says that the first three syllables are rapidly uttered and the last two more slowly.

No. 57.

TENNESSEE WARBLER.

A. O. U. No. 647. *Helminthophila peregrina* (Wils.).

Description.—*Adult male*: Crown and sides of head bluish ash fading into whitish of throat; above bright olive-green; wings and tail dusky with faint edgings of olive-green; outer tail-feathers sometimes show obscure whitish spot near tips; upper eyelid, or faint superciliary line, whitish; below dull white, often washed more or less on throat, breast and sides (especially the last) with sordid yellowish. *Adult female*: Similar; ashy of head veiled by olive-green skirtings; more yellow below. *Immature*: Crown and back clear olive-green; under parts washed with yellow, except on under tail-coverts. Length 4.50-5.00 (114.3-127.); wing 2.53 (64.3); tail 1.65 (41.9); bill .40 (10.2).

Recognition Marks.—Small warbler size. Another nondescript,—sordid white or pale yellowish below; white of belly usually unmistakable.

Nesting.—Does not breed in Ohio. *Nest*, in low bushes near ground, of vegetable fibers, grasses, etc., lined with hair. *Eggs*, pearly white with wreath about larger end of brown and purplish spots. Av. size, .60 x .56 (15.2 x 14.2).

General Range.—Eastern North America, breeding from northern New York and northern New England northward to Hudson Bay Territory; in winter south through eastern Mexico to Costa Rica and California.

Range in Ohio.—Common during spring and fall migrations.

LIKE the Nashville Warbler, this bird of the far north owes its name to an accident of discovery. Wilson first found it on the banks of the Cumberland in Tennessee, and promptly named it after their common hostess. Both Wilson and Audubon regarded the bird as extremely rare, the former having seen but two specimens and the latter three. It is known now as one of our common migrants in the middle West, but its first positive recognition in the case of any individual observer is usually effected by the aid of a gun. Altho bright olive-green might be reckoned on first thought a conspicuous color, it is precisely the opposite when viewed among the tender greens of May, or amidst the changing foliage of autumn.

The Tennessee Warbler is a rather late and leisurely migrant. It does not appear in spring until the leaves are at least half way out, usually about the end of the first week in May; and at that season it keeps to the densest cover in woodland or orchard trees. But once learn its song and the rest is easy. Its voice can readily be distinguished in a May-day chorus, but it is not averse to musical effort on dull days, and then is your best chance. A dull canopy of cloud, it may be, covers the sky. It is not raining, but the face of nature is bathed in an atmosphere heavy with warm moisture, and the apple trees gratefully suck up the nourishment and throw out their foliage and blossoms visibly before your eyes. Suddenly from the midst of some bower of blossom not so far removed but glowing softly down the orchard isle of tenuous vapor, there bursts a fine note of inquiry, the prelude of a series which rises rapidly to a peremptory challenge, *Pichick', pichick', pichick', chick, chick, chip, chip, chip*. The song is delivered in a rapid crescendo up to the last note, but with this the bird suddenly checks himself. If you advance, the bird quits his bower for some other flower-hold as difficult, and the chances are against your catching anything but a dull yellowish glimpse. You cannot see him, but you have heard and that is enough.

In the fall, strange to say, the birds not only seem much more plentiful, but they quit the woods and resort almost exclusively to wayside thickets, second-growth clearings, and the like. At this season too they are much more approachable. Either they are less suspicious now that the love-sickness is over, or else they trust more implicitly to the protection of the sere leaf.

No. 58.

NORTHERN PARULA WARBLER.

A. O. U. No. 648a. *Compsothlypis americana usneæ* Brewster.

Synonym.—BLUE YELLOW-BACKED WARBLER.

Description.—*Adult male*: Above and on sides of head and neck grayish blue; a large greenish golden patch on back; wings and tail dusky with obscure bluish bordering; tips of middle and greater coverts white, forming two conspicuous bars; two outer pairs of tail-feathers with white blotches on the inner webs; lores broadly bluish black; a white spot on lower eyelid; chin and breast yellow,—connection almost cut off by encroaching blue of sides; a blackish or blue-black dab on lower throat; below this, in turn, a rich orange-brown patch, each feather with a yellow tip, producing a shingled effect; below sordid white. *Adult female*: Similar but the orange-brown and black of throat often absent; paler everywhere. *Young of the year*: Upper parts tinged with olive-green, thus giving a peculiar blue-green effect, especially on head; yellow of lower parts paler. Length of males about 4.75 (120.6); wing 2.38 (60.6); tail 1.67 (42.5); bill .38 (9.7)¹.

Recognition Marks.—Smallest of American Warblers (*usneæ* is however the largest of the three allied forms); golden patch on back; the orange-brown on the breast of high plumage male is distinctive.

Nest, a pouch, formed oftenest of a bunch of pensile moss (*Usnea*), or high water debris, gathered together at the bottom, felted, and carefully lined, and with entrance at side. *Eggs*, 4 or 5, sometimes 6 or 7, glossy white or creamy white, speckled with cinnamon-red, chestnut, and gray, usually in a wreath about larger end. Av. size, .66 x .47 (16.8 x 11.9). The breeding bird is perhaps the next form, *C. a. ramalinae*.

General Range.—New England, New York and westward at least to Long. 82°, and north into the Maritime Provinces and Ontario, migrating southward beyond the United States in winter.

Range in Ohio.—Rather rare during migrations.

A recent overhauling of this genus by one of the masters has left us in temporary uncertainty regarding the Ohio forms, but it seems altogether probable that the larger bird is strictly migrant. Dr. Wheaton, relying upon the observations of Messrs. Read and Kirtland, gives the Parula Warbler as a summer resident in northern Ohio. More recently Thomas McIlwraith in his "Birds of Ontario," states that he has not heard of a nest's being found in that province, since the majority of the birds pass still farther north to breed. More lately still they have been found breeding by Fleming in the districts adjoining Georgian Bay. No recent records of breeding are at hand from the northern part of this state, and it would appear at least possible that the more robust form has pushed its way further northward

¹ Measurements of all but length are from Ridgway. See "The Birds of North and Middle America," part II, p. 484.

since Kirtland's time, leaving a hiatus between the two subspecies, which at present consists of northern Ohio and southern Ontario. If closer attention discovers breeding birds in the northern part of the state, they will probably prove to be *avant couriers* of the southwestern bird, *C. a. ramalinae*.

No. 59.

WESTERN PARULA WARBLER.

A. O. U. No. 648a, part. **Compsothlypis americana ramalinae** Ridgway.

Description.—Similar in coloration to *C. a. usneae*, but averaging somewhat smaller. Length of male 4.40 (111.7); wing 2.26 (57.5); tail 1.61 (40.9); bill .39 (9.9). Recently elaborated by Ridgway but status and distribution not yet clearly defined.

General Range.—Locally distributed throughout the Mississippi Valley and its tributaries, west to the Plains, north to Canada, and east to western Ohio and Michigan.

Range in Ohio.—Believed to be the breeding bird; nowhere common but generally distributed.

DURING the spring migrations the Parula Warbler is the most restless midget of all that motley host which throngs the tree-tops. One tries in vain to catch him at rest, if but for the fraction of a second, that he may feast his eyes upon those rare beauties. But no; the little body is swayed by a thousand passions, and each movement must do duty for an hour. It is both moving-time and mating-time, and to see him bustling about in such a mighty flurry one guesses that Chaucer's lines must be true of him:

“So hote he lovede that by nightertale
He sleep namore than doth the nightingale.”

Arrived, however, upon the summer camping ground and secure in his mistress's affections, our hot lover becomes much more sedate. One observed closely at McConnellsville in May, 1903, moved about with great deliberation, stopping for several minutes at a time upon a given twig, where he sang at frequent intervals. The song consisted of distinctly syllabized *s* notes, winding up with a squeak of an entirely different character. *Zu zu zu zu zuce tsip*. The whole was of a hair-like fineness, and had no great carrying power.

During the same season in the wooded hills about Sugar Grove I saw parents leading about full-grown young on the 10th of June. In the overflow

of the Crystal Spring, so well known to Columbus picnickers, we saw a Parula taking a noonday bath. The bird permitted a close approach during his icy ablutions. After this, upon a couch of tangled vines, he took a sun-bath in leisurely fashion, preening, and shaking himself now and then until he looked like a little blue and yellow pincushion. Then he whisked into a tree-top and was lost in a trice.



Taken near Sugar Grove.

Photo by the author.

VIEW LOOKING WEST ACROSS THE HOCKING RIVER.

PARULAS NEST IN THESE WOODED HILLS.

In nesting, the Parula makes artful use of bunches of moss, or even drift material left by a receding freshet. The moss is caught up and woven into a pendulous subspherical mass, or if bulky enough already, the bird may simply pull and pry and excavate a convenient hollow. Again the nest may be entirely constructed of materials laboriously gathered. A writer in Pennsylvania, Mrs. T. D. Dershimmer, reports two such nests in hemlock trees.

No. 60.

CAPE MAY WARBLER.

A. O. U. No. 650. *Dendroica tigrina* (Gmel.).

Description.—*Adult male*: Crown in high plumage black, usually olive-skirted; back olive-green streaked obscurely with black; rump yellow; wings and tail dusky with olive-green edging; a large white patch with olive skirtings on wing, formed by lesser and middle coverts; two or three outer pairs of tail-feathers broadly blotched on the inner web; ear-coverts and space below eye orange-brown contrasting with clear yellow of hind neck and sides of throat; a yellow supercilary line often tinged with orange-brown; a line through eye black; below yellow heavily streaked with black except on chin, sides of throat, and lower tail-coverts; lower belly and crissum whitish; bill blackish, acute, slightly curved; feet dark brown. *Adult female*: Duller; without distinctive head markings; white wing-patch much restricted; dull yellow or dingy white below, streaked with black, more narrowly and less extensively than in male. *Adults in fall*: Entire plumage more or less obscured by olive-gray suffusion. *Immature male* like spring female but with more white on wing. *Immature female* like adult but whitish instead of yellow below. Length 5.00-5.25 (127.-133.3); wing 2.62 (66.6); tail 1.80 (45.7); bill .40 (10.2).

Recognition Marks.—Medium size; ear-patches orange-brown; bright yellow on sides of neck; yellow with black stripes below (something as in *D. maculosa*, but the contrast between the colors not so sharp; the streaks more numerous and not so clearly confluent in stripes).

Nesting.—Not known to breed in Ohio. *Nest*, semi-pensile, of small twigs and grass interwoven with spider-webs, and carefully lined with horse-hair. *Eggs*, 3 or 4, dull white, speckled and spotted with dark brown and lilac-gray, chiefly gathered in wreath about larger end. Av. size, .69 x .49 (17.5 x 12.5).

General Range.—Eastern North America north to Lake Winnipeg and Hudson Bay Territory, west to the Plains. Breeds from northern New England northward; winters in the West Indies.

Range in Ohio.—Comparatively rare,—during migrations only.

THERE are two particularly interesting things about the Cape May Warbler, and that which excites our interest is that it is one of the rarer warblers. One may study the warbler host for several years without meeting this bright-colored little fellow, and then be rewarded with an unexpected meeting with several of them in fullest plumage. I have found them in orchards more than elsewhere, helping the owner prepare for a rich harvest of fruit because the insect eggs are found and destroyed. A troop of warblers is worth barrels of emulsion. Ely Wood, Elyria, has also proved a good place for the Cape May. Six were found in one company last year, in the shade trees along the street.



YELLOW WARBLER
Dendroica aestiva
♂ Life-size

The other thing of peculiar interest is that this warbler has a cleft and fringed tongue, and has been called *Perissoglossa*. Just what the function of this pattern of tongue may be is a puzzle, but that it is in some way useful to the birds can hardly be doubted. It is certainly not an aid to singing, for this warbler is one of the weaker voiced ones, with a high pitched, wiry song, spelled "a-wit, a-wit, a-wit," by Mr. Butler. The song is given while the bird is feeding, and is a sort of accompaniment to the real business of life during the northward journey. In my experience this warbler is unwary and permits a close approach. I have never seen it at a greater height than twenty feet in the trees and bushes.

The migrations have not been well worked out yet, but what we know about the movements across Ohio would indicate a northward movement during the first half of May, and a southward return during August and early September. The persistent student of the migrations is sure to find Cape May sometime under favorable conditions for study.

The nest is built in a low bush in a wooded pasture or open woodland, and is said to be partially pensile. The nest and eggs are not readily distinguishable from other members of this genus. The males sing frequently from their perch on the topmost twig of a spruce tree, and so mislead one as to the whereabouts of the nest. In the United States nests will be found only in northern New England and northern Michigan, Wisconsin and Minnesota, except in the mountains.

LYNDS JONES.

No. 61.

YELLOW WARBLER.

A. O. U. No. 652. *Dendroica aestiva* (Gmel.).

Synonyms.—SUMMER YELLOW-BIRD; SUMMER WARBLER.

Description.—*Adult male*: Forehead and fore-crown bright yellow with an orange tinge; back bright olive-green; rump greenish yellow; wings and tail blackish with greenish yellow edgings, the wing quills edged on both webs, the tail-feathers—except middle pair—almost entirely yellow on inner webs; sides of head and entire under parts golden yellow, the breast and sides heavily streaked with chestnut; bill black; feet pale. *Adult female*: Like male but duller; olive-green on back, not brighter on forehead; paler yellow below, obscurely or not at all streaked with chestnut. *Young males* resemble the adult female. *Young female* still duller; dusky yellow below. Length 4.75-5.25 (120.0-133.3); av. of five Columbus specimens: wing 2.51 (63.8); tail 1.68 (42.7); bill .40 (10.2).

Recognition Marks.—Medium size; golden yellow coloration; chestnut streaks on breast of male; the commonest of the resident warblers.

Nest, a compact cup of woven "hemp" and fine grasses, lined heavily with plant-down, grasses, and, occasionally, horse-hair, fastened to upright branch in rose-thickets and the like. *Eggs,* 4 or 5, white, bluish-, creamy-, or grayish-white, speckled and marked with largish spots of reddish brown, burnt umber, etc., often wreathed about the larger end. Av. size, .70 x .50 (17.8 x 12.7).

General Range.—North America at large, except southwestern part, giving place to *D. ac. rubiginosa* in extreme northwest. South in winter to Central America and northern South America. Breeds nearly throughout its North American range.

Range in Ohio.—Of universal distribution; the most abundant Warbler. Not conspicuous as a passing migrant.



FEMALE BROODING YOUNG.

Photo by R. F. Griggs.

THE Summer Warbler's gold is about as common as that of the Dandelion, but its trim little form has not achieved any such distinctness in the public mind. Most people, if they take note at all of anything so tiny, dub the birds "Wild Canaries," and are done. The name as applied to the Goldfinch may be barely tolerated, but in the case of the Warbler it is quite inappropriate, since the bird has nothing in common with a Canary except littleness and yellowness. Its bill is longer and slimmer, for it feeds exclusively on insects instead of seeds, and its pure yellow plumage knows no admixture, save for

the tasty but inconspicuous chestnut stripes on the breast of the adult male. These stripes are lacking in males of the second year, whence Audubon was once led to elaborate a supposed new species, which he called the "Children's Warbler." The name is not ill-fitting even tho we know it applies only to the Warbler children.

The Yellow Warbler is peculiarly a bird of sunshine, and is to be found anywhere in open situations. It swarms through the orchards and gardens, frequents the wayside thickets, and in town takes possession of the shrubbery in lawn or park. It is abundant in swampy places, and through the willows which line the banks of streams.



Taken near Waverly.

Photo by Rev. W. F. Henniger.

NEST AND EGGS OF THE YELLOW WARBLER.

The song is sunny too, and while not elaborate, makes substantial contribution to the good cheer of spring. The notes are almost piercing and sound better perhaps from across the river than they do in the same tree. Individual variation in song is considerable, but the high pitch and vigor of delivery are distinctive. Certain common types may be syllabized as follows: *Sweet, sweet, sweet, sweetie; tsee, tsee, tsit-a-tee, tsee; wee-chee, chee, chee wee-i-u.* The bird is found singing from its arrival the last week in April until near the close of its second nesting late in July.

The nest of the Yellow Warbler is one of the commonest, both because of the bird's abundance and because no special pains is taken at concealment.

Nests may be placed at any height in orchard trees or willows, but without doubt the most acceptable nesting site is afforded by the dense swamp thickets of the Carolina rose. In a day's nesting in the Oak Point swamps of Lorain County, forty-two occupied nests of eight species were examined by myself and a companion, and of these eleven were Yellow Warbler's.

The cradle of this bird is an exquisite fabrication. The tough inner bark of certain weeds—called indiscriminately hemp—together with grasses and other fibrous materials in various proportions, is woven into a compact cup about, or settled into, some stout horizontal or ascending fork of bush or tree.

As a result the bushes are full of Warblers' nests two or more seasons old. A fleecy lining or mat of plant-down is a more or less conspicuous feature of every nest. Upon this as a background a scanty horse-hair lining may exhibit every strand; or, as I once saw in Washington, the eggs themselves may be thrown into high relief by a coiled black mattress.

The Yellow Warbler displays particular ingenuity in banishing the Cowbird's unwelcome egg. Instead of deserting the spot the birds place a false bottom across the nest and raise the sides to correspond, — two stories, with the ground floor to let.



Taken at Oak Point.

Photo by the Author.

AN UNUSUALLY DEEP NEST.

Three- and even four-story nests of this sort have been found.



BLACK-THROATED BLUE WARBLER

Dendroica caerulescens

Life-size

No. 62.

BLACK-THROATED BLUE WARBLER.

A. O. U. No. 654. *Dendroica caerulescens* (Gmel.).

Description.—*Adult male*: Above, dark dull blue, occasionally spotted with black on the back; extreme forehead, sides of head, chin, throat, sides of breast, and sides, intense black; remaining lower parts pure white; wings and tail blackish, edged on exposed portions with blue or whitish; a large white spot at base of primaries on both webs; secondaries and lower tertials broadly edged with white; three outer pairs of tail-feathers broadly but decreasingly blotched with white on inner webs; bill black; feet brown. *Adult female in spring*: Above dull greenish blue; no pure black anywhere; sides of head dusky; below white, sordid, or with a bluish buffy suffusion; white spot at base of primaries reduced but still prominent. *Adult female in autumn*: Similar but with more yellow everywhere; therefore dull olive-green above, dingy yellow below; brownish washed on sides. *Immature male*: Like adult male, but upper parts greenish; less black below. *Immature female*: Like adult female in autumn. *Adult male in winter*: Above touched with olivaceous; below black somewhat restricted; flanks touched with brownish. Length 4.75-5.50 (120.6-139.7); av. of five Columbus specimens: wing 2.53 (64.3); tail 1.86 (47.2); bill .39 (9.9).

Recognition Marks.—Medium size; black, dull blue, and white in masses of male; white spot at base of primaries in female.

Nesting.—Not found breeding in Ohio. *Nest*, of bark-strips, twigs, and grasses, lined with fine rootlets and horse-hair; placed in low bushes near ground. *Eggs*, 4 or 5, dull white, with spots and dots of olive-brown, chiefly wreathed about larger end. Av. size, .68 x .51 (17.3 x 13.).

General Range.—Eastern North America to the Plains, breeding from northern New England and northern New York northward to Labrador, etc. West Indies and Guatemala in winter.

Range in Ohio.—Common spring and fall migrant.

THE Warblers are a world unto themselves. When the semi-annual flood-tide of migration is at its height, nearly all available space is occupied by them as completely as tho no other sorts of birds existed. The spatial exceptions are the open fields where Sparrows reign supreme, and open water where none but web-footers and the Swallow kind may go. The portion which falls to the Black-throated Blue in the grand allotment consists of the lower levels in the deeper forests, together with an added gratuity of outlying evergreens wherever these may occur. Not but that the bird may appear as a visitor in the tree-tops, or even as an inquisitive tourist in swampy recesses, but these are not his home.

The clear-cut, modest color-masses of the male bird are enough to awaken enthusiasm in any beholder; but the totally different pattern of the female with her shifting olive-greens and dingy yellow, is apt to be confusing. The white

spot on the edge of the wing is not very conspicuous in the female, but once found it settles all dispute, however much imagination may rebel.

The Black-throated Blue Warbler is rather deliberate in movement, quiet and genteel. It is not very difficult to approach it, and a prudent observer may sometimes attain inspection at arm's length. In such cases, however, it is the bird that makes the advances. The surest opportunity comes when the bird has been seen in a front yard evergreen. Then the observer may approach quietly, while the bird, trusting to the density of the foliage, pursues intently his entomological researches, or even publishes his prosy song. *Dzwee, dzwee, dzweedt* comes in a matter of fact voice, or with a curious upward turn, from the depths of the foliage. The sounds are consonantal, hard, and deep, but not out of keeping with the bird's demure ways. On rarer occasions a sprightly and much more musical ditty is heard. *Chew, we-o, we-o, we-o, we-o, wick, i-wick, i-wick*.

This Warbler is common in spring but is even more noticeable in autumn, since it is one of the few species which do not don plainer garments. Its fall movement is leisurely and it finds a congenial companion in the dropping leaf.

No. 63.

MYRTLE WARBLER.

A. O. U. No. 655. *Dendroica coronata* (Linn.).

Synonym.—YELLOW-RUMPED WARBLER.

Description.—*Adult male in spring:* Above slaty blue with black streaks, smaller on sides of crown and nape, broader on back; below white, with black on upper breast, sides of middle breast, and sides in endless variety of patterns; a large patch on each side of breast, a partially concealed patch in center of crown, and rump, bright yellow (lemon or canary); superciliary line white; a deep black patch on side of head; wings fuscous; tail darker; middle and greater coverts narrowly tipped with white, forming two rather conspicuous bars; three outer pairs of tail-feathers with white blotches on inner webs, decreasing centrally; bill black; feet dark. *Female in spring, and both sexes in fall:* Duller; the blue of upper parts overlaid with brownish; a brownish wash on sides of breast and flanks; black of breast obscure,—restricted to centers of feathers; yellow of breast-spots pale or wanting. *Immature:* Brownish above; whitish below with a few obscure dusky streaks. Length 5.25-5.75 (133.3-146.1); av. of five Columbus males: wing 2.08 (75.7); tail 2.22 (56.4); bill .38 (9.7).

Recognition Marks.—Larger; the yellow rump together with size and season of appearance is distinctive; *white* throat, as distinguished from *D. auduboni*.

Nesting.—Does not breed in Ohio. *Nest*, of stalks, twigs, vegetable fibers, and grasses, lined with fine grasses or feathers, and placed five or ten feet up on horizontal branches of coniferous trees. *Eggs*, 4 or 5, dull or creamy white, speckled and spotted or blotched, chiefly about larger end, with reddish- or olive-browns. Av. size, .67 x .52 (17. x 13.2).

General Range.—Eastern North America chiefly, straggling more or less commonly to the Pacific; breeds from the northern United States northward, and winters from southern New England and the Ohio Valley southward to the West Indies, and through Mexico to Panama.

Range in Ohio.—Common in spring and abundant during fall migrations. Indies, and through Mexico to Panama.



Taken near Columbus.

Photo by the Author.

"THE RISING SUN IS GREETED WITH A BURST OF VOCAL SPLENDOR."

WHEN the vanguard of the Warbler host arrives in later April, the bird-man knows it is time to overhaul the daily schedule, to decline with thanks all evening engagements, and to hie him forth in the gray of the morning to welcome his winged friends. The wind is still asleep, the dew is full-bodied and lusty, and sounds of traffic have not yet begun to burden the air. It is at such a time the birds confess their inmost secrets of love and longing, and sing purest praises to the great All-Father. As the signals of dawn are hoisted the chorus swells and the rising sun is greeted with a burst of vocal



Taken near Oberlin.

Photo by the Author.

A FAVORITE WOODS-EDGE.

THE TREES ARE ONLY HALF DRESSED WHEN MYRTLE COMES.

splendor. Upon his appearance the winged voyagers of the night descend, and mingle their lispings and trillings with the full tide of song.

The Myrtles are usually the first of the Warblers to arrive in the spring, as they are the last to depart in the fall. For a week they are abundant, and their sturdy *chip* becomes easily the most familiar of Warbler notes. Other enterprising Warblers not a few except their promise of safe conduct, but one scrutinizes a dozen of the

Myrtles to find one of another species. During the first ten days of May the order of abundance is reversed, and the last dilatory matron has disappeared or every lazy Black-poll comes.

Myrtle is a handsome fellow, but he is too sensible to put on airs. Trees, bushes or fence-rails are alike to him, and he is not above alighting on the ground to secure a fat grub. Now and then a pleasant song is heard, a dainty, silvery warble, rather light, and, one suspects, since the singer is so far from home, not full-voiced yet.



MAGNOLIA WARBLER
Dendroica maculosa
Life-size

The autumnal movement is less hurried than that of spring. At this season the birds often gather in flocks of forty or more, and linger for weeks in sunny, half-wooded pastures, or about the orchards. Here they spend much time in the tall weeds, after the fashion of Goldfinches, hunting for insects, indeed, but in lieu of them often accepting seed. Thus they will occasionally tarry late into November, and do not fear the exposure resulting from the falling leaves, since a yellow rump-spot is all that is left them of the garish beauties of spring.

Yellow-rumped Warblers are reported as wintering commonly in southern Indiana, but Rev. W. F. Henninger did not find them in the lower Scioto valley. Dr. Langdon of Cincinnati has records for March 4 and November 29, and it is not improbable that they winter sparingly in the more sheltered spots of the Ohio River counties. They are reported as abundant at that season in Florida, where they subsist on the berries of the myrtle (*Myrica cerifera*), whence the name.

No. 64.

MAGNOLIA WARBLER.

A. O. U. No. 657. *Dendroica maculosa* (Gmel.).

Synonym.—BLACK-AND-YELLOW WARBLER.

Description.—*Adult male in spring*: Crown and nape slaty blue; back deep black; black bands on the sides of the head meeting in front and connecting with black of back; superciliary line, cut off by black in front of eye, white; a white spot on under eyelid; rump bright yellow shading into back by yellow or olive-green skirtings; upper tail-coverts abruptly black; wings and tail black with narrow edgings of bluish gray; a large white blotch on wing, formed by tips of middle, with tips and outer edges of greater, coverts; tail-feathers, except middle pair, with square white blotches on central third of inner web, below rich lemon yellow, clear on throat and middle belly, heavily streaked with black on jugulum, sides of breast, and sides, the streaks tending to become confluent in two or three large stripes on sides of breast, and to form a black patch on lower throat; crissum white; bill black; feet dark brown. *Adult female in spring*: Like male but duller; more olive-green on back; wing-patch separated into two bars by broader black centers of greater coverts; less heavily streaked below. *Both sexes in autumn*: Above olive-green; grayish on head; pale gray on throat; less heavily, or not at all, streaked below. *Young*: Ashy above with heavy olive skirtings on back and nearly concealed black spots; paler yellow below with less

streaking; rump and tail as in adult. Length 4.50-5.25 (114.3-133.3); wing 2.36 (59.9); tail 1.91 (48.5); bill .36 (9.1).

Recognition Marks.—Smaller; below, rich yellow heavily streaked with black in spring; *square* white spots on central third of tail feathers distinctive in any plumage.

Nest, of twigs, grasses and weed-stalks, carefully lined with fine rootlets, in coniferous trees, usually three to ten feet high on horizontal branches. *Eggs,* 3-5, white, spotted and blotched with hazel, reddish brown and cinnamon. Av. size, .65 x .48 (16.5 x 12.2).

General Range.—Eastern North America west to the base of the Rocky Mountains and casually to British Columbia; breeding from northern New England, New York, and Michigan, to Hudson Bay Territory, and southward in the Alleghanies to Pennsylvania. In winter, Bahamas, Cuba and south through eastern Mexico to Panama.

Range in Ohio.—Common spring and fall migrant. Perhaps rare summer resident in northeastern Ohio.

IT is always with a sense of privilege that one gazes upon a bird so beautiful, so exquisite as this. It is passing strange that one of such brilliant hue should desert the tropics and proceed not only to Ohio—that were not so strange—but to gloomy Labrador. Surely he must be a vision glorious in that land of fogs and pines and mosses gray! The bird brings with him something of the languid air of the South, a breath as of magnolia blossoms, and a southern name. For this bird like two other Warblers, the Palm and the Myrtle, receives its name from the favorite tree of its winter home.

While passing through our borders the Magnolia Warbler is oftenest found moving quietly through the bushes which line the banks of streams or lean over swampy pools in the depth of the forest. If in the latter situation its brilliance seems fairly to dispel the gloom, and if one finds His Magnificence fluttering before an insect-laden leaf, his cup of joy is full. But the bird is no recluse and numbers of them join that bright array which consecrates our tree-tops year by year.

The song of the Magnolia is not often heard, but when vouchsafed is clear and musical and fairly distinctive. It may bear a superficial resemblance to that of the Hooded Warbler, but careful comparison will show that it is shorter, weaker, and more varied. It is only the penultimate syllable, into which the bird throws a peculiar quality and turn, that is confusing, *flick, flick, flick, fletip,* or *che-weech, che-weech, che-o.* Beside this common form there are many variations whose consideration would scarcely prove helpful.

Many years ago it was supposed that this bird could be found breeding



CERULEAN WARBLER
Dendroica cerulea
3/4 Life-size

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in the northern part of the state, and Dr. Wheaton cites the appearance of one individual near Columbus as corroborative. Since that time no decisive records have come in and it is probable that the "northward trend" has effaced this species from the list of breeding birds.

No. 65.

CERULEAN WARBLER.

A. O. U. No. 658. *Dendroica rara* (Wils.).

Description.—*Adult male*: Above and on sides of head, neck, and breast bright grayish blue (china-blue, scarcely "cerulean"), clearest on nape and rump; streaked with black on crown, back, and sides; lores black; below white, a narrow blackish band across chest (sometimes interrupted); sides of breast streaked with black, partially concealed and with bluish edgings; two narrow white wing-bars formed in the usual way; white blotches near end of all but central pair of tail-feathers, on inner web; bill and feet bluish black. *Adult female*: Above, bluish olive-green; below, pale greenish buffy or greenish yellow, clearing on throat and belly, and obscurely striped with back-color on sides; line over and behind eye greenish yellow or wanting; wing-bars and tail-spots like male. *Young*: Like adult female, but males bluer above and whiter below. Autumnal plumage of adults not different. Length 4.00-5.00 (101.6-127.); wing 2.67 (67.8); tail 1.73 (43.9); bill .40 (10.2).

Recognition Marks.—Smaller; azure-blue and white coloration of male; bluish-greenish-grayish olive of female. The latter may be distinguished from the female of *D. caerulescens*, the only one with which it is likely to be confused, by the two wing-bars and the tail-spots.

Nest, a compact structure of fine grasses held together by spiders' silk, and decorated externally with lichens; lined with strips of bark and fine grasses; placed from twenty to seventy feet high in deciduous trees, at some distance from trunk. *Eggs*, 4, creamy white, speckled and blotched, chiefly near the larger end, with chestnut and lilac. Av. size, .67 x .50 (17. x 12.7).

General Range.—Eastern United States and southern Ontario west to the Plains. Rare or casual east of central New York and the Alleghanies. In winter south to Cuba, southeastern Mexico, Central America, and western South America. Breeds from about latitude 35° north to Minnesota.

Range in Ohio.—Rather common summer resident throughout the state; more common as migrant.

THE first five days of May are pretty sure to be warbler days in northern Ohio. For seven years the Cerulean Warbler has appeared at Oberlin during these first five days, usually near the first, and he is always singing when he first appears. He nests in some numbers in Lorain county and elsewhere

in the woods over pretty nearly the entire state. His song ceases about the end of the first week in July, but he tarries well into September.



Yalen Koto, Naga Grove.

Photo by the Author.

THE SUMMER HOME OF THE CERULEAN.

Any quest for the Cerulean Warbler takes one into the deeper woods, where the growth has been crowded and rapid. High up among the interlacing branches, hidden by the dense foliage, he flits all the day long, gleaning

from the new leaves or sallying out into the open for some passing insect, singing in the intervals. The woods which he chooses must be damp underneath, and the trees tall. Undergrowth is no hindrance, but he seems to prefer as little of it as possible.

His song seems to echo the purpose of his life. Beginning, as it were, down among the lowly, it gradually but persistently rises, pointing the way upward, disappearing while yet rising toward the heights. He lives where he can reach down and uplift by his presence and a sunny, joyous nature. The song is not pretentious, calling for applause, but rather the expression of an earnest purpose. You will not hear it without close attention. It has been rendered "*tse, tse, tse, tse, te-e-e-e-e-e-e-e,*" with a strongly rising inflection throughout. The bird sings while sitting, the head thrown back and



Taken near Oberlin.

Photo by Lynds Jones.

NEST AND EGGS OF CERULEAN WARBLER.

PLACED ON HORIZONTAL BRANCH AT HEIGHT OF FORTY FEET.

the breast pulsing with the earnestness of expression. It is not easy to recognize amid the May melody of song.

The nest is lashed upon a horizontal branch, or bound into a horizontal fork, well out from the tree, and always well up from the ground. Two nests which I have found in the famous South Woods were in a beech and rock maple tree respectively, one thirty, the other sixty feet from the ground. These nests resemble the nest of Redstart more than the nest of any other bird, both in composition and construction, but they were stuccoed with cobwebs outwardly. The material was mostly shreds of bark and horse-hair, with a little milkweed bark. The birds are very solicitous for their nest and young, uttering the sharp *chip* of alarm and distress, and venturing within a few feet of the intruder, but they do not show a disposition to fight. I have found nests only near small streams in the woods, or depressions where temporary streams form after severe rains or in spring.

The eggs are hardly distinguishable from other warblers' eggs. The markings incline to darker, or to less reddish in the browns. Four is the usual number for a complete set. It appears that this warbler builds too high for the Cowbird, or else the nest is too small to accommodate the sneaking creature.

LYNDS JONES.

No. 66.

CHESTNUT-SIDED WARBLER.

A. O. U. No. 659. *Dendroica pensylvanica* (Linn.).

Description.—*Adult male*: Extreme forehead ashy white; crown bright yellow (gamboge); hind neck streaked black and ashy white; back and rump bright olive-green, with partially concealed black stripes; upper tail-coverts black, edged with ashy and olive; wings and tail black, primaries and rectrices edged with ashy; secondaries and tertials edged with yellowish green; two irregular wing-bars light yellow; three outer pairs of tail-feathers extensively white on inner webs; a black patch on the side of the head including eye; an irregular white patch behind this; below white; sides of breast and sides with large chestnut patches, irregular or interrupted; bill black; feet dark. *Adult female*: Like male but duller; chestnut of sides much restricted; black face blotch divided by ashy, etc. No autumnal change in either sex. *Immature*: Quite different; above bright olive-green; below ashy or sordid white; wing-bars and tail-blotches as in adult; rectrices in unworn plumage quite acute; bill light below. Length 4.75-5.25 (120.6-133.3); av. of six Columbus specimens: wing 2.36 (59.9); tail 1.91 (48.5); bill .36 (9.1).

Recognition Marks.—Smaller; white under parts and chestnut sides of adult; light yellow wing-bars of young.

Nest, made of bark-strips, grasses and plant-down, and lined with hair; placed two to ten feet high in bush or sapling. *Eggs,* 4 or 5, white or creamy white, speckled with rufous or chestnut, chiefly near larger end. *Av. size,* .68 x .50 (17.3 x 12.7).

General Range.—Eastern United States and southern Ontario, west to Manitoba and the Plains, breeding southward to central Illinois, and northern New Jersey, and in the Appalachian highlands probably to southern Georgia. Visits the Bahamas, eastern Mexico, Central America and Panama in winter.

Range in Ohio.—Regular and common spring and fall migrant. Rare summer resident in northern portion of state.

IT is not easy for me to tell why the Chestnut-sided Warbler impresses me as an exquisite. Perhaps it is on account of his small size and close-knit form, or his willingness to have me approach within speaking distance. His colors are not so bright, nor their pattern in either the contrast or harmony



Taken near Columbus.

Photo by the Author.

AN OFT FREQUENTED GROVE.

that may be found with other warblers, but there seems to be something about the bird which makes the day brighter, the wearing field-work easier, and the hours of fasting forgotten when he flits into view. I have sometimes half suspected that he was conscious of my admiration from the manner in which he displayed his pretty color and trim form. The slightly opened wings, spread tail, and quick movements give a pleasing appearance. The females and fall birds lack the distinct contrasts of color found in the spring males, but they usually have some trace of the chestnut on the sides.

In village and city parks this little warbler may be found well up among the tree-tops, gleaning from the new leaves the insect eggs and larvæ, but in the woods he prefers a lower range. I have found him among the

spice bushes and lower branches, but not on the ground. He seems rather partial to damp woods, possibly because insects are more abundant there.

Feeding and singing are sandwiched together for the better part of the day, as though some expression of gratitude were necessary after each morsel was received. It is often a less spirited song than many warblers give, seeming to be a sort of soliloquy upon life and its compensations, but it is none the less pleasing. There is a pretty close resemblance to some phrases of the song of Yellow Warbler, but a little attention and discrimination will bring out the differences in quality as well as quantity. The song is more often heard on the Oberlin College campus than in the woods about Oberlin, and there it is somewhat different than the woods song. "*W'ce-chee, w'ce-chee, w'ce-chee-c-e-e,*" with the accent on the first syllable of each phrase, is the campus song. In the woods he sings this way: "*Te te te te w'ce chu,*" and occasionally, "*To w'ce, to w'ce, t'ee c-e-e.*" In the woods the song seems to be more spirited than on the campus. The difference may possibly be due to the fact that the first migrants are those which visit the campus, while the later ones remain in the woods.

In the vicinity of Oberlin Chestnut-side arrives about the fifth of May and the last travelers leave for the north shore of lake Erie during the last week of May. It is possible that some stay with us all summer, but if so we have not found them.

The nest resembles the nest of Yellow Warbler, both in situation and composition. It is usually placed in the fork of a bush or shrub from two to eight or nine feet from the ground. I suspect that the nest is more often built in the woods than one would expect with Yellow Warbler. It is well made, suiting the daintiness of the bird.

During August and the most of September one may find this warbler in the shrubbery and second growth in the plainer autumn plumage. He is not singing then during the heat of the day, but may be recognized by the trim form and small size.

LYNDS JONES.

No. 67.

BAY-BREASTED WARBLER.

A. O. U. No. 660. *Dendroica castanea* (Wils.).

Description.—*Adult male.* Forehead, extreme chin, and sides of head broadly (including eye) black; crown and nape deep chestnut; sides of neck and narrow cervical band rich creamy buff; remaining upper parts olive-ashy, streaked with black; wings and tail dusky; two cream-white bars on wings, separated by considerable dusky space; three outer pairs of tail-feathers with large



BAY-BREASTED WARBLER
Dendroica castanea
Life-size

subterminal blotches of white on inner webs; throat and sides of breast chestnut, produced irregularly on sides; middle of breast and remaining under parts buffy. *Adult female*: Similar to male but duller; black of head overlaid with olive-ashy; chestnut of under parts very faint. *Immature*: Bright olive-green above, streaked with black; below whitish, tinged with buffy or yellow on breast, and with buffy (female) or rusty on flanks. Length 5.00-6.00 (127-152.4); av. of four Columbus specimens: wing 2.45 (62.2); tail 2.12 (53.9); bill .40 (10.2).

Recognition Marks.—One of the largest of the genus; chestnut throat-patch distinctive in adult. For young see under following species.

Nesting.—Not known to breed in Ohio. *Nest*, described as a compact, cup-shaped structure of grass, bark-strips, twigs, etc., lined with plant-down and hair, and placed five to twenty feet high in coniferous trees. *Eggs*, 4 or 5, white with a greenish or bluish tinge, speckled in usual warbler fashion, chiefly near larger end, with reddish- or olive-brown. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern North America north to Hudson Bay. Breeds from northern New England and northern Michigan northward; in winter south through eastern Mexico (rare) and Guatemala to Colombia.

Range in Ohio.—Not common, but fairly regular spring and fall migrant.

ONCE in a while we almost miss this gentle Warbler during the spring migrations. This is not so much because the bird is really rare as because it comes late in the season, say about the 10th or 15th of May, when the foliage is well out, and stays for the most part well up in the trees. It is moreover a rather quiet bird, having nothing of the nervousness and dash peculiar to those who have braved the later frosts. So far as ready identification goes the bird is further unfortunate in that its somewhat rare song bears a close resemblance to that of the swarming Black-polls who are soon to bring up the rear of the great procession. But in spite of these obstacles, or because of them, the "one good view" which satisfies the working ornithologist each season is eagerly sought after. It is particularly disappointing that a bird of such substantial quality, and of such elegant appearance withal, should not deign to tarry with us through the summer; but this is in part atoned for by the swarms of lusty children which sweep down upon us in the fall from the teeming North. Then there is the perennial problem of identification in immature plumage. How dull a study ornithology would be without some of these bracing posers!

The song of the Bay-breast does not seem to have been particularly well studied. It is perhaps the highest and squeakiest of them all. Sometimes it is merely a high hissing *tsweis, tsweis, tsweis*, but oftener a succession of shrill sibilations in the form of a swell, *wiss wiss wiss wiss wiss wiss wiss*.

No. 68.

BLACK-POLL WARBLER.

A. O. U. No. 661. *Dendroica striata* (Forst.).

Description.—*Adult male*: Top of head uniform lustrous black; cheeks, hind neck, and cervical collar white, minutely streaked with black; remaining upper parts olive-gray streaked with black; wings and tail dusky with narrow olive-gray edging on exposed webs; two loose white wing-bars formed by tips of coverts; two outer pairs of tail-feathers with subterminal white blotches; traces of white on remaining pairs, except central; under parts white, extensively streaked with black on sides, the streaks usually confluent on sides of throat; bill dark above, light below; feet pale. *Adult female*: Above, including crown, grayish olive-green; everywhere streaked with black; below whitish, tinged with greenish yellow on breast and sides, and with dusky lateral streaks. *Adult male in autumn and winter*: Very different from the summer plumage. Above dull olive-green, passing gradually into dull gray on upper tail-coverts; back and scapulars narrowly streaked with black; white wing bands usually tinged with yellow; a narrow and indistinct superciliary streak of pale olive yellowish; auricular region and sides of neck like upper parts; under parts pale olive-yellow or straw-yellow, whitening posteriorly; sides and flanks indistinctly streaked with dusky; *under tail-coverts white* (Ridgway). *Immature*: Similar to adult female but brighter; less streaked on the back and scarcely, or not at all, below. Length about 5.50 (139.7); av. of six Columbus specimens: wing 2.95 (74.9); tail 1.96 (49.8); bill .39 (9.9).

Recognition Marks.—One of the larger species. Black "poll," white under parts, and lateral black streaks of male; grayish olive-green and robust size of female and young. "This species in winter plumage closely resembles immature specimens of *D. castanea*, but may be at once distinguished by the pure white, instead of buff, under tail-coverts, and pale yellowish brown, instead of dusky, feet, independent of other differences" (Ridgway). Young Black-polls are scarcely distinguishable from the young of *D. castanea*. Above they are precisely like the Bay-breasts, but below they are somewhat less strongly shaded with yellowish or buffy.

Nesting.—Does not breed in Ohio. "*Nest*, of twigs, moss, rootlets, etc., lined with fine grasses and tendrils, generally in spruce trees, about six feet up. *Eggs*, 4-5, white, more or less speckled and spotted, and generally heavily blotched at the larger end with cinnamon-, olive-, or rufous-brown" (Chapman). Av. size, .70 x .54 (17.8 x 13.7).

General Range.—Eastern North America west to the Rocky Mountains, north to Greenland, the Barren Grounds, and Alaska, breeding from northern New England and the Catskills northward. South in winter to northern South America, but not recorded from Mexico or Central America.

Range in Ohio.—Abundant spring and fall migrants,—the latest comers in spring, among the first to return in late summer.

BLACK-POLLS bring up the rear of the great Warbler host. And when one has seen them the reason of their tardiness becomes apparent.

Whereas most Warblers are restless, impatient, fussy, Black-polls are deliberate, decorous, self-contained. They are in no hurry; they have no trains to catch or previously appointed trysts to keep. There is added reason, too, for their leisurely passage, in that their summer camps are pitched far north where spring is tardy also.

In spring the birds seldom arrive before the 15th of May and oftener it is nearer the 20th. The males greatly exceed the females in number, so that one really wonders when the females pass. It is possible that they do not light largely until Lake Erie is traversed, since the species is reckoned rare in the southern part of the state, and only tolerably common in the vicinity of Columbus. For all the birds appear so slow the northern movement is rather rapid, and only an occasional straggler is found after the 25th of May.

It is always with a feeling of sadness that the bird-man views the arrival of these birds which mark practically the close of Warbler season. It has been too short, that period of bursting buds and twinkling wings; but now the leaves are all unfolded, the fairy visitants have stolen away one by one—and here comes Black-poll. To be sure his presence befits the season; the bustle of awakening life over, his monotonous droning chimes in accurately with the murmur of bees' wings, and lies softly upon the pulsing tribute of heated air by which the sounds are alike borne heavenward; but somehow we still rebel—youth was all too short!

The Warblers are lost to view now if they remain in the tree-tops, but a foggy morning, or some reason less apparent, will sometimes bring them down to feed in the shrubbery. At such times they are quite approachable and one may see how—or at least *when*—they produce that fairy creaking which they call a song. This consists of a series of exactly similar notes uttered rapidly, but in a beautiful musical swell. Many syllables will satisfy the ear, but Mr. Langille has perhaps hit it off the best when he says, "*tree, tree, tree, tree, tree, tree, tree, tree.*"

The Black-polls swarm through our state during the fall migrations when they may be observed from the last week in August well into October. It is not probable, however, that any given individual passes so long a time with us, but only that the species occupies such a diverse breeding range that the impelling causes of evacuation are correspondingly diverse in form, and asynchronous in action.

No. 69.

BLACKBURNIAN WARBLER.

A. O. U. No. 662. *Dendroica blackburniæ* (Gmel.).**Synonyms.**—PROMETHEAN WARBLER; PROMETHEUS.

Description.—*Adult male*: Chin, throat, and fore-breast flaming orange (Cadmium yellow); on the rest of head and neck paler cadmium, showing through the black in spots, viz. a small patch on crown, a narrow median line on forehead, a superciliary line broadening on lores and behind, an infra-orbital spot, and a patch on side of neck; remaining upper parts black variegated with white or creamy white; wings and tail dusky; large white wing-patches formed by tips of middle, and outer webs and tips of greater coverts, but indented by dusky webs of outermost feathers; white blotches on inner webs of tail-feathers, extensive on two outer pairs, narrow on remainder except central pair; remaining under parts sordid white or yellowish, with black streaks on sides of breast and sides. *Adult female*: Similar to male but paler; dull olive-gray streaked with dusky on back; throat Indian yellow; remaining yellow faded to maize color. *Immature*: Like female but browner; narrow white wing-bars and dusky-striped interscapular region diagnostic; yellow paler, almost wanting on breast. Length about 5.25 (133.3); av. of four Columbus specimens: wing 2.60 (66.); tail 1.71 (43.4); bill .38 (9.7).

Recognition Marks.—Medium size; orange-yellow of throat is distinctive even when faded.

Nesting.—Not known to breed in Ohio. *Nest*, a compact mass of bark-strips, spruce-twigs, grasses and plant-down, lined with hair, fur, or feathers; placed well up in coniferous trees. *Eggs*, 4, greenish- or bluish-white, speckled and spotted in usual warbler fashion. Av. size, .69 x .49 (17.5 x 12.5).

General Range.—Eastern North America west to eastern Kansas and Manitoba, breeding from the southern Alleghanies, Massachusetts and Michigan north to Labrador. In winter south to the Bahamas, eastern Mexico, Central America and western South America.

Range in Ohio.—Abundant spring and fall migrant.

IT is not difficult to follow the injunction of the birds: Love me, love my woods. One simply cannot help it if they are as charming, and varied, and productive as is the group of adjoining tracts near Oberlin, known collectively as the South Woods, and now called affectionately by the nature-lovers the "Old" South Woods. Nor is the reverent adjective misplaced, for the three kingly oaks which mark the bend of Warbler corner (appearing on page 155 and again on page 156) are full four hundred years old, as measured by the rings of a brother hard by, recently slain in the full vigor of sap. No guns are allowed in the forest:—would that as much could be said of axes! Berryng is forbidden upon pain of expulsion, and save for a few wandering

botanists (simple, harmless folk who occasionally rise to an appreciation of birds, and are therefore to be encouraged) there is none to molest the bird-man nor to disturb his treasures. Dense shade, open clearing, crowded saplings, scattering bush-clumps, dry land and swampy—all are to be found within the limits of that precious hundred acres, and all make separate contribution of interest to the eyes and ears of the ornithologist. It would seem that the force of some venerable tradition impels each avian wanderer, each rarer bird of passage, to pause and rest, or worship, in this ancient shrine. To speak of warblers alone, it was here that we first saw Golden-winged, Brewster, Hooded, and a score of lesser lights. Here Strong saw the Connecticut, and Jones the Prairie and Kirtland. Here only last season a Kentucky turned up a hundred miles beyond his customary range. In short all but five of the forty species of Warblers credited to Ohio have reported in these allied bits of woodland.

But of all the spots in this avian paradise the choicest is "Warbler corner," and of all the birds which crowd to the edge of the wood to mark



Taken near Oberlin.

"THREE KINGLY OAKS."

Photo by the Author.

the rising sun the brightest is Prometheus, the torch-bearer. Like a beacon light his glowing breast sends a quick answering flash to the first greeting of the eastern majesty, and drunk with joy, the tiny spark moves off to set the woods on fire. When his back is turned you lose him in the upper green, but once around and flash! flash! come swift messages of beauty from this divinely fashioned heliograph.

It is enough! You know him now. For the rest the Blackburnian Warbler hops about, and flits, and snatches bugs like other birds. Like



Taken by the Author

THE OLD SOUTH WOODS—WARBLER CORNER.

Photographed by the Author

many others he too, alas! passes far north to breed, quenching his flame for the season in the bosom of some gloomy hemlock. During the spring migrations the brightest males are among the middle early comers, but the paler females, and the youths with breasts unfired, abound from the middle to the twentieth of May, and linger in rare instances until the end of that month. The fall movement begins about the twentieth of August and lasts through September. The summer nesting of this species is unusually successful, to judge from the augmented numbers which appear during the fall migrations.

The song of the Blackburnian Warbler is of the squeaky order and the notes, altho penetrating enough and undertaken with considerable energy, lack volume and fade out to a fairy whisper before the song is done. "*Ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts, ssu-witts,*" is one attempt to express this duodecimo songster.

No. 70.

SYCAMORE WARBLER.

A. O. U. No. 663a. *Dendroica dominica albilora* Ridgw.

Synonyms.—WHITE-BROWED WARBLER; WHITE-BROWED YELLOW-THROATED WARBLER.

Description.—*Adults:* Above bluish-gray; on forehead interspersed with black; a short median frontal line, a superciliary stripe reaching to nostril, and the lower eyelid, white; throat bright yellow, bordered on side by extensive black cheek-patch, which includes lores and is produced behind on lower neck; behind this on neck a white area continuous with superciliary stripe; remaining under parts white, heavily streaked with black on sides; black streaks gathered on each side into a loose chain connecting with black of cheeks; wings and tail dusky, with bluish or ashy edgings, the former with two broad white bars formed in the usual fashion; subterminal white blotches on two outer pairs of rectrices; bill and feet dark. *Immature:* Similar to adult, but much tinged with brown above and below; black of head subdued, and yellow of throat paler. Length 4.50-5.50 (114.3-139.7); av. of six Columbus specimens: wing 2.47 (62.7); tail 1.83 (46.5); bill .44 (11.2).

Recognition Marks.—Medium size; lemon-yellow throat bordered by black on sides, and abruptly by white below; *white* superciliary line.

Nest, usually placed at a considerable height in sycamore or other trees, near water; of weed-stalks, twigs, and grasses, lined with plant-down, etc. *Eggs,* 4 or 5, white or grayish white, speckled and spotted distinctly or obscurely with reddish- or olive-brown, sometimes gathered in wreath about larger end. Av. size, .69 x .53 (17.5 x 13.5).

General Range.—Mississippi and Ohio Valleys west to the Plains, north to Lake Erie and southern Michigan, east to western North Carolina; in winter south to southern Mexico and Central America.

Range in Ohio.—Formerly abundant, now less common; along wooded streams, principally in southern, south-central, and western portions, but locally wherever sycamore trees abound. Breeds.

IN view of the recent changes in the status of this species, it is well to recall Dr. Wheaton's words penned in Columbus some twenty-five years ago: "Not rare summer resident; common during the spring migration.

This is the first of the family to arrive in spring. It is always to be seen before the Yellow-rumped and Yellow Warblers make their appearance, sometimes before the last snow and ice. I have seen them in considerable numbers on the 13th of April, and have known of its occurrence as early as April 9th. When on their migrations they confine themselves almost exclusively to the trees which skirt the streams, and move northward by day with considerable rapidity. During the whole day their characteristic song, *tswee-a tswee-a, tswee-a, tswee, tswee, tswee, tu-wee*, may be heard, sometimes at a

distance of a quarter of a mile, as the birds feed in the sycamore and elm trees. *

* * They are seldom seen in woodland, though they not infrequently visit the shade trees and gardens of the city. They are much more abundant during the spring migrations than at any other time. In this locality it is not uncommon to see a dozen in a morning's walk, about one-third of which may be captured."

In marked contrast with the preceding is the fact that there are no records of the bird's appearance in the recent annals of the Wheaton Club of this city. I have met with only one specimen in the state, a singing male, in a secluded hollow near Cincinnati, where it is still regarded as not uncommon.

The bird was seen on April 25th, 1903, before the foliage was fully out, and during the three hours it was under examination it divided its time about evenly between a single ash tree on the brink of the glen and the central sycamores shown in the illustration. The bird seemed to be gleaning insects from the swelling buds of the ash, but he paused frequently to throw his head up and sing. The song was rather deliberate, high-pitched, emphatic, of a singularly penetrating quality, and unvaried in character, *tswee, tswee, tswee, tswee*, the last note



Taken in
Franklin
County.

Photo by
F. C. Price.

AN IDEAL SPOT FOR SYCAMORE WARBLERS.

25th, 1903, before the foliage was fully out, and during the three hours it was under examination it divided its time about evenly between a single ash tree on the brink of the glen and the central sycamores shown in the illustration. The bird seemed to be gleaning insects from the swelling buds of the ash, but he paused frequently to throw his head up and sing. The song was rather deliberate, high-pitched, emphatic, of a singularly penetrating quality, and unvaried in character, *tswee, tswee, tswee, tswee*, the last note

with a piercing quality like that of the Yellow Warbler. Rev. W. F. Henninger, 1902, gives the bird as a "rare transient * * * observed in Scioto County only;" while Raymond W. Smith (1891) reported it as a common migrant in April in Warren County.

It is more than probable that the decrease in numbers in the case of this species is due solely to the continued destruction of the sycamore trees. Here, at least, is a bird rightly named, for the Warbler has cultivated this grim and grizzled old man-of-the-rivers—whom all the other birds, save perhaps the Blue-gray Gnatcatcher and the King-bird, seem to shun—until its dependence upon it is almost absolute. That the bird was formerly not uncommon northerly is abundantly attested, and it may be that it can still be found in favored spots. Mr. Jerome Trombley knew it as a rare summer resident along the River Raisin, in Monroe County, Mich., and in 1880 succeeded in locating a nest. It was placed 60 or 70 feet high in a sycamore tree and at the end of a branch, some 20 feet from the trunk. Inasmuch as the tree was seven feet through at the base and the supporting limb did not promise to support above a fifty pound weight, the discoverer deemed the treasure unattainable. In 1897 the same observer noted only one bird. Unless definite steps are



Taken near Cincinnati.

Photo by the Author.

STILL-HOUSE HOLLOW.

taken to reserve large areas of the picturesque sycamores, the present generation must witness the passing of the Sycamore Warbler from its northern haunts.

No. 71.

BLACK-THROATED GREEN WARBLER.

A. O. U. No. 667. *Dendroica virens* (Gmel.).

Description.—*Adult male*: Throat and breast above and on sides glossy black; sides of head and neck bright yellow; a line through eye, expanding behind, olive-green; above bright olive-green, clearing to yellow in front and on sides of crown; spotted or streaked with black on middle back, and sometimes, minutely, on crown; upper tail-coverts ashy- or olivaceous-edged; wings and tail dusky with ashy edgings on external webs; two broad white wing-bars; outer pair of tail-feathers almost entirely, and succeeding pairs decreasingly white on inner webs; middle of breast, belly, and crissum pale yellowish white; bill black; feet dark brown. *Adult female*: Similar, but with less black streaking on back, and with black of throat and sides extensively veiled by yellowish skirtings of feathers. *Immature*: Like female, but with more yellow below, and with black of throat still more thoroughly concealed by yellow tips. Length 4.50-5.40 (114.3-137.2); av. of ten Columbus specimens: wing 2.49 (63.2); tail 1.91 (48.5); bill .38 (9.7).

Recognition Marks.—Medium size; bright yellow of cheeks and forehead contrasting, or not, with black of throat.

Nest, of twigs, bark-strips, grass, moss, and feathers, placed ten to fifty feet high in coniferous trees. *Eggs*, 4, white with creamy or buffy tints, speckled and spotted with lilac-gray and rufous-brown, usually gathered in loose wreath about larger end. Av. size, .63 x .49 (16. x 12.5).

General Range.—Eastern North America to the Plains, north to Hudson Bay Territory, breeding from Connecticut and northern Illinois northward, and south along the Alleghanies to South Carolina. In winter south to Cuba and Panama. Accidental in Greenland and Europe.

Range in Ohio.—Very common spring and fall migrant. A few pairs remain to breed in the rare patches of coniferous timber in the northern portion of the state.

If we are sometimes disposed to envy the ornithological pioneers, Wilson, Audubon, and the rest, because of their unique opportunities for observing birds now rare or extinct, we may comfortably reflect upon the fact that that most fascinating and distinctively American family, the *Mniotiltidae*, is yearly marshalled before our eyes in a way that was denied the fathers.



BLACK-THROATED GREEN WARBLER
Dendroica virens
Life-size

Illustration by J. J. Audubon, 1825. Original in the collection of the Academy of Natural Sciences, Philadelphia.

The chief reason for this is one which we deplore otherwise, viz., the continued denudation of the forests. It is probably safe to say that in Wilson's day, that is during the opening decade of the last century, eighty-five per cent of the area of our state was covered with timber. In such a forest even of the great Warbler army, whole regiments might pass year by year unnoticed, and many species be held rare which were really abundant. But as early as 1885 the forest acreage was estimated at only seventeen per cent of the whole. These are the latest statistics available, but the percentage, without doubt, has steadily decreased since then. In this respect, then, we are favored; for if the birds would forage at all, they must needs avail themselves of our restricted wood-lots and swarm through our fenced orchards. We are unmasking hidden beauties, and compelling reluctant fays to show themselves.

The Black-throated Green Warbler, as an individual, is little troubled over our ingenious compulsion, for it is not at all unwilling to show itself, and has never learned a wholesome fear of man's presence. It is one of the commonest warblers both in spring and fall, and seems in no hurry to get on, but there is no recent evidence that it ever fails to make the passage of Lake Erie. Confined for the most part to the tops of trees, it not infrequently ventures down to inspect you, hopping daintily from branch to branch, and leaning forward to peer at you inquiringly as the distance decreases.

The song is an odd little affair of lisping squeaky notes, but as innocent as the upturned face of a questioning child. Its delicacy defies vocalization, but Mr. Burroughs has proposed a graphic representation which is quite unforgettable, "——— √ ———".

Family groups of six or seven individuals may be seen early in the fall hunting close together, but as the season advances the weakening bonds of kinship are lost in the sense of clanship, and this in turn is blended with the sense of racial consanguinity, which more or less affects all warblers. Rev. W. F. Henninger reports a remarkable occurrence which took place near South Webster in Scioto County. He says, in substance: On September 28, 1899, I ran into a company of Warblers which I would place conservatively at two thousand individuals. It was like a regular army as it moved up a long sloping hillside, and with wonderful rapidity. The wind was blowing almost a gale from the north, and the birds allowed themselves to be urged before it in the direction of their ultimate retreat, like half-stubborn autumn leaves. Lisping, chipping, whirling, driving, they hurried on and I after at full speed, panting, and wishing devoutly for a better chance to identify the fleeing forms. Arrived at the top of the hill the army suddenly halted and when I arrived breathless I had time to note the arrangement by species, not rigid indeed, but sufficiently striking to command attention. In the center were seen Hooded Warblers and a sprinkling of Chestnut-sides. On either

side of these in turn were Black-throated Greens and Sycamores, about two hundred of each; while the wings proper were held by Bay-breasts and Black-polls in enormous numbers. The order, as I say, was not strictly maintained but the specific grouping within the general ranks was at least remarkable. As the birds deployed to feed the specific lines were not quite obliterated.

No. 72.

KIRTLAND WARBLER.

A. O. U. No. 670. *Dendroica kirtlandi* (Baird).

Description.—*Adult male in spring*: Above slaty blue, streaked finely on crown and broadly on back with black, the back with a brownish gray cast; lores and frontlet black; a white spot on either eyelid; sides of head and neck slaty blue; wings and tail black, edged with gray; the middle and greater coverts whitish-edged, but not forming distinct bars; outer tail-feathers white-blotched on inner web; under parts clear light yellow, whitening on crissum and chin, the breast with a few small spots, and the sides with short streaks of black. *Adult female*: Similar but duller above and paler below; lores grayish; sides washed with brownish. *Adult male in autumn*: Under parts rich yellow, continuous,—no spotting on breast but sides heavily streaked with black; upper parts, except wing and tail, olivaceous, lightening anteriorly; head without conspicuous markings, but with dull yellowish superciliary stripes and cheeks. *Immature*: Like adult female, but browner gray above; more brownish on sides; breast more distinctly (?) spotted. Length 5.50-6.00 (139.7-152.4); wing 2.75 (69.9); tail 2.35 (59.7); bill .47 (11.9).

Recognition Marks.—Larger; slaty blue back with black stripes; clear yellow below with scattering streaks on side (only comparable in this respect to the Prairie Warbler, which is much smaller and an entirely different bird).

Nesting not known to science.

General Range.—Central northern United States during spring migrations; Atlantic Coast, Virginia, and South Carolina during spring (?) and fall migrations; breeding haunts unknown,—probably Hudson Bay Territory and north of Great Lakes. Winters in the Bahamas.

Range in Ohio.—Nine of the twenty or more specimens recorded in the United States were taken in this state. One fall record, Lawrence County, August 28, 1902.

THE Kirtland Warbler has for many years been the *rara avis* of American ornithology. There are other species of which fewer specimens exist in museums, and others still which are now verging upon extinction,—to say nothing of those strange enigmas, the "Carbonated," "Blue Mountain," and "Small-headed" Warblers, known from the works of Audubon and Wilson and now lost to science, if ever they did in fact exist as independent species.

But in the case of the Kirtland Warbler the lapse of time has brought increased knowledge, and the ornithological appetite has been more keenly whetted by each succeeding announcement of the bird's occurrence.

The type specimen, an adult male, was collected by Mr. Charles Pease, May 13, 1851, near Cleveland, and by him presented to Dr. Jared P. Kirtland. Dr. Kirtland forwarded the bird in the flesh to Professor Baird for identification, and it was very properly named by the latter Kirtland's Warbler, in recognition of the fact that to Dr. Kirtland we are "indebted for a knowledge of the Natural History of the Mississippi Valley." Five other specimens have since been secured in the vicinity of Cleveland, the last by H. E. Chubb on May 12, 1880. In May, 1872, Mr. Charles Dury shot a male bird near Cincinnati; and the last Ohio specimen reported was taken by Lynds Jones at Oberlin, May 9, 1900.

At this writing (July 1, 1903) some twenty-five specimens have been captured in the United States and Canada, while more than fifty have been taken in the winter haunts of the species in the Bahama Islands. Of the United States specimens the westernmost was obtained by H. M. Guilford at Minneapolis, Minn., and the northernmost was picked up dead below the light house on Spectacle Reef, in the Straits of Mackinac, Michigan.¹ All specimens seen in the interior (until the summer of 1902) have been spring birds, but two fall specimens were shot on the coasts of Virginia and South Carolina respectively. After Cleveland, Ann Arbor, Michigan, has been a leading place for the capture of this rare warbler, and it seems probable that that locality is especially favored during the northern migrations. The species will doubtless be found breeding in northern Minnesota, Wisconsin, Michigan, Ontario, and in the region south of Hudson Bay.

The pursuit of this woodland beauty, whose only offense is rarity, has been so keen that most observers have shot first and questioned afterward. Authorities agree, however, that it is a rather quiet, sedate bird, having no especial fear of man, but frequenting the lower levels of bushes and trees, and allowing a somewhat near approach for inspection. It has been compared by some to the Palm Warbler, and it certainly resembles this bird in its habit of bobbing, or jetting the tail.

Rev. Leander S. Keyser closely observed a specimen near Springfield, Ohio, and heard its song. He gives it as "a blithe, liquid melody" and says "the tones were full, clear and bubbling."² On May 7th, and 9th, 1900, Professor Lynds Jones heard two, and perhaps three, of these Warblers near Oberlin. "The song was loud and clear, given with all the vigor of a Wren or Kinglet; the body being straightened to almost a perpendicular direction, and the beak pointing straight up. It was no by-talk or incidental song, but manifestly an earnest purposeful call song. The song is a doubly phrased one, the first part slightly longer and a little less rapidly uttered, the second

¹ For many of these details I am indebted to Mr. Frank M. Chapman's resume in *The Auk*, October, 1903.

² "Bird-dom," by Leander S. Keyser, p. 63.

part quickly and more vigorously uttered. I have written it thus: *ter ter tertec; tswee te chu.*¹

On the 28th of August, 1903, Professor Jones and the writer encountered two of these birds in the extreme southern part of Lawrence County, at a point opposite Ashland, Kentucky. The first bird seen loitered for as much as ten minutes in the top of a little willow tree, and appeared in nowise disturbed by our scrutiny. He was deliberate, not to say indolent, in movement, and delivered from time to time a very light and pleasing rollick, with something of the quality but nothing of the strength of the Myrtle's song. After being observed for about twenty minutes the bird darted down into a thicket where he was joined by another precisely similar, and after a minute or two the pair retired into the depths. So far as reported this was the first appearance of the Kirtland Warbler in the interior during the fall migration.

As this book is going to press word comes from Michigan that Mr. Norman A. Wood of Ann Arbor has just discovered the nesting haunts of the Kirtland Warbler in Oscoda County. According to the last issue of the Bulletin of the Michigan Ornithological Club, Vol. IV., No. 2, June, 1903 (really issued about July 10th), "Just after this issue has gone to press Mr. Wood returned home from his trip north in quest of the Kirtland's Warbler with very gratifying success, having obtained a fine series of skins, male, female, nestlings, full-fledged young, nest, and eggs." Bravo! and alas! The last shrine of ornithological mystery has been penetrated. There are no more worlds to conquer.

No. 73.

PINE WARBLER.

A. O. U. No. 671. *Dendroica vigosii* (Aud.).

Synonym.—PINE-CREEPING WARBLER.

Description.—*Adult males:* Above and on sides of head and neck bright olive-green; wings and tail dusky, edged with brownish gray or whitish; two broad whitish or grayish white wing bars; two outer pairs of rectrices extensively white on inner webs; streak over lores, eyelids, chin, throat, and breast well down, bright greenish yellow; streaked indistinctly on sides of breast and sides with olive; belly and crissum dull white; buffy wash on flanks; bill and feet dark brown. *Adult female:* Above olive-gray, or vinaceous gray with an olive tinge; wing-bars narrower and more decidedly gray than in male; below dingy or grayish with pale yellow or yellowish tinge on breast; traces of olive striping on sides. *In winter* both sexes are browner above; the male brighter yellow and

¹ The Wilson Bulletin, No. 32, July, 1900.

the female buffier below. *Immature*: Dull brownish above; below brownish gray or dingy. Length 5.00-5.60 (127.-142.2); wing 2.80 (71.1); tail 2.18 (55.4); bill .44 (11.2).



Taken near Sugar Grove

Photo by the Author.

A PINE BARREN

PINE WARBLERS MAY BREED HERE.

Recognition Marks.—Medium size; gamboge-yellow with olive shading below, and grayish wing-bars; singularly devoid of positive characters. Usually keeps to coniferous trees and is a creeper in habits.

Nesting.—Breeding not yet reported for Ohio. *Nest*, placed high in pine or cedar trees; composed of bark-strips, leaves, fine grasses, etc., lined with plant-down, hair and feathers. *Eggs*, 4 or 5. "The ground color is a bluish white. Scattered over this are subdued tintings of fine delicate shades of purple, and upon this are distributed dots and blotches of a dark purplish brown, mingled with a few lines almost black" (Brewer). Av. size, .70 x .52 (17.8 x 13.2).

General Range.—Eastern United States west to the Plains, north to Manitoba, Ontario, and New Brunswick, wintering in the South Atlantic and Gulf States, and the Bahamas.

Range in Ohio.—Rare or casual during migrations. Probably more common in eastern portion. Thought to breed in the southern part and should be found nesting anywhere in the state in evergreen timber.

OHIO must seem like a desert to this pine-loving bird, but he is found once in a while either in some tiny oasis like that shown in the cut (which we should call a pine "barren") or else among the orchard and shade trees of a chance resting place. The bird is not certainly known to breed in the state, but Rev. W. F. Henninger, then of Waverly, Ohio, took a young male August 5th, 1898, under circumstances which made it appear probable that the bird had been reared in the immediate vicinity.

The Pine Warbler has some of the near-sighted ways of the Brown Creeper, and like that most prosaic mortal gleans a living from the trunks and larger limbs of trees. In crossing from tree to tree it has a pretty, undulating flight. In winter in the southern pineries, where it abounds, it is occasionally found associated in loose flocks which feed upon the ground.

"Its song," says Chapman, "is a clear sweet trill. Southern birds, in my experience, have more musical voices, and their notes suggest those of the Field Sparrow, while the song of northern birds has more the quality of the Chipping Sparrow's."

No. 74.

PALM WARBLER.

A. O. U. No. 672. *Dendroica palmarum* (Gmel.).

Synonyms.—RED-POLL WARBLER; YELLOW RED-POLL WARBLER (name now restricted to subspecies *D. p. hypochrysea*); WAGTAIL WARBLER.

Description.—*Adults*: Crown chestnut; superciliary line yellow; extreme forehead dusky, divided by short yellow line; lores dusky; cheeks grayish, tinged or streaked with chestnut; upper tail-coverts yellow; remaining upper parts grayish brown, slightly tinged with olive; wings and tail dusky, with obscure grayish or greenish yellow edgings, the former without bars; subterminal white spots, usual to the genus, on two outer pairs of rectrices; chin, throat and crissum clear yellow; remaining under parts yellowish or dingy, more or less streaked, especially on sides, with dusky or pale rufous; a loose necklace of small dusky spots. *Adult in winter and immature*: Crown-patch much obscured by brownish; superciliary line whitish or buffy; below, dingy white or buffy with faint yellowish tinge; breast and sides obscurely streaked with dusky, and sides washed with brownish; crissum clear yellow; upper tail-coverts yellowish olive-brown. Length 4.50-5.50 (114.3-139.7); av. of four Columbus specimens: wing 2.60 (66.); tail 1.98 (50.3); bill .40 (10.2).

Recognition Marks.—Medium size; chestnut crown distinctive in high plumage; yellow crissum in any plumage. Keeps to fence-rows, hedges and wayside bushes; "bobs" nervously and wags tail.

Nesting.—Does not breed in Ohio. *Nest*, on the ground in tuft of grass, compactly built of grasses, bark and moss. *Eggs*, 4, creamy white, spotted and blotched with purple, lilac and reddish brown. Av. size, .70 x .52 (17.8 x 13.2) (Davie).

General Range.—Northern interior to Great Slave Lake; in winter South Atlantic and Gulf States, the West Indies and Mexico. Of rare but regular occurrence in the Atlantic States in migrations.

Range in Ohio.—Regular and common spring and fall migrant. Has been taken in winter near Cincinnati.

IN the careful husbandry of nature this bird alone of the Wood-Warbler kind has been assigned to a station unmistakably humble. The Prairie Warbler, indeed, regularly frequents low bushes, but only the "Red-poll" takes freely to the ground as well. It was there that he learned from the Water Thrushes that quaint habit of tilting the body and shaking or "jetting" the tail, as tho protective harmony of coloration must be atoned for by some conspicuous and incessant motion, lest the bird be stepped on unawares. Altho it feeds much upon the ground, especially in its winter home in the southern states, where its hops about after the fashion of a Titlark or even patters along the dusty roadside, its favorite resorts during migrations are wayside coppices, neglected fence-rows, and the undergrowth of damp woods. In such places it is to be found in April, flitting from bush

to bush or searching quietly among the weeds. It usually lingers well into May and appears again, but less frequently, rather late in the fall. The bird is somewhat variable in appearance and often quite puzzling at some distance. Now a casual glance notes it for a sparrow, and again it challenges attention as some mysterious unknown. If only one catches the nervous flirt of the tail the case is out of Chancery.

Several writers on birds pour contempt on the Palm Warbler's song and many profess ignorance of it altogether. It is not a very elaborate affair but I have heard it delivered with a sprightliness and energy which called me half way across a pasture. One bird in particular lured me to the edge of a wood lot with a spirited rollicking chatter which made me suspect Junco in an ecstasy. Its ordinary song consists of a succession of twinned notes in a swell. On this point Lynds Jones says, "Each syllable should be given a half double utterance except at the middle of the swell, where the greater effort seems to coalesce the half double quality into one distinct syllable." At other times I have noticed a mere sustained sibilation, *twissa, twissa, twissa, twissa, twissa*, without inflectional change. Besides this he has the inevitable Dendroica *chip*, but it is scarcely distinctive enough to be recognizable when a dozen other species are flying.

No. 75.

YELLOW PALM WARBLER.

A. O. U. No. 672a. *Dendroica palmarum hypochrysea* Ridgw.

Synonyms.—YELLOW-BELLIED RED-POLL WARBLER; YELLOW RED-POLL WARBLER.

Description.—Similar to preceding species, but "larger and much more brightly colored, with entire lower parts bright yellow in all stages (excepting nestling plumage); upper parts richer, or less grayish olive than in true *palmarum*" (Ridgway).

Recognition Marks.—Like *D. palmarum*; brighter yellow below.

Nest and eggs not peculiar. Not known to breed in Ohio.

General Range.—Atlantic States north to Hudson Bay. Breeds from eastern Maine, New Brunswick and Nova Scotia northward; winters in the South Atlantic and Gulf States.

Range in Ohio.—Casual during migrations.

THE Atlantic coastal wave of migrating Yellow Red-polls occasionally spills over into our state. Not every *yellow* Palm Warbler is to be suspected, for there is great individual variation among the species, and we are near the

eastern boundary where we should expect intergrades. I once followed a bird near Columbus whose yellow had the convincing glow of gold below (*hypochrysa*, gold below); and a specimen exists in the Oberlin College Museum which is undoubtedly referable to this subspecies.

No. 76.

PRAIRIE WARBLER.

A. O. U. No. 673. *Dendroica discolor* (Vieill.).

Description.—*Adult male*: Above olive-green, brightening on crown, with a triangular area of chestnut-rufous spots or confluent streaks on back; below and on sides of head bright yellow, most intense on superciliary, cheek, and throat; with heavy black streaks or stripes on sides of breast and flanks; a blackish line through eye and a broad, black malar stripe; crissum pale, yellowish white; wings and tail dusky with greenish gray edgings on external webs; middle coverts yellowish white on tips; greater coverts edged terminally with gray on outer web, the two forming indistinct bars; two outer pairs of tail-feathers broadly white on inner webs, third pair with central spot; bill blackish; feet dark brown. *Adult female*: Similar to male but duller, and with chestnut-rufous of back much reduced or wanting. *Immature*: Like female but ashy on head (ear-coverts), ashy olive-green above; paler yellow below, etc. Length 4.25-5.00 (108-127.); av. of four Columbus specimens; wing 2.19 (55.6); tail 1.74 (44.2); bill .37 (9.4).

Recognition Marks.—Smallest of the genus; chestnut-rufous of back distinctive; bears some resemblance to *D. maculosa* below, but smaller and otherwise quite different.

Nest, in bushes or saplings, deeply cup-shaped, composed of fine grasses, plant-fiber, and down, lined with hair. *Eggs*, 4 or 5, white or greenish white, marked with reddish brown and olive-brown, chiefly in a wreath about the larger end. Av. size, .65 x .49 (16.5 x 12.5).

General Range.—Eastern United States to the Plains, breeding from Florida north to Michigan and southern New England. Winters in Southern Florida and the West Indies.

Range in Ohio.—Rare. Probably breeds, but no authentic record.

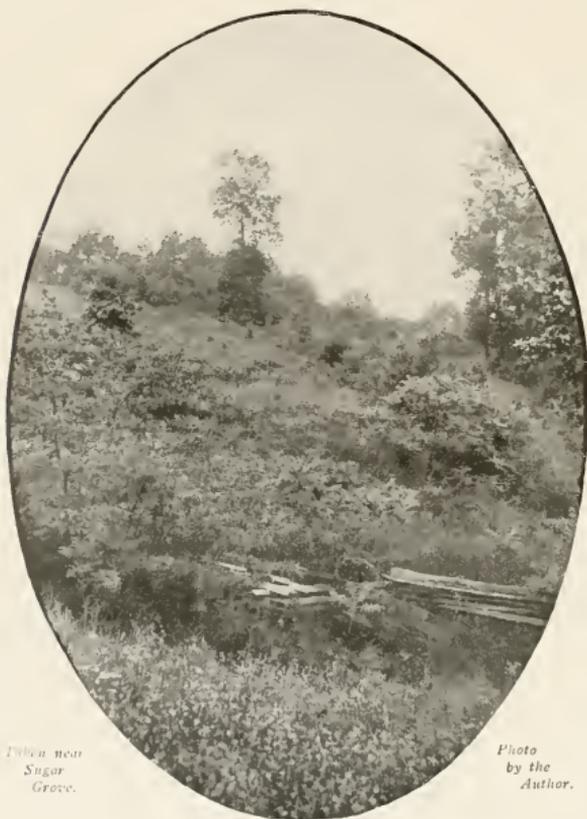
AFTER *D. kirtlandi* the Prairie Warbler is with us the rarest of the genus. Its normal range lies much farther south, and those which penetrate our state are to be regarded only as pioneers or as adventurers without fixed habits. Professor Jones has seen single males at Oberlin on two different occasions, but there are no records for Ontario; and it seems probable that those birds which reach the Lake Erie shore in spring turn southward again before settling for the summer.

On the 11th of June, 1903, I came across a singing male on a hill-top near Sugar Grove, at the point shown in the illustration. The bird moved restlessly from place to place, singing indifferently from the depths of black-

berry thickets, from the tips of oak saplings, or from the foliage of surrounding forest trees. His time was about equally divided between singing and bug-catching, and altho he might remain in a single clump for five minutes at a time, the bird did not keep the same position for two consecutive seconds.

Even during song he would twist and writhe like an Italian prima donna, producing quite as much motion as music.

The song of the Prairie Warbler is a little the most remarkable production in the Mniotiltan repertoire. It is a succession of mellow whistling creaks, each note pitched higher than the preceding, and each gaining somewhat in intensity until the next to the last one is reached. The bird runs a weird chromatic scale upon a fairy oboe, with an effect which Dr. Coes describes as "like a mouse complaining of a tooth-ache."



*Taken near
Sugar
Grove.*

*Photo
by the
Author.*

A HILLTOP PASTURE,
WHERE THE PRAIRIE WARBLER MAY BE SEEN

The bird seen at Sugar Grove was entirely destitute of the "brick-red spots upon the middle of the back," usually recommended as a recognition mark, and certain other marks were less distinct than normally in the adult male. It was probably a male of the second summer which had not yet attained adult plumage.

No. 77.

OVEN-BIRD.

A. O. U. No. 674. *Seiurus aurocapillus* (Linn.).

Synonyms.—GOLDEN-CROWNED ACCENTOR; GOLDEN-CROWNED THRUSH.

Description.—*Adult*: Above brownish olive-green; top of head with two blackish lateral stripes, enclosing a space of orange-brown—golden only by courtesy—more or less veiled by olive-brown tips of feathers; cheeks washed with color of back; lores and ring about eye whitish; below white, heavily spotted across breast and on sides by blackish; a narrow blackish malar stripe; bill and feet flesh-colored. Quite variable in size, but little change in plumage with sex or season. Length 5.50-6.50 (139.7-165.1); av. of four Columbus specimens: wing 2.91 (73.9); tail 2.05 (52.1); bill .44 (11.2).

Recognition Marks.—Small Sparrow size; "golden" crown, and head striped above; general thrush-like appearance.

Nest, on the ground, a slight depression lined and completely overarched with leaves, grasses, bark-strips and trash, and with entrance at side. *Eggs*, 4 or 5, white or creamy white, glossy, speckled and spotted freely with reddish brown and sometimes dull lilac. As usual with this family the markings are frequently wreathed about the larger end. Av. size, .80 x .60 (20.3 x 15.2).

General Range.—Eastern North America north to Hudson Bay Territory and Alaska, breeding from Kansas, the Ohio Valley and Virginia northward. In winter Florida, the West Indies, southern Mexico and Central America to Panama.

Range in Ohio.—Abundant summer resident,—the invariable accompaniment of lowland woods.

BEFORE those extinguishers of ornithological enthusiasm, the mosquitoes, have mustered in full force, it is a pleasure to walk in some dim sequestered wood and watch the antics of the Oven-bird. Not that he is a conscious clown like the Chat; on the contrary he is often as prim and precise as a Puritan dame. And therein lies the fun; for it is always amusing to see a birdikin take himself o'er seriously, and go mincing or strutting about with grand airs. It is amusing too—is it not?—to a person of benevolent intent, when a bird, whose nest has been discovered, goes buzzing about in a mighty huff as tho you were a pirate fleet just landed on his shores. If you have happened upon a ball of grass and leaves like that shown in the illustration, and if the mistress of the "Dutch oven" is at home, you will see such an exhibition of distress, of broken wings and disabled legs, of a shrieking and altogether helpless anatomy, as will make your heart ache,—unless you are wise and laugh. And while the distraught mother is playing lame, the father is adding to the panic by literally falling all over himself in the middle distance—of such strenuous stuff is bird-life made.

The life of the Oven-bird is spent for the most part on the ground. Here it walks sedately or minces daintily, searching the moist humus for grubs and worms, or stirring the dead leaves for hidden treasures. Knowing itself obscure the bird often permits a close approach, and it goes scuttling over the ground oftener than it flies for shelter. But the Oven-bird is no man-with-the-muck-rake. When he would sing it is from the middle branches of a tree, or better. Cautious now, suspecting the very tree-toads, the bird mounts a bare limb, casts searching glances to left and right, walks toward the end of the



THE OVEN.

Photo by R. F. Griggs.

branch, then suddenly surrendering all caution he breaks into utterance. Beginning easily he gains confidence at every step, until the last phrases pierce the woodland and fairly bring the listener to his feet. The crescendo proceeds by a series of little explosions with the ictus on the second syllable of each pair: *pechee*, *pecheé*, *pechéé*, *PECHEE*, *PECHEE*, *PECHEE*. John Burroughs, writing from the eastern part of New York State, has immortalized this song under the words, "teacher, teacher, teacher," etc., but inasmuch as he expressly states that the accent is placed on the first syllable, the description evidently does not apply to Ohio birds.

Besides the familiar woodland chant, there is a rarer ecstasy song given at twilight. Of this Professor Lynds Jones says, "I have seen the Oven-bird suddenly vault into the air, mounting to the tree-tops on quivering wings, then dart back and forth in a zigzag course as swift as an arrow, and finally burst into song as he floated gently down. The song seems to swing once round a great circle with incredible swiftness but perfect ease, ending in a bubbling diminuendo as the performer lightly touches the perch or ground with half rigid wings held high."

No. 78.

WATER THRUSH.

A. O. U. No. 675. *Seiurus noveboracensis* (Gmel.).

Description.—*Adult*: Above dark olive-brown; below white, tinged more or less with sulphur-yellow, everywhere, except on middle belly, spotted and streaked with the color of the back, finely upon the throat and cheeks, broadly upon the breast; a dark line through eye; a prominent yellowish, or buffy (fulvous) superciliary stripe; cheeks and extreme chin more or less tinged with fulvous; bill brown; feet lighter. Length about 5.50-6.00 (139.7-152.4); wing 2.94 (74.7); tail 2.14 (54.4); exposed culmen .45 (11.4); tarsus .82 (20.8).

Recognition Marks.—Large Warbler size, but most suggestive of small sparrow; superciliary line yellow-tinged, never pure white; sulphur-yellow below (never buffy); throat spotted.

Nesting.—Not known to breed in Ohio. *Nest*, on the ground or in the roots of upturned tree; of moss and leaves, lined with fine rootlets and tendrils. *Eggs*, 4 or 5, white or creamy white, speckled and spotted or wreathed in the usual fashion with reddish browns. Av. size, .77 x .59 (19.6 x 15.).

General Range.—Eastern United States to Illinois, and northward to Arctic America, breeding from the northern United States northward. South in winter to the West Indies, Central America, and northern South America.

Range in Ohio.—Common spring, less common, or less noticeable, fall migrant.

THE Water Thrush is a common migrant during the last week in April and the first two weeks in May, and requires at this season careful distinction from its less common relative, the Louisiana Water Thrush. It is found along streams and at the edges of woodland swamps. The more thor-

oughly the swamp is cloked by down timber the better, for it is the Thrush's delight to walk along a fallen log, especially if one end of it passes gradually beneath the black waters. The bird is less wary than the resident form, and will often merely walk to one side when approached; but if driven to take wing it utters a sharp *chink* of farewell, and flies off in great, graceful bounds, which, amid the network of interlacing branches, command admiration both for speed and accuracy.

During the fall migrations, which begin in the latter part of August, the Water Thrushes sometimes fairly swarm, not only in the vicinity of pools and water courses, now less abundant, but under the shade trees and in upland woods. The birds have developed a proper autumnal taste, and to see one working over a patch of fallen leaves is a treat. The industrious little hen siezes in her beak a leaf three times her size, and by a quick jerk tosses it far aside; after which she snaps up the lurking insect prey and passes quickly on to move other worlds.

The song of the northern Water Thrush is not so loud or rich as that of the southern, but it is still sprightly and captivating. "*Sweet, sweet, sweet, chu-chu-wee-chu,*" Professor Jones renders it,—“The first three syllables strongly accented and staccato, the last four short and run together into one phrase, the next to the last a third or more higher. Occasionally one sang *to to che-we che-we che*, the first two indistinct, the third, fifth, and last strongly accented and a sixth higher, the fourth and sixth a little lower. Both songs are high-pitched, clear, liquid whistles that carry far.” According to the same authority many are to be found singing vigorously during the fall migrations.

There is some slight possibility that the Water Thrush may be found breeding in the northeastern part of the state. It is found regularly in the central northern counties of Pennsylvania, and has also been reported by Mr. Sennett from Crawford County, which adjoins our Ashtabula.

No. 79.

LOUISIANA WATER-THRUSH.

A. O. U. No. 676. *Seiurus motacilla* (Vieill.).

Description.—*Adult*: Above, dark olive-brown, deeper on crown, more clearly olive on upper tail-coverts; below white with a distinct buffy suffusion on lower belly, flanks, and crissum; spotted and streaked with color of back on breast and sides; throat unspotted; a malar stripe of confluent spots, scattering behind; a dusky line through eye; superciliary stripe and allied areas of head definitely white. Length 5.75-6.40 (146.1-162.6); wing 3.26 (82.8); tail 2.08 (52.8); bill .53 (13.5); tarsus .89 (22.6).

Recognition Marks.—Larger; small Sparrow size; thrush-like appearance, semi-terrestrial habits; throat unspotted and superciliary line definitely white, as distinguished from preceding species.

Nest, in mossy bank or among roots of upturned tree; of sodden leaves and twigs, lined with grass and rootlets and sometimes hair. *Eggs*, 4 or 5, sometimes 6, white or creamy white, speckled and spotted evenly or in wreaths with cinnamon-brown and lilac-gray. Av. size, .76 x .62 (19.3 x 15.8).

General Range.—Eastern United States north to southern New England and southern Michigan, casually north to Lake George, northeastern New York, west to the Plains. In winter West Indies, southern Mexico, and Central America to Panama.

Range in Ohio.—Common summer resident, but of irregular distribution,—along streams and in wilder portion of state, especially the non-glaciated area.

AMIDST our more modest surroundings the Louisiana Water Thrush occupies much the same position relatively that the Water Ouzel does in the mountainous regions of the West. Both birds possess themselves of the wildest in nature which is to be had, and both are the animating spirits of their chosen haunts. Altho no one suspects any structural affinities between the two, a half dozen other close points of resemblance might be noted, not least among which would be poetic temperament and the talent in song.

Only the most picturesque and unrequented glens are tenanted by this poet-bird from the South. Where cool waters trickle down from mossy ledges and pause in shallow pools to mirror the foliage of many trees, here, and here alone, you will find the Water Thrush at home. The bird will discover himself to you by an imperious *chink* of question and alarm, after which he will pause at the water's edge impatiently, as tho awaiting your withdrawal. The bird stands with the body horizontal or with the hinder parts elevated, jetting the tail vertically from time to time without moving the head, or else bowing with profound but unconvincing gravity. If you are discreet enough to withdraw, or to pretend to, the bird will proceed with the business of getting breakfast, either by wading about in the shallow water, or by

searching noisily among the dead leaves hard by. Nor does he forget to give vent to unallayed suspicions by an energetic *chink*. Or by and by *he* tries hiding, and disappears mysteriously behind a bunch of ferns. One minute, two, three, are allowed to elapse. "Ah, that means a nest," says the shrewd observer; and he moves forward with becoming caution. But the bird is up and off in a trice, and flies down the glen without an apparent pang. A search is made, half-heartedly, with the old result,—"nothing but leaves."

Wherever the nest is to be found (there be those who claim to know, but the author is not one of them), one thing is sure, the bird regards himself as trustee of the whole glen, and his watchful fidelity is impartially bestowed upon all parts of it. If you become especially interested in any one spot—for reasons best known to yourself—why of course he and his wife can go elsewhere: and they move off, sniffing loftily. Every half hour or so the male bird ranges the length of the glen. Now he dashes like a swallow across some open glade. Now he pauses on a log or stone; alternately moving and inspecting until his voice is lost in the distance. You may be near his nest, but he does not deign to notice you, further than to give vent to a disdainful "*humph*" in passing.

The song of the resident Water Thrush is one of our choice things. The bird has found the Pierian spring, tucked away somewhere among our hills—in Morgan County, I think—and has tasted to good advantage. Its notes are wild and ringing clear, but sweet also as honey which the wild bees have made. There is a tumultuous passage in it too, which may occupy only the middle portion or may engulf the whole. At times the singer's main force seems to be expended in the opening peals, so that it almost instantly falls back into a milder cadence or bubbling twitter, in which its warbler affinities are quickly recognized.



Taken in Morgan County.
Photo by the Author.

WHERE COOL WATERS TRICKLE.

As to its platform the musician is not so particular. Usually a free branch from ten to twenty feet high is selected, but I have seen the bird sing his best song while standing knee deep in water. There is said to be also an ecstasy song which lifts the bird quite clear of earth. Audubon declared the Water Thrush's song equal to that of the English Nightingale, but a somewhat less extravagant claim will leave us with a keener appreciation of the bird's real merit.

No. 80.

KENTUCKY WARBLER.

A. O. U. No. 677. *Geothlypis formosa* (Wils.).

Description.—*Adult male*: Crown lustrous black, more or less tipped even in highest plumage, at least behind, by obscure olive or grayish slate; a bright yellow line over eye and curling around it behind; a black patch on side of head, including, lores, produced downward on side of neck as though forming incipient collar; remaining upper parts uniform olive-green; below gamboge yellow, pure and continuous; olive-shaded on sides; bill slightly curved, dark above, light below; feet very pale. *Adult female*: Similar but with perceptibly less black on head, because of more extensive grayish skirtings. *Both sexes in winter*: The black of the crown is further veiled and with brownish tips, while the black on sides of head is partially obscured in the same manner. *Immature birds* lack the black on head or have it concealed in inverse ratio to age. Length 5.25-5.75 (133.3-146.1); wing 2.69 (68.3); tail 1.96 (49.8); bill .44 (11.2).

Recognition Marks.—Medium Warbler size. Pattern of black and yellow on head distinctive, save as regards the "Maryland" Yellow-throat. It is larger and more deliberate in its movements than the latter bird, and differs further in having continuous yellow on the lower parts.

Nest, a bulky affair of dead leaves and grasses, lined with rootlets, and sometimes hair; usually on the ground, concealed or not by overgrowth. *Eggs*, 4 or 5, sometimes 6, white or grayish white, speckled, spotted or blotched with umber, cinnamon and lilac-gray, chiefly about larger end. Av. size, .73 × .58 (18.5 × 14.7).

General Range.—Eastern United States west to the plains, breeding from the Gulf States north to southern New England and southern Michigan. In winter, West Indies, eastern Mexico, and Central America to Panama.

Range in Ohio.—Tolerably common summer resident in the southeastern and southwestern portions of the state. Rare or casual elsewhere.

THE local preferences of the Kentucky Warbler lie about midway between those of the Oven-bird and the Louisiana Water Thrush; and there is much in the bird's appearance and manner to remind one of its near relationship to the *Sciuri*. But the bird is no mere echo of another more illustrious: its ways are its own, and its personality most marked. Damp hill-sides, heavily wooded and with dense undergrowth, are the chosen haunts of this distinguished Warbler, especially if at the bottom of the hill there



Taken in Donda Run.

Photo by the Author.

A BIT FROM KENTUCKY'S RANGE.

is a half-open glade set about with bush-clumps and a tiny stream of water trickling through it. Here the Warbler seeks its food upon the ground, *walking* instead of hopping over its surface, stooping to peer under a projecting stone, turning over a suspected leaf, and nimbly gathering in the scurrying harvest. Now the bird flits up to a fallen log and measures its length, now dives into a cranny behind it, and now emerges again in time to leap into the air for a passing insect. Through long association with mother earth the

Kentucky Warbler, has also acquired, tho in a lesser degree, that strange bobbing motion of the tail peculiar to many ground-haunting species.

Interest in this bird is heightened by the fact that it is exceedingly shy, not only keeping to the wilder glens and out-of-the-way places, but carefully avoiding exposure of its golden plumage when found. More than once the bird-man has crept on hands and knees through a thicket to obtain a glimpse of this demure beauty, thus rendering an homage which a less modest bird could not have compelled. Like most birds, however, the male Kentucky lays aside inconvenient scruples during the season of song, and his voice is one of the boldest as well as sweetest in the woods. At this time he mounts a low branch, and, standing lengthwise, pours out at frequent intervals a clear, rich, ringing strain of three or four similar notes. "*Peé-u-dle, peé-u-dle, peé-u-dle,*" he seems to Mr. E. J. Arrick of McConnellsville to say; while other birds less commonly accent the last syllable of each phrase, *tit-oo-réét, tit-oo-réét, tit-oo-réét*. So intent does the bird become upon his music that if frightened from one perch he will immediately resume his song upon another.

As in the case of all ground-nesting warblers, the nest is rather difficult to find, since it is committed to the protection of some obscure weed-clump or sapling. The surest method of discovery is to spy upon the female while the nest is a-making. According to Messrs. Morris and Arrick, who have had great success in finding the nest of this Warbler, they are to be sought upon the bottoms of the glades rather than upon the hillsides, where the birds otherwise spend the greater portion of their time.

No. 81.

CONNECTICUT WARBLER.

A. O. U. No. 678. *Geothlypis agilis* (Wils.).

Description.—*Adult male*: Whole head and neck and fore breast grayish slate, deepest on fore breast and crown; a white orbital ring; remaining upper parts, including wings and tail, olive-green unmarked; below from breast, pale yellow, the sides tinged with olive; bill dark above, light below; feet light brown. In highest plumage the fore breast is almost, but never quite, black. In autumn the ash of nape is obscured by olive-green skirtings. *Adult female and immature*: Similar to male, but brownish olive-gray instead of slaty on head and neck; the olive of upper parts browner, not contrasting with crown, and thence shading on sides of neck into the browner gray of throat; below dingier yellow, and more heavily shaded by brownish olive on sides. Length 5.20-6.00 (132.1-152.4); wing 2.80 (71.1); tail 1.91 (48.5); bill .43 (10.9).

Recognition Marks.—Larger; grayish slate of male, without black, and contrasting with pale yellow below; female and young obscure brownish olive and yellowish birds, without definite contrasts.

Nesting.—Does not breed in Ohio. *Nests* described from Manitoba and Ontario, of dry grass, or of grass, leaves and trash, lined with hair, on the ground. *Eggs*, 4, white with a few spots of lilac, purple, brown, and black about the larger end. Av. size. .75 x .60 (19.1 x 15.2) (Thompson).

General Range.—Eastern North America, breeding north of the United States. Northern South America in winter.

Range in Ohio.—Quite rare, during migrations.

OF the forty species of Warblers now accredited to Ohio, this is the one bird which has successfully eluded the author's search afield, so that he may perhaps be pardoned some little emotion in setting it down as "quite rare". Others have been more fortunate: Dr. Kirtland in 1838 took one specimen; Dr. Langdon reports one taken near Cincinnati by Mr. Dury in the spring of 1876; Dr. Wheaton saw two during his twenty years' residence in Columbus; Professor Jones reports recently two birds seen near Oberlin; and Rev. W. F. Henninger a pair taken at Waverly, August 10, 1899.¹

Mr. Ernest E. Thompson, who was the first to find the nest of the Connecticut Warbler, says of it: "This species has somewhat the manners of the Vireos, but it is much more active and sprightly in its movements. During the migrations it is generally found on or near the ground in the undergrowth of low damp woods, and also in bordering weedy fields, where it sometimes announces its presence by a sharp *peck*. In the cold boggy tamarack swamps of Manitoba, where I found it breeding, it was the only one of the family and almost the only bird, whose voice broke the silence of those gray wastes. Its loud song was much like the *teacher, teacher* chant of the Oven-bird, but it also uttered another, which I can recall to mind by the aid of the syllables, '*free-chapple, free-chapple, free-chapple, choit.*'"

Mr. M. C. Read, writing in "The Family Visitor" in 1853, says, "This species is described as very rare, but for the two summers past I have noticed it as very abundant in a field of dense brambles, in Andover, Ashtabula County. In its habits it resembles the preceding (*Trichas marylandica*) [now *Geothlypis trichas brachidactyla*] or rather the peculiar habits of the genus are strikingly exhibited in this species. * * * They undoubtedly nest with us in considerable numbers." Whether Mr. Read was correct in his surmise we cannot now determine. If true, it is quite probable that the northward trend of species has long since removed the Connecticut Warbler from the list of our breeding birds.

¹ While looking through the O. S. U. collection and since writing the above, I came upon a specimen of this species secured on the O. S. U. grounds by Mr. J. B. Parker, Oct. 8, 1898. Its appearance instantly recalled that of an obscure *Geothlypis* of which I had obtained several tantalizing glimpses on the 7th of October 1901—probably in the same thicket where Mr. Parker captured his bird—and which I had set down tentatively as an immature male of the Kentucky Warbler. A sober thought, however, of the late date, and the appearance of the O. S. U. specimen in the same plumage convince me that it was an immature Connecticut Warbler. The bird gave little snatches of song quite unlike anything else I ever heard.

No. 82.

MOURNING WARBLER.

A. O. U. No. 679. *Geothlypis philadelphia* (Wils.).

Description.—*Adult male*: Whole head and neck and fore breast slaty gray, intermixed below with black, which emerges clear on the fore breast; lores and orbital ring black; remaining plumage bright olive-green above, shading into bright yellow below; bill dark above, pale below; feet very light brown. *Adult female and immature*: Similar, but slate of head more or less overcast by olive-green; throat dull white or brownish white,—even yellowish; fore breast dull ashy or grayish brown, shading imperceptibly on sides of neck, etc. Length 5.00-5.75 (127.-146.1); wing 2.43 (61.7); tail 2.11 (53.6); bill .43 (10.9).



Taken near Oberlin.

Photo by the Author.

WARBLER CORNER AGAIN.

THE THICKETS IN THE FOREGROUND AFFORD SHELTER TO MOURNING, WILSON AND NASHVILLE WARBLERS, AND NORTHERN YELLOW-THROATS.

Recognition Marks.—Smaller; black conspicuous in slaty gray of breast,—abruptly contrasting with yellow below. Female and young obscure, but affording suggestion of contrast on breast when closely scrutinized.

Nesting.—Not known to breed in Ohio. *Nest*, on or near the ground, of bark-strips, vegetable fibers and trash, lined with grasses and rootlets and sometimes horsehair. *Eggs*, 4, white, dotted with cinnamon-red near larger end. Av. size, .72 x .52 (18.3 x 13.2).

General Range.—Eastern North America to the Plains, breeding from the mountainous portions of Pennsylvania, New England, New York and northern Michigan northward. Central America and northern South America in winter. Accidental in Greenland.

Range in Ohio.—Rather rare spring and fall migrant.

ALTHO deeply veiled in crape as to its head this rare Warbler is a thing of beauty. Its beauty is, however, still further veiled—from human eyes—for it is one of the most persistent of skulkers. During its migrations it passes from copse to copse by night, and remains in hiding by day with almost as much care as that exercised by escaping slaves in the days of the Underground Railroad. One sees just enough of them now and then to know that they are sprightly birds, graceful of movement and keen of eye. Occasionally one may be found in an unguarded moment exploring the tree-tops, but more frequently the coveted glimpse is obtained only by trampling on brush piles or beating outlying thickets.

It is not impossible that the Mourning Warbler may be found breeding in our state, since it is common in New York and New England, and has been reported breeding in Illinois "even south of latitude 39 degrees."¹

The bird is sometimes found singing during the northern movement, especially in the Lake Erie counties. Professor Jones gives it "*tee, te-o, te-o, te-o, tee-se*, the last couplet accented and much higher pitched." Rev. J. H. Langille states that the breeding song varies considerably, but "may generally be denoted by the syllables, *free, free, free, fruh, fruh*,—the first three being loud and clear and the last two in a lower tone, and so much softer and shorter that a moderate distance, or a slight breeze in the opposite direction, may prevent one from hearing them."

¹ Prof. W. W. Cooke, Bull. No. 2, Div. of Economic Ornithology, U. S. Dept. Agr., p. 258.

No. 83.

NORTHERN YELLOW-THROAT.

A. O. U. 681d. *Geothlypis trichas brachidactyla* (Swains.).

Synonym.—Formerly included under MARYLAND YELLOW-THROAT.

Description.—*Adult male*: A black band or mask on forehead and cheeks, bordered on superior margin by a narrow band of ashy white; remaining upper parts dull olive-green, brightening on rump, with a brownish cast on crown and sometimes on wings and tail; chin, throat, fore breast and crissum bright gamboge yellow; lower breast and belly paler: sides washed with brownish; bill black above, light below; feet pale. *Adult female*: Similar, but without black mask,—grayish brown instead; forehead touched with brownish red; much paler yellow below; sides of breast and sides more heavily brownish. *Male in autumn*: Browner above and on sides; black mask tipped with grayish; more yellow on belly. *Immature male*: Similar to adult, but browner, and showing only traces of black mask; throat paler yellow; chin and breast less pure, inclining to saffron. Under tail-coverts yellow at all ages and in all seasons. Length 4.75-5.75 (120.6-146.1); av. of four Columbus males: wing 2.40 (61.); tail 2.00 (50.8); exposed portion of culmen .43 (10.9).

Recognition Marks.—Smaller; black facial mask bordered by ashy; yellow on throat and breast, changing to yellowish on belly, and brownish on sides,—in contrast with the uniform yellow of the under parts in *G. formosa*.

Nest, sunken in grass tussock or bush clump on or near ground, a bulky but neat structure of weed-stalks, bark-strips, leaves of *Typha latifolia*, grasses, etc., carefully lined with grass or hair. *Eggs*, 4, or 5, white or creamy white, speckled, spotted, and sometimes obscurely scrawled, chiefly about larger end, or not, with amber or black. Av. size, .70 x .52 (17.8 x 13.2).

General Range.—Northeastern United States and southeastern British Provinces, from northern New Jersey, Tennessee and east-central Texas northward; south in winter to West Indies and through Mexico to Central America.

Range in Ohio.—Common summer resident, of universal distribution throughout the state, in swamps and lowland thickets.

ACCORDING to a recent decision of our ornithological Sanhedrin, the A. O. U. "Committee", we are obliged to forego the use of the title "Maryland", endeared by long usage, but absurdly inappropriate, as are a dozen other bird names which merely perpetuate accidents of discovery. We might also easily improve upon the name "Yellow-throat" as a distinctive cognomen, for there are at least sixteen other birds belonging to the same family and found within the borders of our state which have throats more or less yellow. But who that has once seen the bird, can forget the broad black facial mask, surmounted by its narrow white band, or fillet, which really serves to distinguish this Warbler from all others? Better far call it the Masked Warbler, the Masquerader, or Domino.

Indeed, one never gets over the impression that this pert little Warbler

is concealing an amused smile behind that inscrutable black mask, and that he is poking fun at you for awkwardness and stupidity, of which you know you are guilty, as you stumble about through the thicket in the wake of the



Taken in Franklin County.

Photo by the Author.

WHERE YELLOW THROATS PLAY HIDE-AND-SEEK.

retreating
m o c k e r.
There is no reasonable doubt that the bird delights in a game of hide-and-seek and that he shows himself from time to time just far enough ahead to keep up the tantalizing play. But if you are wise enough to give it up the bird will presently hop out squarely into the open to look at *you*. Thus life's truest pleasures come unsought.

The Yellow-throats arrive from the south sometime during the last week in

April, and thenceforth wherever there are willow-thickets bordering streams,

or marshy weed-lots, or over-grown fences running through lowland meadows, there are they. The male spends much time singing, seeking for the purpose the summit of a weed-stalk or a flowering shrub, or occasionally mounting a sapling twenty or thirty feet high. *Witchity, witchity, witchity*, or "*I beseech you, I beseech you, I beseech you*", sounds forth at intervals in sharp anatriptic notes which pierce the morning chorus for a hundred yards.

Meanwhile the plainly attired but dainty female is weaving a bulky nest in some weed-clump or grass-tussock hard by. Sometimes it is sunk in the center of a tussock almost to the level of the ground. At others it is lodged in the spreading branches of a bush, or else the crowded heads of certain plants are brought together and made both to support and shelter the tightly-woven structure. The nest is a model of strength, and notwithstanding its usual bulkiness, is well moulded and neatly lined within. According to Dr. Jones the male bird assists somewhat in the construction of the nest, and both birds watch over it with jealous care. Two broods are commonly reared during the season, one in May and another in July. When the nest is threatened, or indeed at any time when intruders are about, the birds give frequent voice to a most peculiar and distinctive note, a sort of Polish consonantal explosion, *weschthub*—a sound not unlike that made by a guitar string when it is struck above the stop.

No. 84.

YELLOW-BREASTED CHAT.

A. O. U. No. 683. *Icteria virens* (Linn.).

Description.—*Adult male*: Above dull olive-green; fuscous on exposed inner webs of wings and tail; a prominent line above lores and eye, a short malar stripe, and eye-ring, white; enclosed space black on lores, less pure behind; throat, breast, lining of wings, and upper sides rich gamboge yellow; lower belly and crissum abruptly white; sides washed with brownish; bill black; feet plumbeous. *Adult male*: Very similar; bill lighter; lores and cheek-patch dusky rather than black; black appreciably lighter. *Young*: Dull olive above; head markings of adult faintly indicated; below grayish white, darker on breast, buffier behind. Length 6.75-7.50 (171.5-190.5); wing 3.01 (76.5); tail 3.01 (76.5); bill .53 (13.5).

Recognition Marks.—Strictly "Sparrow" size, but because of bright color having nearer the size value of Chewink;—the largest of the Warblers. Bright yellow breast with contrasting white below, with size, distinctive.

Nest, placed in thickets, preferably briar, three to five feet from ground, composed outwardly of dried grass-stems and weed-stalks, centrally of layers of dried

leaves, carefully wrapped, and within of fine grasses and horse-hair. *Eggs*, 3-5, white, rather openly spotted or minutely speckled with reddish brown. *Av. size*, .90 x .70 (22.9 x 17.8).

General Range.—Eastern United States to the Plains, breeding north to Ontario and southern New England; south in winter to eastern Mexico, Guatemala, Nicaragua, and Costa Rica.

Range in Ohio.—Abundant in south and central Ohio, decreasing northerly. In some northern localities rare.



Field near Columbus

Phot. by the Author.

THE HAUNT OF THE CHAT.

IF there is a feathered oddity in America, it is the Yellow-breasted Chat; and when you listen to his quaint medley of calls, caws, squawks, pipings and objurgations, you almost feel that the scientists must be as queer as himself for having placed him among the Warblers. Structurally he does belong to this family, but his vocal performances are about as far from warbling as midnight is from midday.

His home is in the thickets along the border of the woods or in the undergrowth of partial clearings. As you approach his haunt, you will hear a low, querulous "*Cook-cook-cook*," suggesting a world of apprehension, as

if he were saying, "There comes a brigand! Now our nests will all be robbed!" You draw nearer, and presently you are greeted with a loud "*Caro!*" and you look around for a crow. If you persist in going into his home, you will receive a "tongue-lashing" that will make your ears tingle, and it does not require a far stretch of the imagination to make you feel that he is quoting profane history at you. He has an extended vocabulary, especially of epithets. Unless you are acquainted with his ways, you will think a half dozen birds are berating you instead of only one.



Taken near Waverly.

THE CHAT'S NEST.

Photo by Rev. W. F. Henninger.

It may be a good while before you see the author of all this jargon, and you are almost ready to quote Wordsworth's famous lines to a Cuckoo,—

"Shall I call thee bird,
Or but a wandering Voice?"

But presently he creeps slyly to the top of a bush, and you catch the gleam of his rich yellow breast, and note his black mask, while he continues his vituperations, his throat bulging out like that of a croaking frog. The first time

you hear him you decide that Nature, in a fit of humor, intended him for a feathered clown; but when you see him, and observe his serious air, his intent gaze, and his nervous movements, you conclude that, after all, he is

not in fun, but that with him "life is real, life is earnest." He is either whistling to keep his courage up, or else his agitation is so great that he must give expression to it.

One of his quaintest performances is to dart out into the air with a loud cry, hold his flapping wings far above him, and let his body and legs dangle loosely while he swings down again into the tangle-wood. The nests of the Chats are bulky affairs, and are built in the bushes. A few strands of grapevine were woven into almost every nest I have ever found, and I have discovered scores of them not only in Ohio, but also in many other States.

LEANDER S. KEYSER.



Taken in
Pike County.

Photo by
Rev. W. F. Henninger.

NOT WORTH SCOLDING ABOUT.

No. 85.

HOODED WARBLER.

A. O. U. No. 684. *Wilsonia mitrata* (Gmel.).

Description.—*Adult male*: A golden mask, including forehead and cheeks, superimposed on a black hood, which covers the head and neck all around and reaches the fore-breast; back, etc. bright olive-green; wings and tail fuscous with olive-green edgings; the two outer pairs of tail feathers white on the inner webs for exposed length; remaining under parts, including lining of wing, bright yellow, abruptly contrasting with the black of hood; bill and rectal bristles black; feet pale. *Adult female*: Black hood much less distinct or wanting,—showing only traces of black on nape, etc.; outlines of golden mask sometimes indistinguishable below, partially veiled by olive-green skirtings above; under parts impure yellow. *Immature male*: Like adult male, but the black feathers of hood with



HOODED WARBLER
Wilsonia mitrata
Life-size

yellow tips. Length 5.00-5.75 (127.-146-1); wing 2.60 (67.6); tail 2.30 (59.9); bill .40 (10.2).

Recognition Marks.—Warbler size; black hood and golden mask of male; yellow forehead and black rictal-bristles of specimens lacking the hood.



Taken near Oberlin.

Photo by the Author

"HERE THE BIRDS SPEND THEIR TIME FLY-CATCHING ALONG THE MIDDLE LEVELS.

Nest, in bushes or saplings from one to five feet up, of bark-strips, leaves, grass, and trash, more or less interwoven with spiders' silk, and lined with hair or fiber. *Eggs,* 4 or 5, white or creamy white, dotted and spotted with reddish brown or amber, chiefly in wreath about larger end. Av. size, .71 x .51 (18. x 13.).

General Range.—Eastern United States west to the Plains, north and east to southern Michigan, southern Ontario, western and southeastern New York and southern New England. Breeds from the Gulf of Mexico northward. In winter West Indies, eastern Mexico and Central America to Panama.

Range in Ohio.—Rare summer resident, locally restricted.



Taken near Jefferson.

Photo by Robt. J. Sim.

A HOODED WARBLER'S NEST.

TAKE a lump of molten gold fashioned like a bird, impress upon it a hood of steel, oxidized, as black as jet, overlay this in turn with a half-mask of the gold, tool out each shining scale and shaft and filament with exquisite care, and you may have the equal of one of those ten thousand dollar vases of encrusted steel and gold, which the Spanish are so clever at making, an heirloom to be handed down from father to son. But let Nature breathe upon it; let the Author of Life give it motion and song; and you will have a Hooded Warbler, not less beautiful than

you cannot handle it, but infinitely more so in that its beauty takes a thousand forms, a fresh one for every turn of fancy that may stir an avian breast.

The further charm of comparative rarity is added to this exquisite creation, so that not a few of us count upon our fingers the occasions upon which we have been granted a sight of it. To me the bird first came as a voice, a sweet and pure but altogether puzzling sound, tossed down from a tree-top on a foggy morning, an hour before dawn. The bird was at an unheard-of distance from his chosen range, so when the sun dissolved the mist and disclosed the singer, sitting quietly, and piping in accents unconstrained, it seemed to us as tho we had caught a fairy overstaying his time limit.

The Hooded Warbler shows a decided preference for damp woods where there is plenty of undergrowth. Beech woods are favorite places if the other conditions are suitable. Here the birds spend their time fly-catching along the middle levels, or descend to search the brush. The tail is sometimes carried



Taken near Sugar Grove.

Photo by the Author.

SLEEPING BEAUTIES.



Taken near Sugar Grove.

Photo by the Author

WHERE THE "BEAUTIES" TOOK THEIR FIRST LESSON IN NATURE STUDY.

closely resemble the dainty cachination of the Acadian Flycatcher, and would undoubtedly be mistaken for those of the latter bird if heard alone. This is the common song, but some, probably many, variant forms occur. One bird, which haunted the beech-woods shown in the first illustration, rendered the typical song, but had also a fashion of bringing in the sneeze early, and finishing strong in spite of the interruption.

The nests in the illustrations speak for themselves, and it is only neces-

half-open after Redstart's well-known fashion; but otherwise the birds are much less fussy than their salmon-spotted neighbors.

Like most Warblers the Hooded has a *chip* note of alarm which is distinctive to practiced ears, while the male has a song which is quite marked, *tsu-e, tsu-e, tsu-e, tsu-ee-tsu*. The notes are ringing and musical, but the last two contain a sort of vocal somersault, as tho the bird were attacked by a sudden inclination to sneeze. These last notes, therefore,

sary to add that they were placed, the one in an oak and the other in an alder sapling, at a height of about two feet from the ground. In feeding the young in the Sugar Grove nest the parents would invariably appear upon a certain bare twig some fifty feet above; here, if observed, the bird would chirp apprehensively for a minute or two, and then without further precaution launch straight for the nest.

The Hooded Warbler is possibly on the increase. I have seen it twice at Columbus and twice at Oberlin within three years, but have not suspected it of nesting at either place. Mr. Robert J. Sim reports it as a regular breeder in Ashtabula County, while Rev. W. F. Henninger reports it as rare in Scioto County in summer.

No. 86.

WILSON WARBLER.

A. O. U. No. 685. *Wilsonia pusilla* (Wils.).

Synonym.—BLACK-CAPPED WARBLER.

Description.—*Adult male*: Above bright olive-green; forehead, sides of head, and under parts bright greenish yellow, usually tinged or vaguely clouded with olive; crown or "cap" lustrous black; wings and tail fuscous and olive-edged, without peculiar marks; bill dark above, light below; feet light brown. *Adult female*: Similar, but the black cap usually wanting, or if present, less distinct. *Immature*: Like female, without cap. Length 4.25-5.10 (108.-120.5); av. of ten Columbus males: wing 2.20 (55.9); tail 1.90 (48.3); bill .32 (8.1).

Recognition Marks.—Least, pygmy size; black cap of male; recognizable in any plumage by small size and greenish yellow coloration. Keeps well down in bushes, weed-patches, and thickets.

Nesting.—Does not breed in Ohio. *Nest*, of grass, leaves and trash, lined with fine grass or hair, on the ground, often partially concealed by grass or weeds. *Eggs*, 4 or 5, white or pinkish white, minutely speckled with reddish brown, sometimes in wreath about larger end. Av. size, .60 x .49 (15.2 x 12.6).

General Range.—Eastern North America west to and including the Rocky Mountains, north to Labrador, Hudson Bay Territory and Alaska. Breeds chiefly north of the United States, migrating south to eastern Mexico and Central America.

Range in Ohio.—Fairly common spring and fall migrant. Ranges low in brush patches or weed thickets.

AMONG the least of Warblers, the pretty little Black-cap is known throughout the state as a not uncommon but somewhat irregular migrant.

In spring it may be entirely missing, but in the fall it is pretty sure to be found among the willows or in weed-thickets, keeping company with Nashville and Tennessee Warblers. At all times it is somewhat confined to undergrowth or rank vegetation, especially that which grows along the banks of streams. No bush or briar tangle, however intricate or strange, appears to present any obstacle to this masterful bush-ranger. A bird dives into a bush near at hand, and you are ready to take oath as to its near whereabouts, when lo, it reappears rods away and at the other side of the patch.

Only now and then is a migrant bird found singing, and we cannot be quite sure that we ever hear the proper song, since the birds go so far north to breed. One heard repeatedly from the center of a bush clump about three feet high said, "*Chi, chipititity, chi, chi.*" "Its song is compared by Minot to that of the Redstart or Yellow Warbler; while Nuttall writes it '*tsh-tsh-tsh,tshca.*' and to Goss it sounds like '*zee-zee-zee-zee-c.*'" These are all quite unlike the breeding song of the allied form *H. p. chryscola*, to which I have listened repeatedly in Western Washington; this is a rapidly uttered and emphatic *chip, chip! chip!! chip!!! chip!!!!*

No. 87.

CANADIAN WARBLER.

A. O. U. No. 686. *Wilsonia canadensis* (Linn.).

Synonym.—CANADIAN FLY-CATCHING WARBLER.

Description.—*Adult male in spring:* Above bluish ash; wings and tail unmarked; crown marked with lanceolate black centers of feathers, the ashy skirtings becoming obsolete on extreme forehead; loreal spot, cut off in front, connecting with broad cheek-patch, black; supraloral spot connecting with under parts, yellow; under parts, except crissum, yellow, with a greenish cast; a broad loose necklace of black spots on fore breast, and connecting with black of cheeks; lower tail-coverts white; bill black above, light below; feet light. *Adult female and immature:* Like male, but with black subdued; necklace faintly indicated by dusky spots; occasionally an olivaceous tinge on back. *Male in autumn:* Richer yellow below; yellow sometimes tipping spots of necklace. Length 5.00-5.75 (127.-146.1); av. of six Columbus males: wing 2.56 (65.); tail 2.09 (53.1); bill .39 (9.9).

Recognition Marks.—Medium Warbler size; bluish ash of upper parts; yellow of under parts; necklace of black spots across breast; rictal-bristles.

Nesting.—Not known to breed in Ohio. *Nest,* of leaves, grass, moss, and bark-strips, lined with fine rootlets, and placed on ground inside of bank, or under protection of log, root, or bush-clump. *Eggs,* 4 or 5, white, spotted and dotted with rufous brown, chiefly about larger end. *Av. size* .67 x .51 (17. x 13.).



AMERICAN REDSTART
Setophaga ruticilla
Life-size

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General Range.—Eastern North America west to the Plains, and north to Newfoundland, southern Labrador and Lake Winnipeg. South in winter to Central America and northern South America. Breeds from the higher parts of the Alleghanies and the more elevated portions of southern New York and southern New England northward.

Range in Ohio.—Common spring and early fall migrant.

AMONG the later migrants may usually be seen each season a few of these exquisite fly-catching Warblers. In their breeding haunts, which lie far to the north of us, they range low in the bushes and often descend to the ground, but when traveling they seem to find better company in the tree-tops, and appear very much at home there. There is something so chaste in the clear yellow of the throat and chest, spanned tho it is by a dainty necklace of jet, and something so modest and winsome withal in the bird itself, that some of us go into reverent ecstasies whenever we see one of them.

The song is only occasionally rendered during the migrations, but seems to increase in frequency, as we should expect, as the bird proceeds northward. Some have likened it to that of the Yellow Warbler; but to my ears it bears a strong generic resemblance to that of the Hooded Warbler. At any rate it is clear, sprightly and vigorous. *Chut, tutoo'it, tutoocét* is one rendering, probably less characteristic and complete than Mr. Thompson's classical interpretation "*Rup-it-chee, rup-it-chee, rup-it-chit-it-lit.*"

The Canadian is among the earliest of the returning Warblers, having been seen in the southern part of the state as early as August 24th. At this season the species is somewhat puzzling, by reason of the frequent absence, or half suppression, of the characteristic necklace. On the return journey, also, the birds are much more apt to be found in thickets, or low in well watered glens.

No. 88.

AMERICAN REDSTART.

A. O. U. No. 687. *Setophaga ruticilla* (Linn.)

Description.—*Adult male:* Head and neck all around and breast shining black; remaining upper parts dull black with glossy patches, changing to brownish black or fuscous on wings; a large salmon-colored patch at base of secondaries; a smaller, nearly concealed patch of same color at base of primaries; the outer web of the outer primary salmon nearly throughout its length; the tail feathers, except the two middle pairs, salmon-colored on both webs for the basal two-thirds; two large patches of reddish salmon on the sides of the breast; the

lining of the wings and the sides extensively tinged with the same color, occasionally a few touches across the chest below the black; lower breast, belly, and crissum, white; bill black; feet dark brown; black in variable amounts on sides of breast between the orange-red spots; lower tail-coverts sometimes broadly tipped with blackish. *Adult female*: Above, brownish ash with an ochraceous or olive tinge on back; salmon parts of male replaced by yellow (Naples yellow), and the reddish salmon of sides by chrome yellow; remaining under parts dull whitish, sometimes buffy across chest. *Immature male*: Similar to adult female, but duller the first year; the second year mottled with black; does not attain full plumage until third season. Length 5.00-5.75 (127.-146.1); av. of five Columbus males: wing 2.59 (65.8); tail 2.17 (55.1); bill .36 (9.1).

Recognition Marks.—Medium Warbler size; black with salmon-red and salmon patches of male; similar pattern and duller colors of female and young; tail usually half open and prominently displayed, whether in sport or in ordinary flight.

Nest, in the fork of a sapling from five to fifteen feet up, of hemp and other vegetable fibers, fine bark, and grasses, lined with fine grasses, plant-down and horse-hair. *Eggs*, 4 or 5, greenish, bluish, or grayish-white, dotted and spotted, chiefly about larger end, with cinnamon-rufous or olive-brown. Av. size, .68 x .51 (17.3 x 13.).

General Range.—North America north to Fort Simpson, west regularly to the Great Basin and casually to the Pacific Coast States, breeding from the middle portion of the United States northward. In winter, the West Indies, southern Mexico, Central America, and northern South America.

Range in Ohio.—Abundant summer resident throughout the state, more common during migrations.

THE "start" of Redstart is from the old Anglo-Saxon *steort*, a tail; hence, Redstart means Redtail; but the name would hardly have been applied to the American bird had it not been for a chance resemblance which it bears to the structurally different Redstart of Europe, *Ruticilla phoenicurus*. In our bird the red of the tail is not so noticeable as is the tail itself, which is handled very much as a coquette handles a fan, being opened or shut, or shaken haughtily, to express the owner's varied emotions.

The Redstart is the presiding genius of woodland and grove. He is a bit of a tyrant among the birds, and among his own kind is exceedingly sensitive upon the subject of metes and bounds. As for the insect world he rules it with a rod of iron. See him as he moves about through a file of slender poplars. He flits restlessly from branch to branch, now peering up at the under surface of a leaf, now darting into the air to secure a heedless midge, and closing upon it with an emphatic snap, now spreading the tail in pardonable vanity or from sheer exuberance of spirits; but ever and anon pausing just long enough to squeeze out a half-scolding song. The paler-colored female, contrary to the usual wont, is not less active nor less noticeable than the male, except as she is restrained for a season by the duties of

incubation. She is even believed to sing a little on her own account, not because her mate does not sing enough for two, but because she—well, for the same reason that a woman whistles,—and good luck to her!

During the mating season great rivalries spring up, and males will chase each other about in most bewildering mazes, like a pair of great fire-flies, and with no better weapons—fighting fire with fire. When the nesting site is chosen the male is very jealous of intruders, and bustles up in a threatening fashion, which quite overawes most birds of guileless intent.

Redstart's song is sometimes little better than an emphasescent squeak. At other times his emotion fades after the utterance of two or three notes,



Taken near
Dancus.

Photo by
J. R. Parke

A FAIRY BONBON.

PAPA REDSTART IS PRESENTING HIS BABY WITH A CADDIS-FLY.

and the last one dies out. A more pretentious effort is represented by Mr. Chapman as "*ching, ching, chee; ser-see, swee, swee-e-e-e.*" Because of the bird's abundance many variations are noted, and, indeed, the Redstart's song is often quite puzzling, especially if it proceeds from a colorless young strippling of one summer.

One knows exactly where to look for the Redstart's nest, but for all that it is not easy to see a "knot" in the fork of a young sapling, matched to a nicety with the surrounding bark, and oftenest hidden by a leaf or two—not many, but just enough. The fabric is a model of daintiness and close weaving. Strips of the inner bark of common milkweed or shredded grape-vine

bark form the bulk of the nest. The structure does not often embrace the sustaining braces, but the ends of its component strips are made fast to the rough bark of the sapling; besides this, frequent guy ropes and stays of gossamer are thrown out. A snug lining of roller grass and horse-hair completes the home, which measures commonly one and seven-eighths inches across and one and a half deep, inside. Two broods are sometimes raised in a season.

No. 89.

HORNED LARK.

A. O. U. No. 474. *Otocoris alpestris* (Linn.).

Synonym.—SHORE LARK. (This name is perpetuated solely through an accident of discovery, the type specimen having been described by Catesby from "the Seashore of Carolina.")

Description.—*Adult male in breeding plumage:* Upper parts warm brown or fuscous, clearest on wings and tail, feathers everywhere heavily edged with rufous; middle of crown, occiput, nape, sides of neck, bend of wing, and upper tail-coverts, pinkish cinnamon; fore-crown, cheeks and jugular crescentic patch black; forehead, superciliary stripe, auriculars and throat primrose yellow; belly and crissum white; sides and flanks brownish. *Adult female:* Similar to male, but duller and paler, the black especially being obscured by brownish or buffy tips. *Winter plumage of both sexes* distinguished by somewhat heavier and more uniform coloring, save on black areas, which are overcast by buffy tips; fore breast dusky or obscurely spotted. Length about 7.75 (196.9); av. of four Columbus males: wing 4.26 (108.2); tail 2.87 (72.9); bill .48 (12.2); tarsus .84 (21.3).

Recognition Marks.—Sparrow to Chewink size; black throat and head patches; feather tufts or "horns" directed backward. To be distinguished with *O. a. praticola* by its larger size, and from *O. a. hoyti* by the fact that both throat and superciliary line are yellow.

Nesting.—Does not breed in Ohio. *Nest*, a cup-shaped depression in the surface of the ground, plentifully lined with fine grasses, moss, grouse feathers, etc. *Eggs*, 3 or 4, greenish- or grayish-white, profusely and minutely dotted with olive-buff, greenish brown and lavender. A typical set from Labrador, as described by Major Bendire, measures .96 x .66 (24.9 x 16.8); .95 x .68 (24.1 x 17.3); .87 x .64 (22.1 x 16.3).

General Range.—Northeastern British America west to Hudson Bay and south to Newfoundland, Labrador, etc.; accidental in Greenland; in winter west to Manitoba and south to Illinois, Ohio, the Carolinas, etc.

Range in Ohio.—Common winter resident, especially in the northern part. Moves about in flocks in conjunction with *O. a. hoyti* and *O. a. praticola*.



HORNED LARK
Otocoris alpestris
♂; Life-size

THE Horned Lark bears the reputation of being the most plastic of American species—the Song Sparrow (*Melospiza cinerea*) alone competing with it in this respect. A recent monograph by Mr. Harry C. Oberholser¹ enumerates twenty-two forms, of which sixteen are described as North American, and five Mexican, beside one from Colombia and another (*O. a. flava*) from Eurasia. Of this number the majority occur west of the Mississippi River, where climatic conditions are more sharply differentiated, and where, especially in the southwest, the situation admits of that permanent residence which is almost essential to the marked development of subspecific forms. Doubtless other forms will be elaborated, and perhaps some of the distinctions here pointed out will prove inconstant, and the names proposed



Taken at Colorado

Photo by E. R. Warren

HORNED LARK—MALE?

untenable; but the fact remains that Mr. Oberholser has done a splendid piece of work, and one which serves to renew the fascination of the old problem of the influence of environment upon the origin of species.

There is much to be done in Ohio in accurately determining the mutual relations and the distribution of the three forms which occur here in winter. The problem is complicated by the large number of intermediate forms which are to be found. Indeed it is scarcely too much to say that no two Horned Larks look exactly alike. Typical specimens of each subspecies may be found during any season, but the majority of all birds taken will prove to be puzzling intergrades. The reason for this I conjecture to be as follows: *Otocoris alpestris* (or more properly, *O. alpestris alpestris*) attains its maximum

¹ A Review of the Larks of the Genus *Otocoris* (Proceedings of U. S. Nat'l Museum, Vol XXIV.

² This series of pictures taken by Mr. Warren in midwinter at Colorado Springs and represents *O. a. leucoloma* (Coeus) or, possibly, *O. a. heysti* Bishop. In either case the differences between them and our local species are too slight to be noticeable in a black and white reproduction.

development in the region east of Hudson Bay; *O. a. hoyti* in the region west; while *O. a. praticola*, normally centering in the northern prairie states bordering the Mississippi River, is rapidly extending its range to include the region north of the Great Lakes (as well as pushing east to the Atlantic Coast). It is evident, therefore, that the area south of Hudson Bay and north of Ohio



Taken in Colorado

HORNED LARK—FEMALE.

Photo by E. R. Warren.

affords a meeting ground for the three forms. It is the summer population of this extensive debatable ground which invades Ohio in winter, and floods us with intergrades. It is noteworthy in this connection that the Ohio breeding birds, typical *O. a. praticola*, so far as known, are largely lost to sight during the winter inundation from the north; and the question arises whether they do not retire southward as a whole or in part during the winter season.

No. 90.

HOYT HORNED LARK.

A. O. U. No. 474k. *Otocoris alpestris hoyti* Bishop.

Description.—Similar to *O. alpestris*, but the yellow of throat paler or restricted to central stripe; the eyebrow white or, rarely, slightly yellowish. Seasonal and sexual changes like preceding.

This seems to be a well marked subspecies. I have examined specimens from Columbus, Wauseon, Oberlin, etc., all clearly referable to this type.

This is the bird of the northern interior of British America. Its winter range overlaps that of *O. alpestris*, tho lying mostly to the westward. Large winter flocks often contain both forms in about equal proportions.

Average measurements of 15 males: wing 4.37 (111.1); tail 2.77 (70.5); exposed culmen .45 (11.4); tarsus .88 (22.3); middle toe .49 (12.5) (Oberholser).



Taken in Colorado

Photo by E. R. Warren.

SIZING UP THE CAMERA.

No. 91.

PRAIRIE HORNED LARK.

A. O. U. No. 474b. *Otocoris alpestris praticola* Hensh.

Description.—Similar to preceding forms, but smaller and not so brightly colored; the forehead and line over eye dull white, the yellow of throat pale or wanting. Adult male, length about 7.25 (184.2); "wing 4.13 (104.9); tail 2.99 (75.9)." Adult female, "length 6.75-6.85 (171.5-174.); wing, average, 3.84 (97.5); tail 2.73 (71.9)" (Ridgway).

Recognition Marks.—Sparrow size; terrestrial; conspicuous black or blackish markings about head. Black crown patch produced into feather-tufts or "horns" pointing backward. Forehead and line over eye whitish, never yellow.

Nest, on the ground, a deep, cup-shaped depression plentifully lined with grass. Depth, 1.85; width, 2.12. *Eggs*, 3 or 4, pale greenish or bluish white to dull olive, heavy and evenly speckled with grayish or greenish brown. Av. size .82 x .62 (20.8 x 15.8).

General Range.—Upper Mississippi Valley and the region of the Great Lakes to New England, breeding eastward to western Massachusetts and even Maine; south in winter to Carolina, Texas, etc.

Range in Ohio.—Common in northern portion at all seasons; breeds sparingly southward at least as far as Columbus. Evidently increasing in numbers and distribution.

BEFORE the eyes have been opened to his singular beauties and charms the Prairie Horned Lark is apt to rank among the unthinking along with the "brown birds" of roadside and field. He is a modest bird in some respects, it is true. Watch him as he indulges in a dust bath in a warm country road, or as he is surprised from his gleaning in late autumn. He will run ahead with a plaintive cry as tho begging not to be disturbed or driven from his treat. If your business is urgent and you must follow the road, he finally leaves you with a louder cry of protest, either to fly to pastures new, or, as is more likely, to circle around and fall in behind you at the old spot. He is emphatically a bird of the open. He scorns trees and will not trust himself to anything whose connection with the ground is less obvious than that of a fence-post or, perchance, a fence rail. When he is on the ground he walks or scampers, but does not hop like the Sparrow.

Two phases of this bird's life stand out most prominently to view, the winter flocking, and the early nesting. As winter approaches, these birds renounce allegiance to local ties and form roving bands, which flit from field to field or county to county, or else catch the fever of their more impetuous cousins from the North and join forces with them for a brief southern flight.

Perhaps the birds from northern Ohio are reinforced from Ontario and beyond. Those in central Ohio are augmented very considerably by northern visitors of both species.

A "feeding lot," or field where fodder is daily dealt out to the stock, is a typical resort for a winter troop of Horned Larks. Here they gather by dozens and scores, and sometimes to the number of two or three hundred, and feed upon the weed seed which the cattle have threshed out with their hooves, or upon the undigested matter of droppings. If the observer moves toward a flock in the open field the birds may skulk and steal away in every direction, or else, having taken plaintive counsel, take suddenly to wing and fly off in a great straggling company.



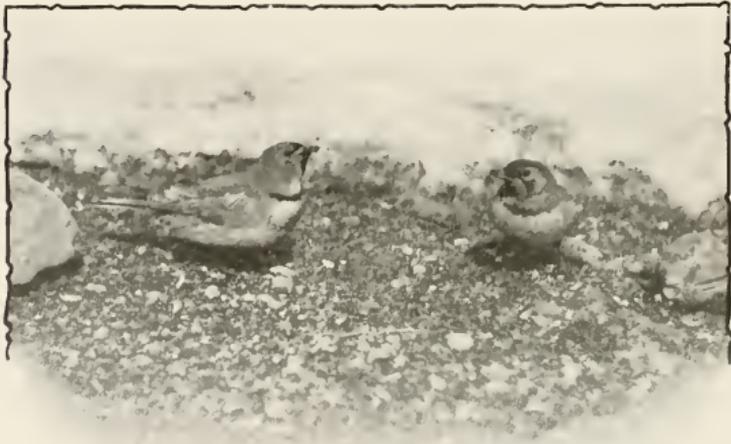
Taken in Colorado

Photo by E. R. Warren

A WINTER TROOP OF HORNED LARKS.

Once, during the winter of 1901-02, by the aid of a friendly rail fence and a convenient tree, I crept upon and studied closely a flock of two hundred Horned Larks (*alpestris*, *a. hoyti* and *a. praticola*). They were glean- ing industriously near the edge of a large feeding lot a mile or so west of town. The mercury stood at zero, and the birds had need of industry to keep up the inner fires. Twice during my watch the entire flock was seized with a sense of instant danger and rose as one bird. After circling about once or twice they settled again, apparently reassured. I could not believe that I was the cause of offense, since they had already become somewhat ac-

customed to my presence, and I showed myself freely both before and after without causing alarm. Indeed, when I retired from the scene I passed right through their ranks and the birds simply melted away before me and quietly resumed their feeding at one side without any general disturbance. How then account for this sudden flight impulse? Some would suggest an unheard command from a sentinel. Such officials possibly exist, but their services are irregular and inconspicuous. On the whole I am inclined to give considerable weight to the suggestion of Dr. Thomson Jay Hudson that animals and birds in flock are moved by telepathic influences, emanating, as may chance, from one or another of their number. In this case, certainly,



"DEVOTES HIMSELF * * TO SOME MAKE-BELIEVE-RELUCTANT LADY."

the psychical explanation of the well known phenomenon appears plausible and attractive. The unreasoning apprehensiveness of a single individual—it might have been frightened at the shape of a cornstalk, or anything as trivial—was instantly communicated to the whole flock, and put them into sudden panic.

With the first signs of returning spring the Prairie Horned Lark abjures the madding crowd and devotes himself to the task of proving his superior merits and attractions to some make-believe-reluctant lady. The

Labrador birds, it may be, are still flocking; Bluebird has not brought the official tidings of spring from the Southland; but only let the February sun shine a little while and "Prairie's" brave courting song is heard from on high.

When the frost is out of the ground, altho there may still be ample danger of snows, the sturdy pair sink a deep, cup-shaped depression in the moist earth and line it plentifully with dried grasses, last year's thistle down, and such. In this latitude the eggs are laid in March or early April, three or four in number, heavily and oftenest minutely, dotted with dull olive or greenish brown, but sometimes bearing spots as large as those of Shrikes' eggs. The favorite way to locate Horned Larks' nests in season is to post one's self at the edge of a field and watch the female skulk to her nest. I



Photo by the Author.

"AT THE SACRED HOUR OF SUNSET."

have followed a bird with my glasses half way across a forty acre field until she was so far away that I could judge of her whereabouts only by the fact that movement had apparently ceased. As I walked straight toward the nest the bird would flush at forty or fifty yards.

A first brood is raised in April and a second in June or July. According to Prof. Lynds Jones three broods are raised in Iowa, one early in April, another early in June, and a third in late July, or August.

But the chief interest of nesting time centers in the song flight of the male. The song itself is perhaps nothing remarkable, a little ditty or succession of sprightly syllables which have no considerable resonance or modulation, altho they quite defy vocalization; yet such are the circumstances attending its delivery that it is set down by every one as "pleasing," while

for the initiated is possesses a charm which is quite unique. *Twidge-widge*, *widgity*, *widgy-widge*, conveys no idea of the tone-quality, indeed, but may serve to indicate the proportion and tempo of the common song; while *Twidge*, *widgity*, *eclooy*, *eclooy*, *idgity*, *eclooy*, *cew*, may serve the same purpose for the rare ecstasy song. The bird sometimes sings from a fence post, or even from a hummock on the ground, but usually the impulse of song takes him up into the free air. Here at almost any hour of the day he may be seen poising at various heights, like a miniature hawk, and sending down tender words of greeting and cheer to the little wife who broods below.

It is, however, at the sacred hour of sunset that the soul of the heavenly singer takes wing for its ethereal abode. The sun is just sinking; the faithful spouse has settled herself to her gentle task for the night; and the bird-man has lain down in the shadow of the fence to gaze at the sky. The bird gives himself to the buoyant influences of the trembling air and mounts aloft by easy gradations. As he rises he swings round in a wide, loose circle, singing softly the while. At the end of every little height he pauses and hovers and sends down the full voiced song. Up and up he goes, the song becoming tenderer, sweeter, more refined and subtly suggestive of all a bird may seek in the lofty blue. As he fades from the unaided sight I train my glasses on him and still witness the heavenward spirals. I lower the glasses. Ah! I have lost him now! Still there float down to us, the enraptured wife and me, those most ethereal strains, sublimated past all taint of earth, beatific, elysian. Ah! surely, we have lost him! He has gone to join the angels. "Chirriquita, on the nest, we have lost him." "Never fear," she answers; "Hark!" Stronger grows the dainty music once again. Stronger! Stronger! Dropping out of the boundless darkening blue, still by easy flights, a song for every step of Jacob's ladder, our messenger is coming down. But the ladder does not rest on earth. When about two hundred feet high the singer suddenly folds his wings and drops like a plummet to the ground. Within the last dozen feet he checks himself and lights gracefully near his nest. The bird-man steals softly away to dream of love and God, and to waken on the morrow of earth, refreshed.

It is most gratifying to note that the Horned Larks of our state are increasing. Perhaps some of the apparent increase is due to the fact of better acquaintance and closer methods of observation; but more is doubtless due to the continued denudation of timber and the consequent restoration of land to the prairie conditions suitable for this plains-loving bird. It is suggestive, in view of this suspected increase, that Nuttall, writing in 1832, said of this whole group (*O. alpestris* and subspecies not yet elaborated), "As yet the nest of this wandering species is unknown, and must probably be sought for

only in the coldest and most desolate of regions." Wheaton, writing from Columbus as late as 1882, knows nothing of the breeding of this bird in Ohio. He says, merely, "The Shore Lark breeds from New York and Wisconsin northward * * * During the breeding season the male is said to have a short but pleasing song."

No. 92.

AMERICAN PIPIT.

A. O. U. No. 697. **Anthus pensilvanicus** (Lath.).

Synonyms.—AMERICAN TITLARK; BROWN LARK.

Description.—*Adult in spring:* Above soft and dark grayish brown with an olive shade; feathers of crown and back with darker centers; wings and tail dusky with paler edging, the pale tips of coverts forming two indistinct bars; outer pair of tail-feathers extensively white; next pair white-tipped; superciliary line, eye-ring and under parts light grayish brown or buffy, the latter streaked with dusky except on middle of throat and lower belly,—heavily on sides of throat and across breast, narrowly on lower breast and sides. *Winter plumage:* Above, browner; below, duller buffy; more broadly streaked on breast. Length 6.00-7.00 (152.4-177.8); wing 3.37 (85.6); tail 2.53 (64.3); bill .46 (11.7).

Recognition Marks.—Sparrow size; brown above; buffy or brownish with dusky spots below; best known by *tlip-yip* notes repeated when rising from ground or flying overhead.

Nesting.—Does not breed in Ohio. *Nest*, on the ground, loosely constructed of grasses and moss. *Eggs*, 4-6, so heavily speckled and spotted with reddish or dark brown as almost entirely to obscure the whitish ground color. Often, except upon close examination, the effect is of a uniform chocolate-colored egg. Av. size, .77 x .57 (19.6 x 14.5).

General Range.—North America at large, breeding in the higher parts of the Rocky and Cascade Mountains and in sub-Arctic regions; wintering in the Gulf States, Mexico, and Central America. Accidental in Europe.

Range in Ohio.—Common during migrations. The spring movement is more rapid, and so less frequently observed than that of the fall.

THE American Pipit does not sustain the habitual dignity of the boreal breed. He is no clown, indeed, like our Titmouse, nor does he quite belong

to the awkward squad with young Cowbirds. A trim form and a natty suit often save him from well merited derision, but all close observers will agree that there is a screw loose in his make-up somewhere. The whole Pipit race seems to be struggling under a strange inhibitory spell, cast upon some ancestor, perhaps, by one knows not what art of nodding heather bells or potency of subtly distilled Arctic moonshine. As the flock comes straggling down from the northland they utter unceasing *yips* of mild astonishment and self-reproach at their apparent inability to decide what to do next. Their indecision is especially exasperating as one rides along a trail which is closely flanked by a primitive rail fence, as I have often done in northern Washington. One starts up ahead of you and thinks he will settle on the top rail and watch you go by. As his feet near the rail he decides he won't, after all, but that he will go a few feet farther before alighting. If he actually does alight he instantly tumbles off with a startled *yip*, as tho the rail were hot and he had burnt his toes. Then he tries a post with no better success, until you get disgusted with such silly vacillation and inane yipping, and clap spurs to your horse, resolved to escape the annoyance of having to follow such dubious fortunes.

In social flight the Pipits straggle out far apart, so as to allow plenty of room for their chronic St. Vitus's dance to jerk them hither or thither or up or down, without clashing with their fellows. Only a small percentage of those which annually traverse our state fly low enough to be readily seen; but when they do they are jolting along over the landscape and complaining at every other step. The note is best rendered *tlip-yip*, less accurately *pip-it* (whence of course the name); and a shower of these petulant sounds comes spattering down out of the sky when the birds themselves are nearly or quite invisible.

The birds rarely appear singly, but move commonly in loose companies of from ten to a hundred individuals. The fall movement is quite leisurely, and not infrequently snow flies before the last stragglers are safely past. At this time of year they are to be found, if at all, in close-cropped pastures, fallow fields, or upon the gravelly shores of rivers and ponds. In spring the return movement is much more definite and concentrated. The main body of migrants passes through about the second week in May, altho stragglers in winter plumage occur casually in March and April. The bird is reported by Ridgway as an occasional winter resident in southern Illinois, and it could probably be found at that season in the southern part of this state.

Spring flocks may be looked for in freshly plowed fields, where they feed attentively and often silently, moving about with "graceful gliding walk, tilting the body and wagging the tail at each step, much in the manner of a *Sciurus*."

No. 93.

WOOD THRUSH.

A. O. U. No. 755. *Hylocichla mustelina* (Gmel.).

Description.—*Adult*: Above, bright cinnamon-brown, brightest on head and nape, shading insensibly into light olive-brown on rump, wings, and tail; wing-quills fuscous on inner webs; below, white, a buffy tinge on breast meeting bright cinnamon on sides of neck,—marked, except on upper throat, belly, and crissum, with large, roundish, or wedge-shaped, blackish spots; lores and eyering whitish, not clearly defined; auriculars sharply streaked with white and



Taken near
Circleville.

Photo by
the Author.

“THE BRUDING FEMALE IS UNUSUALLY DEVOTED TO HER EGGS.”

dark brown; bill dark at base, lightening toward tip on culmen; lower mandible and feet yellowish brown. Length 7.50-8.50 (190.5-215.9); wing 4.30 (109.2); tail 3.10 (78.7); bill .66 (16.8).

THE WOOD THRUSH.

Recognition Marks.—Chewink size; the largest of the genus; above cinnamon-brown in front, olive-brown behind; below heavily spotted.

Nest. of twigs, weed-stalks, leaves, and trash, with a matrix, or inner wall, of mud, carefully lined with rootlets; usually saddled upon semi-horizontal branch of sapling, five to fifteen feet up. *Eggs*, 3-5, uniform greenish blue, about



Take near Circleville,

"THE DEPTHS OF THE FOREST CLAIM HIM."

Photo by the Author.

the color of Robin's, or perhaps averaging a shade lighter. Av. size, 1.04 x .76 (26.4 x 19.3).

General Range.—Eastern United States to the Plains, north to southern Michigan, Ontario, and Massachusetts; south in winter to Guatemala and Cuba. Breeds from Virginia, Kentucky and Kansas northward.

Range in Ohio.—Common summer resident.



Phot. by E. B. Williamson.

NEST AND EGGS OF THE WOOD THRUSH.

THE EGGS ARE REALLY MUCH DARKER THAN THEY APPEAR TO BE BECAUSE BLUE "TAKES WHITE".

ALTHO all of our Thrushes are retiring in disposition, the Wood Thrush, perhaps because of his larger size, is the least so. The depths of the forest, indeed, claim him, but so too do the shaded lawns of village streets and city parks. In his woodland home this Thrush does not flee as tho a price

had been set upon his head, but often comes forward—not too close—with a *pit* of inquiry and greeting.

The Wood Thrush spends considerable time on the ground looking for beetles and worms, but he is ready at a moment's notice to flutter up on a log or low branch, and stand there surveying you, flirting, or twinkling, the wings occasionally to indicate his perfect readiness for further retreat, or else ruffling and shaking his feathers as tho to shake off the memory of the mold. A false step now and he may disappear irrevocably down some forest isle: a quiet glance of admiration serves to reassure him, and he may resume his feeding.

There is an air of gentleness and good breeding about the bird, which goes a long way to disarm a wanton enemy, and one studiously hostile there could not be. Brighter than the other Thrushes in color, and marked unmistakably with heavy spots upon breast and sides, the Wood Thrush is further distinguished in a gifted family by its wonderful voice. The chanting of the Wood Thrush is one of the choice things in bird music. In the freshness of the undried morning the bird mounts a low limb and takes up a part in the grand anthem of nature, whose complementary voices may be lost to any ear less

fine than his. The bird listens to the retreating foot-steps of the morning stars, and sings, "*Far away—far away.*" Zephyr stirs the unfolding leaves with his boyish alto and our matchless tenor responds, "*Come to me—Here in glee—bide a wee.*" in cadences of surpassing sweetness. Altho the singer's voice is rich and strong, so that he may be heard at times for half a mile, there are at the same time grace notes and finer passages which only a near-by listener can catch. The notes, I am told by musical critics, are, of all bird notes, the most nearly reducible to ordinary musical notation; but the peculiar timbre of the bird's voice, the rich vibrant quality of the tones, is of course inimitable. Their utterance at morning and evening is something more than a clever musical performance; it is worship.



Taken near Chickadee

Photo by the Author.

ONE TYPE OF NEST.

THIS NEST APPEARS NEAR THE CENTER OF THE ILLUSTRATION ON PAGE 210.

The typical situation for a nest is upon an overarching sapling, as shown in the nearest illustration. To secure a romantic site stability is sometimes sacrificed, and the nest, loosely saddled upon a narrow branch, may be toppled over by the wind or by a careless hand. At other times the nest is securely lodged upon the forks of a horizontal limb or upright sapling, and may prove very durable.

Upon a foundation of dry leaves are laid grass, fibres, and weed-stems; these are held in place by a matrix of mud or rotten wood, and the nest lined with rootlets or dead leaves. The mud-working must be disagreeable business for such dainty birds. I once came upon a mother mason at her task. Her bill and breast were all be-daubed with mud, and she cut such a sorry figure that she fled precipitately upon my approach and would not come back again.

According to Dr. Jones the same nest is occupied during successive seasons, especially if securely placed. Repairs are made each year, and consist either of a new matrix and lining or of the latter alone. He has one in his collection which shows four distinct yearly additions.

The brooding female is unusually devoted to her eggs, and altho in manifest terror of the "infernal machine" thrust up close to her nest, bravely returns to her charge again and again.



Taken near Circleville.

Photo by the Author.

A TYPICAL NESTING SITE.

No. 94.

WILSON THRUSH.

A. O. U. No. 756. *Hyalocichla fuscescens* (Steph.).

Synonym.—VEERY.

Description.—*Adult*: Above, light cinnamon-brown or bister, uniform; wing-quills shading to brownish fuscous on inner webs; below white, the throat, except in the upper middle, and the breast, tinged with cream-buff, and spotted narrowly and sparingly with wedge-shaped marks of the color of the back; sides and flanks more or less tinged with brownish gray; sides of head buffy-tinged, with mixed brown, save on whitish lores; bill dark above, light below; feet light brown. Adult male, length 7.25-7.75 (184.2-196.9); wing 4.00 (101.6); tail 2.87 (72.9); bill .53 (13.5). Female averaging smaller.

Recognition Marks.—Sparrow to Chewink size; light cinnamon brown above; breast buffy, lightly spotted.

Nest, of leaves, bark-strips, weed-stems, and trash, lined with rootlets; on or near the ground. *Eggs*, 3-5, plain greenish blue, not unlike the Robin's. Av. size, .88 x .64 (22.4 x 16.3).

General Range.—Eastern United States to the Plains, north to Manitoba, Ontario, and Newfoundland. Breeds from northern New Jersey and the northern part of the Lake States northward; winters sparingly in Florida, but chiefly south of the United States.

Range in Ohio.—Common migrant. Not uncommon summer resident in northern Ohio; less common and locally restricted throughout the state.

THOSE of this species which pass farther north to breed, and which constitute by far the greater majority, may sometimes be seen in village orchards and in rather open situations, but the chosen home is in deep, dank forests and in low-lying, swampy tangles. Here the enthusiastic bird student may catch a sufficient glimpse of a flitting shade to believe that the tail seen does not contrast in color with the back, and that the bird must therefore be, by elimination, the Wilson rather than the Hermit Thrush. For the rest the bird is known only as a voice, an elusive voice, a weird and wonderful voice. The name "Veery," by which the bird is known in New England, is evidently an imitation of one of its rolling notes. Its scolding or interrogatory cry consists of a single one of these notes, *Ve-ery* or *ve-er-u*, but its song consists of a series of six or seven of these syllables rolled out with a rich and inimitable brogue. The notes vibrate and resound, and fill the air so full of music that one is led to suspect the multiple character of each. The bird is really striking chords, and the sounding strings still vibrate when the next is struck. There is, moreover, in the whole performance a musical crescendo coupled with a successive lowering of pitch, which is simply ravishing in its sense of mystery and power.

Altho reported commonly in the northern portion in summer, I have no positive information of a nest's having been found in Ohio. In fact this species is one of the inexcusably neglected birds of the state.

No. 95.

GRAY-CHEEKED THRUSH.

A. O. U. No. 757. *Hylodichla alicia* (Baird).

Synonym.—ALICE'S THRUSH.

Description.—*Adult*: Above, uniform dull olive-brown; below, white, on the breast and sides of throat tinged with pinkish buff, and further marked by broad, sector-shaped spots of blackish; the sides and sometimes lower breast washed with dusky gray; lores and region about angle of commissure distinctly gray; remaining space on side of head gray, mingled with olive-brown. Bill dark brown, somewhat lighter below; feet brown. Length 7.00-8.00 (177.8-203.2); av. of six Columbus specimens; wing 4.05 (102.9); tail 2.56 (65.); bill .50 (12.7).

Recognition Marks.—Sparrow to Chewink size; pallid cheeks afford only positive diagnostic mark; darker above and more heavily marked on breast than *H. fuscescens*.

Nesting.—Does not breed in Ohio. *Nest*, of bark-strips, leaves, grasses, etc., lined with fine grasses; on branches of low trees or on bushes, two to eight feet from ground. *Eggs*, 4, greenish blue, faintly spotted with reddish or yellowish brown. Av. size, .91 x .70 (23.1 x 17.8).

General Range.—Eastern North America west to the Plains, Alaska and northern Siberia; north to the Arctic Coast; south in winter to Costa Rica. Breeds chiefly north of the United States.

Range in Ohio.—Not very common spring and fall migrant.

ALL Thrushes look alike to the layman, and it is not perhaps to be wondered at that this species, altho by no means rare, is not known to above a dozen observers in the state. Alice's Thrush has the same modest ways and semi-terrestrial habits which characterize the other members of the genus, and while with us does little to distinguish itself from them. Like the others it has a fashion of slipping along quietly through the undergrowth, and may not be observed until driven, all unconsciously perhaps, to its last ditch, whereupon it flutters up into view on a post of the boundary fence, or hurtles back wildly over the observer's head. It is, perhaps, a little more deliberate in movement than the Olive-backed Thrush, with which it is most likely to be confounded.

During the migrations the bird is seldom heard to utter a sound. Its scolding note is described as being midway between the interrogatory whistle of the Olive-backed and the ill-mannered snarl of the Wilson. Its song, too, requires careful distinction from the former, and hence from both.

The breeding habits of the Alice Thrush are as yet imperfectly known, especially in its British American range. Mr. Bradford Torrey first suspected its presence in New England during the breeding season, on the strength of a song heard in the White Mountains, and shortly afterward Mr. William Brewster confirmed the record by securing nests in the same locality.

No. 96.

OLIVE-BACKED THRUSH.

A. O. U. No. 758a. *Hylocichla ustulata swainsonii* (Cab.).

Description.—*Adult*: Above, olive, or olive-brown, substantially uniform,—a little brighter than in preceding species; below, white; throat (only slightly in center), breast, and sides of head strongly suffused with creamy or ochraceous-buff, unmistakable on lores and eye-ring; cheeks and throat spotted narrowly and breast broadly with dusky olivaceous; sides and flanks lightly washed with brownish gray, sometimes appearing in broad, sector-shaped marks on sides and across breast below the buffy area. Bill brown, lighter at base of lower mandible; feet light brown. Length 6.50-7.50 (165.1-190.5); wing 3.81 (96.8); tail 2.49 (63.2); bill .50 (12.7).

Recognition Marks.—Sparrow size; uniform olive-brown above; heavy spotting and buffy wash on breast; sides of head and eye-ring buffy.

Nesting.—Does not breed in Ohio. *Nest*, of bark-strips and grasses with a heavy inner mat of leaves, sometimes largely composed of, or covered externally with, moss, lined with rootlets and fine grasses; placed at moderate heights in bushes or saplings of thickets. *Eggs*, 3-5, pale greenish olive, with not very distinct spots and blotches of reddish and yellowish brown. Av. size, .91 x .65 (23.1 x 16.5).

General Range.—Eastern United States westward to the Upper Columbia River, and casually to the north Pacific Coast. Southward in winter to Cuba, Central America, and western South America; casual in Bermuda. Breeds in the mountainous regions of the Eastern States northerly, and generally north of the United States.

Range in Ohio.—A common but very unobtrusive migrant.

ALTHO not less habitually a bird of the undergrowth and thickets than its congeners, when at home in its northern haunts, the Olive-backed Thrush has a curious custom during migrations of remaining aloft in the



OLIVE-BACKED THRUSH
Hylorichia ustulata swainsonii
♂, Life-size

tree-tops and spending the days in company with the Warblers. Sometimes in searching the top of an elm tree with my glasses for possible Parulas and certain Black-throated Greens, I have noted a half dozen of these Thrushes, moving about quietly at that height and evidently finding an abundance of insect food about the new-flung tassels of clustering flowers. Here too are to be heard subdued songs, which, because of their very moderation, serve to transport the fortunate hearer into regions of utter rest.

When it does resort to the ground, the Olive-backed Thrush can be provokingly elusive; and no one of the servants of this wayside inn, Ohio, may claim really to know this fleeting guest. The full-voiced song is often rendered in dense thickets and swampy woods, especially in the northern part of the state. It bears a superficial resemblance to that of the Wilson Thrush and has something of the same rolling, vibrant quality. It is, however, less prolonged and less vehement. It lacks the liquid r's and l's which the Veery rolls under his tongue like sweet morsels; and the pitch of the whole rises slightly, while the volume of sound diminishes toward the end of the series, *W'e-e-o we-e-o we-o we-o weee*. The scolding note is a soft liquid *quit*, which may be perfectly imitated by whistling; but this sound I have never heard during the migrations. There is, besides, a high-pitched, musical call-note, which may be recognized as the birds pass overhead at night.

No. 97.

HERMIT THRUSH.

A. O. U. No. 759b. *Hylocichla guttata pallasii* (Cab.).

Description.—*Adult*: Above, light olive- or dull cinnamon-brown, changing on rump to bright cinnamon of lower tail-coverts and tail, in marked contrast to back; below, white, clear only on belly,—throat and breast with a faint buffy tinge; sides and breast washed with pale brownish; throat, in confluent chains on sides, and breast, broadly marked with dusky olivaceous spots, paling or obscure on lower breast and sides; sides of head not peculiar; bill dark brown, with lighter base on lower mandible; feet light brown, Length 6.50-7.50 (165.1-190.5); wing 3.60 (91.4); tail 2.60 (66.); bill .51 (13.).

Recognition Marks.—Sparrow size; cinnamon tail contrasting with back, distinctive.

Nesting.—Not positively known to breed in Ohio. "*Nest*, of moss, coarse grasses, and leaves, lined with rootlets and pine-needles, on the ground. *Eggs*, 3 or 4, greenish blue, of a slightly lighter tint than those of the Wood Thrush, .88 x .69 (22.4 x 17.5)" (Chapman).

General Range.—Eastern North America, breeding from the northern Alleghenics, the mountainous parts of southern New England, southern New York, northern Michigan, etc., northward, and wintering from the Northern States southward.

Range in Ohio.—Abundant migrant. One breeding record, Cincinnati, by Chas. Dury.

AS one passes through the woods in middle April, while the trees are still leafless and the forest floor brown with last fall's harvest, a moving shape, a little browner still but scarcely outlined in the uncertain light, starts up from the ground with a low *chuck*, and pauses for a moment on a tiny stump. Before you have fairly made out definite characters the bird flits to a branch a little higher up and more removed, to stand motionless for a minute or so, or else to chuckle softly with each twinkle of the ready wings. By following quietly one may put the bird to a dozen short flights without once driving it out of range; and he may find that the tail is abruptly rufous in contrast with the olive-brown of the back, and that the breast is boldly spotted, but not so heavily as in the case of the Wood Thrush.

The Hermit Thrush is very common, almost abundant, along wooded streams and low-lying copses, from the middle of April to the fifth of May. The remarkable weather in the spring of 1903 brought one bird to Columbus on the nineteenth of March, and held the species at Oberlin until the eighth of May. Altho rather retiring and quite clever at escaping observation when desiring to, the birds are frequently seen in the back yard shrubbery, and share with Towhee and Cardinal the spoils hidden beneath the carpet of fallen raspberry leaves. In the fall they are not less abundant and linger as late as November 25th.

Now and then a fortunate observer, lurking about in some secluded glen, catches a song—some foregleam of the glory which is one day to light up the hills of Laurentia. I have never heard it myself except in the mountains of Washington. For me the vicinity of a certain emerald stream, which passes, half pool, half spray, through the solemn woods which clothe Wright's Peak, is forever sacred, because there, with a dear companion, I first heard the vesper hymn of the Hermit Thrush. We did not see the singer—that were sacrilege—but from some dim height there floated down to us a voice no longer tainted by the earth struggle, but heavenly pure, serene, exalted. It was the voice of an angel, such as haunt the groves of Paradise. To recall but for an instant those ravishing notes is to call up the first promise of love, the mother's prayers, and all the precious contents of that inner casket of the heart, which may not be opened until we present ourselves at Heaven's gate, and feel therein for the golden key.

No. 98.

AMERICAN ROBIN.

A. O. U. No. 761. *Merula migratoria* (Linn.).

Description.—*Adult male*: Head black, interrupted by white of chin and white with black stripes of throat; eyelids and a supraloral spot white; tail blackish with white terminal spots on inner webs of outer pair of rectrices; wings dusky except on external edges; remaining upper parts grayish slate; below, — breast, sides, upper belly and lining of wings cinnamon-rufous; lower belly and crissum white, touched irregularly with slate; bill yellow with blackish tip; feet blackish with yellowish soles. *Adult female*: Similar to male, but duller; black of head veiled by brownish. *Adults in winter*: Upper parts tinged with brown, the rufous feathers, especially on belly, with white skirtings. *Immature*: Similar to adult, but head about the color of back; rufous of under parts paler or more ochraceous. *Very young birds* are black spotted, above and below. Length about 10.00 (254.); wing 5.08 (129.); tail 3.75 (95.3); bill .78 (19.8).

Recognition Marks.—"Robin" size; cinnamon-rufous breast; everybody knows the Robin.

Nest, a thick-walled but shapely bowl of mud, set about with twigs, leaves, string, and trash, and lined with fine grass-stems; placed anywhere in trees or variously, but usually at moderate heights. *Eggs*, 4 or 5, sometimes 6, greenish blue, unmarked. Av. size, 1.15 x .79 (29.2 x 20.1).

General Range.—Eastern United States to the Rocky Mountains, including Mexico and Alaska. Breeds from Virginia and Kansas northward to the Arctic Coast. Winters from southern Canada and the Northern States (irregularly) southward. Casual in Bermuda. Accidental in Europe.

Range in Ohio.—Abundant summer resident. Casual during winter throughout the state.

MANY birds bear the epithet American to distinguish them from similar old world species, but none bear it more worthily nor more proudly than the American Robin. Having only a superficial resemblance to the English Redbreast or "Robin Redbreast" (*Erithacus rubecula*), from which it was originally named, our sturdy bird is an unmistakable "bird o' freedom," and as such is beloved from Boston Bay to the Golden Gate, and from the Gulf to the Forty-ninth parallel—and beyond. With Bluebird alone does Robin divide the honors of early spring, and it is nip and tuck between these friendly rivals which shall first proclaim the glad tidings of winter's downfall.

Sometime in February the first migrant Robins usually pass our southern border, and press on with squeeches and pipings of delight to reclaim possession of the old haunts. It is not quite clear whether the first migrants are those which pass furthest north, or whether the birds move up by successive waves, each wave outstripping its predecessor and sweeping over the heads of the

birds already located; but the latter is, I believe, usually the case. Or again we may conceive that the thirsty land drinks up each succeeding wave until its force is dissipated, or until the saturation point is reached, after which those which follow may pass on without loss, save of the lame and the lazy. Certain it is that the local population is everywhere augmented during March, and that great straggling fleets, composed of several hundred individuals, pass over our heads as late as the first week in April.

During the uncertain days of early spring the Robins gather in loose companies and keep to the seclusion of the woods, following the sun from east to south and west, ransacking the roots of trees and the edges of standing water for food, and,

above all,



Taken near Oberlin.

Photo by the Author.

GOOD MORNING! HAVE YOU ANY WORMS FOR ME?

sketching in the matrimonial plans of the season. When Robins have become common about the streets and yards of village and town, partners have usually been selected, but there still remain for many of the cocks hard-contested battles before peaceful possession is assured. These are not sham fights either; a Robin will fight a hated rival, beak and claw, till he is either thoroughly winded or killed outright.

After the first brood is raised the males assemble nightly with the full-grown young in chosen roosts, while the females are undertaking the duties of a second brood. These roosts are selected either in village shade trees or in thickets and rank vegetation of low-lying swampy land. Curiously enough they often share a bit of grove with the Bronzed Grackles, or else mix in freely with the Redwings in the cat-tail swamps. During July and August few birds are to be seen in their breeding haunts, but except for a



Taken in Grand Forks

DINNER TIME.

Photo by the Author.

few belated couples, unfortunate with the early nesting or busy with a third brood, they gather in little companies and feed largely upon wild fruits, on wooded hillsides or in quiet out-of-the-way places. At this season, too, the birds are undergoing the moult, and are indisposed for any considerable activity.

The Robin's song in its common form is too well known to require particular description, and too truly music to lend itself well to syllabic imitation. It is a common thing, indeed, like the upturned mold and the air which fans it, but out of these come the varied greens which beautify the world; and the homely piping of the Robin has given birth to many a heaven-directed aspiration and purged many a soul of guilty intent. Robin conceives many passages which are too high for him, and these he hums inaudibly or follows in silent thought, like a tenor with a cold; when the theme reaches his compass again he resumes, not where he left off, but at the end of the unheard passage. When the Robin is much given to half-whispered notes and strains unusually tender, one may suspect the near presence of his *fiancée*. If you are willing to waive the proprieties for a few moments you will hear low murmurs of affection and soft blandishments, which it would tax the art of a Crockett to reproduce. And again, nothing can exceed the

sadness of a Robin's lament over a lost mate. All the virtues of the deceased are set forth in a coronach of surpassing woe, and the widower declares himself forever comfortless. It is not well, of course, to inquire too particularly as to the duration of this bereaved state—we are all human.

As Dr. Wheaton has already pointed out, the Robin occasionally develops surprising powers of mimicry. I once found one in early spring who



Taken in Canal Dover.

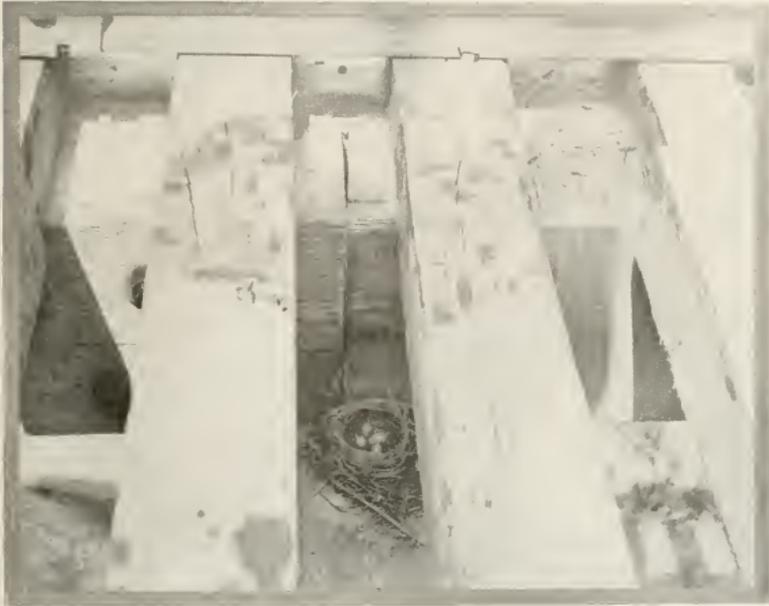
ALL. FED.

Photo by the Author.

called his mate "Phoebe" with such a convincing accent that I spent a half hour searching for the flycatcher. Another which sang back of Orton Hall on the O. S. U. campus had incorporated the familiar ringing vesper notes of the Wood Thrush into its own song. He gave the borrowed notes in three keys or qualities, all of which were essentially characteristic of the other bird.

In nesting the Robin displays little caution, and its homely mud-walled

cup is not withdrawn from most familiar observation. Building preferably in the major crotches of orchard or shade trees, the bird ordinarily selects a site from five to fifteen feet up, but nests are sometimes found at fifty feet, and again, on the ground. Window sills and beams of porches, barns, and out-buildings are favorite places, and especially if the season is backward. Two of the most unusual sites came under my observation during the season of 1903. One shown in the illustration was placed on the sleeper of a railroad



Taken in Lorain County.

Photo by the Author.

AN UNUSUAL NESTING SITE.

bridge over which trains passed three times an hour. Another was made fast among the drooping branches of a weeping willow near their tips, and at a point where none of them were above a quarter of an inch in diameter. How the bird contrived to lodge the foundation, and mould her characteristic mud-cup in such a difficult situation, I cannot comprehend.

Nothing could be more common than Robins' nests. In walking out from Canal Dover, along the tow-path which Garfield's footprints have made sacred, the writer, in company with Dr. Leander S. Keyser, counted

seventeen occupied nests of the Robin in the trees which were within reach of the path, and in a distance of a mile and a half. The stretch would deserve to be called Robin Row if there were not so many other places likewise distinguished.

On this same trip Dr. Keyser conducted me to a Robin's nest which he had located some days before in an osage-orange hedge, and which he thought might be convenient to photograph. The mother bird was at the nest, but alas! how helpless!

During some excitement or sudden fright the bird had become impaled on one of the thorns of an overarching branch and had struggled in vain, until death—all too tardy, I fear—had put an



Taken near Canal Dover. Photo by the Author.
THE TOW-PATH.



Taken near Canal Dover.

A ROBIN TRAGEDY.

Photo by the Author.

end to her misery. The cruel spike was thrust through the skin and underlying connective tissue of the throat in a horizontally ascending direction, and the bird was hanged with her feet dangling in her own nest. One egg, entire but stained with ordure, and a sodden mass of broken eggs besides, bore witness with sad eloquence to the tragedy.

In spite of the law-makers, who knew exactly what they were doing in declaring the Robin worthy of protection, thousands of these birds are annually slaughtered by unthinking people because of their fondness for cherries and other small fruits. And yet we are assured by competent authorities that cultivated fruit forms only four per cent of the Robin's food throughout the year, while injurious insects constitute more than one-third.¹ Robins *are* provoking in the cherry trees, especially when they bring the whole family and camp out; but there is one way to limit their depredations without destroying these most distinguished helpers: plant a row of mulberry trees, preferably the Russian Mulberry, along the orchard fence, and the birds will seek no further. I have seen a mulberry tree swarming with Robins, while neighboring fruit trees were almost untouched. The plan is simple, humane, and efficacious.

¹ Butler: Birds of Indiana, p. 1160.



No. 99.

BLUEBIRD.

A. O. U. No. 766. *Sialia sialis* (Linn.).

Synonyms.—EASTERN BLUEBIRD; WILSON'S BLUEBIRD.

Description.—*Adult male, in spring:* Above rich azure-blue; below, throat, breast, and sides chestnut. Occasionally the azure area reaches around to include the chin. In autumn the blue of the upper parts is obscured by the reddish-brown edgings of the feathers; the white of the lower parts is more extended and the chestnut paler and more restricted. *Adult female:* Above, blue mixed and obscured with dull chestnut, except on wings, tail and rump, which are pure; below, paler. *Immature:* Brownish, with blue gradually increasing; back marked with whitish shaft lines; breast and under parts closely dotted with brown and white. Length 5.70-7.00 (144.8-177.8); wing 3.75-4.15 (95.3-105.4); tail, 2.60-3.00 (66.-76.2); bill .45 (11.4). Female averages smaller than male.

Recognition Marks.—Sparrow size; azure-blue and chestnut coloring.

Nest, in cavities, artificial or natural, hollow trees, stumps, posts, bird boxes, etc.; lined with grass and weed-stalks, with occasionally string, feathers, and the like. *Eggs,* 4-6, uniform pale blue, sometimes very light bluish white, and rarely pure white. Average size, .84 x .63, (21.3 x 16.).

General Range.—Eastern United States to the eastern base of the Rocky Mountains, north to Manitoba, Ontario and Nova Scotia, south in winter from the Middle States to the Gulf States and Cuba. Bermuda, resident.

Range in Ohio.—Of universal distribution in the State, but most abundant in northern and central portions. In winter it remains regularly only in the extreme south, but stragglers may be found anywhere.

HOW the waiting country-side thrills with joy when Bluebird brings us the first word of returning spring. The snow may still linger in patches and the hoar-frost be only just making out of sight that rare day when the herald presses northward and scatters the tidings far and wide. Spring is in the air and spring, thenceforth, is in our hearts. The cruel north wind may sweep down again and all the ugly signs of winter return, but Bluebird has kindled in our hearts the fires of an inextinguishable confidence, and we know that the master word of exorcism has been spoken. Surely there is nothing in nature more heartening than the resolute courage and sublime good cheer of this dauntless bird. Reflecting heaven from his back and the ground from his breast, he floats between sky and earth like the winged voice of Hope. Or else, "shifting his light load of song from post to post along the cheerless fence," he pours out sincerest gratitude for even the meager goods of life, and counts it joy enough to live.

Truth to tell, Bluebird does make sad mistakes sometimes. He trusts too



BLUEBIRD
Sialia sialis
Life-size

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well some tricky Zephyr of the South, who whispers not of what he knows, but what he hopes, and is cruelly deceived. But Spring does come, and if her most impetuous herald dies in the performance of his duty, we love and honor him most because his task was hardest.

The year 1895 marked a sad chapter in Bluebird's experience, and proved to be a turning point in the history of his race. That spring an unusually severe cold wave of long duration swept over the Middle and Gulf States. The cold wrought fearful havoc to all bird life, but the blow seemed to fall most heavily upon the Bluebirds. Their ranks were not merely decimated; they were almost exterminated. Observers in Ohio saw only single birds where before they had seen scores and hundreds. Thus, at Oberlin, I saw only five birds up to May 1, 1895. It is very gratifying, however, to note that their numbers are materially increasing of late. In some localities they appear to have almost regained their former status.

It goes without saying that from that dreadful winter only the fittest survived. Evidence is not lacking to show that the Bluebird of today is hardier than the Bluebird of ten years ago. In Lorain County for instance, there were no authentic records of Bluebirds wintering until the season of '98-'99. Then and every season since a few have been seen. If this be a correct inference, then the massacre of '95 will not have been without its influence for good in preparing the species against similar and more severe attacks in the future.

The Bluebird is pre-eminently domestic in his tastes, and he lacks none of the qualities essential to the model husband and father. If not already mated upon arrival in early spring, the business is not long delayed. The birds take a leisurely honeymoon, and the first nesting is not undertaken before the last week in April or the first in May. Nothing can exceed the gallantry, or perhaps I would better say the courtesy of Bluebirds *en famille*. They almost



Taken in Knox County

Photo by J. B. Parker

FEMALE BLUEBIRD ABOUT TO ENTER NEST.
NOTE THE WOODPECKER-LIKE ATTITUDE AND ESPECIALLY THE USE
OF THE TAIL AS A PROP.

invariably address each other as *dear* or *dearie*, and they have a host of untranslatable tones of endearment beside.

These gentle spirits are, however, best not aroused by an outsider. In securing his personal rights or in defending his home, Bluebird is always brave and sometimes pugnacious to a degree. Indeed it is to be feared that when it comes to a question of property rights, he is not always kind. The annals of bird-lore are full of accounts of spirited encounters between luckless Wrens, Martins, Woodpeckers, etc., and Bluebird. Here is one of them by Dr. Howard Jones, of Circleville: "Some years ago I placed a bird box upon the house-top, which for a few seasons was occupied by a pair of Bluebirds. One spring they failed to appear at the usual time and the box was taken by a pair of Martins. The old nest was carried out and the newcomers were thor-

oughly settled in their quarters, when the Bluebirds returned (probably the same pair that had formerly occupied the box), and at once commenced tearing out the intruders' nest. But they were soon discovered and a pitched battle ensued, the Bluebirds retiring as if defeated. This procedure was repeated several mornings and at intervals during the days. When, early one morning, being awak-



~Photo by Rev. W. F. Henninger.

A DOUBLE NEST OF THE BLUEBIRD.

THE LOWER SET WAS LAID PREMATURELY, OR ELSE CHILLED BY A COLD SNAP.

ened by the incessant screams of the Martins, I hastened to the yard to see what I supposed was the final encounter; but the affray was over before I arrived. My father, however, was there holding a female Martin in his hand, he having witnessed the whole affair. After much scolding and sparring one of the Bluebirds clinched with the Martin, and both birds rolled together from the house-top to the pavement below, where, in deadly embrace, they were captured; but the Bluebird, still strong and active, slipped away. In

all these engagements the male Martin seemed content to encourage his mate by his vociferous screams, while both Bluebirds fought with equal vigor."

In a fair encounter the Bluebird is more than a match for the always execrable English Sparrow; but no bird can endure the mobbing which the hoodlums resort to; and as a result the Bluebirds have to surrender the choicest places to the interlopers.

The home of the Bluebird consists ordinarily of a deserted Woodpecker hole in tree or stub, or else of a decayed cavity in post, stump, or apple tree. The hole is plentifully lined with grass, weed-stalks, and unclassifiable trash; altho birds of more cultivated tastes are beginning to employ feathers. The birds distinctly favor the haunts of men, and so, when occasion offers, will occupy bird-boxes or suitable crannies. I once found a brood in a half open mail-box, attached to the front door of a village dwelling temporarily vacant. Mr. Oliver Davie reports finding a nest in Columbus in the interior of a car-wheel rendered idle by a railroad strike; and another in Morrow County, in a deserted Eave Swallow's nest.

A farm near North Amherst in Lorain County contains, besides several fields and pastures and an ideal bit of woodland, two young orchards and a small vineyard. Throughout these last, Mr. Will Smithkons, the son of the owner, has distributed upwards of fifty Bluebird boxes, each composed of a section of a hollow limb, closed with a board at top and bottom, and provided with a neat augur-hole in the side. The boxes are made fast to the trees or lodged at considerable intervals along the intersecting fences



*Fallen
nest
of
C. cyanocephalus.*

*Photos
by the
Author.*

BLUEBIRDS AT NEST.
THE LOWER KNOT-HOLE CONTAINS A BROOD OF
CLAMORING YOUNG.

Mr. Smithkons finds that more than half of the boxes are occupied each season; and he counts the birds of inestimable advantage in helping to save the grapes and apples from the ravages of worms. In two instances Robins accepted the partial shelter afforded by the boxes and nested in the crotch of the tree immediately under the Bluebirds.

The eggs, from four to six in number, are a uniform pale blue, with a



Taken near North Amherst.

Photo by the Author.

ONE OF MR. SMITHKON'S BLUEBIRD BOXES.

A ROBIN'S NEST APPEARS IN THE CROTCH BELOW.

surface somewhat polished. Owing to the delicacy of the pigment, cabinet specimens fade readily. Pure white sets are on record, and faded blues are not unusual. Two or three broods are raised in a season.

Doubtless Bluebird's song owes somewhat of the high estimation in which it is held to the fact that it sounds forth at a time when there are few rivals, and the aspect of nature contrasts somewhat sternly with its good cheer. Be that as it may, his soulful warbling notes will always be regarded as something half sacred by those who understand. *Cheery-cheery - cheery, dearie*, are the notes of the flight-call.

Chew-ee-i-tew, wheeoo-he-ite, chew-ee-w-tuiti, may serve to recall the familiar spring-time warbler.

In autumn Bluebird lingers late, hawking at insects in some sunny corner, or sampling the winter fruits which others are to gather. A favorite tidbit of this season is the berry of the common ivy, which the bird procures by fluttering before the purple clusters. When the season advances the birds retire with evident reluctance. Passing slowly overhead in little pilgrim companies they call down to you as they fly, *cheery—cheery, dearie, hali* mournfully indeed, but still with tender promise of another meeting at a fairer time.

No. 100.

GOLDEN-CROWNED KINGLET.

A. O. U. No. 748. *Regulus satrapa* (Licht.).

Description.—*Adult male*: Crown-patch (partially concealed) bright orange or flame-color (cadmium orange); a border of plain yellow feathers overlying the orange on the sides; these in turn bordered by black in front and on sides; extreme forehead white, connecting with white superciliary stripe; a dark line through eye; above bright olive-green, becoming olive-gray on nape and side of head and neck; wing-quills and tail-feathers much edged with light greenish yellow, the former in such fashion as to throw into relief a dusky spot on middle of secondaries; greater coverts tipped with whitish; under parts sordid white, sometimes dusky-washed, or touched on sides with olivaceous. *Adult female*: Similar, but with crown-patch plain yellow instead of orange. *Immature*: Without crown-patch or bordering black, gradually acquiring these through gradation of color. Length about 4.00 (101.6); wing 2.26 (57.4); tail 1.71 (43.4); bill from nostril .21 (5.3).

Recognition Marks.—Pygmy size; orange, or yellow, and black of crown distinctive.

Nesting.—Does not breed in Ohio. *Nest*, pensive, but receiving auxiliary support from sides; of moss, lined with fine inner-bark strips, black rootlets, and feathers; in coniferous trees, usually at considerable heights. *Eggs*, 8-10, in two layers, creamy white or sordid cream-color, dotted, spotted, and blotched with pale wood-brown, and sometimes obscurely with lavender. Av. size, .54 x .40 (13.7 x 10.2).

General Range.—North America generally, except Pacific Coast, breeding in the northern and elevated parts of the United States, and northward; migrating southward in winter to Guatemala.

Range in Ohio.—Usually common winter resident and migrant throughout the state; sometimes locally absent.

OUR artist has done well to picture the royal midgets among the autumn leaves. It is when the crimson and gold are being lavished on every hillside and the year is sinking in sumptuous splendor that these little whisperers steal in upon us almost unnoticed. But when the transient glory of the trees has turned to sodden mold, the cheerful company of Kinglets is still to be found—ungarnered leaves too full of sap for October's vintage, staunch potentates unshaken by the winter winds.

It is passing strange that bits of birdanity no bigger than Hop-o'-my-Thumb should prefer to spend the winter with us, but so it is, and we are mightily cheered by their presence. Zero weather has no terrors for them and the good fellowship of winter seems in no wise marred by storms.

Kinglets go in troops which keep a little to themselves, but which are still enrolled in the membership of some larger bird-troop of winter. Brown Creepers, especially, affect their company with a persistence which must sometimes be a little vexing to the more vivacious birds; but there is no complaint or hauteur on the part of the latter, only royal tolerance. Evergreen trees are most frequented by Kinglets, and here they are almost invariably to be found during the severest weather. With tireless energy they search both bark and twigs for insects' eggs and larvae scarce visible to the human eye. They flutter about at random, hang head downward if need be, dart and start and twist and squirm, until one frequently despairs of catching fair sight of the crown for the necessary fraction of a second. Of course it's a Golden-crown: but then, we want to see it.

And all the time Cutikins is carrying on an amiable conversation with his neighbor, interrupted and fragmentary to be sure, but he has all day to it—*tss-tss-tsip-chip-tseck*. If you draw *too* near, *chip* can be made to express vigorous disapproval. Only now and then does one hear snatches of the northern song. It has something of the quality and phrasing of the better-known Ruby-crown's, but lacks distinctness, and is perhaps not so loud. One May morning a large company of Golden-crowned Kinglets held a concert in the trees of the Oberlin College campus. The fresh-leaved maples fairly resounded to their spirited music for a space of fifteen minutes; then all was silent. The Kings recollected themselves.



GOLDEN-CROWNED KINGLET
Regulus satrapa
Life-size

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No. 101.

RUBY-CROWNED KINGLET.

A. O. U. No. 749. *Regulus calendula* (Linn.).

Description.—*Adult male*: Above olive-green, duller before, brightening to greenish yellow on edgings of quills and tail-feathers; a partly concealed crest of scarlet (flame-scarlet to scarlet-vermilion); two narrow, whitish wing-bars formed by tips of middle and greater coverts; some whitish edging on tertials; a dusky interval separating greenish yellow edges on outer webs of secondaries; a whitish eye-ring and whitish skirtings around base of bill; under parts soiled white, heavily tinged with buffy and olivaceous-buff. *Adult female and immature*: Similar but without crown-patch. Length 4.00-4.50 (101.6-114.3); wing 2.33 (59.2); tail 1.72 (43.7); bill from nostril .25 (6.4).

Recognition Marks.—Pygmy size; scarlet crest distinctive. Note wing-bars and whitish eye-ring of female and young.

Nesting.—Does not breed in Ohio. *Nest*, semi-pensile; of moss, fine bark-strips, etc., neatly interwoven, lined with feathers; in coniferous trees at moderate heights. *Eggs*, 5-9, dull white or pale buffy, faintly speckled or spotted with light brown, chiefly at the larger end. Av. size, .55 x .43 (14. x 10.9) (Davie).

General Range.—North America at large, south to Guatemala, north to the Arctic Coast, breeding chiefly north of the United States and in the higher ranges of the West.

Range in Ohio.—Common spring and fall migrant.

“Where’s your kingdom, little king?
 Where’s the land you call your own?
 Where’s your palace and your throne?
 Fluttering lightly on the wing
 Through the blossom world of May,
 Whither lies your royal way?
 Where’s the realm that owns your sway,
 Little King?”

Dr. Henry Van Dyke is the questioner, and the little bird has a ready answer for him. It is “Labrador” in May, and

“Where the cypress’ vivid green
 And the dark magnolia’s sheen
 Weave a shelter round my home”

in October. But under the incitement of the poet's playful banter the Kinglet enlarges his claim:

“Never king by right divine
Ruled a richer realm than mine!
What are lands and golden crowns,
Armies, fortresses and towns,
Jewels, scepters, robes and rings,
What are these to song and wings?
Everywhere that I can fly
There I own the earth and sky;
Everywhere that I can sing
There I'm happy as a king.”

And surely there is no one who can meet this dainty monarch in one of his happy moods without paying instant homage. His imperium is that of the spirit, and those who boast a soul above the clod must swear fealty to this most delicate expression of the creative Infinite, this thought of God made luminous and vocal, and own him king by right divine.

It was only yesterday I saw him, Easter day. The significant dawn was struggling with great masses of heaped-up clouds, the incredulities and fears of the world's night; but now and again the invincible sun found some tiny rift and poured a flood of tender gold upon a favored spot where stood some solitary tree or expectant sylvan company. Along the river bank all was still. There were no signs of spring save for the modest springing violet and the pious buckeye, shaking its late-prisoned fronds to the morning air, and tidily setting in order its manifold array of Easter candles. The oak trees were gray and hushed, and the swamp elms held their peace until the fortunes of the morning should be decided. Suddenly from down the river path there came a tiny burst of angel music, the peerless song of the Ruby-crown. Pure, ethereal, without hint of earthly dross or sadness, came those limpid, welling notes, the sweetest and the gladdest ever sung—at least by those who have not suffered. It was not, indeed, the greeting of earth to the risen Lord, but rather the annunciation of the glorious fact by heaven's own appointed herald.

The Ruby-crowned Kinglet has something of the nervousness and vivacity of the typical Wren. It moves restlessly from twig to twig, flirting its wings with a motion too quick for the eye to follow, and frequently uttering a titter of alarm, *chit-tit* or *chit-it-it*. During migrations the birds swarm through the tree-tops like Warblers, but are oftener found singly or in small companies in thickets or open clusters of saplings. In such situations they



BLUE-GRAY GNATCATCHER
Poliophtila caerulea
♂, Life-size

exhibit more or less curiosity, and if one keeps reasonably still he is almost sure to be inspected from a distance not exceeding four or five feet. It is here too that the males are found singing in spring. The bird often begins *sotto voce* with two or three high squeaks, as though trying to get the pitch down to the range of mortal ears before he gives his full voice. The core of the song is something like "tew, tew, tew, tew, sweet to cat, sweet-oo cat," the last phrases being given with a rising inflection, and with an accent of ravishing sweetness. The tones are so pure that they may readily be whistled by the human listener, and a musical contest provoked in which one is glad to come out second best.

I once saw a Kinglet in a royal mood. A young Ruby-crown was carolling, and quite prettily, in the lower branches of an old oak tree hard by. I was watching him closely to see if I might catch a glint of red, when up darted an older rival and flashed a jewel so dazzling as to fairly smite the eye. The youngling felt the rebuke keenly, and retired in great confusion. It seems that when the bird is angry it has the power of erecting its crest and so unveiling the full glory of the ruby crown.

No. 102.

BLUE-GRAY GNATCATCHER.

A. O. U. No. 751. *Poliptila cærulea* (Linn.).

Description.—*Adult Male*: Above, grayish blue, brighter and bluer on head, hoary on rump; front of head, on forehead and sides, narrowly bordered with black; wings fuscous, with narrow edgings of blue-gray; tail black centrally, the outer pair of feathers white, the next pair mostly white, and the two succeeding pairs blackish touched with white, or not; under parts white, with a bluish or plumbeous tinge, changing on sides of head; eye-lids white; bill black, hooked; feet dark. *Adult female and immature*: Similar but duller; without black on head, and with bill lightening below. Length, 4.25-5.50 (108-139.7); wing 2.02 (51.3); tail 1.92 (48.8); bill .38 (9.7).

Recognition Marks.—Pygmy to Warbler size; a slim, tidy bird with a long tail; blue-gray coloring, and black and white pattern of tail unmistakable.

Nest, a delicately modelled cup, of fine bark-strips and grasses, interwoven and bound together with cob-webs, lined with plant-down, fine grasses and horse-hair, and decorated externally with lichens; saddled upon horizontal limb, or settled into crotch. *Eggs*, 4 or 5, bluish white, speckled and spotted with reddish browns and umber. Average size, .56 x .44 (14.2 x 11.2).

General Range.—Middle and southern portions of the eastern United States, rare north of latitude 42° . South in winter to Guatemala, Cuba, and the Bahamas. Breeds throughout United States range, and winters from the South Atlantic and Gulf States southward.

Range in Ohio.—Abundant summer resident; less common northerly.

THERE are birds in whose presence you cannot help exclaiming, God bless you! and this is one of them. Why you should do it you cannot tell any more than you can tell why the same expression rises to your lips at sight of a blue-eyed babe in its mother's arms, kicking and cooing by turns and looking out upon the great round world with great round eyes of wonder. The innocence and frailty of the bird, as of the babe, touches some hidden chord of

sympathy, and we cry out in mingled big-brotherly pity and astonishment.

One's first introduction to this minikin of the woods must almost of necessity be when the bird has ventured down to the lower bushes, or heaped - up



Taken near Oberlin.

Photo by the Author.

A NEST OF THE BLUE-GRAY GNATCATCHER.

piles of brush, to search for insects or cobwebs. The little blue bundle of business passes unmindful within a dozen feet of you, or if recalled to consciousness by some stirring apprehension, pauses to wag its long tail through an arc of a hundred and eighty degrees, or else to shake it up and down through almost as great a compass. "*Biz, biz, biz,*" the midget cries, and if you can only mark the note well before the bird is lost again in the dense foliage of the tree-tops, to which it soon returns, you have grasped a thread of recognition which is always bound tightly to this little brother of the air.

Sometimes the note is doubled so that the bird seems to say, *Bawbee, bawbee*, but in any case there is a sort of buzzing resonance about it which is distinctive. The pearly fay has also a dainty rambling song full of ethereal phrases and delicate suggestiveness. In one passage it bears a marked resemblance to the "*Sweet-to-cat*" note of the Ruby-crowned Kinglet. One must, however, get very near to the singer in order to catch anything worth while, for the bird sings in the tiniest of voices.

The nest of the Blue-gray Gnatcatcher is, after the Hummingbird's, the daintiest in the woods. It is placed at any height from a dozen or fifteen feet to the limit of the trees. That seen in the illustration was taken from an elm tree at a height of sixty feet, and it is typical as to position, in showing the protecting branch above. It would be very difficult to find nests at these heights were it not for the fact that the birds fly freely and directly to the chosen spot, and occasionally betray their presence by buzzing while the nest is a-making. Both birds work with unflagging industry, and prolong their labors into the heated hours of each day. It is a rebuke to a sluggard to see one dashing up to a tree and whirling around in the nest that is to be, and laying off the cobwebs at such a furious rate. The walls of the nest are built up so high that only the tail of the sitting bird protrudes, looking curiously like a handle to this lichen-covered cup.

As soon as the young Gnatcatchers are able to make their wants known they repeat incessantly the *biz biz* notes of the parents, and thus the strenuous life of these most earnest little birds is begun at an early age.

and this bird is master of it all. Top side, bottom side, inside, outside—this bird is there, fearless, confident; in fact, he rather prefers traveling head downward, especially on the main trunk route. He pries under bark-scales and lichens, peers into crevices and explores cavities in his search for tiny insects, larvæ and insects' eggs—especially the latter. The value of the service which this bird and his close associates perform for the horticulturist is simply incalculable. There should be as heavy a penalty imposed upon one who wantonly killed a Nuthatch or a Chickadee, as upon one who entered an enclosure and cut down an orchard or a shade tree.



Taken at McConnellsville.

Photo by A. H. Morris

PATRONIZING THE FREE-LUNCH COUNTER.

The Nuthatch has a variety of notes, all distinguished by a peculiar nasal quality. When hunting with the troop, he gives an occasional softly resonant *tut* or *tuttut*, as if to remind his fellows that all's well. The halloo note is more decided, *tin*, pronounced à la Français. By means of this note and by using it in combination, they seem to be able to carry on quite an animated conversation, calling across from tree to tree. During the mating season and often at other times they have an even more decided and distinctive note, *quonk*, *quonk*, *quonk*, or *ho-onk*, *ho-onk*, in moderate pitch and with deliberation. Their song, if such they may be said to have, consists of a rapid succes-

sion of simple syllables, *tew, tew, tew, tew, tew*, which are musical, vibrant, and far-sounding, a sort of trumpeting, out of all proportion to the size of the bird.

The nest of the Nuthatch is placed in a cavity carefully chiselled out and usually at a great height in an elm tree or perhaps an oak. Both sexes share the labor of excavation, and when the cavity is somewhat deepened one bird removes the chips while the other delves. Like all the hole-nesting species of this family, but unlike the Woodpeckers, the Nuthatches provide for their home an abundant lining of moss, fur, feathers, and the like. This precaution is justified from the fact that they are early nesters—complete sets of eggs being found no later than the second week in April.

The male is a devoted husband and father, feeding the female incessantly during incubation, and with her sharing in the care of the large family long after many birds have forgotten their young. The young birds early learn to creep up to the mouth of the nesting hole to receive food when their turn comes; and they are said to crawl about the parental tree for some days before they attempt flight.

No. 104.

RED-BREASTED NUTHATCH.

A. O. U. No. 728. *Sitta canadensis* Linn.

Synonyms.—RED-BELLIED NUTHATCH; CANADIAN NUTHATCH.

Description.—*Adult male*: Crown and nape shining black; white superciliary lines meeting on extreme forehead; a black band through eye; remaining upper parts grayish blue; wings fuscous, unmarked; tail-feathers, except upper pair, black; the outer pairs subterminally blotched with white in retreating order; chin, and sides of head, and neck below the black, pure white; remaining under parts rusty or ochraceous-brown; bill short, subulate, plumbeous-black; feet dark brown. *Adult female*: Similar, but crown like the back, with only traces of black beneath; lateral head-stripe blackish; usually paler rusty below. *Immature*: Like adult female. Length, 4.25-4.75 (108.-120.6); average of seven Columbus specimens: wings 2.61 (66.3); tail 1.43 (36.3); bill .50 (12.7).

Recognition Marks.—Pygmy size; black and grayish blue above; rusty below; tree-creeping habits.

Nesting.—Not known to breed in Ohio. *Nest*, of grasses, feathers, etc., in a hole of tree or stub, usually at lower levels. *Eggs*, 4 to 6, white or creamy-white, speckled with reddish brown and lavender. Average size, .59 x .47 (15. x 11.9).

General Range.—North America at large, breeding from northern New England, northern New York, and northern Michigan northward, and southward

in the Alleghanies, Rocky Mountains, and Sierra Nevada; in winter south to about the southern border of the United States.

Range in Ohio.—Not uncommon, but irregular, spring and fall migrant. Sparingly resident in winter in central and southern Ohio, casually north,—regularly wherever pine or hemlock timber occurs.

THIS migratory species is more brightly colored as well as somewhat smaller than its resident cousin, the White-breasted. It is frequently found associated with the latter in winter, perhaps regularly from the Fortieth Parallel southward, altho it is never as numerous as the resident bird. Its common note somewhat resembles the *quonk* of the local species, but it is higher pitched—at least an octave higher, Dr. Brewer says—and very nasal, *quank*, *quank*, *quank*, or *nya-a*, *nya-a*.

During migrations the Canadian Nuthatch is frequently associated with the Warblers, and moves freely about the smaller limbs of orchard and shade trees, especially conifers. At such times its unexpected behavior is a little puzzling, but if observed closely it will usually be seen to include in its travels a tour of the tree-trunk in characteristic Nuthatch fashion.

Its nesting is entirely extralimital, but possesses interest because of its well-established custom of plastering the space immediately surrounding the entrance to its nesting hole with pitch or fir balsam for a distance of several inches. Whether this is done to insure a safe footing for itself, or as a guard against enemies is undetermined as yet.

No. 105.

BROWN-HEADED NUTHATCH.

A. O. U. No. 729. *Sitta pusilla* Lath.

Description.—*Adult*: Above grayish blue; top of head well down, including eye and nape, grayish brown, darker on borders; a central white spot on nape; wings fuscous; bend of wing whitish; traces of white on central edges of outer primaries beginning with the second, and in retreating order; tail-feathers, except central pair, black, tipped with grayish, the outer pairs with transverse white spot retreating and fading centrally; chin and sides of head below, white; remaining under parts sordid or dingy whitish; bluish ashy on flanks; bill stout, subulate, blackish above, lighter near base of lower mandible. *Immature*: Brown of head obscured by color of back; darker and more tawny below. length, 3.85-4.50 (97.8-114.3); wing 2.57 (65.3); tail 1.29 (32.8); bill .51 (13.).

Recognition Marks.—Pygmy size; grayish brown cap and tree-creeping habits distinctive.

Nesting.—Not known to breed in Ohio. “*Nest* of feathers, grasses, etc., generally near the ground, in a tree or stump. *Eggs*, 5 or 6, white or creamy white, heavily spotted or blotched with cinnamon- or olive-brown, .56 x .46 (14.2 x 11.7)” (Chapman).

General Range.—South Atlantic and Gulf States, north to southern Maryland and (casually?) Ohio, Missouri, etc.

Range in Ohio.—Accidental in northern Ohio. Reported by Kirtland.

THE sole claim which the Brown-headed Nuthatch has to notice in this work is that established many years ago by Dr. Kirtland, who said: “I once killed a specimen in the northern part of Ohio. Only one other instance¹ is on record of its wandering so far north, so that the occurrence must be deemed very unusual. The species is generally confined to the Gulf and South Atlantic coast states, where its favorite range is in the pine barrens of Georgia and the Carolinas. It is more sociable than the Ohio Nuthatches, moving about, except during the breeding season, in considerable companies, which keep up a sibilant chatter during meal time. The nesting is similar to that of the better known species, save that it is apt to be at lesser heights, and the warm lining is less in evidence.

No. 106.

TUFTED TITMOUSE.

A. O. U. No. 731. *Bæolophus bicolor* (Linn.).

Description.—*Adult*: Above ashy gray, deepest on top of head; forehead sooty black; a conspicuous crest; sides of head and below ashy white, strongly washed with rusty on sides and flanks; bill plumbeous-black; feet plumbeous. *In winter*: The back and, usually, edgings of wing and tail more or less tinged with olive; the lower parts tinged with brownish, especially on breast. *Immature*: Less distinctly black on forehead; not so rusty on sides; bill light, except along culmen. Length, 5.75-6.50 (146.1-165.1); wing 3.13 (79.5); tail 2.67 (67.8); bill .43 (10.9).

Recognition Marks.—Sparrow size; black forehead and ashy blue crest; plain coloration in ash, whitish, and rusty.

Nest, in a hole in stump, beech-stub, or tree, of leaves, bark, corn-pith and trash, lined with hair or feathers. *Eggs*, 5-8, white or creamy-white, evenly spotted and speckled with reddish brown. Average size, .71 x .55 (18. x 14.).

General Range.—Eastern United States to the Plains, north to northern New Jersey and southern Iowa; casual in southern New England. Resident throughout its breeding range.

Range in Ohio.—of general distribution throughout the state.

¹ In Michigan: See Whenton *ad loc.*

**TUFTED TITMOUSE***Parus bicolor*

♂ Life-size

"I don't know for the life of me what the fuss is all about, but I know there is the greatest commotion going on right under my nose. On a single branch of a scraggly hillside tree—said branch being horizontal, twelve feet long, and fifteen feet above the ground—there were gathered at practically one and the same time the following birds: Tufted Tits, three to six, Black-capped Chickadees, three or four, Carolina Wrens, three, Downy Woodpeckers, three, Wood Pewees, two or three, one Red-eyed Vireo, one Yellow Warbler, one Phoebe, an Indigo Bunting, a Redstart, one very small Crested Flycatcher and several English Sparrows—some twenty or more birds of at least twelve species—each vociferating, scolding, denouncing or at least anxiously inquiring, and many, for the lack of better employment, fighting withal. It only lasted half a minute after I arrived, but it was a stirring time while it was on, and I am all a-tremble with excitement myself. What does it all mean, anyway? The Tufted Titmice, I think, started the hubbub; but whether one of their youngsters was choking on a June bug, or had up and slapped its mother, I cannot tell." So runs the writer's note-book under date of June 17, 1902, in recording one of the most intense little episodes of bird life ever witnessed. It was just like those Titmice, anyway—inquisitive, irascible, hysterical, always kicking up a shindy among the birds. In some of their antics they are like spoiled children, but their very sauciness is their salvation.

The Titmouse is the major domo of the winter bird troop. His military crest marks him out for such an office, and his restless way of fussing up and down the line gives him a show of authority over the Nuthatches, Creepers, Woodpeckers, Chickadees, and Cardinals, which compose that motley company. He is, indeed, a most important personage, in his own eyes; but no one else takes him over seriously, and his pretensions are slyly encouraged by the knowing ones, as affording a prospective diversion amidst the tedium of winter.

The Tufted Tits come of hardy stock; altho somewhat less common in the northern portion of the state, there is no other evidence that they mind the severity of winter. The average Titmouse family, too, approaches near the proportions that our grandfathers believed in. With six or eight youngsters in a brood and two broods in a season, it is a wonder that they do not overrun the land.

Nests consist of well-lined cavities like those of the Chickadee, but the excavations more frequently follow natural lines; and for the sake of getting an easy start through an inconspicuous knot-hole, the birds will range up to thirty or forty feet in height. Less frequently deserted Woodpeckers' nests are used, and fresh holes are dug in green or rotten wood.

The *chee-y, chee-y* call of the Titmouse is one of the most familiar sounds of the woods and village groves. More loud and clear is the *Peter, Peter, or peto, peto* note of springtime. As a distinct modification of the first named note there is a rare musical *chöö-y, chöö-y*, which has in it much of the flute-

like character of the Wren's song. The latter bird is very apt to answer this cry with his "*Richelieu*" note, as tho he were challenged to utterance. If one is accustomed only to these clear whistled calls, it comes as a great surprise when the Titmouse bursts out with a *Chick-a-dee*, *Chick-a-dee-dee*, almost precisely like that of his black-capped cousin.



Taken near Columbus.

Photo by the Author.

"AN INCONSPICUOUS KNOT-HOLE."

A PAIR OF TITMICE NESTED HERE DURING THE SEASON OF 1903.

Under date of March 31st I find: "The neighboring woods are haunted, and have been for a week or more past, by a love-lorn Titmouse who repeats *Peto, peto, peto, peto* with rapid enunciation and wearisome iteration. The bird utters this cry in groups, as above, on an average of about thirteen times a minute, and keeps it up all day long. During these days he ranges high in the trees, but stops only ten or fifteen seconds in a place,—about long enough to repeat his burden four or five times. Then comes a hiatus of a few seconds, during which time he is flitting to another perch.

At a casual glance it looks as tho Mary Ann had retired

to the depths of some unknown knot-hole to escape this silly chap, and we heartily wish that we might follow suit."

No. 107.

CHICKADEE.

A. O. U. No. 735. *Parus atricapillus* Linn.

Synonyms.—BLACK-CAPPED CHICKADEE; BLACK-CAPPED TITMOUSE.

Description.—*Adult*: Top of head and nape shining black; throat dead black with whitish skirting posteriorly; a white band on side of head and neck, increasing in width behind; back and scapulars gray with an olivaceous cast and more or less admixture of buffy at the edges and as skirting; wings and tail dusky, more or less edged, especially on greater coverts and tertials, with ashy or whitish; breast and belly white; sides, flanks and crissum washed with buffy or light rusty (nearly whitish in summer); bill and feet dark. Rather variable in size; one adult specimen in the O. S. U. collections measures: wing 2.27 (57.7); tail 2.10 (53.3); bill .34 (8.6). Another: wing 2.70 (68.6); tail 2.57 (65.3); bill .38 (9.7). Length, 4.75-5.75 (120.6-146.1); average of eight Columbus specimens of medium size: wing 2.60 (66.); tail 2.44 (62.); bill .36 (9.1).

Recognition Marks.—Warbler size; black of head and throat, and general gray tone of remaining plumage. Not certainly distinguishable by plumage alone, except in the hand, from the next species; larger.

Nest, a heavy mat of moss, grasses, and plant-down, lined with feathers, hair or fur, in made hole or natural cavity of stump or tree, usually at lower levels. *Eggs*, 5-8, white, marked sparingly with reddish brown, in small spots, tending to gather about larger end. Average size, .58 x .47 (14.7 x 11.9).

General Range.—Eastern North America north of the Potomac and Ohio Valleys. Not strictly migratory, but roving irregularly south along southern boundary of range.

Range in Ohio.—Common in northern and sub-northern Ohio. Southern extension not yet clearly defined. "Abundant resident in northern and probably eastern Ohio. Not common winter visitor in central and southern Ohio" (Wheaton).

BY a subtle instinct every one connects the Chickadee with winter. Springtime gaiety is a cheap thing and is rated accordingly. Who could help being cheerful when the forests are heaving with blossom, and a thousand sweet odors are filling the nostrils? But here is a bird that loves to hear the north wind go *Ho-oo-oo-oo*, and whose good cheer is brought to its fullest perfection only by the teasing of the frost. If you have wandered out into the leafless woods to mourn for the departed joys of summer or to sigh for the return of spring, this little fellow hastens down from the tree-tops to comfort you, and to cry *Chick-a-dee, Chick-a-dee-dee-dee*. The beady little eyes sparkle all the while with merriment, and there is no such thing as sadness possible after a visit from the Titmouse troupe.

Chickadee's good cheer is partly explained by the fact that he has a very warm coat—he looks like a little muff himself—and by the fact that the sort of food he likes is reasonably plentiful in winter. The bird eats insects at all times of year, but his staple diet is formed by the eggs and larvæ of insects. These are found tucked away in the crevices of bark, or grouped on the under surface of the smaller limbs and persistent leaves. On this account the Black-cap must frequently hang head downward, and this he does very gracefully, using his tail to balance himself with, much as a boy does his



Taken near Columbus.

Photo by the Author.

"A CLINGING SNOW COMES AND BURIES THE NORTHERN HALF OF HIS HUNTING-GROUND."

legs in hanging from a "turning pole," swinging to and fro as if he thoroughly enjoyed it. Once in a while a clinging snow comes and buries the northern half of his hunting-ground. Then is the time to hang out a lump of suet, or to scatter bits of meat—unless your bounties are always claimed by the English sparrow.

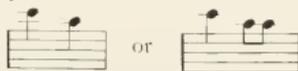
Besides the frequent repetition of its name, *Chickadee*, the bird has a brusque *tsc-day, tsc-day* of uncertain meaning, and a *day, day, day, day* of discomposure and indignation. The birds of a flock intent on feeding keep



CAROLINA CHICKADEE
Parus carolinensis
Life-size

DEPARTMENT OF AGRICULTURE, UNITED STATES GOVERNMENT, WASHINGTON, D. C.

track of each other by the utterance of a faint *tsip*; and this note serves as well for the guidance of friendly Creepers and other members of the winter troop. In contrast with these more prosaic sounds comes the mating call, *Svee-tee* or *Svee-tee-tee*, high-pitched, clear and sweet as a voice of home. The notes ring true and may be readily imitated by thin lips.



This song, if such it may be called, also serves a variety of purposes bordering on those of courtship, and its use by an observer often serves to call up a motley company of birds where before the woods were silent.

Contrary to the wont of most hole-nesting birds, the Chickadee believes in warm blankets. Into the chosen cavity, whether natural or artificial, the birds lug immense quantities of moss, wool, hair, or rabbits' fur, until the place is half filled; and the sitting bird, during the chilly days of April, is snug and warm.

Ordinarily a hole is dug by the birds in a rotten stub at a height of two or three feet. Sometimes a deserted nest of the Downy Woodpecker is used, but on the other hand, excavations are sometimes made in green wood. Several nests I have seen in willow and poplar saplings, and at a height of fifteen or twenty feet.

Young Chickadees are such cunning little creatures that the temptation to fondle them is often irresistible. The parents may have very decided views as to the propriety of such action, or they may regard you as some benevolent giant whose ways are above suspicion. Not infrequently the parent birds will venture upon the hand or shoulder to pursue their necessary offices, if their young are kindly entreated.

No. 108.

CAROLINA CHICKADEE.

A. O. U. No. 736. *Parus carolinensis* Aud.

Synonym.—SOUTHERN CHICKADEE.

Description.—*Adult*: Similar to preceding species, but averaging smaller; black of throat a little more extensive and sharply defined below, shining like that of crown; greater coverts *without* whitish edging, the edging of wing-quills and lateral tail-feathers less extensive, not whitish, but dull bluish ash; back, etc. uniform brownish ash; second primary appreciably longer than secondaries. Length, 4.25-4.65 (108-118.1); wing 2.47 (62.7); tail 2.10-2.50 (53.3-63.5); average 2.19 (55.6); bill .32 (8.1).

Recognition Marks.—Pygmy size; similar to preceding species, but usually decidedly smaller; plumage not positively distinguishable except in the hand; has different notes.

Nesting.—Substantially like that of preceding species. *Eggs*, not different. Average size, .60 x .50 (15.2 x 12.7).



Taken in Morgan County.

Photo by the Author.

A HAUNT OF THE CAROLINA CHICKADEE.

A NESTING HOLE MAY BE SEEN NEAR THE TOP OF THE CENTRAL STUB.

General Range.—Southeastern states, north to New Jersey and Illinois, west to Missouri.

Range in Ohio.—Common in southern, especially southeastern, Ohio. Regular but not so common in central and central-northern Ohio.

THIS bird bears so close a resemblance to the preceding species that great confusion has existed in regard to them both. In the main their habits are very similar, and the differential points sought to be established between them on this ground seem a little fanciful.

Dr. Wheaton reported the Carolina Chickadee common in the vicinity of Columbus, and considered it the only breeding species. He says, "Arrives about the middle of April; apparently departs for the south soon after the breeding season." I have never positively identified it here, and the eight local specimens in the O. S. U. collections all belong to the northern form. All recently seen in winter were certainly *P. atricapillus*, and I am inclined to think that the few local breeding birds are of the same species. On the other hand the two forms were found last winter, near the Licking Reservoir, mingling freely in a large winter troop, while *P. carolinensis* alone was found breeding there the following season. The latter bird is found exclusively in the southern part of the state, and in the Ohio River counties is one of the commonest of all birds.

The most satisfactory distinction between the two forms is that of song. The notes of the southern form are more varied, and once understood need never be confused with those of the Black-cap. The mating call usually consists of two doubled notes, *kuswécé, kuswécé*, and the first of each pair is lower than the other :



But in Lawrence County we heard a song of three syllables, of which the first was faintest and highest, and the remaining two showed an interval greater than the Black-cap. Sometimes the first note was raised to full rank, and we had a descending scale of three notes. We were repeatedly tricked by this Chickadee's note into looking for Cowbirds; but on second thought it was seen really to resemble more closely (and then only occasionally) that of the Rusty Grackle. In company the lesser Chickadee is given to the use of a peculiar sneezing note, *kechezawick, kechezawick*, by which it is possible to recognize him instantly. Sometimes the bird's entire repertoire is drawn upon at once, and there issues forth a wild medley of *day, day's*, sneezes and whistled calls, which together make up a sort of ecstatic love song.

No. 109.

BROWN CREEPER.

A. O. U. No. 726. *Certhia familiaris americanus* (Bonap.).

Description.—*Adults*: Above, dark brown, broadly and loosely streaked with ashy white; more finely and narrowly streaked on crown; rump bright cinnamon; wing-quills crossed by two whitish bars, one on both webs near base, the other on outer webs alone; greater coverts, secondaries, and tertials tipped with white; tail fuscous,—slightly decurved, open W-shaped at end, of elastic, acuminate feathers; below, soiled white, sometimes tinged with tawny on flanks and crissum; bill slender, decurved. Length, 5.00-5.75 (127-146.1); average of five Columbus specimens: wing 2.54 (64.5); tail 2.22 (56.4); bill .56 (14.2). Female averages a little smaller than male.

Recognition Marks.—Warbler size; singularly variegated in modest colors above; the only *brown* creeper.

Nesting.—Not known to breed in Ohio. *Nest*, of twigs, bark-strips, moss, etc., crowded behind a warping scale of bark. *Eggs*, 5-8, white or creamy-white, speckled and spotted with cinnamon-brown or hazel, chiefly in wreath about larger end. Average size, .61 x .47 (15.5 x 11.9).

General Range.—Eastern North America, breeding from the northern and more elevated parts of the United States northward, and casually further south; migrating southward in winter.

Range in Ohio.—Common fall and spring migrant. Winter resident in central and southern portions; found less commonly, or casually, in northern Ohio in winter.

DEAR, patient, plodding mortal! How we wish it were in our power to relieve him, if but for an hour, of the endless monotony of tree-climbing! But, no; he has scarcely reached the main branches of one tree-trunk when he lets go "like a bit of loosened bark," and brings up punctually at the base of another. With now and then a plaintive *chip* which is little better than a sigh, he hitches along the bark, winding spirally up the tree, and pausing at the end of every jerk to inspect the crevices for insects and their larvæ. Little attention is paid to man's presence and, indeed, the bird seems scarcely to indulge a thought above his task. Work, work, work,—while Titmouse is plotting mischief, and Chickadee is turning somersaults, this unimaginative clerk is adding up his endless columns and telling off the digits in a wiry, piping voice.

The Creeper knows that he is a near-sighted fellow, but he is sharp enough to depend on the wits of others. When the winter troop is ranging freely he follows close and pipes shrilly, "Wait for me, wait for me," if he thinks the bigger children are trying to give him the slip. I have watched a pair of them tagging a Nuthatch about from tree to tree as faithfully as a brace of poodles.

Yet he too has his little pleasures. One bug is not quite like another in bugginess, so that any bark rift may render up some entomological curiosity rare of form and gustable of juice. And when the lush days of springtime come, even this understrapper gets giddy and rushes out into space, jerking hither and thither in an aerial frenzy and cutting the most absurd figures; after which he comes back to his bark, beaming and panting, and expecting the plaudits of an admiring world. This spirited performance proves highly satisfactory to at least one witness, and prepares the way for that domestic joy in the Northland, which is not denied the humblest, and which lifts all mortals to an equal plane.

While with us the Creeper rarely sings, and its ordinary notes, *chip* and *tseep*, *tseep*, or "*creep*, *creep*, *cree*, *cree*," require careful distinction from those of the Golden-crowned Kinglet; but in its breeding haunts it is said to have a delicate and pleasing song.

No. 110.

MOCKINGBIRD.

A. O. U. No. 703. *Mimus polyglottos* (Linn.).

Description.—*Adults*: Upper parts ashy gray, sometimes with a brownish tinge; wings and tail dusky on exposed portions, with faint, grayish edging; primaries, except outer one, and secondaries broadly white at base,—the former nearly, and the latter entirely, concealed by the greater coverts, which are white with narrow blackish tips; also some edging on middle coverts and tertials; the outer pair of tail-feathers almost entirely, the next largely (on inner web), the next pair or pairs touched with, white; under parts soiled white, sometimes dingy or brownish, especially behind; bill black; feet dark. *Young*: Similar to adult, but browner above; speckled with dusky below. Length 9.00-11.00 (228.6-279.4); wing 4.45 (113.); tail 4.80 (121.9); bill .70 (17.8). Quite variable in all its dimensions. Female averages a little smaller.

Recognition Marks.—Robin size; a gray bird with a long tail, and exhibiting much white on wing in flight; unmistakable.

Nest, of twigs, weed-stalks, and trash, lined with rootlets, plant-down, hair, etc., placed at lower levels in thickets, orchard trees, etc. *Eggs*, 4-6, bluish white, greenish blue, or, rarely, buffy, spotted or blotched, chiefly near the larger end, with yellowish brown, cinnamon-brown or chestnut. Variable in size. Average .98 x .72 (24.9 x 18.3).

General Range.—United States south into Mexico. Rare or irregular north of about latitude 38°. Bahamas.

Range in Ohio.—Found frequently but not regularly during breeding season, in southern portion; breeds occasionally in southeast portion. Rare or accidental elsewhere. Formerly reported breeding near Cleveland. Casual in winter (two records).

THE Mockingbird is the acknowledged chief of American songsters, and is declared by many connoisseurs both at home and abroad to be the best in the world. Its claim to supremacy is stoutly contested by the friends of the Nightingale, and the endless discussion of their comparative merits still goes on. Instead of presuming to decide between the rival claimants, one may be permitted to point out the futility of comparisons. Enjoyment of bird music is so largely a matter of training, temperament and association, and the music itself so diverse in conception and execution, that comparisons are meaningless. As well try to decide the relative merits of the keys of E flat and C sharp, or of the violet and the blue rays of the solar spectrum. Things which belong to the same order may still be incomparable.

Certainly, however, as a mimic the Mockingbird has no peer. Nothing in bird song seems beyond him. His memory is prodigious and his artistic feeling admirable. Great individual differences exist among the performers. Other things being equal advancing age confers increasing skill. All male birds, except the very youngest, may be able to imitate accurately, but some impart an artistic interpretative quality, which enables them easily to surpass their models. Thus a caged Mocker belonging to a Dr. Golz of Berlin captivated the heart of cultured Europe, and the hall of avian fame is still ringing with his praises.

A captive specimen I once observed in Oberlin proclaimed unconsciously the history of his early life. He reproduced not merely the bird songs of the village, but those of the wildwood as well, where he must have been reared. Besides these the various songs and noises to be heard in the average bird-store were faithfully presented. Some of his mimicry was irresistibly fetching, and I stood rooted to the pavement as the bird sang from a suspended cage at some distance. What puzzled me most, however, about his performance was that he always stood silent whenever a bantam rooster, some two blocks or so away, crowed. When his mistress assured me that it was the Mockingbird that crowed, I could scarcely believe my ears. Having always heard the rooster at a distance the Mocker reproduced the sound in exactly the same way, with the ventriloquistic effort manifestly resulting. The crowing of the bantam was a favorite trick of his, and I noticed that he usually followed it by the scream of a Hawk. The challenge of the cock followed by the cry of his enemy was certainly as clever a piece of stage-work as ever a glee club did in a melange. In the course of a quarter of an hour songs and cries of the following birds were recognized: Robin, Cuckoo, Flicker, Red-headed Woodpecker, Red-eyed Vireo, Warbling Vireo, Yellow-breasted Chat, Purple Martin, Red-shouldered Hawk, Flycatchers (probably Green-crested) fighting, Barn-

Swallow, White-breasted Nuthatch, Wood Pewee, Baltimore Oriole, Parrot, Canary, and Rooster; besides these, numerous "baby calls" not quite clear. Among his many bird-store reminiscences I made sure at one time that the monkeys were quarreling in their cage. His torrent of borrowed songs was continually changing, like a kaleidoscope. I timed him once, and the tune was changed eighty-seven times in seven minutes. Of these I was able to recognize only fifty-eight as they flew—that of the Robin appearing twenty-two times.

The bird not only sings for hours at a time during the day, but often well into the night, or, in the mating season, practically all night. According to Nehrling, the daylight hours are largely occupied with imitations and renditions of other masters, while during the night the song is almost entirely original, exhibiting the full compass of a poet's emotions, but oftenest tender and sublime. Maurice Thompson has given us unrivalled descriptions of what he is pleased to call the "dropping song," an ecstasy of the nuptial season, during which the male descends step by step an aerial staircase, measured off by the periods of his own passion during a perfect tempest of song.

Mockingbirds are very domestic in their tastes, in the double sense of being both fond of their own home and of the haunts of men. With slight encouragement they will nest in nearby shrubbery, or even in clinging vines or upon the porch rails of a house. Their presence is a benediction to a farmyard, both for the excellent music they discourse, and for the spirited defense which the male makes against Hawks and other intruders.

The occurrence of the Mockingbird in Ohio is quite irregular. It has been recorded as a transient in the northern part of the state, but its appearance anywhere in the northern two-thirds is matter of surprise. Rev. W. F. Henninger reports it as very rare in the region of the lower Scioto. Messrs. Arrick and Morris of McConnelsville reported a little colony of them breeding near that place in the summer of 1896. During January of this year the same gentlemen sent me a specimen which had been taken on the 25th of that month from a federated troop of winter birds of the usual sorts. There was two inches of snow upon the ground at the time, but the Mocker was in excellent condition.

No. 111.

CATBIRD.

A. O. U. No. 704. **Galeoscoptes carolinensis** (Linn.).

Description.—*Adult*: Slate-color, lightening almost imperceptibly below; black on top of head and on tail; under tail-coverts chestnut, sometimes spotted with slaty; bill and feet black. Length 8.00-9.35 (203.2-237.5); wing 3.59 (91.2); tail 3.65 (92.7); bill .62 (15.8).

Recognition Marks.—Chewink size; almost uniform slaty coloration distinctive.

Nest, of twigs, weed-stalks, vegetable fibers, and trash, carefully lined with fine rootlets, placed at indifferent heights in bushes or thickets. *Eggs*, 4-5, deep emerald-green, glossy. Average size, .95 x .69 (24.1 x 17.5).

General Range.—Eastern United States and British Provinces, west regularly to and including the Rocky Mountains, irregularly to the Pacific Coast from British Columbia to central California. Breeds from the Gulf States northward to the Saskatchewan. Winters in the southern states, Cuba, and middle America to Panama. Bermuda, resident. Accidental in Europe.

Range in Ohio.—Of general distribution in summer; abundant.



Taken in Madison County.

Photo by the Author.

A GOOD PLACE FOR CATBIRDS.

THOSE who hold either a good or a bad opinion of the Catbird are one-sided in their judgment. Two, and not less than two, opinions are possible of one and the same bird. He is both imp and angel, a "feathered Mephistopheles" and "a heavenly singer." But this is far from saying that the bird lives a double life in the sense ordinarily understood, for in the same minute he is grave, gay, pensive and clownish. Nature made him both a wag and a poet, and it is no wonder if the roguishness and high philosophy become inextricably entangled. One moment he steps forth before you as sleek as Beau Brummel, graceful, polished, equal-eyed; then he cocks his head to one side and squints at you like a thief; next he hangs his head, droops wings and tail, and looks like a dog being lectured for killing sheep:—Presto, change! the bird pulls himself up to an extravagant height and with exaggerated gruffness, croaks out, "Who are you?" Then without waiting for an answer to his impudent question, the rascal sneaks off through the bushes, hugging every feather close to the body, delivering a running fire of cat-calls, squawks and expressions of contempt. There is no accounting for him; he is an irrepressible—and a genius.

The Catbird is at home anywhere in bushes and shrubbery. River banks are lined with them, and swampy tangles are thronged with them, but they also exhibit a decided preference for the vicinage of man and, if allowed to, will frequent the plum trees and raspberry bushes. They help themselves pretty freely to the fruit of the latter, but their services in insect-eating compensate for their keep a hundred-fold. Nests are placed almost anywhere at moderate heights, but thickety places are preferred, and the Carolina rosebush is acknowledged to be the ideal spot. The birds exhibit the greatest distress when their nest is disturbed, and the entire neighborhood is aroused to expressions of sympathy by their pitiful cries.

Comparing the scolding and call notes of a Catbird with the mewing of a cat has perhaps been a little overdone, but the likeness is strong enough to lodge in the mind and to fasten the bird's "trivial name" upon it forever. Besides a mellow *phut, phut* in the bush, the bird has an aggravating *mec-a-a*, and a petulant call note which is nothing less than *Ma-a-ry*. Cautious to a degree and timid, the bird is oftener heard in the depths of the thicket than elsewhere, but he sometimes mounts the tree-top, and the opening "*Phut, phut, coquillicot*"—as Mrs. Blanchan hears it—is the promise of a treat.

Generalizations are apt to be inadequate when applied to singers of such brilliant and varied gifts as the Catbird's. It would be impertinent to say: *Homo sapiens* has a cultivated voice and produces music of the highest order. Some of us do and some of us do not. Similarly some Catbirds are "self-conscious and affected," "pause after each phrase to mark its effect upon the audience," etc. Some lack originality, feeling, are incapable of sustained effort, cannot imitate other birds, etc. But some Catbirds are among the most

talented singers known. One such I remember, which, overcome by the charms of a May day sunset, mounted the tip of a pasture elm, and poured forth a hymn of praise in which every voice of woodland and field was laid under contribution. Yet all were suffused by the singer's own emotion. Oh, how that voice rang out upon the still evening air! The bird sang with true feeling, an artist in every sense, and the delicacy and accuracy of his phrasing must have silenced a much more captious critic than I. Never at a loss for a note, never pausing to ask himself what he should sing next, he went steadily on, now with a phrase from Robin's song, now with the shrill cry of the Red-headed Woodpecker, each softened and refined as his own infallible musical



Taken near Waverly.

Photo by Rev. W. F. Henninger.

AN EARLY NEST.

taste dictated; now and again he interspersed these with bits of his own none less beautiful. The carol of the Vireo, the tender ditties of the Song and Vesper Sparrows, and the more pretentious efforts of the Grosbeaks, had all impressed themselves upon this

musician's ear, and he repeated them, not slavishly, but with discernment and deep appreciation. As the sun sank lower in the west I left him there, a dull gray bird, with form scarcely outlined against the evening sky, but my soul had taken flight with his—up into that blest abode where all Nature's voices are blended into one, and all music is praise.



BROWN THRASHER

Thryothorus palustris

1. in Life-size

Illustrated from the collection of the
Smithsonian Institution, U.S. National Museum

No. 112.

BROWN THRASHER.

A. O. U. No. 705. *Toxostoma rufum* (Linn.).

Description.—*Adult*: Upper parts, including tail, warm cinnamon-brown, or tawny-cinnamon; paler, brownish gray, on forehead; sides of head gray, obscurely dotted or mottled with brown; wings dusky on concealed webs only; coverts tipped with dusky and white; outer tail-feathers sometimes faintly tipped with whitish, often much worn and frayed; under parts white or brownish white, silky, heavily spotted on sides of throat, breast and sides, with dark brown. The spots are brown-centered and dusky-edged, or solid dusky, tear-shaped, or wedge-shaped, and sharply defined on the silky background. Bill dark brown above; lower mandible yellow at base, but dusky at end; culmen curved near tip; feet brown. Length 10.50-12.00 (266.7-304.8); average of four Columbus specimens: wing 4.07 (103.4); tail 4.90 (124.5); bill .98 (24.9).

Recognition Marks.—Robin size; cinnamon-brown above; whitish and heavily spotted below; long tail and rather long bill.

Nest, of sticks, twigs, bark-strips and trash, lined with rootlets, horse-hair, or feathers, placed at medium heights in hedge-rows, orchard trees, or thorn thickets. *Eggs*, 4-5, sometimes 6, bluish or greenish white, sometimes buffy, thickly sprinkled all over with cinnamon, but usually most thickly near larger end. Average size, 1.07 x .80 (27.2 x 20.3).

General Range.—Eastern United States west to the Rocky Mountains; north to southern Maine, Ontario and Manitoba. Breeds from the Gulf States northward. Accidental in Europe.

Range in Ohio.—Regular but not abundant summer resident throughout the state.

THE last of this splendid trio of mocking singers is even more secretive than the others in its ordinary habits, and bolder yet in song. Early in spring the Thrashers steal northward up the river valleys, skulking along fence-rows or hiding in brush-heaps and tangles, and rarely discovering themselves to human eyes until the breeding ground is reached. Here, too, if the weather is unpropitious, they will mope and lurk silently; but as soon as the south wind repeats the promise of spring the Thrasher mounts a tree-top and clears his throat for action.

Choosing usually a spot a little way removed from the road, the singer sends his voice careering over field and meadow, lane and wood-lot, till all may hear him for a hundred rods around. What a magnificent aria he sings! Precise, no doubt, and conscious, but it is full-voiced and powerful. Now and then he lapses into mimicry, but for the most part his notes are his own—piquant, incisive, peremptory, stirring. There is in them the gladness of the

open air, the jubilant boasting of a soul untamed. Each phrase is repeated twice.

“That’s the wise thrush; he sings each song twice over,
Lest you think he never could recapture
The first fine careless rapture.”

He opens his bill wide, his body vibrates with emotion, and each note is graced by a compensating movement of the drooping tail.

Altho the Brown Thrasher does not make such hopeless confusion of jest and earnest as does the Catbird, there is still something of the buffoon about him, and his ways in the bush are not altogether above criticism. Possibly



Photo by E. B. Williamson.

NEST OF THE BROWN THRASHER.

with the best of motives, but still in a very annoying fashion the bird sneaks about through the brush and insists upon knowing your business. From time to time it utters a sharp repulsive *tsook*, and occasionally a suggestive *you-uh*, which makes one feel conspicuous and uncomfortable. The bird's eye too, with its orange iris, while it must be admitted to harmonize perfectly with the warm russet of the plumage, has a sinister cast which might prejudice the unthinking.



CAROLINA WREN
Thryothorus ludovicianus
About Life-size

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In defense of its home the Thrasher is almost fearless, often placing itself within reach of the observer's hand, and calling down upon him all the while the most dreadful woes. The female is a close sitter, and portraits *in nido* are not difficult to obtain.

Nesting sites are various, but the bird shows a decided preference for those which are naturally defended by thorns. Nearly every full sized *Crategus* (thorn apple) has at one time harbored a nest. Hedges of osage-orange are well patronized—almost exclusively so in the prairie states further west—and the honey-locust tree is not forgotten. Next after these come wild plum thickets, grape-vine tangles, brush heaps, fence corners, and last of all, the ground.

No. 113.

CAROLINA WREN.

A. O. U. No. 718. *Thryothorus ludovicianus* (Lath.).

Synonyms.—GREAT CAROLINA WREN; MOCKING WREN.

Description.—*Adult*: Above rufous-brown or rusty (quite variable as to shade), duller or darker on head, brighter on rump, with concealed downy white spots; wings and tail like back, but finely and rather indistinctly barred with dusky; a conspicuous, white superciliary line, bordered indistinctly behind with blackish; a broad, rusty stripe behind eye; under parts white, much washed with tawny or pale rusty across the breast and on the flanks and lower belly; sometimes the rusty is so pronounced that only the chin remains whitish; lower tail-coverts heavily barred with dusky; bill and feet brown, the former decurved. Length 5.50-6.00 (139.7-152.4); average of ten Columbus specimens: wing 2.32 (58.9); tail 1.90 (48.3); bill along exposed culmen .67 (17.).

Recognition Marks.—Warbler to Sparrow size; largest of the Ohio Wrens.

Nest, a bulky mass of grasses, hay, leaves, and trash, lined with fine grasses, feathers, etc., placed in some cavity or cranny of stump, log, brush-pile or the like. *Eggs*, 4-6, white, cream-white or light buff, thickly speckled with cinnamon-brown and lavender, well distributed or wreathed about larger end. Average size, .73 x .59 (18.5 x 15.).

General Range.—Eastern United States north to southern New York, southern Michigan and southern Nebraska; west to the Plains. Rare or casual in southern New York and southern Ontario. Resident nearly throughout its range.

Range in Ohio.—"Abundant in southern, common and resident in middle, rare in northern Ohio." Wheaton's statement still applies.

WHEN the bird man settles down into a shady nook and begins screeching, that is, making a sharp kissing sound on the back of the hand, to attract

the birds, the very first fellow to come is always the Carolina Wren. He had been catching spiders about the root of a fallen tree, but like the true Athenian, he will hear the new thing at whatever cost. Bustling, tittering, and talking excitedly to himself he hurries up. At the first sight of the stranger he jumps as if shot, but he has presence of mind enough to dodge behind a log and take chattering counsel of his fears. Then, more cautiously, he emerges and begins a systematic search. Now scampering along a log with tail in air like a chipmunk, now squatting in sudden alarm, or craning and bubbling apprehensively, the little feathered ferret turns up first on this side of you, then on that, until his curiosity is thoroughly satisfied;—it is only a man.

This little brown pixie is the most energetic and tireless creature of the woods. He not only manages to mind his own business but everybody else's as well, and if one only knew how to approach him, he would doubtless be found a perfect encyclopedia of wood-lore. He chatters with the squirrels, explores crannies with mice, climbs trees with the Creepers, and sings with the best of them. Altho quite devoted to the brush-heaps and dells of the deeper woods, he is also thoroughly at home in the vicinity of man, and often patronizes our porches and outbuildings with the freedom of a House Wren.

It is, however, as a songster that the Great Carolina Wren has endeared himself to the hearts of all. Those who are accustomed only to the sputtering of the House Wren are taken completely by surprise when they hear the clear, rich bugle notes of this *maestro*. Indeed, for clear enunciation, vivacity, and carrying power, they yield the palm to none. No two individuals are ever quite alike in their major notes or song, but the following are characteristic songs: *Cle-er-hé-heav, cle-er-hé-heav, cle-er-hé-heav, clé-cw; Richelieu, Richelieu, Richelieu.* One merry wight on the banks of the Muskingum, inquired of the passing canoeists, *D'y'ever tee-ter? Je-ver tee-ter? Je-ver tee-ter?* We confessed that we sometimes did, but felt obliged to decline teetering with him upon a nodding sunflower. A Cincinnati bird as gay, shouted, *Sugar to eat, sugar to eat, sugar to eat, sugar,* in a most convincing way; but this invitation also was declined.

On all occasions this nervous little creature appears to be full of a sort of compressed air, which escapes from time to time in a series of mild explosions, like the lid of a tea-kettle being jarred up and down by steam. When the valve is opened a little wider there follows an *accelerando* rattling call, which seems to be modeled after the chirr of the red squirrel; and when the throttle is held wide open the rattling notes are telescoped together into an emphatic "*kurr'r'st.*" which brings one up standing.

Carolina Wrens are given great credit for secretiveness. Their nests, when placed in brush piles or under logs are not always easy to locate, and even when they select a cranny in an outbuilding, the visiting parents will sometimes exhibit all the caution of spies in approaching their nest. But of-

tener they leave a trail of sound, at least, behind them. The first nest the writer ever found was exhibited gratuitously by a proud father. The bird signalled the stranger and then hopped along in plain sight, only stopping now and then to be sure that he was being followed, until he came to a sycamore stump. Here he thrust his head into a cranny and buzzed excitedly. The bird-man drew near and noted a single egg, while the Wren capered about with every appearance of delight at the admiring glances cast upon the bird-to-be.

This particular nest completely filled the cavity it occupied, and even the



Taken in McConnelsville.

Photo by the Author.

BE IT EVER SO MUSSY THERE'S NO PLACE LIKE HOME.

entrance was "boarded up" until it represented the precise dimensions of the occupant. One of the latest pieces of furnishing consisted of a half-length of sloughed-off snake skin, which rolled easily into the center of the nest when disturbed. The nest shown in the accompanying cut is a typical accumulation of trash such as the Carolina Wren delights in. The mass to the left, poorly defined in the dim light of the tool-house, represents the "cock's nest," an incomplete structure where the male bird spends his nights.

Carolina Wrens are very prolific. Not only are seven or eight eggs sometimes laid for a sitting, but three broods are raised in a season, and these so

rapidly that the male bird often has the care of two broods while his mate is occupied with the third. The breeding season is quite variable. Many first broods are raised in March; some in February. Professor Butler records an instance in which fresh eggs were found on the first day of December, at Brookville, Indiana.

The species is on the increase, notably in the northern part of the state. It first made its appearance in Lorain County in 1899, and has been found there regularly since. In the summer of 1901 the bird was found by Professor Jones and myself on Isle St. George and on East Sister Island, the latter in Canadian territory. The geographical movement of this species is a typical example of that "northward trend," to which Professor Jones has so ably called attention in his recent Catalog of the Birds of Ohio.

No. 114.

BEWICK WREN.

A. O. U. No. 719. *Thryomanes bewickii* (Aud.).

Description.—*Adults*: Above, dark olive-brown, or rufous-brown with an olive tinge; the rump with downy, concealed, white spots; wings showing at least traces of dusky barring,—sometimes complete on tertials; tail blackish on concealed portions, distinctly and finely barred with blackish on exposed portions; the outer pairs of feathers white-tipped and showing white barring, incipient or complete on terminal third; a narrow white superciliary stripe, and an indistinct dark stripe through eye; under parts grayish white, dark tinged on sides and flanks; under tail-coverts heavily barred with dusky; bill dark brown above, lighter below; culmen slightly decurved. Length 5.00-5.50 (127.-139.7); wing 2.08 (52.8); tail 2.01 (51.1); bill .53 (13.5).

Recognition Marks.—Warbler size; known from House Wren by superciliary stripe, and whiter under parts, mostly unbarred; more deliberate in its movements.

Nest, anywhere in holes or crannies about buildings, posts, brush-heaps, etc.; of twigs, lined with grasses and miscellaneous soft materials; not distinguishable from those of *T. acdon*. *Eggs*, 4-6, sometimes 7, white, speckled—usually not so heavily as in *T. acdon*—with cinnamon- or rufous-brown, and purplish, uniformly, or chiefly in wreath near larger end. Average size, .66 x .48 (16.8 x 12.2).

General Range.—Eastern United States, west to the eastern border of the Plains and eastern Texas; rare east of the Alleghanies north of Maryland and Delaware; north irregularly in the Mississippi Valley to southern Minnesota. Migratory only along the northern border of its range.

Range in Ohio.—Formerly unknown in the state, it has recently made its appearance, and is on the increase in some parts of southern and central Ohio,—notably in the Valley of the Scioto.

BARELY known as an Ohio bird at Wheaton's time (its nest having been found once in Circleville) the Bewick Wren today is *the* Wren of Southern Ohio. Since his arrival the House Wren has "left the country" and has been entirely replaced by this better songster and thriftier species. When the chilling blasts of February, 1899, howled over the Scioto Valley bottoms and crept into every ravine of the hills, the thermometer standing at 30° below zero, when Goldfinches and Sparrows dropped out of the sky, exhausted and frozen, the cheerful voice of the Bewick Wren was loudly ringing from some favorite perch. How I had to envy him! While man and



*Taken near
Waverly.*

A NEST IN THE WOOD-PILE.

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

beast were seeking shelter from this cold, and the earth was groaning under its burden of snow, he, undaunted, gay and light-hearted, was singing in anticipation of the joyous springtime. And again when trees and flowers bloom, or when midsummer's sun is blazing down in unabated fury, his song greets us at our home. Not a voluble merry chatter, like the House Wren's, but clear, strong and cheery, easily heard for a quarter of a mile,—such is the song of Bewick's Wren. Easily distinguished from the former he has the same teasing days about him,—now peeping into some corner, now examining the woodpile, now crawling into a knot-hole of the smoke-house, creeping forth like a mouse at the next moment, whisking his erectly-carried tail, watching you carefully though fearlessly, he all of a sudden mounts some fence-post, pours forth his proud metallic notes, drops down into the chicken yard, disappears in the pig pen, mockingly scolds at you, sings again, and is willing to keep this game up all day. We do not know which to admire more.



Taken near Waverly.

Photo by Rev. W. F. Henninger.

BEWICK WREN'S NEST IN OLD TIN CUP.

site. The arm-pit of an old coat, old tin and coffee cups, log cabin nooks and corners, often contain his nest. This is rather bulky, composed of sticks, grass, wool, horse and cow hairs, quail and chicken feathers, snake skins and other rubbish. From four to eleven eggs are found in it in April and again in June. They are white with various spots of lilac-gray and brown, and my observations lead me to the belief that the eggs of the older birds are more heavily spotted than those of the younger ones, and the spots are also better distributed over the entire surface of the eggs, while those of younger birds show more minute spots, and these generally in a wreath around the blunt end of the egg. In about two weeks the eggs are hatched and a jolly crowd of youngsters soon joins the parents in their insect-hunt, and the next year we have the pleasure of hearing still oftener this bold, bright songster in his native haunts. May the Bewick Wren live and thrive forever in the rugged hills of southern Ohio, to bring joy and cheerfulness to the hearts of men!

W. F. HENNINGER.

his beautiful song or his confidence in man.

The height of these actions is reached at the mating season, for he is the bird that makes life sweet about the old log cabins, deserted woodpiles and half-destroyed orchards. Almost any place in the neighborhood of man is chosen for a nesting

The advance of this sturdy species has progressed at least as far as Columbus, and there is every reason to suppose that it will ere long possess the state. In North Columbus, where the author has observed them for three years past, the following song-forms have been noted: *Sweéc-terr, willy, willy, willy*; *Sweeter-weé-lie, dong-kerwillits*; *Sweé-terr-link-i-tinki-tinkits*; *Swee-wee, choav, chee-weely*. The rendition of any of the above forms occupies about two and a half seconds, and the clear ringing notes are quite unlike any other bird song.

No. 115.

HOUSE WREN.

A. O. U. No. 721. *Troglodytes aedon* Vieill.

Description.—*Adult*: Above, grayish rufous-brown, duller and lighter on fore parts; brighter and more rufous on rump, which has concealed downy white spots; back indistinctly barred with dusky; wings on exposed webs and tail all over distinctly and finely dusky-banded; sides of head speckled grayish brown, without definite pattern; below, light grayish brown, indistinctly speckled or banded with darker brownish on fore parts; heavily speckled and banded with dusky and whitish on flanks and crissum; bill black above, lighter below; culmen slightly curved; feet brownish. Length 4.50-5.25 (114.3-133.3); wing 2.08 (52.8); tail 1.67 (42.4); bill .47 (11.9).

Recognition Marks.—Warbler size; brown above, lighter below; everywhere more or less speckled and banded with dusky, brownish, or white.

Nest, of sticks and trash, lined with fine grasses or chicken-feathers, placed in bird-boxes, holes in orchard trees, crannies of out-buildings, etc. *Eggs*, 4-8, white, heavily speckled, and usually more or less tinged with pinkish brown or vinaceous, with a wreath of a heavier shade about the larger end. Average size, .64 x .51 (16.3 x 13.).

General Range.—Eastern United States and southern Ontario, west to Indiana and Louisiana. Resident from the middle districts southward.

Range in Ohio.—Common throughout the state in towns and villages, and about farm-houses. It is being replaced in some localities of southern and central Ohio by the preceding species.

MANY years ago this cunning little bird gave up its woodland retreats and adopted the white man. The unconscious lure which led to this result was doubtless the abundance of toothsome worms, which had already adopted man's apples and currants and cabbages. Since that time the discerning have always put out boxes and gourds or cans to encourage the residence of this sprightly and valuable friend. The mutual benefit association thus formed worked admirably, until the advent of the English Sparrow, but since that

evil day the Wren has fought a losing battle. If one could believe in the survival of the "sassiest" the odds would still be in his favor, but the Wren alas! has not learned the value of coöperation, and his tiny beak, however valiant, is no match for the concerted action of the aliens. The American Wren must go.

For some reason, too, the near presence of its cousins, the Carolina and Bewick Wrens, does not seem to be congenial to this bird, and it has retired before the latter species, apparently without dispute, from the southern third of the state; and one finds it commonly only where neither of the others is to be found.

Arriving about the middle of April, the House Wren—or Jenny Wren, as it is fondly called—proceeds immediately to renovate last year's quarters, and to season the task with frequent bursts of song. In singing his joyous trill the bird reminds one of a piece of fireworks called a cascade, for he fills the air with a brilliant bouquet of song, and is himself, one would think, nearly consumed by the violence of the effort. But the next moment the singer is carrying out last year's feather-bed by great beakfuls, or lugging into some cranny sticks ridiculously large for him.

During the nesting season both birds are perfect little spitfires, assailing mischievous prowlers with a fearlessness which knows no caution, and scolding in a voice which expresses utmost contempt. The rasping notes produced on such an occasion remind one of the energetic use of a nutmeg-grater by a determined housewife.

In providing a nest the birds usually seek to fill up the chosen cavity, whatever it be—an old coffee pot, a peck measure, a sleeve or pocket of an old coat, or a mere knot-hole—with sticks and trash. Within this mass, or preferably on the top of it, a heavily-walled cup of chicken feathers is placed, and these are held in shape by a few horse-hairs. I once found a set of Wren's eggs in the deserted nest of a Barn Swallow. Even here the second tenants had relined the nest, until there was barely room to insert the fingers between the edge of the nest and the roof of the building.

Not infrequently, whether because of the incessant persecutions of the Sparrows, or from a recurrence of ancestral tastes, nests are found far from any human habitation, in a crevice of a worm fence or in a decayed stump at the edge of the swamp.

Eggs are deposited at the rate of one each day, and incubation lasts fourteen days. Two and often three broods are raised in a season, the eggs of each succeeding set usually being less in number.

No. 116.

WINTER WREN.

A. O. U. No. 722. *Olbiorchilus hiemalis* (Vieill.).

Description.—*Adult*: Above, warm dark brown (burnt umber), duller before, brighter on rump, obscurely waved or barred with dusky on back, wings, and tail; edges of four or five outer primaries spotted with white at regular intervals; concealed white spots on rump scarce, or almost wanting; a pale superciliary line; sides of head speckled, brownish and white; under parts everywhere finely mottled, speckled, or barred,—on the throat and breast mingled brownish (Isabellacolor) and white, below dusky and white, dusky predominating over brown on flanks and crissum; bill comparatively short, straight, blackish above, lighter below; feet light brown. Length about 4.00 (101.6); average of five Columbus specimens: wing 1.86 (47.2); tail 1.26 (32.); bill .40 (10.2).

Recognition Marks.—Pygmy size; dark brown above, lighter below; more or less speckled and barred all over; tail shorter than in preceding species.

Nesting.—Not known to breed in Ohio. *Nest*, of moss and a few small twigs, lined heavily with feathers, placed among roots of upturned tree, or in cranies of decayed stumps, brush-heaps, etc., *Eggs*, 5-7, white or creamy-white, dotted finely but sparingly with reddish brown; occasionally blotched with the same; sometimes almost unmarked. Average size, .69 x .50 (17.5 x 12.7).

General Range.—Eastern North America, breeding from the northern parts of the United States northward, and in the Alleghanies south to North Carolina. Winters from about its southern breeding limits southward.

Range in Ohio.—Regular during migrations, wintering southerly. Found in winter sparingly in the central portions, casual northerly. A few linger in northern Ohio into late May and are suspected of breeding.

WHEN the woods are bare and the leaves are huddled into corners to escape the teasing of a November wind, a little brown shadow flashes up for an instant at the edge of a brush heap, chitters apprehensively once or twice, and is gone again, just as you have made up your mind that the Winter Wren has come. A cautious foot resting on the heap and stirring gently will bring him out again to estimate the danger. How deliciously absurd it is! this tiny creature with its sparkling eyes and dumpy form. Its tail, too, is turned up until it leans the other way, and it gives one the impression that the bird will tumble forward and nothing to prevent it.

When driven from one cover the Winter Wren instantly seeks another, and spends little time a-wing, except as it flits from branch to branch. It is to be found principally along river bottoms and in ravines, under overhanging banks, and about upturned roots of trees. Some occasionally venture into the

barus and outbuildings of country places, or may spend the winter about the wood-pile.

The only note heard commonly is the *chitit* or *chirr* of alarm but the full song is sometimes heard in May in at least the northern tier of counties; and there is just a suspicion that it occasionally breeds. Its song is a surprising effort for a bird so tiny and obscure,—a cataract of tinkling, splashing, gurgling sounds, and wanton trills, lasting for seven or eight seconds.

No. 117.

SHORT-BILLED MARSH WREN.

A. O. U. No. 724. *Cistothorus stellaris* (Licht.).

Description.—*Adult*: Above everywhere streaked or barred with blackish, ochraceous, and white; a little clearer ochraceous on hind neck; wings and tail heavily barred, the former only on exposed webs, a very faint, pale, superciliary line; below white, clear on throat and belly, washed with ochraceous-buffy on sides of neck, across breast, and on sides; flanks and crissum darker ochraceous or tawny; bill short, dark brown above, pale below; culmen slightly decurved; feet light brown. Length 3.75-4.50 (95.3-114.3); wing 1.92 (48.8); tail 1.55 (39.4); bill .40 (10.2); bill from nostril .30 (7.6).

Recognition Marks.—Pygmy size; heavy dorsal and coronal streaking in three shades distinctive; unbarred below as compared with preceding species; bill much shorter than that of the next species.

Nest, near the ground, in a tussock of grass,—a globe formed by bringing the live grass-blades together, and interweaving with vegetable fibers and dried grasses; lined with plant-down; entrance in side. *Eggs*, 6-8, pure white, unmarked,—unique in this respect in the family. Av. size, .64 x .49 (16.3 x 12.5).

General Range.—Eastern United States, north to southern New Hampshire, southern Ontario, southern Michigan, and southern Manitoba, and west to the Plains. Winters in the South Atlantic and Gulf States.

Range in Ohio.—Rare, or casual in suitable localities,—the Reservoirs, Lake Erie swamps, etc. Has been known to breed near Cleveland.

IT has never been the author's good fortune to meet with this Wren but once, and then during migrations, when close study was impossible. It is at best a rare visitor with us, and nothing has recently come to light regarding its nesting in the state.

Mr. Ernest E. Thompson says, "This is less a species of the deep water marshes than is the long-billed member of the genus, and often it will be found



LONG-BILLED MARSH WREN

Catantopus palustris

Life-size

in places that are little more than damp meadows. It is remarkably mouse-like in habits and movements, and can be flushed only with extreme difficulty."

Mr. B. T. Gault, of Glen Ellyn, Illinois, found this bird not uncommon in the grassy marshes near Sheffield, Indiana, and describes the song as altogether different from that of *T. palustris*. "In the manner of delivery it forcibly reminds one of the song of the Dickcissel (*Spiza americana*) altho, of course, it was not near as loud. They were quite shy but would allow one to approach within forty or fifty feet of them, when they would dart down into the thick grass, from which it was almost impossible to dislodge them. The specimens that I secured were shot from small bushes on the edge of the marsh, these being the favorite stands occupied by the male in song."

According to Dr. Brewer, the nests of this species are constructed in the midst of tussocks of coarse, high grass, the tops of the blades being bent down and interwoven into a stout spherical ball, closed on every side save for one small aperture. The strong wiry grass of the tussock is also shot through and interlaced with finer materials brought in by the bird. The whole structure is almost impervious to rain; and the inner nest is composed of grasses and fine sedges, lined with vegetable downs.

No. 118.

LONG-BILLED MARSH WREN.

A. O. U. No. 725. *Telmatodytes palustris* (Wils.).

Description.—*Adult*: Crown blackish; forehead light brown centrally,—color sometimes spreading superficially over entire crown; hind neck and scapulars light brown (raw umber, nearly); rump warm russet; a triangular patch on back blackish, with prominent white stripes and some admixture of russet; wings and tail fuscous or blackish on inner webs, brown with black bars on exposed surfaces; sides of head whitish before, plain brown or punctate behind; a white superciliary line; under parts white, tinged with ochraceous-buff across breast, and on sides, flanks, and crissum; bill and feet as usual. Length 4.50-5.50 (114.3-139.7); av. of seven Columbus specimens: wing 1.84 (46.7); tail 1.58 (40.1); bill along culmen .53 (13.5); from nostril .43 (10.9).

Recognition Marks.—Warbler size; brown and black pattern of back with white stripes distinctive; white superciliary stripe and long bill as distinguished from preceding species. Strictly confined to cat-tails and long grass of marshes.

Nest, a ball of reeds and grasses, chinked and lined with cat-tail down, with entrance in side, and suspended in growing cat-tails (*Typha latifolia*) or bushes. *Eggs*, 5-9, so heavily speckled with olive-brown or sepia as to appear almost uniform brown. Av. size, .66 x .48 (16.8 x 12.2).



Taken at the Licking Reservoir.

Photo by the Author.

NEST OF THE LONG-BILLED MARSH WREN.

General Range.—Eastern United States, north to Massachusetts, Ontario and southern Manitoba; wintering from the Gulf States south to eastern Mexico, and locally as far north as southern New England. Breeds throughout its United States and British American range.

Range in Ohio.—Regular summer resident in suitable localities,—the Reservoirs, Lake Erie shore, etc. Found elsewhere, but not commonly, during migrations.

TO the Coots and Rails belong the ooze-infesting morsels of the swamp, but all the little crawling things which venture into the upper story of the waving cat-tail forest belong to the Long-billed Marsh Wren. Somewhat less cautious than the water-fowl, he is the presiding genius of flowing acres, which often have no other interest for the ornithologist. There are only two occasions when the Marsh Wren voluntarily leaves the shelter of the cat-tails or of the closely related marshables. One of these is when he is driven south by the migrating instinct. Then he may be seen skulking about the borders of streams, sheltering in the weeds or clambering about the drift. The other time is in the spring, when the male shoots up into the air a few feet above the reeds, like a ball from a Roman candle, and sputters all the way, only to drop back, extinguished, into the reeds again. This is a part of the tactics of his courting season, when, if ever, a body may be allowed a little liberty. For the rest he clings sidewise to the cat-tail stems or sprawls in midair, reaching, rather than flying from one stem to another. His tail is cocked up and his head is thrown back, so that, on those few occasions when he is seen, he does not get credit for being as large as he really is.

The Wren is very free with his metallic clattering notes. As in the case of the Carolina Wren, the bird gives one the impression of being chock-full, and of needing only to turn a convenient spigot to let out a flood of sounds. There is a mixture of clicking, lisping, purring, and sweet sputtering about them all which is not at all unpleasant to the ear.

In nesting this Wren weaves a compact ball of dead reeds and grasses a little deeper than wide, and slung midway of the growing reeds, as in the illustration. The interstices of the structure are tightly packed with vegetable cotton, cat-tail down, or moss,—never mud,¹ in my experience. Entrance is effected through a hole in the side, often difficult to discover, and the interior is snugly lined with down or purloined feathers. While the female is incubating, the male has a curious habit of constructing other nests in the neighboring reeds. These cocks' nests vary from three to twenty in number, and spread out through an area of a square rod or two. Some are never

¹ Dr. Wheaton says, "It is composed of coarse grasses and mud", but he is evidently misled by Dr. Brewer's statement, which, however accurate it may be for New England, certainly does not apply to nests in this region.

finished, but others are quite as carefully built as the one actually occupied. The purpose of this strange habit is unknown, except as it is probable that the male spends the night in one of them.

No. 119.

PURPLE MARTIN.

A. O. U. No. 611. **Progne subis** (Linn.).

Description.—*Adult male*: Rich, purplish black, glossy and metallic; wings and tail dead black. *Adult female*: Similar to male, but blue-black of upper parts restricted and duller; forehead, hind-neck, and lower parts sooty gray, paler on belly and crissum. Bill black, stout, and broad at the base, decurved near tip; nostrils exposed, circular, opening upward; feet moderately stout. *Young males*: resemble adult female but are somewhat darker, the steely blue appearing at first in patches. Length 7.25-8.50 (184.2-215.9); av. of eight Columbus specimens: wing 5.75 (146.1); tail 2.72 (69.1); bill, breadth at base .73 (18.5); length from nostril .33 (8.4).

Recognition Marks.—Chewink size; the largest of the Swallows; blue-black, or blue-black and sooty-gray coloration.

Nest, of leaves, grass, and trash, in some cavity, usually artificial,—bird-boxes, gourds, etc. *Eggs*, 4-5, rarely 6, pure, glossy white. Av. size, .98 x .73 (24.9 x 18.5).

General Range.—Temperate North America, north to Ontario and the Saskatchewan, south to the higher parts of Mexico, wintering in South America.

Range in Ohio.—A common resident of cities and villages; seldom abundant, but locally restricted and variable.

FROM time immemorial the garrulous Martin has enjoyed the hospitality of man. Before the advent of the Whites the Indian is said to have prepared for the yearly return of the Martin by trimming the boughs from some saplings hard by the wigwam, and "leaving the prongs a foot or two in length, on each of which he hung a gourd or calabash properly hollowed out" for the birds' accommodation. The white men were quick to follow the example set, and for many years Martin-houses, some of them quite ornate, have been a familiar feature of village and country places. These artificial quarters are exclusively used in the prairie states, but here, where timber has been so abundant, a considerable proportion have either never abandoned the ancestral fashion of nesting in hollow trees or old Woodpecker holes, or else have been driven back to it by the English Sparrows. The Martins have suffered

much at the hands of these notorious pests, and their great reduction in numbers throughout the state is doubtless due largely to this cause.

Arriving about the middle of March, in the southern part of the state, and from the first to the middle of April in the northern tier of counties, the Martins are apt to wait quietly about their houses until the weather settles. Cold days are spent altogether within doors, and a cold snap at this season is sure to decimate the species, for the bird feeds exclusively upon insects. Their food is not confined to the smaller insects, as in the case of the other Swallows, but bees, wasps, dragonflies, and some of the larger predatory beetles are consumed.

The birds mate soon after arrival. Old nests are renovated and new materials are brought in,—straw, string, and trash for the bulk of the nest, and abundant feathers for lining. They are very sociable birds, and a voluble flow of small talk is kept up by them during the nesting season. The song, if such it may be called, is a succession of pleasant warblings and gurglings, interspersed with harsh rubbing and creaking notes. A particularly mellow *coo, coo, coo* recurs from time to time, and any of the notes seem to require considerable effort on the part of the performer.

Purple Martins are not only brave in defense of their young, but often go a little out of the way to pick a quarrel with strangers. Hawks are set upon fearlessly and driven out of bounds, and the birds' presence in the barnyard is appreciated on this account. There is besides a running fight to be kept up with Wrens, Bluebirds, and English Sparrows, for possession of the home box. So far as I have been able to observe, however, the birds are not molested by the sturdier Tree Swallows, as is said to be the case in New England. In Northern Illinois the nesting houses are habitually shared

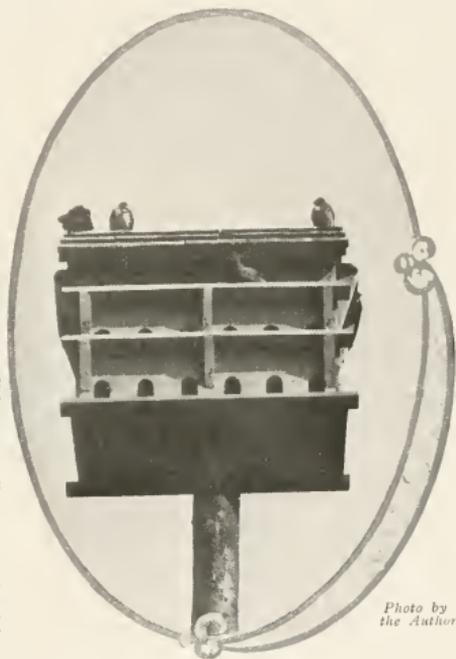


Photo by
the Author.

THE MARTIN-HOUSE.

with the last named species, and the birds seem to have reached a *modus vivendi* on peaceable grounds.

At the end of the breeding season the Martins are no longer confined to the nesting site, but range freely by day, and gather in large companies to roost at night. Sometimes the ridge or cornice of a building is used for this purpose, but oftener the birds resort to some unfrequented woodland or out-of-the-way place. In the summer of 1901 we saw upwards of a thousand of them roosting in the hackberry trees of North Harbor Island, and had reason to believe that the company represented not only the entire population of the Lake Erie Islands, but a considerable number from the Canadian and Ohio mainland as well.



No. 120.

CLIFF SWALLOW.

A. O. U. No. 612. *Petrochelidon lunifrons* (Say).

Synonyms.—EAVE SWALLOW; REPUBLICAN SWALLOW.

Description.—*Adult*: A prominent whitish crescent on forehead; crown, back, and an obscure patch on breast steel-blue; throat, sides of head, and nape deep chestnut; breast, sides, and a cervical collar brown-gray; belly white or whitish; wings and tail blackish; rump pale rufous,—the color reaching around on flanks; under tail-coverts dusky. *In young birds* the frontlet is obscure or wanting; the plumage dull brown above, and the throat blackish with white specks. Bill and feet weak, the former suddenly compressed at tip. Length 5.00-6.00 (127.-152.4); wing 4.35 (110.5); tail 2.00 (50.8); bill from nostril .22 (5.6).

Recognition Marks.—"Warbler size," but comparison inappropriate.—better say "Swallow size"; white forehead and rufous rump. Found in colonies.

Nest, an inverted stack-shaped, or declined retort-shaped structure of mud, scantily or well lined with grass, and depending from the walls of cliffs, sides of barns under the eaves, and the like. *Eggs*, 4-5, white, spotted, sometimes scantily, with cinnamon- and rufous-brown. Av. size, .82 x .55 (20.8 x 14.).

General Range.—North America, north to the limit of trees, breeding southward to the Valley of the Potomac and the Ohio, southern Texas, southern Arizona, and California; Central and South America in winter. Not found in Florida.

Range in Ohio.—Not common summer resident. Locally abundant.

NOTHING so charms the vision of the small boy of egg-collecting proclivities as the sight of a long double row of mud bottles under the eaves of a huge hay-barn. Here at last are nests as he has dreamed of them, not the solitary baskets close hidden under a cover of protecting green, but nests out in the open, nests by the dozen—"nests to burn" as he excitedly tells himself, while he runs to besiege the farmer host for a ladder. If he climbs toward the coveted nests, anxious heads, wearing a white frown, are first thrust out at the mouths of the bottles, and then the air becomes filled with flying Swallows, charging about the head of the intruder in bewildering mazes, and filling the air with strange frangible cries, as tho a thousand sets of toy dishes were being broken. The neck of the mud flask must first be broken off before the hand can be inserted, and then the lad will find four or five speckled eggs, reposing upon the scantiest lining of straw or upon the bare mud bottom.

In building, the Swallows repair to some river bank or mud hole, and secure a pellet of mud, kneading it in the beak until the required consistency is reached, and then pressing it firmly against the chosen wall. The little mason uses its beak for both hod and trowel, and it frequently experiences no little difficulty in laying the foundations of its nest on a smoothed or painted surface. Formerly, of course, the Cliff Swallows built only against the faces of cliffs or clay banks, as they do in the West to-day in immense numbers. Now, however, they are found only on the outside of buildings, easterly, and are quite at the mercy of man's reception.

The history of this species in Ohio cannot certainly be written. It was once supposed that all "Republican" Swallows were invaders from the West, but evidence of their aboriginal occupancy of New York and some of the New England states has more recently come to light; and it is not improbable that colonies were to be found in Ohio before the advent of the white man. Audubon noted a colony at Newport, Kentucky, in 1819. Dr. Kirtland in 1838, speaks of them as having recently extended their settlements to several buildings in the western part of Cincinnati, and noted a company that same season building their nests on a barn in the northern part of Columbiana County. Dr. Wheaton in 1880 regarded the Cliff Swallow as a "very common summer resident." Today it is not at all common through any considerable section, and I have found it nesting but twice, both times in Lorain County. Its recent

defection is unquestionably due to the presence of the English Sparrows; and the unlucky farmer now has to support a gibbering swarm of grain-eating birds, where before he enjoyed the gratuitous services of a graceful host of insect-destroyers.

No. 121.

BARN SWALLOW.

A. O. U. No. 613. *Hirundo erythrogaster* Bodd.

Description.—*Adult*: Above lustrous steel-blue; in front an imperfect collar of the same hue; forehead chestnut; lores black; throat and breast rufous; the remaining under parts, including lining of wings, more or less tinged with the same, according to age and season; wings and tail blackish, with purplish or greenish reflections; tail deeply forked, the outer pair of feathers being from one to two inches longer, and the rest graduated; white blotches on inner webs (except on middle pair) follow the bifurcation. *Immature*: Forehead and throat paler; duller or brownish above; lateral tail-feathers not so long. Length about 7.00 (177.8); wing 4.75 (120.6); tail 3.00-4.50 (76.2-114.3); bill from nostril .24 (6.1).

Recognition Marks.—Aerial habit; rufous of throat and under parts; forked tail; nest *inside* the barn.

Nest, a neat bracket or half-bowl of mud, luxuriously lined with grass and feathers, and cemented to a beam of barn or bridge. *Eggs*, 3-6, of variable shape, —oval or elongated; white or pinkish white and spotted with cinnamon or amber. Av. size, .76 x .55 (19.3 x 14.).

General Range.—North America at large. Perhaps the most widely and generally distributed of any American bird. Winters in Central and South America.

Range in Ohio.—Of universal distribution. Not so plentiful as formerly.

IT takes six sorts of Swallows to make an Ohio summer, but we call that day spring when the pleasant twitterings of the Barn Swallows are to be heard in the land. The airy voyageurs have come many a league this morning, but they have time to peep into the old nests, and to make the empty rafters ring once or twice with their merry *tisic, tisic*, before they are out again to skim the meadows for an early breakfast. The very poetry of motion is theirs as they ply up and down above the clover tops, or rise at a thought to take an insect high in the air. See them, too, above the village horse-pond, skurrying after the nimble flies, now dipping into the water and just parting its surface, and now steeple lengths aloft, floating and fleeing in "higher plane curves" of flight. Surely all Swallows are graceful, but he of the forked tail is unsurpassed.



BARN SWALLOW
Hirundo erythrogaster
½ Life-size

We may take it as an especial mark of the confiding nature of this bird that its nest is placed *inside* the barn, and we shall not be far astray so far as the bird's disposition is concerned. But under primitive conditions it is a cave dweller, and like Phœbe, has simply done the easiest thing upon the advent of civilization. At the head of a romantic lake in the West I once came upon a little grotto, which could be entered only from the water—or the air. In a space the size of a small room were half a dozen nests of this Swallow

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Swallows
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a f t e r t h e f a m i l i e s — o n e o r t w o e a c h s e a s o n , a s t h e c a s e m a y b e — h a v e b e e n s u c c e s s f u l l y b r o u g h t o u t , t h e b i r d s j o i n t h e m s e l v e s i n g r e a t r o v i n g c o m p a n i e s w h i c h e m b r a c e t h e i r o w n a n d o t h e r k i n d s . T h i s b r o a d d e m o c r a c y o f t a s t e i s n e v e r m o r e c l e a r l y i l l u s t r a t e d t h a n w h e n f o u r o r f i v e s o r t s a r e s e e n l i n e d u p t o g e t h e r o n a t e l e g r a p h w i r e .



Taken in Delaware County.

Photo by the Author.

A BARN SWALLOW'S NEST.

No. 122.

TREE SWALLOW.

A. O. U. No. 614. **Iridoprocne bicolor** (Vieill.).

Synonym.—WHITE-BELLIED SWALLOW.

Description.—*Adult male*: Above, lustrous steel-blue or steel-green; below, pure white; lores black; wings and tail black, showing some bluish or greenish luster; tail slightly forked. *Female*: Similar to male, but duller. *Immature*: Upper parts mouse-gray instead of metallic; below whitish. Length about 6.00 (152.4); wing 4.57 (116.1); tail 2.19 (55.6); bill from nostril .25 (6.4).

Recognition Marks.—Aerial habits; steel-blue or greenish above; pure white below.

Nest, in holes in trees or, rarely, in bird houses, plentifully lined with soft materials, especially feathers. *Eggs*, 4-6, pure white,—pinkish white before removal of contents. Av. size, .75 x .54 (19.1 x 13.7).

General Range.—North America at large, breeding from the Fur Countries south to New Jersey, the Ohio Valley, Kansas, Colorado, etc.; wintering from South Carolina and the Gulf States southward to the West Indies and Guatemala.

Range in Ohio.—Common spring and fall migrant. Not common summer resident, except in a few favored localities.

ONE Swallow does not make a summer, but a little twittering company of them faring northward makes the heart glad, and fills it with a sense of exultation as it responds to the call of these care-free children of the air. This remark applies to Swallows in general, but particularly to Tree Swallows, for in their immaculate garb of dark blue and white, they seem like crystallizations of sky and templed cloud, grown animate with the all-compelling breath of spring. They have about them the marks of high-born quality, which we cannot but admire as they spurn with a wing-stroke the lower strata, and rise to accept we know not what dainties of the upper air.

The Tree Swallow is a lover of the water, and in our latitude he is detained for the summer only by the larger bodies, especially the reservoirs. In the summer of 1902 they were found to be very common at the Lewiston Reservoir, where they nested in the numerous stubs,—the water-killed remnants of previous forests. The birds are not themselves able to make excavations in the wood, but they have no difficulty in possessing themselves of others birds' labors. Old holes will do if not too old, but I once knew a pair of these Swallows to drive away a pair of Flickers from a brand new nesting-hole, and to occupy it themselves.

Among the writer's earliest oölogical recollections are those of a little stub sticking out of the muck and saw-grass of an Illinois swamp. A neat-

looking hole about eight feet up prompted instant attack. A hand was about to enter the coveted approach, when crack! went the stump, and down went the small boy with the stub on top of him. But the mud was as soft as a feather-bed and my first thought was for the eggs. There they were, four delicate pink beauties, spilled out upon the black mud, but unbroken. The nest cavity was filled within three or four inches of the entrance with chicken feathers, and the sides were lined with them to the very edge of the hole. Taking the least possible toll, one egg, I carefully replaced the others, then dragged the stub several rods to an old fence, where I bound it fast with wire to an upright post. The parent birds accepted the proffered amends; the set was completed, and a handsome brood raised.

In many localities Tree Swallows are prompt tenants of bird houses. This does not seem to be largely their habit in Ohio; doubtless because suitable nesting sites in trees are still abundant. A pair once built their nest in a sort of tower attic, just inside of a hole which a Flicker had pierced in the ceiling of an open belfry of a country church. When in service the mouth of the swinging bell came within two feet of the brooding bird. One would think that the Swallows would have been crazed with fright to find themselves in the midst of such a tumult of sound; but their enterprise fared successfully, as I can testify, for at the proper time I saw the youngsters ranged in a happy, twittering row along the upper rim of the bell-wheel.

No. 123.

BANK SWALLOW.

A. O. U. No. 616. *Riparia riparia* (Linn.).

Synonym.—SAND MARTIN.

Description.—*Adult*: Upper parts plain, brownish gray; wings fuscous; throat and belly white; a brownish gray band across the breast; a tiny tuft of feathers above the hind toe. There is some variation in the extent of the pectoral band; it is sometimes produced indistinctly backward, and sometimes even interrupted. Length 5.00-5.25 (127.-133.3); wing 3.95 (100.3); tail 1.97 (50.); bill from nostril .20 (5.1).

Recognition Marks.—Smallest of the Swallows; throat white; brownish gray pectoral band on white ground.

Nest, at end of tunnels in banks, two or three feet in; a frail mat of straws and grasses and occasionally feathers. Breeds usually in colonies. *Eggs*, 4-6, sometimes 7, pure white. Av. size, .70 x .49 (17.8 x 12.5).

General Range.—Northern Hemisphere; in America south to West Indies, Central America, and northern South America; breeding from the middle districts of the United States northward to about the limit of trees.

Range in Ohio.—Abundant summer resident in localities providing suitable nesting sites. More common northerly.

THE life of a Swallow is so largely spent a-wing that our interest in it centers, even more than in the case of other birds, upon that time when it is bound to earth by family ties. We are scarcely conscious of the presence of the Bank Swallows until one day we see a great company of them fluttering about a sand bank, which overlooks the river, and busily engaged in digging the tunnels which are to shelter their young for that season. These birds are regularly gregarious, and their nesting colonies frequently number hundreds of pairs.

The birds usually select a spot well up, within a foot or two of the top of a nearly perpendicular bank of clay or sand, and dig a straight, round tunnel three or four feet long. If, however, the soil contains stones, a greater length and many turns may be required to reach a safe spot for the slight



Taken in Lorain County.

Photo by the Author.

THE BANK.

enlargement where the nest proper is placed. The bird appears to loosen the earth with its closed beak, swaying from side to side the while, and, of course, fallen dirt or sand is carried out in the mouth. Sometimes

the little miner finds a lens-shaped tunnel more convenient, and I have seen them as much as seven inches in width by only two in height. While the colony, especially if small, usually occupies a straggling horizontal line of holes, their burrows are not infrequently to be seen in loose tiers, in which case the bank presents a honeycombed appearance.

Communal life seems a pleasant thing to these Swallows, and there is usually a considerable stir of activity around the quarters, and a good deal of

social twittering and gyrating. The wonder is that the rapidly moving parts of this aerial kaleidoscope never collide, and that the cases of turning up at the wrong number are either so few or so amicably adjusted. The nesting season is, however, beset with dangers. Weasels and their ilk sometimes find entrance to their burrows; and they are also an easy prey to untaught small boys; while the undermining of the river or the lapping waves sometimes precipitate an entire colony—at least its real and personal property—to destruction. As an instance of the last, I remember once coming upon a large colony on the Lake Erie shore. Recent rains, added to the basal encroachment of the waves, had dislodged an extensive layer from the face of the nesting bluff, to a depth of two or three feet. The catastrophe had evidently taken place only a day or two before, and egg-shells and nesting materials were freely mingled through the fallen clay; yet the foolish birds had gone right to work again upon the same treacherous site, and in the colony of, say, five hundred birds, a hundred nests were already under way.

Bank Swallows are perhaps the least musical of their kind—unless we except the Rough-winged species, which is naturally associated with them. They have, however, a characteristic twitter, an unmelodious sound, like the rubbing together of two pebbles. An odd effect is produced when the excited birds are describing remonstrant parabolas at an intruder's head. The heightened pitch in the notes of the rapidly approaching bird followed instantly by the lower tone of full retreat, is enough to startle a slumbering conscience in one who meditates mischief against a Swallow's home.

No. 124.

ROUGH-WINGED SWALLOW.

A. O. U. No. 617. *Stelgidopteryx serripennis* (Aud.).

Description.—*Adult*: Warm brownish gray or snuff-brown, including throat and breast; thence passing insensibly below to white of under tail-coverts; wings fuscous. *Young birds* exhibit some rusty edging of the feathers above, especially on the wings, and lack the peculiar, recurved hooks on the edge of the outer primary. Size a little larger than the last. Length 5.00-5.75 (127-146.1); wing 4.30 (109.2); tail 1.85 (47.); bill from nostril .21 (5.3).

Recognition Marks.—Medium Swallow size; throat not white; warmish brown coloration, and brownish suffusion below fading to white on belly. It is easy to distinguish between this and the preceding species if a little care is taken to note the general pattern of under parts.

Nest, in crevices of cliffs and shale banks, at end of tunnels in sand banks, or in crannies of bridges, etc.; made of leaves, grasses, feathers, and the like,—bulky or compact according to situation. *Eggs*, 4-8, white. Av. size, .74 × .51 (18.8 × 13.).

General Range.—United States at large, north to Connecticut, southern Ontario, southern Minnesota, British Columbia, etc., south through Mexico to Costa Rica. Breeds throughout United States range and south into Mexico.

Range in Ohio.—Commonly distributed along streams; less common north-erly.

SCIENCE has long denied to this bird the right to shine in its own light, and has always used the preceding species as a foil, or background of comparison, in describing this one. Nor is it easy to break with the precedent now hoary with age. The Rough-winged Swallow is very like the Bank Swallow, but it differs thus and so and so. In the first place it has those curious little hooklets on the edge of the wing (specifically on the outer web of the first primary)—nobody knows what they are for. They surely cannot be of assistance in enabling the bird to cling to perpendicular surfaces, unless, indeed, it be head downward—a habit which, so far as I am aware, has never been observed. It is easy to see how the bird might brace its roughened wings against the sides of its burrow to prevent forcible abduction, but it is not so easy to see who would want to coerce the gentle creature in any such way.

Again the Rough-winged Swallow has a steadier, rather more labored flight than that of his foil. Its aerial course is more dignified, leisurely, less impulsive and erratic. In nesting, altho it may include the range of the Sand Martin, or even nest side by side with it, it has a wider latitude for choice and is not hampered by local traditions. If it burrows in a bank it is quite as likely to build near the bottom as the top. Crevices in shale walls or stone quarries, crannies and abutments of bridges, or even holes in trees are utilized. Dr. Wheaton sites many instances of birds nesting about brick buildings, some of which were in the busiest parts of Columbus. One guileless bird I knew excavated a nest in a little bank of an ungraded lot only three feet above the sidewalk of a prominent street in Seattle.

Unlike the Bank Swallows the Rough-wings do not colonize to any extent, but are rather solitary. A single pair may choose a site in some sheltered spot of a steep shalebank far from kith or kin, or again several pairs may be attracted to the same gravel pit by its easy conditions.

Further than this the species under consideration resembles the other bird quite closely in notes, in habits, and in general appearance, being distinguishable only by a sharp eye in accordance with the suggestions given above. It seems certain that the habits of the species are undergoing a considerable and

rapid change. The birds are adjusting themselves readily to the new conditions brought in by civilization, and are steadily increasing in numbers. In many localities in the middle and southern portions of the state they may be reckoned, after the Barns, our commonest Swallows.



Taken near Sugar Grove.

Photo by the Author.

ROUGH-WINGED SWALLOWS HAVE AN EYE TO BEAUTY

A PAIR OF THE BIRDS ARE NESTING IN ONE OF THE CRANNIES JUST ABOVE THE CENTER

No. 125.

BOHEMIAN WAXWING.

A. O. U. No. 618. *Ampelis garrulus* Linn.

Description.—*Adults*: A conspicuous crest; body plumage soft, grayish-brown or fawn-color, shading by insensible degrees between the several parts, back darker, passing into bright cinnamon-rufous on forehead and crown, and through dark ash of rump and upper tail-coverts into black of tail; tips of tail feathers abruptly yellow (gamboge); breast with a vinaceous cast, passing into cinnamon-rufous of cheeks; a narrow frontal line passing through eye, and a short throat-patch velvety black; under tail-coverts deep cinnamon; wings blackish-ash, the tips of the primary coverts and the tips of the secondaries on outer webs, white; tips of primaries on outer webs bright yellow, whitening outwardly; the shafts of the rectrices produced into peculiar flattened red "sealing-wax" tips; bill and feet black. Length about 8.00 (203.2); wing 4.61 (117.1); tail 2.56 (65.); bill .47 (11.9).

Recognition Marks.—Chewink size; grayish-brown coloration. As distinguished from the much more common Cedar-bird: belly *not* yellow; white wing-bars; under tail-coverts cinnamon.

Nesting.—Does not breed in Ohio. Like that of next species. *Eggs*, larger. Av. size, .98 x .69 (24.9 x 17.5).

General Range.—Northern portions of northern hemisphere. In North America, south in winter irregularly to Pennsylvania, Ohio, Illinois, Kansas, southern Colorado, and northern California. Breeds north of United States; also, possibly, in the mountains of the West.

Range in Ohio.—Irregular and rare in northern portion in winter.

PERHAPS we shall never know just why these gentle Hyperboreans spend their winters now in New England, now in Wisconsin, now in Washington, or throughout the northern tier of states at once. Their southward movement is doubtless dictated by hunger, and the particular direction may be determined in part at least by the prevailing winds. Years have passed since any have been seen in Ohio, but they are likely to reappear any winter. Usually they appear in flocks of several hundred individuals, and it is asserted on what seems to be good authority¹; that millions were once seen on the Powder River in Wyoming in flocks rivalling in extent those of the Wild Pigeons.

The Northern Waxwing is a bird of unrivalled beauty, even surpassing that of the Cedarbird, which it closely resembles in appearance and habits. When with us it feeds by preference upon the berries of the mountain ash and the red cedar, and more rarely upon persimmons. Its life history is as yet imperfectly known, altho it has been found breeding near the Yukon and Anderson Rivers. It has even been surmised to breed irregularly in the mountains of the United States.

¹ See Coues' "Birds of the Northwest," p. 92.



BOHEMIAN WAXWING
Ampelis garrulus
LATE-SIZE.

No. 126.

CEDAR WAXWING.

A. O. U. No. 619. *Ampelis cedrorum* (Vieill.).**Synonyms.**—CEDAR-BIRD; CHERRY-BIRD; CAROLINA WAXWING.

Description.—*Adults*: A conspicuous crest; extreme forehead, lores, and line through eye velvety-black; chin blackish, fading rapidly into the rich grayish-brown of remaining fore-parts and head; a narrow whitish line bordering the black on the forehead and the blackish of the chin; back darker, shading through ash of rump to blackish-ash of tail; tail-feathers abruptly tipped with gamboge yellow; belly sordid yellow; under tail-coverts white; wings slaty-gray, primaries narrowly edged with whitish; secondaries and inner quills without white markings, but bearing tips of red "sealing-wax"; the tail-feathers are occasionally found with the same curious, horny appendages; bill black; feet plumbeous. Sexes alike, but considerable individual variation in number and size of waxen tips. *Young*, streaked everywhere with whitish, and usually without red tips. Length 6.50-7.50 (165.1-190.5); wing 3.70 (94.); tail 2.31 (58.7); bill .40 (10.2).

Recognition Marks.—Sparrow size; soft grayish-brown plumage; crest; red sealing-wax tips on secondaries; belly yellow; wings without white bars or spots, as distinguished from preceding species.

Nest, a bulky affair of leaves, grasses, bark-strips and trash, well lined with rootlets and soft materials; placed in crotch or horizontally saddled on limb of orchard or evergreen tree. *Eggs*, 3-6, dull grayish blue or putty-color, marked sparingly with deep-set, rounded spots of umber or black. Av. size, .86 x .61 (21.8 x 15.5).

General Range.—North America at large, from the Fur Countries southward. In winter from the northern border of the United States south to the West Indies and Costa Rica. Breeds from Virginia, Kentucky, Kansas, etc., northward.

Range in Ohio.—Of regular occurrence in the State, but irregular or variable locally. Resident, but less common in winter.

ONE does not care to commit himself in precise language upon the range of the Cedar-bird, or to predict that it will be found at any given spot in a given season. The fact is Cedar-birds are gypsies of the feathered kind. There are always some of them about somewhere, but their comings and goings are not according to any fixed law. A company of Cedar-birds may throng the barren maples in your front yard some bleak day in December; they may nest in your orchard the following July; and you may not see them on your premises again for years—unless you keep cherry trees. It must be confessed (since the shade of the cherry tree is ever sacred to Truth) that the Cedar-bird, or "Cherry-bird," has a single passion, a consuming desire for cherries. But don't kill him for that. You like cherries yourself. All the more reason then why you should be charitable toward a brother's weakness. Besides he is so handsome, handsomer himself than a luscious cherry even. Feast your

eyes upon him—those marvelous melting browns, those shifting saffrons and Quaker drabs, those red sealing-wax tips on the wing-quills (he is canning cherries, you see, and comes and carry the vision to ries. Or if there are breadth of mosquito-



*Taken in
New Brunswick.*

*Photo
by the
Author.*

A PARTNERSHIP AFFAIR.

MR. C. H. MORRIS FURNISHED THE BAGS AND THE CEDAR-BIRD
DID THE WORK.

squeak. Indeed, so high-pitched is this extraordinary note, that I find several of my friends cannot hear it at all, even when the Waxwings are squeaking all about them. It is an almost uncanny spectacle, that of a company of Waxwings sitting aloft in some leafless tree early in spring, erect, immovable, like soldiers on dress parade, but complaining to each other in that faint, penetrating monotone. It is as tho you had come upon a company of the Immortals, high-removed, conversing of matters too recondite for human ken, and who survey you the while with Olympian disdain. You steal away from the foot of the tree with a chastened sense of having encountered something not quite understandable.

The dilatory habits of these birds are well shown in their nesting, which they put off until late June or July for no apparent reason. They build a thick-walled, well-set structure of weed-stalks, roots, grass, etc., oftenest in orchard

mes provided).
the table with
not enough for
netting over
Feast your eyes, I say,
you, and a few less cher-
you both, draw a decent
the tree, and absolve
your soul
of murder-
ous intent.
Remember,
too, if you
require self-
justifica-
tion, that

earlier in the season he
devoured an enormous
quantity of canker
worms and other simi-
lar pests, so that he has
a clear right to a share
in the fruit of his labors.
The Cedar-bird being
so singularly endowed
with the gift of beauty, is
denied the gift of song. He
is the most nearly voiceless
of any of the American
Oscines, his sole note be-
ing a high-pitched, sibilant

trees, especially apple. In their nesting they are usually half gregarious, so that a small orchard may contain a dozen nests, while another as good, a



CANNING SEASON.

Photo by J. B. Parker.

THE FEMALE CEDAR-BIRD IS FEEDING THE YOUNG RIPE CURRANTS.

little way removed, has none. During the breeding season the birds are unusually silent, but when discovered stick closely to their nests even to the point of being taken by the hand. It is on this account, as well as for their sleekness, that they are favorite birds with the photographer.

No. 127.

NORTHERN SHRIKE.

A. O. U. No. 621. *Lanius borealis* Vieill.**Synonyms.**—GREAT NORTHERN SHRIKE; BUTCHER-BIRD.

Description.—*Adult*: Upper parts clear, bluish gray, lightest—almost white—on upper tail-coverts; extreme forehead whitish; wings and tail black, the former with a conspicuous white spot at base of primaries, the latter with

large, white terminal blotches on outer feathers, decreasing in size inwardly; a black band through eye, including auriculars; below grayish white, the feathers of the breast and sides narrowly tipped with dusky, producing a uniform, fine vermiculation which is always present; bill blackish, lightening at base of lower mandible; feet black. *Young* birds are barred or washed with grayish brown. The plumage of adult is sometimes overcast above with a faint olivaceous tinge. Length 9.25-10.75 (235.-273.1); wing 4.50 (114.3); tail 4.19 (106.4); bill .72 (18.3).

Recognition Marks.—Robin size; gray and black coloring; sharply hooked bill; breast vermiculated with dusky, as distinguished from next species.

Nesting.—Does not breed in Ohio. *Nest*, a well constructed bowl of sticks, thorn-twigs, grasses, and trash, heavily lined with plant-down and feathers; in bushes or low trees. *Eggs*, 3-7, dull white or greenish gray, thickly dotted and spotted with olive-green, brown, or lavender. Av. size, 1.07 x .78 (27.2 x 19.8).

General Range.—Northern North America; south in winter to the middle portions of the United States. Breeds north of the United States except sparingly in northern New England.

Range in Ohio.—Not uncommon spring and fall migrant; occasional winter resident.

FLITTING like a gray ghost in the wake of the cheerful hosts of Juncos and Redpolls, comes this butcher of the North in search of his accustomed prey. If it is his first visit south he posts himself suddenly upon the tip of a neighboring tree and rasps out an inquiry of the man with the gun. Those that survive these indiscretions are thereafter faintly descried in the distance either in the act of diving from some anxious summit, or else winging swiftly over the inequalities of the ground.

All times are killing time for this bloodthirsty fellow, and even in winter he "jerks" the meat not necessary for present consumption—be it chilly-footed mouse or palpitating Sparrow—upon some convenient thorn. In spring the north-bound bird is somewhat more amiable, being better fed, and he pauses from time to time during the retreat to sing a strange medley, which has won for him the name "Great Electric Buzz." This is meant for a love song, and is doubtless so understood by the proper authorities, but its rendition sometimes produces about the same effect upon a troop of Finches which a catamount's serenade has upon the cowering deer.

It is quite the fashion nowadays to discover, after much scrutiny of rudely arrested meals, that various bird-devils are not really so black as they have been painted. This is welcome news to those of us who have become so thoroughly identified with the bird-world as to desire easy shrift for its sins; but one wonders in the case of the Butcher-bird at least, whether the laity will receive it. It is high doctrine for one who has really seen the cruel beak dyed red with



Illustration by J. S. MILLER, 1965
Nest: COURTESY OF THE U.S. ARMY, 1965

LOGGERHEAD SHRIKE
Lanius ludovicianus
About 1/2 Life-size

some winter songster's gore. I, for one, am willing to accept with becoming humility the verdict of the leading stomachologists with reference to most birds, but when one of them extols the moderation of the Northern Shrike, I reserve the right to do a little incredulous grumbling. It is true that the bird sometimes allows his fond glance to fall upon the English Sparrow—and in so far he is above reproach—but it is not recorded that the creature exercises proper discrimination between the beggar in fustian and our gentle guests of woodland and weed-lot. No doubt, too, our northern brigand would eat mice or grasshoppers by preference, and does when opportunity offers, but it is no fault of ours that we cannot set such viands before his butchery in winter, so that he must needs fall to eating our Juncoes and Goldfinches. The slaughter of Horned Larks and the terrorizing of an innocent band of Tree Sparrows are offences not easily forgiven. Have at thee, Sirra! My gun is loaded!

No. 128.

MIGRANT SHRIKE.

A. LOGGERHEAD SHRIKE.

A. O. U. No. 622. *Lanius ludovicianus* Linn.

Description.—*Adult*: Dark bluish gray above; rump just perceptibly lighter; lower scapulars tipped with black; wings black, a small white spot at base of primaries; the inner quills narrowly tipped with white; tail black, the outer pair of feathers broadly tipped with white, and the succeeding pairs less so or not at all; below grayish white, sordid on breast, but everywhere strongly contrasting with upper parts; narrow frontal line, including nasal tufts, lores and ear-coverts, black,—continuous, and passing mostly below eye; bill and feet black. *Immature*: Colors of adult less strongly contrasted; lower parts washed with brownish; loreal bar obscure; more or less vermiculated with dusky all over (in younger birds), or upon the under parts alone; ends of wing-quills, coverts, and tail-feathers often with ochraceous or rusty markings. Length 9.00 (228.6); wing 3.78 (96.); tail 3.70 (94.); bill .61 (15.5). The description is from a typical South Carolina bird in the O. S. U. collection. Ohio birds, even when clearly referable to this form, average much lighter and somewhat larger.

Recognition Marks.—Chewink to Robin size; dark gray above; whitish below; black patch on head; white spot on wing; breast of adult unmarked, as distinguished from *L. borealis*; dark gray or ashy on rump, as distinguished from *L. l. excubitorides*.

Nest, a bulky, but well put together mass of sticks, thorn-twigs, weed-stalks and the like, carefully lined with plant-down, wool or feathers, placed five to

fifteen feet high in orchard trees, thorn hedges, etc. *Eggs*, 3-6, sometimes 7, dull grayish, or greenish white, thickly speckled and spotted with olive- or red-dish-brown. Av. size, .97 x .73 (24.6 x 18.5).

General Range.—Eastern United States, west to the Plains; north to the Great Lakes, northern New England, etc. Breeds throughout its range.

Range in Ohio.—Of casual occurrence throughout the state. This form seems to have entered the state by encroachment from the south, and is perhaps more distinct southerly.

For convenience this form and the next (whatever their relationships) are treated together under the common name Migrant Shrike.

B. WHITE-RUMPED SHRIKE.

A. O. U. No. 622a. ***Lanius ludovicianus excubitorides*** (Swains.).

Synonyms.—BUTCHER-BIRD; MOUSE-BIRD.

Description.—*Adult*: Similar to preceding species but paler; the upper tail-coverts more or less distinctly whitish, the white of scapulars more extensive. Dimensions a little larger, save of bill, which is about the same. Length 8.00-10.00 (203.2-254.). A typical Columbus male measures: wing 3.96 (100.6); tail 3.98 (101.1); bill .61 (15.5). Average of six Columbus specimens of the combined forms: wing 3.93 (99.8); tail 3.81 (96.8); bill .62 (15.8).

Recognition Marks.—Same size as preceding; paler; "rump" whitish.

Nesting.—Same as preceding species.

General Range.—"Western North America, from the Plains to the Pacific, except Coast of California; and from Manitoba and the Plains of the Saskatchewan south over the tablelands of Mexico." Its range extends eastward around the Great Lakes, and southerly, where it intergrades with the preceding species.

Range in Ohio.—Of general distribution, thinning out southerly. There is no fixed line geographically or zoologically between this and the preceding form. Either may be found anywhere in the state, and may bear any family relation to the other apparent subspecies.

The "Shrike question" is still unsettled. The relation of the two subspecies in this state puzzles the professional as well as the amateur. Whether indeed Ohio represents intermediate ground where we should expect every degree of intergradation (since by definition, subspecies are forms known to intergrade), or whether it is comparatively new territory entered by two diverse elements, which, because of their previous affiliation, tend to coalesce; or whether, finally, the Ohio bird should be subspecifically distinguished from the *L. ludovicianus* of the South, and recognition made of a constant infusion from the West,—all these are points not yet decided, and perhaps indeterminable. An attempt has been made to separate the Shrike of the middle North under the name *L. l. migrans*. Altho the characters shown, especially that of larger size, are fairly constant, they have been deemed too trifling for recognition, and the A. O. U. committee reported unfavorably upon the proposed subspecies. Perhaps the easiest

way to account for the considerable diversity which we find in specimens, is simply to recognize this state as a meeting ground of two forms which have attained their maximum differentiation elsewhere,—*ludovicianus* in the South,



Taken near Columbus.

Photo by the Author.

THE SHRIKE'S FORTRESS.

THE TREE IS A HONEY-LOCUST, AND A NEST OF THE SHRIKE APPEARS ON THE RIGHT.

and *excubitorides* in the West—and without attempting to assign subspecific value to the various phases as they appear. Hence, however we may regard, from

the scientific point of view, the attempt to lump Ohio varieties together under the proposed name *L. l. migrans*, I think there can be no doubt whatever of the propriety of adopting for common use the term MIGRANT SHRIKE to cover all differences.

Those whose delight it is to weigh carefully the shades of difference between tweedle-dum and tweedle-dee may seek the doubtful illumination of the preceding fine print, but plain folk who desire to know something of the local Butcher-bird will prefer to begin HERE.

In all but southern localities, where the species is partially resident, the Shrike arrives about the middle of March. His patchy plumage harmonizes more or less with the snow-checked landscape, but he is nowise concerned with problems of protective coloration. Seeking out some prominent perch, usually at this time of year a fence-post, he divides his time between spying upon the early-creeping field mice and entertaining his lady love with outlandish music. Those who have not heard our resident Shrike *sing* have missed a treat. He begins with a series of rasping sounds, which are probably

intended to produce the same receptive condition on his audience which Ole Bull secured by awkwardly break-

ing one string after another on his violin until only one was left. There the resemblance ceases, however, for where the virtuoso could extract a melody of marvelous range and sweetness from his single string, the bird produces the sole note of a struck anvil. This pours forth, however, in successive three-syllabled phrases like the metallic and reiterative clink of a free-falling hammer. The chief difference which appears between this love song and the ordinary call of



Taken near Columbus.

Photo by the
Author

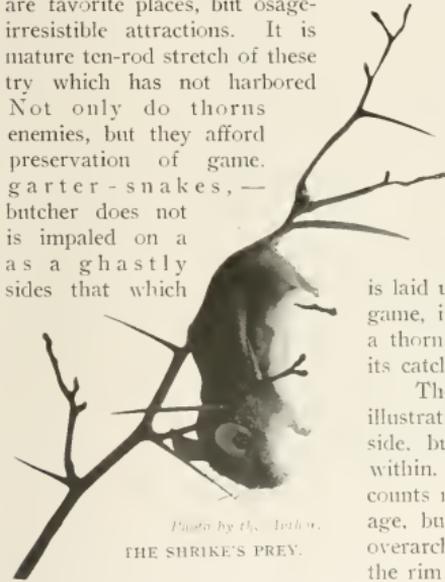
MIGRANT SHRIKE AT NEST.

A CLOSER VIEW OF THE NEST SHOWN IN THE PRECEDING ILLUSTRATION. THE BIRD IS PERCHED UPON THE EDGE OF THE NEST BUT IS SCARCELY DISTINGUISHABLE IN THE MAZE.

warning or excitement is that in the latter case the less tender passions have weighted the clanging anvil with scrap iron and destroyed its resonance.

The Shrike is a bird of prey, but he is no restless prowler wearing out his wings by incessant flight,—not he. Choosing rather a commanding position on a telegraph wire or exposed tree-top, he searches the ground with his eye until he detects some suspicious movement of insect, mouse, or bird. Then he dives down into the grass, and returns to his post to devour at leisure. I once saw a Shrike rise perpendicularly some fifty feet from a telegraph wire by a labored but rapid flight to seize an insect to me invisible, and repair with it to a stone wall. Here he dealt his catch a severe blow, and when satisfied that it was dead, ate it contentedly.

Like most guilty birds, and some innocent ones, the Shrike usually selects a thorn tree for a home. Honey-locusts and the various species of *Crataegi* are favorite places, but osage-irresistible attractions. It is a mature ten-rod stretch of these trees which has not harbored. Not only do thorns protect the Shrikes from their enemies, but they afford preservation of game. garter-snakes, — butcher does not is impaled on a as a ghastly sides that which



Painted by the Author.

THE SHRIKE'S PREY.

orange hedges also present safe to say that there is not a delectable thorns in open country or more nests of this bird. protect the Shrikes from their then convenient hooks for the Mice, grass-hoppers, sparrows, anything which the over-fed care for at the time of capture, thorn for future reference, or warning to the unwary. Be-

is laid up, the bird, in the case of larger game, invariably seeks the assistance of a thorn or splinter to enable it to rend its catch for immediate consumption.

The nest—admirably shown in our illustration—is usually a bulky affair outside, but exceedingly tight and warm within. Since the bird nests early, it counts nothing on the protection of foliage, but cunningly screens its eggs by overarching chicken feathers worked into the rim of the nest. First sets are com-

monly found by the middle of April, but the birds usually nest again in June. They are singularly indifferent, as a rule, to the welfare of the nest, but when it is disturbed sit clinking in the distance, or absent themselves entirely. Occasionally, however, especially if the young are well grown, they make a spirited and deafening defense. Eggs are deposited on successive or alternate days, and incubation is accomplished in about two weeks.

The Loggerhead, or Migrant Shrike, has increased somewhat within recent years, except in those localities where it has been subjected to a thoughtless persecution. It is perhaps a thankless task to speak a good word for this rapacious renegade "song-bird," who flaunts his butcheries in our very faces, but we must always defer to the sum of the facts, not to those alone which are apparent. Birds are found to constitute only eight per cent of the Shrike's food throughout the year, and those mainly of seed-eating varieties. Sylvester D. Judd, Ph. D., in an elaborate report upon the subject of the Shrike's food, concludes, "The Loggerhead's beneficial qualities outweigh 4 to 1 its injurious ones. Instead of being persecuted, it should receive protection."

No. 129.

RED-EYED VIREO.

A. O. U. No. 624. *Vireo olivaceus* (Linn.).

Description.—*Adult*: Crown grayish slate, bordered on either side by blackish; a white line above the eye, and a dusky line through the eye; remaining upper parts light olive-green; wings and tail dusky with narrow olive-green edgings; below dull white, with a slight greenish-yellow tinge on lining of wings, sides, flanks, and crissum; first and fourth, and second and third primaries about equal, the latter pair forming the tip of wing; bill blackish at base above, thence dusky or horn-color, pale below; feet leaden blue; iris red. Little difference with age, sex, or season, save that young and fall birds are brighter colored. Length 5.50-6.50 (139.7-165.1); av. of three Columbus specimens: wing 3.03 (77); tail 1.99 (50.5); bill from nostril .36 (9.1);—a little below average in size.

Recognition Marks.—Warbler size; largest; white superciliary line contrasting with blackish and slate of crown; red eye.

Nest, a semi-pensile basket or pouch, of bark-strips, "hemp," and vegetable fibers, lined with plant-down, and fastened by the edges to forking twigs near end of horizontal branch, five to twenty-five feet up. *Eggs*, 3 or 4, white, with black or amber specks and spots, few in number, and chiefly near larger end. Av. size, .85 x .56 (21.6 x 14.2).

General Range.—Eastern North America, west to Colorado, Utah and British Columbia; north to the Arctic regions; south in winter from Florida to northern South America. Breeds nearly throughout its North American range.

Range in Ohio.—Abundant summer resident, universally distributed.

ONE cannot be sure whether it was the bird's color, or good cheer, or characteristic note, which led Vieillot in 1807 to select for this group the name *Vireo*, a Latin word meaning, I am green, or flourishing. The plumage of this modest "Greenlet" boasts only enough green to enable its owner to lose

itself easily in the foliage of the upper branches; but the voice of good cheer, *Vireo - vireo - vireo*, frequently repeated, is enough, not only to rescue the bird from oblivion, but to immortalize it.

The Red-eye does occasionally make itself heard in isolated pasture elms and among the shade-trees of the city, but its normal range is in the deeper woods and groves. Here it moves in a leisurely manner from bough to bough, examining critically each leaf and



Tukey near Elyria.

Photo by the Author.

"DO YOU HEAR ME? DO YOU BELIEVE IT?"

bud, or making little sallies after insect prey. Its soliloquizing notes are often uttered—always in single phrases of from two to four syllables each—while the bird is busily hunting, and serve to mark an overflow of good spirits rather than a studied attempt at song. There is about them also an interrogative character which Wilson Flagg has paraphrased, "You see it—you know it—do you hear me?—do you believe it?" "The Preacher" not infrequently enforces his homilies by hopping down slowly from the tree-tops and bringing the truth home to his hearers. The bird's inquisitiveness is often his salva-

tion, for those which linger at greater heights are often indistinguishable from Warblers of unknown rarity, and their occasional diffidence is much deplored by those who shoot in haste and repent at leisure.

The Red-eyed Vireo is an indefatigable singer, and when he really gives attention to it, as when the mate is sitting, he produces a quantity of sound little less than astonishing. One bird to which I once listened at midday had chosen for his station the topmost bare twig of a beech tree a hundred feet from the ground, and from this elevated station, he poured out his soul at the rate of some fifty phrases per minute, and without intermission during the half hour in which he was under observation. One could recommend to such a zealous devotee the



Taken in 1890.

Painted by Lewis Jones.

A DOUBLE NEST OF THE RED-EYED VIREO.
BOTH THE MALE AND THE FEMALE WERE SITTING WHEN PHOTOGRAPHED.

Chinese fashion of writing prayers (or songs) upon the rim of a wheel, and attaching it to water-power. There would be some time left then for bug-hunting. The bird sings more or less during the entire period of its residence in the north. I heard one two years ago at Columbus singing with undiminished vigor on the seventh day of October, at high noon. The Red-eye's notes are sweet and smooth and clear, higher-pitched and a little more rapid than those of the Yellow-throated Vireo, from which, however, it requires to be carefully distinguished. It has also a comparatively infrequent scolding or

¹ By courtesy of *The Wilson Bulletin* this picture appears in advance of its publication by that journal

alarm note, *we-an* or *ye-an*, with the French nasal "n." This is delivered about twenty-five times a minute, while the bird holds to one perch without moving, save to sway from side to side or to twist its head rhythmically—a sort of nervous relief whose exact function is in doubt.

The nest of this Vireo is a model of neatness, being swung by the brim from the forked tips of horizontal or declining limbs, as in the case of the two species illustrated. The materials used are strips of thin bark, hemp, dead leaves bleached to the color of oxidized silver, and various vegetable downs. The exterior is frequently ornamented with lichens and shreds of cocoons or wasps' nests. Bits of newspaper are always acceptable, and some nests are largely composed of this interesting by-product of civilization.

No. 130.

PHILADELPHIA VIREO.

A. O. U. No. 626. **Vireo philadelphicus** (Cass.).

Description.—*Adult*.—Above, dull olive-green over gray, ashy on head; narrow frontal line and area around eye whitish, save for short, dusky line through eye; wings and tail fuscous, edged narrowly with olive-green; no apparent spurious quill; no white wing-bars; first primary shorter than fourth; tip of wing formed by second and third; below everywhere, except on chin, pale sulphur-yellow; sides sometimes buffy or olivaceous; bill blackish above, paler below; feet plumbeous. Length 4.75-5.00 (120.6-127.); wing 1.60 (40.6); tail about 2.00 (50.8); bill from nostril .27 (6.9).

Recognition Marks.—Warbler size; an almost exact counterpart of *V. gilvus*, and known from it positively only by the apparent absence of spurious quill (it having been nearly aborted); it may usually be distinguished, however, by its slightly smaller size, and yellower coloration below, as well as by its more marked olive above.

Nesting.—Does not breed in Ohio. *Nest*, pensile, of grass and birch bark, suspended from fork of horizontal branch eight feet up. *Eggs*, 4, like those of *V. olivaceus* (E. E. Thompson).

General Range.—As yet imperfectly known; eastern North America north to Hudson Bay; south in winter to Costa Rica and Panama. Breeds from Maine, New Hampshire and Manitoba northward.

Range in Ohio.—Probably not uncommon, but little observed, spring and fall migrant.

“NOT very common but regular spring and fall migrant, in May and September. The Philadelphia Vireo is one of the most interesting of the

family, because of its comparatively recent discovery and general rarity. It frequents woodlands and the wooded borders of streams. I have seen a single individual in my garden. In the spring they are found single or in pairs, sometimes in high ash trees, but usually in the branches of undergrowth in beech woodland. In the fall I have found them in flocks, in company with Red-eyed Vireos and Bay-breasted Warblers. Fall specimens are decidedly yellow below. A little acquaintance will enable an observer to determine the species at sight as readily as the family to which it belongs. Its smaller size and olive-green, without marked ashiness of the upper parts, readily separate it from the Warbling Vireo, while the absence of wing-bars as readily distinguishes it from the White-eyed Vireo. So far as I can ascertain they are mute when on their migrations."

Thus Dr. Wheaton writes twenty-five years ago. The birds *must* be not uncommon, since they are known to breed to the north of us through a wide range of country. They are, however, exceedingly inconspicuous, and the only recent appearance which has been noted in Ohio, is that of two birds seen by myself at Columbus, April 22, 1902, on the grounds of the State University.

No. 131.

WARBLING VIREO.

A. O. U. No. 627. *Vireo gilvus* (Vieill.).

Description.—*Adult*: Above, dull ashy, almost fuscous, with the palest possible tinge of olive-green, the latter color brightest on interscapulars, rump, and edgings of secondaries and rectrices; wings and tail fuscous, the primaries with faint whitish edgings; no wing-bars; first primary spurious,—only about a third as long as the others; point of wing formed by third, fourth, and fifth primaries; second shorter than sixth; below white with slight tinges on sides,—buffy on sides of head and neck, olive-fuscous on sides of breast, sulphur-yellow on sides of belly and flanks, and sometimes vaguely on breast; lores and space about eye whitish, enclosing obscure, dusky line through eye; bill dusky above, lighter below; feet blackish. Length 5.00-6.00 (127-152.4); wing 2.91 (73.9); tail 1.94 (49.3); bill from nostril .30 (7.6).

Recognition Marks.—Warbler size; general absence of positive characteristics,—altogether the plainest-colored bird of the American avifauna.

Nest, a pensile pouch of bark-strips, grasses, vegetable fibers, and trash, carefully lined with plant-down; hung usually from fork of small limb, at any height. *Eggs*, 3 or 4, white, sparingly and distinctly dotted or spotted, or, rarely, blotched

with black, amber, or reddish brown, chiefly at the larger end. Av. size, .75 x .55 (19. x 13.9).

General Range.—North America, in general, from the Fur Countries to Oaxaca, Mexico. Breeds throughout the greater part of its range.

Range in Ohio.—Of general distribution in summer. Perhaps less common southerly.

BOLDLY quitting the woodland retreats, so dear to all the other Vireos, this little warbler makes his home in the long rows of maples and elms which line the streets of village and town, or lead the way to country residences.



Taken near McConnellsville.

Photo by the Author.

NEST AND EGGS OF THE WARBLING VIREO.

THE NEST WAS BROUGHT DOWN FROM A HEIGHT OF TWENTY FEET TO HAVE ITS PICTURE TAKEN,
AND PROMPTLY REPLACED.

Because he is clad in Quaker gray there is little need for the singer to show himself, so he remains for the most part concealed in the dense foliage, but he opens here for the passer-by a cool fountain of song, which is doubly refreshing for its contrast with the dusty turmoil of the street below. Unlike

the disconnected fragments which the Red-eye furnishes, the song of the Warbling Vireo is gushing and continuous, a rapid excursion over pleasant hills and valleys. The notes are flute-like, tender, and melodious, having, as Chapman says, "a singular alto undertone." All hours of the day are recognized as appropriate to melody, and the song-period lasts from the time of the bird's arrival late in April until its departure in September, with only a brief hiatus in July.

In sharp contrast with the beautiful canzonettes which this bird showers down from the tree-tops, come the harsh, Wren-like scolding notes, which it often delivers while searching through the bushes, and especially if it comes across a lurking tabby-cat.

The Warbling Vireo's cradle is swung where its after life is spent—in the depths of a shade tree. The structure is a little the neatest of them all, being closely woven of grasses and fine bark-strips, and felted more or less compactly with vegetable downs. The female is a close sitter, sticking to her post even tho nearly paralyzed with fear. The male is usually in close attendance and knows no way of discouraging the inquisitive bird-man save by singing with redoubled energy. He takes his turn at the eggs when the wife needs a bit of an airing, and even, it is said, carries his song with him to the nest.

The Vireos are frequent victims of the Cowbird. The birds seem to realize the imposition that is being practiced upon them, but are not able to eject the foreign egg. Sometimes a false bottom is constructed to hide the bastard product, and sometimes the tainted nest is deserted outright. One such I found which contained only a single Cowbird's eggs, and that punctured by the outraged Vireo.

No. 132.

YELLOW-THROATED VIREO.

A. O. U. No. 628. *Vireo flavifrons* Vieill.

Description.—*Adult*: Above and on sides bright olive-green, giving way posteriorly to bluish ash; wings and tail blackish; conspicuous white edgings all around on the inner quills and outer rectrices; edging of primaries narrow, whitish, or olivaceous; that of inner tail-feathers whitish or bluish white; two conspicuous white wing-bars formed by tips of middle and greater coverts; no apparent spurious quill; first primary longer than fourth; tip of wing formed by

second and third; chin, throat, and breast bright yellow (canary); a ring around the eye and a supraloral line of the same color; a dusky spot in front of the eye; belly and remaining under parts pure white or sordid; bill and feet black. Length 5.50-6.00 (139.7-152.4); wing 3.00 (76.2); tail 1.93 (49.); bill from nostril .32 (8.1).

Recognition Marks.—Warbler size; yellow breast; white belly.

Nest, pensile, of interwoven strips of bark, plant-fibers, etc., lined with fine grasses, and usually covered with lichens; depending from forked branch ten to forty feet up. *Eggs*, 3 or 4, white, with a roseate tinge, marked with dots and spots of amber, black or reddish brown, chiefly about larger end. Av. size, .83 x .61 (21.1 x 15.5).

General Range.—Eastern United States north to Ontario and Manitoba; south in winter to Colombia. Breeds from Florida and the Gulf States northward.

Range in Ohio.—Common during migrations; locally common or rare during breeding season.

THIS species is evidently the least known of our four resident Vireos. It is a bird of handsome and striking appearance, but while it is occasionally seen in orchard or shade trees about town, it is nearly confined to the woods, and those, too, in rather out-of-the-way places. It is decidedly a bird of the upper levels and seldom ventures down as do its kinsmen to inspect the passer-by.

The song of the Yellow-throated Vireo, because of its varied character, is almost hopelessly confusing. Usually it differs from that of the Red-eyed chiefly in having rough-edged notes, in briefer phrases, and in being less hurried in delivery, altho uttered with great asperity. Rev. J. H. Langille says: "It keeps well up in the tops of trees, diligently gleaning as it sings, *vireo*, *viree-ee*, *wee-ree*, etc., in tones rather shrill for a Vireo, and not nearly so finely modulated and fluent as those of its relative the Red-eye, but greatly resembling them." Chapman says: "If the Red-eyed Vireo is a soprano the Yellow-throat is a contralto," but the note of the latter has a shrill quality which serves to disguise the somewhat lower pitch. I have heard a song—and seen the singer too—which was continuously sustained for long stretches, and which differed from that of the Warbling Vireo only in its greater variety and strength.

If the song is somewhat puzzling there need be no uncertainty with reference to the bird's scolding note, or choleric tirade, *zee*, *tsu tsu tsu tsu tsu tsu tsu*, becoming rapid at first and then slowing down; or else plain *tsu tsu tsu tsu tsu tsu tsu tsu* with exceeding rapidity at the start and a *rallendo* finish. It is a nutmeg-grater cry like the House Wren's, but on a larger scale.

The nest of this Vireo is similar in construction and position to those of the other species. It is perhaps a little bulkier than most, and is often

highly ornamented, almost concealed, by mosses and lichens. Some authorities place it at a height of from five to twenty or thirty feet, but I am inclined to the opinion that many nests may be found at a much greater height. The males assist regularly in the duties of incubation, and they have a suicidal habit of singing on the nest.

No. 133.

BLUE-HEADED VIREO.

A. O. U. No. 629. *Vireo solitarius* (Wils.).

Synonym.—SOLITARY VIREO.

Description.—*Adult*: Crown and sides of head clear, bluish ash; eye-ring and supra-loral line white; remaining upper parts olive-green; wings and tail blackish, with whitish or olive-green edgings; tips of middle and greater coverts white, forming two conspicuous bars; spurious quill about one-fourth as long as others; second quill shorter than fifth; point of wing formed by third and fourth; below white, purest on chin and throat; the sides heavily washed with greenish yellow or olive-green, the color reaching sometimes nearly across the breast; bill and feet black or blackish. Length 5.00-6.00 (127.-152.); wing 2.95 (74.9); tail 2.18 (55.4); bill from nostril .29 (7.4).

Recognition Marks.—Warbler size; a large, clearly-marked species, best known by its blue cap enclosing white eye-ring, and its white throat.

Nesting.—Not yet positively reported from Ohio. *Nest*, a pendulous basket of usual Vireo construction, but sometimes decorated externally with moss and lichens, placed in forks of horizontal branch, five to fifteen feet up. *Eggs*, 4 or 5, white with scattering dots and spots of red or reddish brown. Av. size, .81 x .62 (20.6 x 15.8).

General Range.—Eastern United States to the Plains, north to Hudson Bay and Fort Simpson. South in winter to Guatemala. Breeds from southern New England and the northern parts of the Lake States northward.

Range in Ohio.—A common spring and fall migrant. Suspected, but not known to breed in northern part of state.

IT is a thankless task to compare the several beauties of birds so modest as the Vireos, but certainly when it comes to plumage nothing could be more chaste, more decorous, and pleasing withal, than the dainty blues and whites of *V. solitarius*. It is principally by his costume that we know him, for he is usually silent during migrations, and sings only in the northern tier of counties, or, in a moment of forgetfulness, by the wayside. Blue-headed



BLUE HEADED VIREO
Vireo solitarius
♂ Life-size

Vireos are abundant during Warbler time and are generally to be found high in the trees, keeping company with the equally silent Olive-backed Thrushes, or pausing to admire the tiny manœuvres of their Warbler friends. This is not their habitual range, however, and those which venture down into the lower branches or move about among the shrubbery appear to be much more at home. While with us the bird is deliberate in its movements and gives no sign of the vivacity which characterizes the resident species.

The only song I have heard during the migrations was comparable to that of the Red-eye, but the component phrases had only one or two syllables each, and were slower, softer, and weaker in character. This performance evidently does not truly represent the bird's vocal powers, for Bradford Torrey says of it: "The Solitary's song is matchless for the tenderness of its cadence, while in peculiarly happy moments the bird indulges in a continuous warble that is really enchanting. It has, too, in common with the Yellow-throat, a musical chatter—suggestive of the Baltimore Oriole's—and a pretty trilled whistle."

No. 134.

WHITE-EYED VIREO.

A. O. U. No. 631. *Vireo noveboracensis* (Gmel.).

Description.—*Adult*: Above bright olive-green, duller on cervix; brighter on forehead and rump; wings and tail dusky, with bright edgings of olive-green; two yellowish white bars formed by tips of middle and greater coverts; spurious quill nearly half as long as second primary; second shorter than sixth; point of wing formed by third, fourth and fifth; below white or sordid; sides and flanks washed with bright yellow; lores and a ring around eye bright yellow; bill and feet dark; iris white,—hazel in young. Specimens differ chiefly in the yellowness or sordidness of under parts. Length 4.50-5.25 (114.3-133.3); wing 2.45 (62.2); tail 1.92 (48.8); bill from nostril .28 (7.1).

Recognition Marks.—Warbler size; yellow lores and eye-rings and yellow sides; yellowish white wing-bars, as distinct from *V. gilvus*, which it nearest resembles in point of size; white irises.

Nest, of usual Vireo construction, suspended from forked twigs, three or four feet high in underbrush or thickets. *Eggs*, 3 or 4, white, dotted sparingly with reddish brown or dark purple. Av. size, .76 x .56 (19.3 x 14.2).

General Range.—Eastern United States west to the Rocky Mountains.

north to southern New England and Minnesota; south in winter from Florida to Guatemala and Honduras. Breeds from Florida and the Gulf States northward.

Range in Ohio.—Common in southern, rare in central Ohio. Reported regularly from northeastern part of state (Cuyahoga and Ashtabula Counties).

THE manners of this "well-connected" bird have evidently suffered through close association with that "prince of mountebanks," the Yellow-breasted Chat. Like the larger mime the Vireo frequents brushy ravines and thickets at the edge of the woods, where he prowls and pries and practices all the tricks of the lightning change artist, and is ready at any time to join his voice in a volley of abuse levelled at the chance intruder. If you are not apprised of his presence by a sharp click heard in the depths of the thicket, the feathered *farceur* will mount a nodding wand and throw the succession of vocal somersaults which he calls his song. *Tup to wee-o, chipiti burtuck*, comes with surprising energy and distinctness from so small a throat and you are ready to follow at once upon the chase to which the wary bird invites you.

Mimicry is the White-eye's specialty. He follows it not only from a desire to be tuneful but from sheer love of mischief. Once, in Lawrence



Taken in Morgan County.

Photo by the Author.

"THE WHITE-EYED VIREO BUILDS LOW."

County, we heard a remarkable succession of sounds coming we knew not whence. The ravine was full of birds and we surmised Chat and Catbird and Mockingbird, until we came at last upon the center of attraction. A White-eyed Vireo was hopping to and fro upon a willow branch and singing vociferously while birds of half a dozen other species were ranged about him giving rapt attention,—among them a jealous Catbird, who listened with bill agape and drooping wings.

we heard a remarkable succession of sounds coming we knew not whence. The ravine was full of birds and we surmised Chat and Catbird and Mockingbird, until we came at last upon the center of attraction. A White-eyed Vireo was hopping to

The punchinello paused from combinations while the audi would break out with a new pro four phrases from different ar over and over with slight mod or five seconds. The Chat ite preface, but we recognized Song Sparrow, Catbird, Caro

time to time to think up new ence shifted uneasily. Then he duction, a jumble of three or tists, and this he would repeat ifications at intervals of four note, a nasal *aoun*, was a favor- also Towhee, Summer Tanager, lina Wren, English Sparrow,



*Taken in
Morgan County.*

Photo by the Author.

NEST AND EGGS OF THE WHITE-EYED VIREO.

Wood Thrush, and Warbling Vireo, in the order named.

But while the bird is a good deal of a wag and something of a scold, we are always ready to applaud his humor, and we may as readily condone his "nippy" tongue when we remember that it is wielded in a good cause. The White-eyed Vireo builds low, seldom above seven or eight feet from the ground, and it is naturally anxious for the safety of its eggs or little ones. It is only when the welfare of these is threatened that the bird becomes disagreeable and personal, and not always then.



*Taken in
Morgan
County.*

*Photo
by the
Author.*

"SAT NICELY FOR HER PORTRAIT."

The nest shown in the near-by illustration was pointed out to me by a friend, Mr. C. H. Morris of McConnelsville. The bird was on but she occupied the center of a little bower which was guarded by a wall of drooping vines and bristling blackberry stems. With fear and trembling I cut an entrance way, removing the stems one by one, and glancing apprehensively at the sitting bird, but she sat on, unmoved. Next, the camera was brought in and advanced by slow stages toward the watchful bird. Many twigs required to be cut away, and there was much flapping of camera-cloths, gesticulating of unmanageable "legs," and clicking of shutters, but the white-eyed beauty sat nicely for her portrait, — once, twice, thrice, until the strain became too great for her. Next the nest and eggs were photographed, and after removing the Cowbird's egg (which appears in the picture just above the nearer rim) the rest were left to be gathered later in the day.

Returning some five hours later, the bird-man pressed eagerly into the copse, intending to collect the set of eggs for a well-known museum. The bird was on and happy now in a new-found confidence. Nearer—nearer—came the collector. The bird sat on. Finally moved by some strange impulse the man brought his face down close to hers, not above a foot away, and gazed wistfully, searchingly, into those trustful eyes. Then that old hard heart of mine melted within me and I turned and fled.

No. 135.

SCISSOR-TAILED FLYCATCHER.

A. O. U. No. 443. *Muscivora forficata* (Gmel.).**Synonyms.**—SWALLOW-TAILED FLYCATCHER; SCISSOR-TAIL.

Description.—*Adults*: General color hoary-ash, lighter below, white on throat, darkening on nape, mingling with ochraceous or rusty on back; a concealed scarlet or orange crown-patch; wings fuscous to blackish, with hoary and buffy-gray edgings; first primary deeply emarginate and attenuate; tail deeply forked, the outer pairs greatly produced,—three or four times the length of shortest feathers—the ordinary feathers black, and the longer ones black-tipped, but white or faint salmon-colored for four-fifths their length; a scarlet tuft on the side of the breast; lining of wings, sides of belly, and flanks bright salmon, fading on crissum; bill and feet black. *Immature*: Similar; tail undeveloped; no crown-patch; first primary not emarginate. Length to fork of tail 7.50-8.50 (190.5-215.9); wing about 5.00 (127.); tail 5.00-10.00 (127.-254.); bill .65 (16.5). Females somewhat smaller, and with less developed tails.

Recognition Marks.—Chewink size (comparing body sizes, exclusive of tail); hoary-ash, scarlet and salmon coloration; tail greatly produced, deeply bifurcated.

Nesting.—Does not breed in Ohio. "Nest, of sticks, etc., lined with feathers and other soft materials built in trees. Eggs, 3-5, .89 x .67 (22.6 x 17.), pure white or creamy white, boldly but sparingly spotted with rich madder-brown and lilac-gray."

General Range.—Texas, Oklahoma, Indian Territory, southern Kansas, southwestern Missouri, south through eastern Mexico to Costa Rica. Accidental in southern Florida (Key West), New Jersey, New England, York Factory (Hudson Bay Territory), etc.

Range in Ohio.—Accidental. One record, by Mr. Frank H. Welder, near Marietta, May 20, 1894.

THIS exceedingly graceful Flycatcher is known to be a great wanderer, but its normal range is confined to Texas, with adjacent territory on the north and south. The species is admitted to our state list on the authority of Mr. Oliver Davie, who reports a single example said to have been taken near Marietta.

The Scissor-tail is so named from a habit it has of opening and closing its elongated tail-feathers like the blades of a pair of scissors. These remarkable appendages may possibly serve the bird as balancers, or brakes, in flight, but a more natural explanation would seem to be that they were provided to enable the owner to work off his surplus energies, and to grace his bold sallies after

insect prey. The birds are rather quarrelsome, especially among themselves. A fight between four or five males such as one observer reports, must be a spectacular affair—equal to one of those other occasions celebrated in the song of their native land, "When dey's razors a'flyin' troo de air."

No. 136.

KINGBIRD.

A. O. U. No. 444. *Tyrannus tyrannus* (Linn.).

Description.—*Adult*: Above ashy black changing to pure black on head, and fuscous on wings; crown with a concealed orange-red (cadmium orange) patch or "crest," the orange feathers black-tipped and overlying others broadly white at base; wings with whitish and brownish ash edgings; tail black, all the feathers broadly white-tipped, and the outermost pair often white-edged; below white, washed with grayish on breast; bill and feet black. *Immature* birds lack the crown-patch, and are more or less tinged with fulvous or buffy on the parts which are light-colored in the adult. Length 8.00-9.00 (203.-228.6); av. of four Columbus specimens: wing 4.60 (116.8); tail 3.31 (84.1); bill from nostril .52 (13.2).

Recognition Marks.—Chewink size; blackish ash above; white below; black tail conspicuously tipped with white; noisy and quarrelsome.

Nest, of weed-stalks, plant-fibres and trash, with a felted mat of plant-down or wool, and an inner lining of fine grasses, feathers, rootlets, etc. *Eggs*, 3 or 4 sometimes 5, white or cream-white, distinctly but sparingly spotted with dark umber and occasional chestnut. Av. size, .98 x .73 (24.9 x 18.5).

General Range.—North America from the British Provinces south; in winter through eastern Mexico, Central and South America. Less common west of the Rocky Mountains. Not recorded from northern Mexico and Arizona.

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

STERN republicans that we all are, we nevertheless delight in the tales of ancient tyranny, if only to shudder at them. And surely the fascinating complex of modern international politics would lose full half its charm if there were not half a dozen autocrats to deal with, to flatter, to cajole, to outwit, and secretly to admire. And surely, too, no sane bird-lover would willingly dispense with the presence in our midst of the Kingbird, that arch-tyrant of the winged world. He is King by divine right, if there be such a thing, for he is crowned when he comes of age without any intervention of man. He fairly bursts with self-importance at all times, and the conscientious effort of his ma-

turer years is to enforce his imperium over some chosen domain of bush and field. If he does lord it over the underlings and velleins of his realm it is only that they may humbly acclaim and applaud him, champion of the defenseless, as he

knowledge his sway
the self-appointed
the defense-
protects



Photo by R. F. Griggs

A YOUNG TYRANT—THE LAST OF THE BROOD.

them from the attacks of all infidel Hawks, Crows, and Jays. Who has not seen him as he quits his high perch in the elm sapling and hurries forward, choking with vengeful utterance, to meet and chastise some murderous Hawk, who before any other foe is brave? Down comes the avenger! The Hawk shies with a guttural cry of rage and terror, while a little puff of feathers scatters on the air to tell of the tyrant's success. Again and again the quick punishment falls, until the tiny scourge desists and returns, shaking with shrill laughter, to give his mate a highly-colored account of his adventure.

When the "King of Rome" was born Napoleon caused a hundred guns to sound. When the twenty-second cannon boomed and the people knew it was a boy, hats flew up and the streets of the gay French capital rang with ap-

plause. This feathered Napoleon has no such spectacular way of announcing the realization of his paternal hopes, but the bird world nevertheless soon guesses the secret. If the tyrant was critical before, he is choleric now; for the whips of discipline he substitutes scorpions. He has the dignity of a whole royal family to maintain. On that glad day he thrashes two Sparrow Hawks and puts a flock of Crows to flight in sheer exuberance of spirits.

It is easily possible, however, to exaggerate the pugnacity of the Kingbird, or to infer from extreme examples that all are quarrelsome. It is not unusual for Kingbirds to be on the best of terms with their immediate neighbors, thieves always excepted. I once found in one small poplar tree the nests of three birds, each containing eggs, viz., a Robin, an Oriole, and a Kingbird. The two latter were within five feet of each other. Dr. Brewer also records an exactly similar case. Kingbird's courage, which is unquestionable, is often tempered by prudence, altho at other times it quite overbalances his better judgment. The Burrowing Owl of the West will tolerate none of his nonsense, and I have seen the birds make sad mistakes in molesting these virtuous mousers. The sight of a Shrike will make a Kingbird shrink into the smallest possible compass. Catbirds, too, are said to be, for valid reasons, quite exempt from their tyranny.

The food of the Kingbird consists entirely of insects, caught on the wing for the most part, by sallies from some favorite perch. His eyesight must be very good, as he not infrequently spies his prey at distances of from twenty to fifty yards. Honey bees form an occasional but inconsiderable article of diet. Both in the taking of food and in the discharge of police duties the Kingbird exhibits great strength and swiftness as well as grace in flight. Once when passing in a canoe through a quiet weed-bound channel near the Muskingum river, I was quite deceived for a time by the sight of distant, white-breasted birds, dashing down to take insects near the surface of the water, and even occasionally dipping under it. They had all the ease and grace of White-bellied Swallows, but proved to be Kingbirds practicing in a new role.

This fondness for the water is often exhibited in the bird's choice of a nesting site. Ordinarily orchard or shade trees, or the more prominent members of neglected hedge-rows are preferred, but on several occasions I have found nests on low-swinging horizontal branches overhanging the water, and thrice, at least, in tiny willow clumps entirely surrounded by it. The nest of the Kingbird sometimes presents that studied disarray, which is considered by some the height of art. Now and then a nest has such a dishevelled appear-

ance as to quite discourage investigation, unless the owner's presence gives the secret of its occupancy away. It is placed usually in an upright or horizontal fork of a tree at a height of from three to forty feet. Twigs, weed-stalks and trash of any kind enter into the basal construction. The characteristic feature of the nest, however, is the mould, or mat, of vegetable plaster, ground wood, and



Taken in the Living Reservoir.

Photo by the Author.

NEST AND EGGS OF THE KINGBIRD.

THE NEST IS PLACED ABOUT TWO FEET UP IN A WILLOW GROWING IN SEVERAL FEET OF WATER.

the like, or else compacted wool and cow-hair, which is forced into the interstices of the outer structure and left smooth and rounded inside, giving shape to the nest. This in turn is lined with fine grasses, horse-hair, or variously. Occasionally nests are found composed almost entirely of wool. In others string is the principal ingredient.

Eggs are laid at the rate of one each day. Incubation begins when the

nest complement is full, or, more rarely, when the first egg is laid; and is completed, normally in fourteen days. The last week in May or the first in June is the usual time for the first set, and two broods are not infrequently raised in a season.

Although the Kingbird never sings, it has a characteristic and not unmusical cry, *tizic, tizic* (spell it plithisic if you prefer) or *tsee tsee tsee tsee*, in numerous combinations of syllables which are capable of expressing various degrees of excitement and emotion.

No. 137.

CRESTED FLYCATCHER.

A. O. U. No. 452. *Myiarchus crinitus* (Linn.).

Description.—*Adult*: Above, grayish brown washed with olive-green; a short crest not different in color; wings brownish fuscous variegated by edgings,—cinnamon-rufous on primaries, gray or fulvous on coverts and secondaries, greenish yellow, and sometimes broadly white on tertials; tail cinnamon-rufous on the inner webs of all except middle pair of feathers; these and outer webs brownish fuscous; sides of head, throat, and chest ashy gray; the remaining under parts clear, sulphur-yellow; bill dark brown, lighter at base below; feet blackish. Length 8.50-9.10 (215.9-231.1); av. of five Columbus specimens: wing 4.18 (106.2); tail 3.68 (93.5); bill from nostril .64 (16.3).

Recognition Marks.—Chewink size; ashy, *sulphur-yellow*, and cinnamon-rufous below; crested.

Nest, in holes in trees or posts; a heavy matting of grasses and trash, and invariably including in its composition a cast-off snake-skin; usually at moderate heights. *Eggs*, 3-6, peculiar, creamy brown or buff, with heavy markings and pen-scratching, chiefly longitudinal, of chocolate or purplish brown. Av. size, .90 x .68 (22.9 x 17.3).

General Range.—Eastern United States and southern Canada, west to Manitoba and the Plains; south through eastern Mexico to Costa Rica, Panama and Colombia. Breeds from Florida northward.

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

AN outburst of sinister laughter from some distant tree-top in the woods on the 28th or 29th day of April is notice that the Great Crested Flycatcher has come. He is shy at first, but you may catch a glimpse of his warm brown wings as he crosses some skyey space, or of his sulphur breast as he peers down at you from some high limb and reports your progress in excited tones to a still more timid mate. "*Queep, queep, queep*—Look out now, he's coming—*U'hecoo!*" and away they scurry to laugh in high discordant notes at their

thrilling adventure. The Crested Flycatcher is the monitor and cynic of the woods. His harsh outcry greets you as you enter the portals of his chosen temple, and he rails at worshipper and priest alike in hollow mocking tones which grate upon the nerves of the would-be devotee. Quarrelsome if not courageous, meddlesome and impudent, the wood-folk are glad when increasing family cares enjoin upon this fretful tyrant a more prudent silence.

Quite unlike other Flycatchers this bird of the cinnamon garb nests in holes in trees. A hollow limb at a moderate height is preferred, but old Woodpecker holes do not come amiss, or new ones either for the matter of that. Orchard trees are often chosen and a convenient knot-hole admitting to the decaying interior will be most eligible. Artificial sites,—bird-houses and the like, have also been used of late years. The hollow, if capacious, is half-filled with trash of every conceivable description,—string, fur, feathers, grass, leaves, and what not. There is only one *sine qua non*:—a cast-off snake skin the bird must and will have, if possible. This, be it noted, is a harsh rustling affair, and is placed almost invariably near the top of the heap, or thrown clear around the rim.

Various conjectures have been advanced to account for this strange taste. Since their nests are often ill-smelling affairs, it has been suggested that the birds really have a weakness for the aroma of the snake, and so provide a convenient smelling bottle to sustain the sitting bird at her weary task. It is well known that a garter snake in spring exhales an odor like wild crab-apple blossoms, but the comparison is not likely to recommend the serpent as a fashionable bouquet. A nest found in Oberlin throws a clearer light upon the problem. A cavity in an apple tree from which a grandmotherly old Flicker had been evicted, was filled half way to the top with tufts of cow-hair and bunches of chicken-feathers, but it contained no snake-skin. Its place was supplied by a crumpled piece of tough tissue paper, which rustled ominously when the hand was inserted. The secret was out. It is the rustle of the snake-skin which either delights the bird, or to which it trusts for giving warning of an enemy's approach during the owner's absence—a sort of burglar alarm, as it were.

Apropos of this curious penchant for snake-skins, Mrs. Blanchan offers a clever conceit to account for the bird's crest. It is from the early fright the youngsters get at discovering a snake in the nest. No snakey; no pompadour!

The eggs are not the least remarkable objects connected with these strange birds. Not only are they more heavily marked than those of any other hole-nesting species, but the color is distributed in longitudinal streaks and pen-scratchings, purplish brown and umber on a creamy buff ground. Among these are interspersed spots and blotches and hair-lines of every degree of deli-

cacy and clearness. It is supposed that the eggs of all hole-nesting species revert to the uncolored form, viz., white, after the lapse of necessary ages,—there being no longer an economic value in color which is to remain unseen. If this be true, then we must conclude that the Crested Flycatcher has only recently hit upon the present method of departure from the family trait of open air nesting. And this is more remarkable because the eggs of the genus *Myiarchus* are more heavily colored than those of any other of the *Tyrannidae*.

The nesting of this species usually takes place in June. From three to six eggs are laid, and incubation is completed in fourteen days. The young are ready to leave the nest at the end of as many days more, and they remain more or less closely associated with the parents at least until the time of the southern journey, which is undertaken during the second or third week in September.

No. 138.

PHOEBE.

A. O. U. No. 456. **Sayornis phœbe** (Lath.).

Synonyms.—PEWIT; PEWIT FLYCATCHER; PEWEE; BRIDGE PEWEE.

Description.—*Adults*: Above, brownish-gray with an olivaceous cast, changing into brownish-dusky on top of head; wings and tail dusky, the former with indistinct bars of brownish-gray and with some lighter olivaceous gray edgings on the secondaries; below, pale sulphur-yellow, or whitish, sordid, and tinged heavily on sides of breast with color of back; bill and feet black. *Immature* birds are rather brighter in coloration than adults, and have more prominent wing-bars. Length 6.75-7.25 (171.5-184.2); wing 3.44 (87.4); tail 2.78 (70.6); bill from nostril .40 (10.2).

Recognition Marks.—Sparrow size; dull olivaceous above, becoming dusky on head; black bill; “*phæbe*” note. To be distinguished from *Contopus virens* by its larger size, less prominent wing-bars, and different bill—the last being longer, narrower, and darker than in the other bird.

Nest, a thick-walled cup or bracket of moss and mud, lined with plant-down, fine grasses and horse-hair; placed upon a beam or projecting corner of out-building, bridge, shale-bank, etc. *Eggs*, 4-6, white, unmarked, or, rarely, sparsely dotted with reddish-brown. Av. size, .80 x .55 (20.3 x 14.).

General Range.—Eastern North America west to eastern Colorado and western Texas, and from the British Provinces south to eastern Mexico and Cuba, wintering from the South Atlantic and Gulf States southward. Breeds from South Carolina northward.

Range in Ohio.—Common summer resident.

THE chilly winds of March may have handed in their resignations, but they have not yet been accepted by the Weather Bureau when Phoebe ventures north. He was feasting on flies in Florida, and would have done well to wait



PHOEBE
Sayornis phoebe
 ♀ Life-size

PHOTOGRAPH BY J. S. COOPER, U.S. GEOLOGICAL SURVEY
 MODEL PREPARED BY JOHN W. WOODRUFF, U.S. GEOLOGICAL SURVEY

another month, but that homesickness for old Ohio which her sons and daughters know so well, mastered him, and he could not stay away. Arrived in the old haunts, the pussy-willows nod pleasantly at the venturesome bird, but unfamiliar pools frown icily, and he is obliged to court the shelter of some protecting bank until the purposes of spring are a little stronger grown. Here he utters from time to time a plaintive *tsip* of discontent, or shivers miserably as a fresh blast of Boreas discovers his retreat. Doubtless he recalls on such occasions the bitter irony of the old rhyme, which must have originated in a sunnier land:



Photo by Rev. W. F. Henninger.

PHOEBE'S NEST IN LOG CABIN.

THE NEST CONTAINS ONE EGG OF THE COWBIRD.

"On March the Twenty-first 'tis spring,
When little birds begin to sing;
To build their nests; to raise their brood;
With tender care provide them food."

"Here it is the Twenty-first of March, but where is their spring? Tsip! Nothing but gray skies and a cold wind. Ugh!—and bleary patches of snow! Tsip! It is really too bad! Tsip! Tsip!" But a day or so later the sun shines out and Mrs. Phoebe, more prudent but scarcely less eager, arrives from the south, and the pair set bravely to work nest-building.

Nesting is, of course, the absorbing business of all migrant birds during their summer residence, but in few of them is devotion to the rearing of young, and attachment to a chosen locality carried to a higher degree than in the case of Phebe. Two or three broods are often raised by these birds in a season, and the same pair will return to a favorite culvert or outbuilding year after year. A recent writer tells of a pair which built nests along the lintel of a door for six successive years, until the place was crowded full of nests in various degrees of preservation.



Photo by Rev. W. F. Henninger.
PHEBE'S NEST IN COFFEE POT.

Formerly Phebes nested entirely along streams, placing their nest on a convenient ledge of rock jutting out from some moss-covered bank, which was kept damp by the spray of falling water; or else attaching them to the sides of small caves. This habit still persists in many parts of our state, and nests are to be commonly found along shale-cliffs and in sand-stone grottoes or old quarry-holes. But Phebes have also adopted the ways of civilization, and

the porch, or carriage house, or "lumber shed," boasts no more welcome occupant than this gentle fly-catcher. Bridges, and especially stone culverts, offer a mediate ground between nature and ultra civilization, and of these the birds eagerly avail themselves. One expects at the crossing of every stream, in spring, to see a demure, dusky bird, perched upon the fence-wire where it spans the water, and to hear him say in plaintive but tender accents, "*Pewit, phæbe - phæbe - pewit, phæbe.*" Phoebe herself is brooding patiently below, under the cool stone arch, in spite of the thunder of your horse's hoofs.

It would seem as if these birds become perfectly inured to danger of every sort, and especially to noises. The blasting of rock in a quarry-hole is nothing, if only the nest is not dislodged. In several instances I have found occupied nests in railroad culverts: once in an open-topped culvert, and within four feet of passing trains. Less prudent was a bird found sitting in a stone conduit only eighteen inches high,



*Taken in
Ely Port
Elyria.*

*Photo by the
Author.*

PHOEBE'S CAVE.

THIS LITTLE GROTTO IS THE ONE REFERRED TO IN THE TEXT.

through which a six-inch stream of water flowed. The illustration on the preceding page shows a nest found in an old coffee-pot, which had been left hang-

ing on a nail in a deserted cabin. Mr. Henninger was obliged to take the pot down in order to secure a good photograph.

As may be guessed from the catholicity of Phœbe's tastes, many untoward accidents befall during nesting time. Some nests are drowned out; a crumbling ledge or weakening mud-cement causes the downfall of others; while the Phœbe suffers more than most from misplaced confidence in man—or boy. Saddest of all, perhaps, is the annual destruction by parasites. Phœbe's fondness for chicken feathers frequently involves the introduction of chicken-lice into the nest, and these and other vermin make the poor bird's life a burden. Finding cold eggs or desiccated young, one unacquainted with the cause of Phœbe's hardships, is inclined to chide the parent birds for negligence, especially if they be seen at some distance uttering only a feeble plaint; but a careful investigation will exonerate the birds, and let the observer into the secret of their tragic sorrow.

In this connection a word of advice to those who are the favored hosts of Phœbe, may not be amiss. When you are giving the chickens their spring bath of sulphur, remember Phœbe's nest. If you find evidence of vermin, remove the eggs carefully while you sprinkle the nest thoroughly with the powder, but do not get



WHERE PHŒBE CAPTURES THE EARLY FLY.

too much on the inside. Phœbe may not like it at first, but she will lead off six lusty youngsters at the end of the season, and that will be thanks enough. Or in return, you may figure out how many house-flies a pair of Phœbes will catch in a day, working at the rate of two a minute.

An exhaustive list of Phœbe's enemies is not possible or necessary, but a little drama which I once witnessed in the romantic park at Elyria, is at least fruitful in suggestion. While hunting along the side of the steep river bank with two companions, our attention was arrested by the excited "chit-

tering" of a Phebe, which hovered over a brush pile. A little brown streak flashed out of this pile and into another, and the Phebe closed in hot pursuit. Round and round a half-raised log they flew—a Winter Wren in terror for his life, and the flycatcher breathing direst vengeance. After a spirited chase, the Wren reached unassailable depths in a large brush heap, and his pursuer made off snapping his beak and panting with rage. Ten rods away we found the Phebe's eggs in a mossy bracket on the wall of a sand-stone grotto. Would a dear little Winter Wren be mean enough to harm them, or were Phebe's suspicions unfounded?

No. 139.

OLIVE-SIDED FLYCATCHER.

A. O. U. No. 459. *Nuttallornis borealis* (Swains.).

Description.—*Adult*: Upper parts brownish slate with a just perceptible tinge of olivaceous on back; top of head a deeper shade, and without olivaceous; wings and tail dusky-blackish, the former with some brownish gray edging only on tertials; flank-tufts of fluffy, yellowish or white feathers, sometimes spreading across rump and in marked contrast to it, but usually concealed by wings; throat, belly and crissum, and sometimes middle line of breast, white or yellowish white; heavily shaded on sides and sometimes across breast with brownish gray or olive-brown,—the feathers with darker shafts-streaks; bill black above, pale yellow below; feet black. *Immature*: Similar to adult, but coloration a little brighter; wing-coverts fulvous or buffy. Length 7.00-8.00 (177.8-203.2): wing 4.16 (105.7); tail 2.64 (67.1); bill from nostril .53 (13.5).

Recognition Marks.—Sparrow to Chewink size; heavy shaded sides; bill yellow below; *tee-tee* note; keeps high in trees during migrations.

Nesting.—Not known to breed in Ohio. *Nest*, a shallow cup of twigs, bark-strips, etc., lined with grass and moss; saddled upon horizontal limb of coniferous trees, often at great heights. *Eggs*, 3-5, creamy-white or pale buff, spotted distinctly with chestnut and rufous, and obscurely with purplish and lavender, chiefly in ring about larger end. Average size, .85 x .63 (21.6 x 16.).

General Range.—North America, breeding from the northern and the higher mountainous parts of the United States northward to British Columbia, and the Saskatchewan River. Accidental on the Lower Yukon and in Greenland. In winter south to Central America, Columbia and northern Peru.

Range in Ohio.—A rare migrant. Only a dozen or so records known.

A familiar resident in the mountains of the West and not uncommon in New England, this large Flycatcher is known to us only as a rare migrant passing to and from its home in the Laurentian highlands. It is not a sociable bird, but migrates in solitary fashion, and roosts high in some scantily clad or dead tree, wherever night may chance to overtake it. At such times it

expresses its distrust of the bird-man, craning his neck from below, by occasional alarm notes of singular resonance and penetrating quality, *tew-tew*, *tew-tew*, *tew*, *tew*, *tew*. Beside this he has a loud call, *swee-cheew*, which is one of the characteristic notes of the dense evergreen forests in which the bird spends its summer. "Three *Cheers*," he seems to say—as a gold-miner in the Cascade Mountains of Washington once put it. And, truly, for one who has been delving all day in the bowels of the silent earth, the greeting which this bird shouts down from the topmost twig of some giant fir is most welcome and enspiriting.

No. 140.

WOOD PEWEE.

A. O. U. No. 461. *Contopus virens* (Linn.).

Description.—*Adult*: Upper parts dusky, with a brownish, olivaceous, olive-green, or even grayish cast,—brighter in any case on sides of neck and on back; wings and tail darker; middle and greater coverts tipped with brownish gray, forming two rather noticeable bars; under parts sordid white or yellowish, tinged more or less on sides and sometimes across breast with olive-brown or gray; bill black above, light yellow below, sometimes dark-tipped; feet black. Varies considerably in the matter of olivaceous and yellow coloring, being brighter colored after each moult, viz., in spring and fall. *Immature* birds have some rusty tinging of the feather tips, especially on the wing-coverts. Length 6.00-6.60 (152.4-167.6); av. of five Columbus specimens: wing 3.37 (85.6); tail 2.55 (64.8); bill from nostril .39 (9.9).

Recognition Marks.—Small Sparrow size; obscure coloration; broad bill, yellow below; gray wing-bars; *pe-a-wee* note.

Nest, a shallow cup of compacted moss, grass, rootlets, etc., lined indifferently well with grasses, but handsomely decorated externally with lichens; saddled midway or in fork of horizontal limb, at middle heights. *Eggs*, usually 3, sometimes 4, creamy-white, marked by largish spots of distinct and obscure rufous-brown or amber, in open wreath about larger end. Av. size, .71 x .55 (18. x 14.).

General Range.—Eastern North America, west to the Plains, and from southern Canada southward, migrating through eastern Mexico and Honduras to Colombia and Ecuador. Breeds from Florida to Newfoundland.

Range in Ohio.—Abundant summer resident.

WHEN the tide of spring migrations is at its height, and the early morning woods are bursting with melody, a pensive stranger, clad in soberest olive, takes his place on some well shaded limb and remarks, *pe-a-wee*, in a plaintive voice and with a curious rising inflection at the end. Unlike his cousin, the Phebe, who came too early in March, and who felt aggrieved at the lingering frosts, the Wood Pewee has nothing that he may rightly complain of. The trees are

wreathed in their tenderest greens; the fresh blossoms, opening to the wooing breeze, are exhaling their choicest odors; the air hums with teeming insect life. But the Wood Pewee takes only a languid interest in all these matters. His memory is haunted by an unforgotten sorrow, some tragedy of the ancestral youth, and he sits alone, apart, saying ever and anon as his heart is freshly stirred, *pé-a-wee, pé-a-wee*.

As the season advances, however, the drawling minor notes contrast less strangely with the surroundings. Bobolink's note tinkles distantly from the meadows or is hushed under the weight of increasing family cares. Oriole still flutes, but only spasmodically, and soon we know he too will be silent. When the days reach their full length and the trees can hold not another leaf, then the heart of the olive stranger grows warm. He feels that he has come to his own, and from some ashen limb on the border of a woody aisle, his oft-repeated notes blend perfectly with the languorous air. When other birds are silent through the heat of the day, this soothing singer interprets rather than breaks the delicious stillness of the sunlit shades by his gentle inquiry, *pe-a-wee? pe-a-wee!* And then from time to time, lest his quaint interrogation should seem yet too obtrusive, he answers himself with a quainter note of perfect comprehension and content, *ah-péa-wee*.

Altho fond of the deeper woods the Wood Pewee is by no means confined to them. He is even a little partial to the haunts of men if they include orchard and ample shade trees. His whistled notes present an irresistible temptation to imitation, but when he hears his name called by unfamiliar lips he exhibits only mild surprise without resentment.

The nest of the Wood Pewee is one of the most slightly and romantic structures which an ingenious Nature has evolved. Who would not, after the Hang-bird's nest perhaps, choose a home which looked as if it grew upon the very limb which supported it? A rather shallow cup—not a saucer—made of split grass, weed-fibers, delicate strips of grapevine bark, and abundant moss, is settled into the crotch of a lichen-covered horizontal limb, or perhaps it is saddled upon the middle of the limb, even tho it be not over an inch in thickness. In place of cement or vulgar mud, the builders use spiders' silk, the toughest of substances for its size, and delightfully sticky. When the walls are laid, a fairy network of this substance is spread over the outside; and lichens, carefully selected to correspond with those already appearing on the limb, are plentifully used to decorate and conceal the surface. The resulting creation appears like a moss-covered knot where knots are common, and that is all.

But of what use is all this cunning art of decorative concealment, if the proud architects have to go and give the secret away after all? One has only to determine the general vicinity of a Pewee's nest, and then wait quietly at some little distance until the bird flies straight to it. Even when standing beneath the exact spot, the bird, in utter guilelessness or confidence, will settle

upon her eggs with a soft titter of content. But why not? Who could wish to harm so gentle a creature?

In no way do birds exhibit greater diversity of character than in their treatment of intruders. Some will flutter about you savagely when the nest is being examined, and snap their mandibles as tho wishing you were only the size of a horse-fly; others sit at a distance and utter a mournful plaint; while others still disappear from view entirely.

That the Wood Pewee is a bird of spirit the red squirrel can testify. I once saw one of those arch-destroyers trying to make his way along a walnut limb which was evidently forbidden territory. A Pewee had him under fire, and every time his head came round above the limb she set upon him fiercely. If the viciously clicking mandibles did not succeed in finding one of those evil eyes, the flashing fire from the bird's eye must certainly have singed his whiskers. No telling what would have happened had there not been one who intervened.

No. 141.

YELLOW-BELLIED FLYCATCHER.

A. O. U. No. 463. *Empidonax flaviventris* Baird.

Description.—*Adult*: Above dull olive-green, shading on sides and breast into greenish yellow of under parts, the latter shade purest (sulphur-yellow) on belly; wings and tail fuscous; the middle and greater coverts tipped, and the inner quills edged with light greenish yellow or whitish; secondaries abruptly yellow-edged on terminal half of outer webs; tip of wing formed by second, third and fourth primaries; the first shorter than the fifth; a yellow eye-ring; bill dark above, pale below; feet blackish. *Immature*: Similar, but duller above; brighter yellow below; the wing-bands buffy or ochraceous. Length 5.00-5.75 (127.-146.1); av. of ten Columbus specimens: wing 2.67 (67.8); tail 2.02 (51.2); bill from nostril .32 (8.1); width at base .31 (7.9).

Recognition Marks.—Warbler size; general yellowness,—the constancy and strength of the yellow is distinctive.

Nesting.—Not known to breed in Ohio. *Nest*, chiefly of moss, placed on or near ground, in upturned roots, under fallen logs, or in moss-bank. *Eggs*, 4, creamy-white, spotted and speckled, chiefly about larger end, with cinnamon-brown. Av. size, .67 x .52 (17. x 13.2).

General Range.—Eastern North America, west to the Plains, and from southern Labrador south through eastern Mexico to Panama, breeding from the northern States northward. Casual in Greenland.

Range in Ohio.—Probably not uncommon during migrations. Owing to its retiring habits few observers have reported it.

THE *Empidonaccs*, or Gnat-kings, (as the Greek name signifies), as a group, offer peculiar difficulties to the student of birds. Altho separated into many species, the distinctions are so fine and the birds in the hand really look so much alike, that their identification is for a long time, in the experience of every one, involved in doubt and confusion. In the West, indeed, where the habitats of these birds are not yet clearly defined, and where the commonest species has earned the name *difficilis* (difficult), the effort to keep up with the little Flycatchers is almost maddening.

The keys to an acquaintance with the four species¹ which occur in our state, are to be found in the notes, or characteristic cries, which each bird utters, and in the character of the haunts which each affects. The species under consideration is the least known of the four. It is found only during migrations, when it is very quiet and very secretive. I have never positively identified it within the state and it appears to be known to only two or three observers. Dr. Wheaton, who was perhaps better acquainted than any one else with the Yellow-bellied Flycatcher, says of its range: "It is seldom found perched near the extremity of limbs watching for or capturing flying insects, but it is generally seen in the midst of a low thicket or fence row, and at the first intimation that it is an object of observation, seeks further concealment by hiding near the ground and remaining motionless. None of the family are such adepts at concealment, its habits in this respect resembling those of the Connecticut and Mourning Warblers."

The ordinary note of this bird is described as "an abrupt *psc-ck*, almost in one explosive syllable," in which case it cannot be so unlike the familiar *cle-otip* note of the Acadian Flycatcher. It has, however, a more distinctive call—"a soft, mournful whistle consisting of two notes, the second higher pitched and prolonged, with rising inflection, resembling in a measure *chu-c-c-p*" (J. Dwight, Jr.). Dr. Wheaton records having heard this longer note on two occasions, but it is rarely heard during the migrations.

No. 142.

ACADIAN FLYCATCHER.

A. O. U. No. 465. *Empidonax virescens* (Vieill.).

Synonym.—GREEN-CRESTED FLYCATCHER.

Description.—*Adult*: Upper parts, olive-green, olive, or olive-gray; wings and tail fuscous; the wing-barring and edging according to the pattern of the preceding species, but not so yellow—rather inclining to buffy or gray; tip of wing

¹ For practical purposes the northern refinement *E. traillii alnorum* may be disregarded.

formed by second and third primaries; first longer than fifth; eye-ring, white, or palest possible yellow below; below white, shaded with olive or olive-gray on sides and across breast, tinged with sulphur-yellow on belly (except the middle), flanks, and lining of wings; bill broad, blackish above, pale beneath; feet dark. *Immature*: Like adult, but with ochraceous wing-bars and edgings, and brighter green above, with paler tips of feathers—thus lightening the general effect. Length, 5.50-6.10 (139.7-154.9); wing, 2.87 (72.9); tail, 2.27 (57.7); bill from nostril .37 (9.4); width at base .30 (7.6).

Recognition Marks.—Larger Warbler size; distinctly olive (of some shade) above; throat whitish; yellow-tinged on belly and flanks; *cleotip* note; an inhabitant of woodland, especially beech.

Nest, a frail and shallow saucer of leaf-stems, dried blossoms, or twigs, and rarely, grasses; placed in forklet near tip of declining beech-branch, at a height of from seven to fifteen feet. *Eggs*, 2 or 3 and sometimes 4, creamy-white, sparingly spotted about larger end with rusty-brown. Av. size, .73 x .54 (18.5 x 13.7).

General Range.—Eastern United States, north to southern New York and southern Michigan, west to the Plains, south to Cuba and Costa Rica. Rare or casual in southern New England.

Range in Ohio.—Abundant summer resident. One of the most characteristic birds of our numerous beech woodlands.

“THE groves were God’s first temples,” and in none of them is worship fitter than in a wood of ancient beeches. The floor of the temple is ribbed with their roots, Plinth and archi-

trave are wanting, but the sturdy beech columns need no excuse save their own rugged grace and their anreoles of living green. Their unfluted sides are frescoed, perhaps, in lichen hues of ashy-



Photo by
J. B. Parker

Taken near
Danville.

green and ochrey brown, or else becheckered by the soft sunlight as it comes sifting down through unstained windows. Here a group of tapering pillars, a closer brotherhood, incline in reverence to the whispering breeze, and cast an ample shade for the inner shrine; and here a fallen tree, grown old in service but useful still, invites the worshipper to pause and rest.

In such a sacred spot as this the Acadian Flycatcher has chosen to spend its brief summer. Within the shadow of a single wood it finds its mate, rears young, and gathers strength for the return across the unknown wastes to Florida.

The first notice which we have of the bird's arrival, sometime during the last week in April, is a fairy sneeze heard in the depths of the wood.

"Cleotip," it says,

but with the time and emphasis of a

"Kachew."

This note comes not from the tip of some dead limb in full view, as would be the case with other Flycatchers, but from a clear space on some lower limb or middle height. The bird delivers his salutation with a good deal of apparent effort, as tho he were clearing an obstruction from his beak, and he jerks his tail at the same time by way of emphasis. His repertory of song contains no other notes save a low humming titter of adulation, common to the little Flycatchers, and a sharp scolding note, *sweet*, or more rarely *sweet*, with a sort of explosiveness at the finish. Altho these are the only notes which I have observed in a somewhat extended acquaintance, one cannot afford to be dogmatic on this subject. As matter of curiosity the following list of interpretations is presented, as culled from seven authors: *Queac, queac, tchoac, tchewee, weet, weet, weet, will; chirr* (Audubon); *quequal* (Allen); *spee or peet; pee-e-yuk* (Chapman); *e-chee-ah* (Nehrling); *wick-up* or *hick-up; queep-*



Photo by L. B. Parker.

THE TRIUMPH OF MOTHER-LOVE.

ALTHO IN TERROR OF THE CAMERA, THIS MOTHER FLYCATCHER VENTURES TO FEED HER FAMISHING BROOD WHILE HOVERING OVER THEM ON THE WING.

queep or *chier-queer*; *whoty*, *whoty* (Bendire); *What-d'ye-see* (Wheaton); *tshcc-kee*, *tshcc-kee* (Blanchan). Seven other authorities consulted wisely refrained from the attempt.

It is not altogether unusual to find the Acadian Flycatcher frequenting second growth clearings, and the woody borders which face damp brush lots, but he is more commonly found along the umbrageous vista of some unfrequented wood-road, or in the gloomy heart of the forest. Here he waits impatiently for mosquitoes and midges, darting at them suddenly from his perch, making a quick turn at the goal, and bringing his mandibles together sharply with a click which for one poor insect is the veritable crack of doom. Here, too, in some dim aisle of the forest, from the feathery tip of a horizontal or



Photo by J. B. Parker.

ACADIAN FLYCATCHER AND YOUNG.

THE NEST IS THE SAME AS SHOWN IN THE PREVIOUS ILLUSTRATION. GROWN BOLDER THE MOTHER BIRD ALIGHTS ON THE LIMB PREPARATORY TO DIVIDING A MOTH AMONG HER BROOD.

descending branch, a frail cradle is swung. It is a shallow saucer of fine twigs, leaf-stems, or the stalks of some slender vine made fast by the edges to forking twigs or half supported by them. Usually the materials are loosely interwoven and bound together by cobwebs, but the latter are often absent. Catkins and dried blossoms also generally enter into the construction. Occasionally the whole affair is so careless that it merits Dr. Wheaton's comparison, "a tuft of hay caught by the limb from a load driven under it." Beech trees are not the only hosts of this little gnat-king. Dr. Jones says, "I have taken nests from the maple, dogwood, oak, hickory, black-haw, thorn, Indian-arrow, beech, elm, papaw, willow, hazel, and wild grape-vine." To this list must be added the hemlock, a favorite tree wherever it is to be found.

Into the frail saucer three eggs are commonly put. They are of a rich creamy or buffy hue, flesh-tinted as well, when fresh, and boldly but sparingly spotted about the larger end with light brown or umber;—never "white," and seldom unmarked. Many eggs must be lost each season, for any considerable wind would upset them. In fear and trembling I once hooked down a nest at the end of a horizontal oak branch full twenty feet high. The single youngster which it contained appeared, however, to enjoy the ride immensely. If there had been eggs, they could have been counted from below, as in most cases.

The Acadian Flycatcher lays its first eggs before the end of May, and is ready for a second family early in July. It is believed that some thrifty birds raise three broods in a season, but this must be rare.

Considerable fault has been found with the name *Acadian*. It is a misnomer in so far as it is understood to refer to a certain locality in Nova Scotia. The

"Green-crested Flycatcher" of the A. O. U. committee is worse yet.

It is a revival of the "Small Green-crested Flycatcher" of Audubon and others, but it is inapt. It reminds one strongly of Cuvier and the French Academy.

Cuvier once asked the French savants to define a crab. "A crab", said these wiseacres, "is a small, red fish which crawls backward."

"Very good, Gentlemen," replied Cuvier, "very good; only a crab is not a fish; it is not red; and it does not crawl backward."

If the discontent with "Acadian" cannot be subdued, I would propose a revival of the term *Sylvan*, once employed for several Flycatchers indiscriminately but now fallen into disuse. *Sylvan* Flycatcher would accurately and appropriately distinguish *Empidonax vireescens* in Ohio.



Photo by J. B. Parker.

CLEANING THE NEST.

THE PARENT BIRDS ATTEND TO THIS NECESSARY DUTY AT THE CLOSE OF EACH VISIT TO THE NEST.

No. 143.

TRAILL FLYCATCHER.

A. O. U. No. 466. *Empidonax traillii* (Aud.).

Description.—*Adult*: Above olive, dark olive-green, or olive-brown, *brown of head darker and unmistakable*; wings and tail fuscous; wing-coverts tipped and inner quills margined with grayish (pale buffy or fulvous); pattern of edging on secondaries similar to that of preceding species but less distinct,—yellow not so abrupt, paler, etc.; wing-tip formed by second, third, and fourth primaries; first usually shorter than fifth; below sordid white, tinged on breast and sides with brownish gray, and with a faint wash of sulphur-yellow behind; bill dark above, light brown below. *Immature*: Browner above, more yellow below; wing-bands deep buffy or ochraceous. Length 5.75-6.25 (146.1-158.8); wing 2.84 (72.1); tail 2.22 (56.4); bill from nostril .36 (9.1); width at base .30 (7.6). Female not so long, but other dimensions substantially the same.



Taken in
Lorain County.

Photo by the Author.

A VIEW OF THE OAK POINT SWAMPS—A FAVORITE HAUNT OF THE TRAILL FLYCATCHER.

Recognition Marks.—Warbler to small Sparrow size; as compared with the preceding species, a general note of brownness observable; other diagnostic differences not easy, nor individually constant; habits quite different; a dweller in swamps and lowland thickets.

Nest, a rather bulky but neatly-turned cup of plant-fibres, bark-strips, grass, etc., carefully lined with fine grasses; placed three to ten feet up, in crotch of

bush or sapling of lowland thicket or swamp. *Eggs*, 3 or 4, not certainly distinguishable from those of preceding species. Av. size, .70 x .54 (17.8 x 13.7).

General Range.—Western North America from the Mississippi Valley (Ohio, Illinois, and Michigan) to the Pacific and from the Fur Countries south into Mexico.

Range in Ohio.—Locally common summer resident. Found in willows and alders of swamps.

EARLY in June your morning walk along the river bank is likely to be interrupted by an imperative *swee-chee*, issuing from the top of a hackberry sapling hard by. This bird sits uneasily upon her perch and appears anxious, worried. Only dire extremity, you may be sure, could induce her to venture so near this unknown monster, man. *Swee-chee*, she challenges again, and then amazed at her own temerity, vanishes into the thicket to be seen no more.

There is a nest near, but the owner has done her duty in proclaiming the fact, and she will not lead further in the search. At about the level of your head in some willow or alder clump, or mayhap in a hackberry like the one upon which she sat, you will find a neat, substantial cup of hemp and grasses, bound tightly to an upright fork. The nest might have been a



Taken at the Licking Reservation.

Photo by the Author.

A WELL-BUILT CUP
NEST AND EGGS OF THE
TRAILL FLYCATCHER.

Yellow Warbler's, except that it is a trifle bulkier and not so well concealed. It lacks, too, the cotton lining which is indispensable to the Warbler home. The eggs might have been those of an Acadian Flycatcher, but the situation of the nest is entirely different, and its architecture as far removed as Gothic from Maori. Or again the nests of the two species may be happily related by the comparison of cup and saucer. The cup of the Traill Flycatcher is normally two inches across by one and a half deep, inside.

On June 11th, 1901, while walking through a dense clump of swamp elms on the Olentangy levee, I spied a nest of this bird at a height of about ten feet. It was in a delicate situation, but by resting what seemed about one-half of my avoirdupois on an elm sapling, and entrusting the other half to the air, I managed to secure a glimpse into the nest. I saw that it was good. The nest itself was somewhat awry. It had doubtless been planned right in the first place, but the last wind, or the rapid growth of engaging twigs had lifted one side higher than the other. It contained four eggs, three normal and fresh; the other off in every way, except as to size and shape. The egg in question was absolutely unmarked, and bore every evidence of having been exposed to the weather for a great length of time. It was porous with age and the contents perfectly hard. How it might have come into a nest of recent construction along with three fresh eggs I am quite unprepared to say.

Traill's Flycatcher is found only in localities conforming to rather exact requirements. The



Taken
at the
Licking
Reservoir

Photo
by the
Author

VERY CONFIDING.

THIS LITTLE MOTHER FLYCATCHER APPEARS AGAIN NEAR
THE CENTER OF THE NEXT ILLUSTRATION.

bird loves brushy swamps and lowland thickets. In a suitable swamp of a few acres it may abound, so that one writer has stated, rather extravagantly, that it nests in colonies. On the other hand it may be entirely wanting for miles



Taken at the Hocking Reservation.

Photo by the Author.

A HOME IN THE ELDERBERRIES.

A FEMALE TRAILL FLYCATCHER IS SEEN SITTING ON HER NEST AT A POINT NEAR THE CENTER OF THE PICTURE.

around. Alto nests of this species have been frequently found of late, comparatively little systematic work has been done upon its life history. The bird reaches Ohio about the second week in May (Columbus, May 5th, is an early record, possibly of *E. t. alnorum*), raises one brood and disappears early in September. Authorities differ, as usual, in the interpretation of the notes: "Whit-te-ar", and later in the season "Hoyt-te-ar" were what Dr. Wheaton heard. An energetic *swee-chee* or *swee-chu* suits most. An early migrant at Columbus once startled me with a most emphatic enunciation, *Zweé-bew* and once again *sweé-bew, sweét*. This bird was evidently not *E. hammondi*, but he had acquired the precise accent of the western species.

No. 144.

LEAST FLYCATCHER.

A. O. U. No. 467. *Empidonax minimus* Baird.

Synonym.—CHEBEC.

Description.—*Adult*: Above, olive, olive-green, or rarely, olive-brown; a little darker on the head; wings and tail fuscous; tip of wing formed by third and fourth primaries; second equal to the fifth; first shorter than the sixth; wing-bars ashy white or brownish gray; pattern of secondaries about as in *virescens*, but edging ashy white instead of yellowish; below, dull white, shaded on sides by brownish gray, and behind faintly with sulphur yellow; eye-ring whitish; bill dark above, horn-color below,—not so light as in the other species. *Immature*: Similar, but rather more yellow below. Length 5.00-5.50 (127.-130.7); wing 2.46 (62.5); tail 2.03 (51.6); bill from nostril .31 (7.9); width at base .29 (7.4).

Recognition Marks.—Least, Warbler size; *chebec* or *sewick* note, smartly rendered. Size and note distinctive.

Nest, a neat structure of interwoven grasses, bark-strips, and felted vegetable-down, lined with hair, or occasionally, feathers; placed in upright or horizontal fork of sapling five to fifteen feet up. *Eggs*, 3-5, white, unmarked, or rarely, speckled. Av. size, .63 x .50 (16. x 12.7).

General Range.—Chiefly eastern North America, west to eastern Colorado and central Montana; south in winter to Central America. Breeds from the northern States northward.

Range in Ohio.—Common spring and late summer migrant. Locally and sparingly resident in summer.

IN comparison with other *Empidonaces* a good many superlatives are applicable to this bird in addition to that of least. In the first place he is the earliest of the spring migrants, reaching central Ohio some time during the last week of April or even earlier. Then he is the most prominent, for he

almost invariably selects a conning tower on some naked or dead limb which commands a wide sweep of mosquito territory. He is the least timid, or perhaps we would better say he is the most confiding of his race. Conscious of right motives himself, he is slow to think evil of others, and does not hesitate to occupy a convenient station from which he may observe your business with pleased interest, while not forgetting his own. Then if you are not ready to admit that he is the dearest bird, it must be conceded that he is a little the noisiest member of a group in which this distinction is easy and not unflattering. *Seewick*—*seewick*, or as some prefer to hear it, *che-bec*, sounds frequently in a very business-like tone of voice from the tip of the dead branch which serves the bird as a base of operations.

The drooping wings and a general air of dejection which distinguish this little Flycatcher at rest, are promptly contradicted both by the energy of the bird's utterance, and by the spirited sorties which are made after passing insects. Sometimes a whole host of midges is encountered and then the little mandibles go snip, snip, snip, like barbers' shears in skillful hands.

There is also an ecstatic flight cry, which occurs either as the result of the excitement of rivalry or the chase, or as a tender passage in courtship, and which almost lays claim to being considered song. During its delivery the bird rises from its perch, flutters its wings rapidly and turns around slowly in the air, while it utters an incoherent series of screaming gasps: *Seewick, tooral, seewick tooral, seewick, tooral-ooral*.

The Least Flycatcher is to be found almost anywhere during the spring migrations, but orchards, second-growth clearings, and brushy hillsides are favorite places. The up-trip is made in rather leisurely fashion, and the birds sometimes linger long enough to encourage the idea that they are going to nest. Mr. I. A. Field saw two of these birds at the Licking Reservoir on May 30th, and Professor Johnson of Granville believes that a pair of them have nested for several years past in front of his house.

If the nest is discovered in the state, as it is altogether likely to be, it will be found in an upright fork of some bush or sapling, a very neat structure built somewhat after the manner of a Redstart's; and the pure white eggs will make identification easy and certain.

The return journey takes place early in September or late in August. It is, however, an open question whether birds seen August 24th, 1902, in Meigs County, were early migrants or summer residents.

No. 145.

RUBY-THROATED HUMMINGBIRD.

A. O. U. No. 428. *Trochilus colubris* Linn.

Description.—*Adult male*: Above shining bronzy green,—rear aspect golden-green; wing-quills fuscous with faint purplish reflections; tail (two thirds concealed by green coverts), dark, metallic violet or purplish, forked, and with emarginate feathers; gorget shining metallic crimson; chin dull, velvety black; throat, below gorget, whitish; remaining lower parts heavily tinged with dusky and overlaid with metallic green, save on flanks, which are cottony-whitish; bill slender, straight, and uniformly rounded. *Adult female*: Similar but without gorget; throat white, specked with dusky; tail double rounded, feathers rapidly tapering near tip. *Immature male*: Like adult female, but tail forked. *Immature female*: Like adult, but throat not specked with dusky. *Adult male*, length 3.25-3.60 (82.6-91.4); wing 1.53 (38.9); tail 1.08 (27.4); bill .63 (16.). *Female* a little larger.

Recognition Marks.—Size least among Ohio birds.

Nest, of plant-down, bound together by vegetable-fibers, and decorated externally with lichens; a tiny cup saddled upon a horizontal or descending limb, usually at considerable heights. *Eggs*, 2, pure white. Av. size, .51 x .34 (13. x 8.6).

General Range.—Eastern North America to the Plains, north to the Fur Countries, breeding from Florida to Labrador; and south in winter to Cuba, Mexico and Veragua.

Range in Ohio.—Common summer resident.

THOSE of us, who as children were taught to call lady-bugs "lady-birds," might have been pardoned some uncertainty as to the whereabouts of the dividing line between insects and birds, especially if, to the vision of the "Hum-bird's" wings shimmering by day above the flower bed, was added the twilight visits of the hawk-moths not a whit smaller. The Hummer is painted like a butterfly; its flight is direct and buzzing like a bee's; it seeks its food at the flower's brim by poising on rapidly vibrating wing like the hawk-moth; but there the resemblances cease. For the rest it is a bird, migrating, mating, and nesting quite like grown folks.

It is a matter of no little wonder that of the five hundred species of Hummingbirds known to science and confined to the New World, only one should have penetrated the region east of the Mississippi River, there to enjoy a range almost twice larger than that of any other species. How we came to be so nearly overlooked we may never know; but let us be thankful for one.

Contrary to the popular belief the Hummer does not feed largely upon nectar, but inserts its needle-bill into the depths of flowers mainly for the purpose of capturing insects. This explains the otherwise puzzling habit the bird has of revisiting the same flower beds at frequent intervals. It is not to



RUBY-THROATED HUMMINGBIRD
Trachilus colubris
Life-size

Illustration by A. W. Richards
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gather new-flowing sweets but to see what flies the sweets themselves have gathered. If the bird extracted honey to any great extent—it does some—it would be rifling the bait from its own traps. Again the bird is not footless, as some suppose, but it spends a good deal of time perching on exposed limbs, from which it may dart, Flycatcher fashion, after passing insects.

I am almost inclined to deny the report also that this tiny creature is songless. For in addition to the squeaks of excitement or anger, which all have heard, have we not seen an impetuous gallant dashing through the air in great rainbow mazes, before his lady love, demurely seated; and have we not heard him giving cry to a perfect ecstasy of chipping and suckling notes of such exquisite fineness that the human ear could only catch the crests of sound? Song is a relative term, to be sure; but to accuse the Hummingbird of being voiceless, is a bit of injustice. Ask the lady.

Hop-o'-my-Thumb has, I am sorry to say, a flashing temper to match his throat. Rivals charge at each other with an impetuosity which makes us fearful that they will be spitted on each other's beaks. Other birds a hundred times the size must sometimes suffer from the little tyrant's spleen, but to see a Hawk cross the sky by jerks and plunges in a vain effort to avoid this tiny persecutor is not a wholly unedifying sight.

The Hummingbird is full of curiosity and not, perhaps, without some sense of humor. Else why should one of them down in Washington County have hovered for full twenty seconds in mock uncertainty within eighteen inches of the author's nose? It was only honest sunburn, and I resent the bird's insinuation.

The fairy's nest is commonly saddled to an obliquely descending branch of an orchard or forest tree. It is a tiny tuft of vegetable down bound together and lashed to its support by a wealth of spider webbing and covered externally with lichens. When finished it is nothing more than an elfin bump on a log, but the unwary visits of the mother discover a secret otherwise profound. She sits upon two eggs like homeopathic pills—so dainty, indeed, that she herself must needs dart off the nest every now and then and hover at some distance to admire them. Both parents are valiant in defense of the nest, but the practical support of the little family seems to fall chiefly upon the mother. The young are fed by regurgitation—"a frightful looking act," as Bradford Torrey says.

No. 146.

CHIMNEY SWIFT.

A. O. U. No. 423. *Chætura pelagica* (Linn.).

Synonym.—CHIMNEY SWALLOW (incorrect).

Description.—*Adult*: Entire plumage sooty brown or sooty gray, darker, almost black, on wings, much lighter on throat; feathers of upper parts with faintest possible greenish iridescence: lores black; the shafts of the tail-feathers extending beyond the vanes, forming black spines one-quarter to one-third of an inch in length; point of wing formed by first and second primaries; the remaining wing-quills strongly and uniformly graduated in length; bill very small; feet weak. Length 4.75-5.50 (120.6-139.7); wing 5.00 (127.); tail 1.90 (48.3); bill from nostril .16 (4.1); gape 1.00 (25.4).

Recognition Marks.—Apparently "Swallow" size; abbreviated tail; semi-lunar appearance of wings in flight; general black aspect. Never seen at rest save in chimneys or hollow trees.

Nest, a shallow half-saucer of short twigs, glued together with the bird's saliva and similarly cemented to the inside wall of a chimney, or placed in a hollow tree. *Eggs*, 4-6, pure white. Av. size, .80 x .51 (20.3 x 13.).

General Range.—Eastern North America north to Labrador and the Fur Countries, west to the Plains, and passing south of the United States in winter, at least to Jalapa, Mexico, and Cozumel.

Range in Ohio.—Abundant summer resident.

THE way of any bird in the air commands interest, but the way of the Swift provokes both admiration and astonishment. With volitatorial powers which are unequaled by any other land bird, this avian missile goes hurtling across the sky without injury, or else minces along slowly with pretended difficulty. Now it waddles to and fro in strange zigzags, picking up a gnat at every angle, and again it "lights out" with sudden access of energy and alternate wing strokes, intent on hawking in heaven's upper story. At favorite seasons the birds cross and recross each other's paths in lawless mazes and fill the air with their strident creakings, while here and there couples and even trios sail about in great stiff curves with wings held aloft. It is the only opportunity afforded for personal attentions, and it is probable that the sexes have no further acquaintance except as they pass and repass in ministering to the young.

The most interesting hour in the life of this bird is bed-time. All the birds in a given locality resort nightly to some high chimney or ventilator shaft,—the larger the better. Even during the breeding season the males congregate regularly in these places and thither the young are hurried as soon as they have attained adolescence. After sunset, then, the company gathers for a social whirl in the air above their long black bunk. Under leadership which seems haphazard, they gyrate furiously, now appearing like specks borne about resistlessly in some vast whirlpool, now following through some intricate evolution in figure-



CHIMNEY SWIFT
Chaetura pelagica
♂, Life-size

of-eight or rosette pattern, all without collision or accident. No bird is more loth to go to bed, but as the evil hour draws near and conscience pricks the tender-hearted, a few approach the chimney top with quivering wing. But at sight of the yawning hole they recoil in terror, and rejoin the mad whirl above, circling seven times faster for the fright they have had. But something really must be done; the music languishes; one and another and another braves the depths, and returns no more. Soon there is a general movement and whole squads go down. The young bloods spur up the dance with renewed fury, but the light is fading and the end is near. When the waltz is over a few late comers dive into the hole without loss of time. All is still, at last, and darkness broods over the scene. Thus has the bird-man seen them a thousand strong.

Getting up in the morning is more prosaic. At about 4:30 A. M. (on a morning late in August) some unquiet spirits who have slept outside, enter the chimney and arouse the sleepers. A general exodus soon occurs, but there is no repetition of last night's gaities. In leaving the chimney the birds do not hurl themselves upward, as one might expect, but flutter quietly to the top, and upon reaching the brim fly straight away or else downward. When many are leaving at once this action curiously resembles that of smoke on a windy day.

In nesting the Chimney "Sweeps" seek out the smaller chimneys of dwelling houses, and usually only one pair occupies a single shaft. Short twigs are seized and snapped off by the bird's beak in midflight, and these, after being rolled about in the copious saliva, are made fast to the bricks, a neat and homogeneous bracket being thus formed. This will be sufficient to support the half dozen crystal white eggs and the hissing squabs which follow, unless a premature fire or a long-continued rain dissolves the glue and tumbles the fabric into the grate.

Sitting birds, when discovered, oftenest drop below the nest and hide, clinging easily with the tiny feet supported by the spiny tail. The male bird seldom pays any attention unless there are young, in which case he even brushes past the intruder and enters the nest in his eagerness to share the hour of danger. The young are rather slow in development and it requires, according to Mr. Otto Widmann, two months to rear a family of them. Usually only one brood is raised, but a second nesting is undertaken even as late as August if the first has proven unsuccessful.

Of course the Swift did not always place the nest in chimneys. Dr. Howard Jones says: "Sometimes it is built in a hollow trunk of a tree, under the eaves of a house, or upon a rafter in a barn, but the last two locations are very exceptional. Before the days of chimneys the nests were placed almost exclusively in hollow trees, and even today there are some birds which cling to this ancestral habit. About two miles east of Circleville on Darby Creek,

is a gigantic sycamore, which, a century or so ago, was topped by the wind. In the trunk of this tree, which is hollow to the roots, Chimney Swifts have built for years. There are other hollow trees in the neighborhood, into which I have also seen birds carrying sticks; and if all such trees in the state could be counted, they would probably foot up hundreds, or, perhaps even thousands."

No. 147.

WHIP-POOR-WILL.

A. O. U. No. 417. *Antrostomus vociferus* (Wils.).

Synonym.—NIGHT-JAR.

Description.—*Adult male*: Mottled,—black, gray and ochraceous of several shades—in intricate patterns and soft blendings; a narrow collar and the terminal third of three outer pairs of rectrices white, the former margined, and the latter tipped with ochraceous-buff; crown and nape finely mixed gray, with narrow lateral, and broad medial black streaks; the wings much mixed with ochraceous-buff, which is nearly pure in spots on outer webs of dusky primaries; four median tail-feathers gray and dusky, indistinctly barred, and with ochraceous mottling; the lateral feathers chiefly blackish, and with large white terminal bands; below nearly black on throat above collar, and across breast; lighter on belly and sides, obscurely barred with dusky in wavy outlines on pinkish buff, fulvous, or ochraceous ground; bill with enormous gape and protected by stout, undivided rictal bristles, an inch or so in length, and seven or eight in number on a side. The bristle idea is carried out by numerous hair-like tips of the feathers which border the throat on the sides and meet the bristles above. Feet a little stouter than in preceding species. *Adult female*: Similar, but with narrow ochraceous-buff, instead of broad, white terminal bands on outer tail-feathers; collar more extensively tinged with buffy. *Immature*: Pattern of upper parts somewhat different; plainer below. Length 9.50-10.00 (241.3-254.); wing 6.16 (156.5); tail 4.73 (120.1); gape 1.28 (32.5); bill from nostril .30 (7.6).

Recognition Marks.—Robin size; general mottled and brindled appearance; crescentic white collar; prominent rictal bristles; *no white wing-spot*.

Eggs, 2, laid on the ground or among dead leaves, in damp woods or thicket; elliptical, dull white or creamy, with spots and dots or sometimes blotches of yellowish brown, and with obscure lilac shell markings. Av. size, 1.16 x .86 (29.5 x 21.8).

General Range.—Eastern North America to the Plains, and from latitude 50° south to Guatemala.

Range in Ohio.—Not uncommon summer resident, but locally restricted.

AS one is picking his way late in April through a low damp wood, choked with underbrush, a dark figure suddenly rises from the dead leaves at his feet, uttering a low disconcerted *chuck*, but moving off with wings of

ghostly noiselessness, only to drop down into the brush again a rod or so away. It is almost idle to search for it with the eyes alone, so perfectly do the softly blended colors of the Whippoorwill's plumage assimilate to those of the leaf-strewn mold. On other occasions the bird may be seen resting on some low limb or fence-post, and twice during migrations I have seen it high in trees in broad daylight, squatting lengthwise of a dun-colored limb.

Whippoorwills are crepuscular and nocturnal in habit, and secure their insect prey by flying to and fro across bushy pastures and swampy meadows. The bird's enormous gape, seconded by the lengthy bristles on either side of the beak, makes the pursuit about as artless as that of the entomologist, who sweeps the tops of the weeds with a mosquito-netting bag, "catching as catch can."

These nocturnal fly-catchers are rather irregular in their distribution about the state. They are likely to appear almost anywhere during migrations; but for a breeding haunt



Photo by R. F. Griggs.

THE WHIPPOORWILL'S NEST.

prefer broken country where wooded ravines and damp brushy hillsides abound. I have seen half a dozen of them near Columbus and presume they breed in some of the "runs." Chance Creek, a deep ravine in Lorain County, once pine-clad, was the only spot where we could be sure of finding them for miles around.

It was here that I once listened to a concert which stands out in memory like the singing of Patti. A small party of us, reunited classmates, were crossing, at dusk, the high tongue of land between Chance Creek and Vermillion River, when we heard the sweet notes of a Whippoorwill, *whip-poor-will*, wafted up from the glen below. Soon the bird was joined by another whose presence seemed to provoke the first to redoubled effort. The mellow notes were produced in a continuous series by each performer, and a third chimed in, as we stood and listened to the intoxicating music, in that tender fresh hour after sunset. After a time the bird-man ventured to imitate their cries by whistling, and soon obtained a hearing. The birds answered eagerly at frequent intervals. Then came a long hush, followed by a sudden sense of the birds' presence, as they glided silently by, almost brushing my wife's garments with their quiet wings. They took up a station near and poured forth such a flood of liquid notes as made the air quiver and vibrate with the gushing melody, and bathed our world-worn spirits in a grateful stream of limpid absolution. Awed and hushed the bird-man could not emulate those glorious strains, and the trio retired in gentle confusion.

The periods of greatest activity in song are the hours just after sunset and those preceding dawn, but the cries may be heard at all hours of the night as the bird pauses from time to time to rest.

The eggs, which are not quite white, as one might suppose them to be from the photograph, are laid upon the fallen leaves or bare rock, without any attempt at nest construction. The parent bird sits close as long as possible, or feigns lameness in the event of danger; and she has also a hissing note meant to repel attack. The eggs or young must be studied, if at all, the hour they are discovered, for in the absence of the observer, the bird will remove them—by the mouth it is said—to a place of safety.

No. 148.

NIGHTHAWK.

A. O. U. No. 420. *Chordeiles virginianus* (Gmel.).**Synonym.**—BULL-BAT.

Description.—*Adult male*: Mottled, black, gray and ochraceous, and with white in patches; above black predominates, especially on forehead and back, mottling falling into indistinct bars on upper tail-coverts and tail; anterior edge of wing white; the wing-quills dusky; a large, white, transverse patch about midway on the first five primaries, save on the outer web of the first; a large V-shaped throat-patch white; remaining under parts distinctly and finely barred, dusky and whitish with some faint ochraceous,—the latter found especially on the parts adjacent to the white throat-patch; the crissum sometimes pure white, usually barred, at greater intervals than on breast; a white band crossing tail near tip, except on central feathers. Bill without evident bristles, the horny part very small, but length of gape about an inch. Tarsus very short; the middle claw enlarged, and with a curious, horny, comb-like process on the inner edge. *Adult female*: Similar, but without white band on tail, and with white spots on primaries often much reduced; throat-patch tinged with ochraceous, and suffusion of under parts by this color more pronounced. *Immature*: More finely and heavily mottled than adults, and with upper parts more heavily marked, or even suffused with ochraceous-buff. Length 9.00-10.00 (228.6-254.); wing 4.85 (123.2); tail 4.32 (109.7); bill from nostril .21 (5.3).

Recognition Marks.—To appearance "Little Hawk" size—really smaller; central white spot in long wing distinctive.

Eggs, 2, deposited on the bare ground, often among rocks, sometimes upon a flat rock, or on the gravel roof of a tall building; grayish white, or dull olive-buff marbled, mottled, or clouded and speckled with various shades of olive, and brownish- or purplish-gray. Av. size, 1.18 x .86 (30. x 21.8).

General Range.—Northern and eastern North America west to the Great Plains and central British Columbia, and from Labrador south through tropical America to the Argentine Republic.

Range in Ohio.—Not very common summer resident. Abundant during migrations, especially in August. Breeds sparingly throughout the state but is subject to great local variation.

CURIOSITY is certainly a large element in the make-up of most birds. Scarcely had I set my foot outside my door this August morning, when I caught sight of a young Nighthawk which had alighted for the day on a prominent bare limb of an oak, at a height of not less than sixty feet. But I was not the first discoverer. Half a dozen Bluebirds were hovering about the stranger and talking excitedly. Red-headed Woodpeckers cackled and scolded and exclaimed "Queer! Queer!" diving viciously by way of emphasis, at the unoffending night-bird. Blue-gray Gnatcatchers, Baltimore Orioles, and Flickers joined the mob, wagging their heads and chattering as they

passed up surmises to their motley companions. They all agreed it was a *What-is-it?* and I did too; for the bird was so brown, or tawny, and showed so little of the distinctive white spot on the wings, that it took all the morning to determine that it was really a young Nighthawk and not a Whippoorwill.

Both of these birds suffer somewhat from an unreasoning prejudice on the part of both birds and men, occasioned perhaps by their long wings. I have seen Robins pounce upon an unoffending Whippoorwill, and drive the poor bird nearly distracted: while everybody knows that the very name



Token near Delaware.

Photo by E. L. Scott.

NIGHTHAWK'S EGGS, IN SITU.

"hawk," however unreasonably applied, is enough to explode the cap on any self-sufficient old musket.

These Nighthawks are perfectly harmless except to moths, midges and their ilk; and their uplifted wings half careened by the evening breeze, furnish one of the most pleasing adornments of meadow and pasture. The birds "quarter the air" in a bat-like flight of irregular zigzags, often pouting as they go, *Mizard—mizard*. They are not so strictly nocturnal as the Whippoorwills, but put a liberal construction on "twilight," being careful to avail themselves of all dark days, and, in fact, moving about at will whenever the sun slants fairly. During the mating season the males take great parabolic

leaders in the air, returning sharply and producing a loud booming *da-w-wo*,—whether by the rushing of the air through the wings or across the open mouth will perhaps never be determined.

While the Nighthawk prefers open situations, and is not found much in heavily timbered regions, it takes readily to the life of the city, because of the abundance of insects there afforded. In Columbus it is a familiar feature, hawking fearlessly above High Street, and nesting, as in many other cities, upon the tarred and gravelled roofs of flat-topped buildings. During migrations scores of these birds are sometimes seen moving aloft in loose array, and customarily, at this season, silent. Locally they never appear to be so abundant as in the West, where I have seen several hundred gathered to gyrate in social fashion within the limits of a single pasture.

The eggs of the Nighthawk are more heavily colored than those of the Whippoorwill, as becomes their more exposed situation. The young birds place great reliance upon their protective coloration, and even permit the fondling of the hand rather than confess the defect of their fancied security.

No. 149.

HAIRY WOODPECKER.

A. O. U. No. 393. *Dryobates villosus* (Linn.).

Description.—*Adult male*: Above, in general, black,—glossy, at least on crown and cervix, dull on tail, fuscous on wings; a narrow, scarlet band on the nape; white superciliary and rictal stripes, separated by a black band through eye, continuous with nape; a black malar stripe, broadening behind; white nasal tufts; a lengthened white patch on middle of back; wing-coverts spotted with white,—a round blotch on the tip of each; wing-quills and primary coverts white-spotted on each web, the blotches on the outer webs confluent in bars on the closed wing; tail black centrally, the two outer pairs of feathers white on exposed portions, the third pair white-tipped and tinged with rusty; entire under parts soiled white; bill and feet light plumbeous. *Adult female*: Similar, but without scarlet band on hind neck. *Young* with the crown mostly red or bronzy or even yellowish" (Coues). Length 8.50-9.50 (215.9-241.3); wing 4.63 (117.6); tail 3.31 (84.1); bill 1.13 (28.7).

Recognition Marks.—Chewink size; black and white above (male with red band on hind neck), and soiled white below; rattling call notes.

Nest. in a hole excavated in tree, usually in dead portion, unlined. *Eggs*, 4-6, white. Av. size, .94 x .73 (23.9 x 18.5).

General Range.—Northern and middle portions of the United States from the Atlantic Coast to the Great Plains.

Range in Ohio.—Common throughout the State. Resident.

WE naturally associate our resident Woodpeckers with winter weather, partly because the removal of the foliage causes them to stand out in bold relief, and partly because the unfailing character of their food-supply makes them in a measure free from the depression of spirits usually incident to the season. The Hairy Woodpecker, especially, is often in high spirits when the air is frosty. He has spent the night deep in the heart of some forest tree, at the end of his winter tunnel, and now he crosses a half-wooded pasture with great bounds of flight, shouting, *plick, plick*, from time to time; and he gives a loud rolling call—a dozen of these notes in swift succession—as he pulls up in the top of a dead tree to begin the day's work.

In the search for hidden worms and burrowing larvæ, it seems not improbable that the Woodpecker depends largely upon the sense of hearing—that he practices auscultation, in fact. A meditative tap, tap, is followed by a pause, during which the bird apparently marks the effect of his strokes, noting the rustle of apprehension or attempted escape on the part of the hidden morsel. It is not unusual for the bird to spend a half hour in tunneling for a single taste, and even then the wary game may withdraw along some tunnel of its own even beyond the reach of the bird's extensible tongue. But beside that which must be secured from the bowels of the wood, there is much to be gleaned from the surface and in the crannies of the bark. The winter fare is supplemented also by cornel berries and the fruit of certain hardy vines.

The Hairy Woodpecker visits the winter troupes only in a patronizing sort of way. He is far too restless and independent to be counted a constant member of any little gossip club, and, except briefly during the mating season, and in the family circle, he is rarely to be seen in the company of his own kind.

The nests of this bird are usually situated well up in the forest trees. Beech trees are likely to be dead at the top, even when they interpose a thrifty screen of foliage below, and afford, therefore, an ideal situation. The bird, however, sometimes ventures into town and takes up quarters in a shade tree, or in the orchard, or even in a fence-post. Incubation is attended to in May and but one brood is raised in a season. These Woodpeckers are exceptionally valiant in defense of their young, the male in particular becoming almost beside himself with rage at the appearance of an enemy near the home nest.



DOWNY WOODPECKER
Dryobates pubescens medianus
Life-size

No. 150.

DOWNY WOODPECKER.

A. O. U. No. 394c. *Dryobates pubescens medianus* (Swains.).

Description.—*Adult*: A miniature of the preceding, and with the same distinction between the sexes. In the present species the white of the nasal tufts encroaches upon the forehead, and is continuous with the superciliary line; the wing coverts are more numerous white-spotted; and the outer tail-feathers are barred with black; the under parts sometimes exhibit a faint buffy suffusion. Length 6.25-7.00 (158.8-177.8); av. of five Columbus specimens: wing 3.75 (95.3); tail 2.57 (65.3); bill .66 (16.8).

Recognition Marks.—Sparrow size; like preceding species but much smaller, bill only a little more than half as long; *pink* or *pimp* note.

Nest, in holes of rotten stubs or decayed limbs, unlined, usually at moderate heights. *Eggs*, 4-6, white. Av. size, .75 x .59 (19.1 x 15.).

General Range.—Middle and northern portions of eastern United States and northward.

Range in Ohio.—Common,—about three to one of the preceding species. Resident.

DOWNY is one of the most familiar and confiding of birds. Almost without suspicion, he is still full of curiosity, and is one of the first birds to come up when the call of the Screech Owl is sounded by the bird-man. One place is about as good as another for his trade, so when the Cardinals and Juncos have retired in disgust, having thoroughly exposed the shameless trick, Downy still lingers, tapping industriously along the smaller branches of some near-by tree, or studying the intruder through a maze of dreamy content. This little Woodpecker is one of the most frequent visitors in orchard and garden. He will begin at the bottom of an apple tree and work around it, ascending spirally, and then follow out one branch after another, until it would seem that he had exhausted about every possibility of insect-egg or hidden worm in connection with that tree. The holes which he digs are either prospect shafts or mining tunnels, whose sole object is the golden worm. The little miner, therefore, does no injury to the live wood, and confers incalculable benefits upon the orchard by the destruction of its real enemies.

Downy is one of the most devoted members of the winter troupe. His loyalty to this organization is at times almost pathetic. When the bird-man comes up, the Juncos move away in a huffy manner; Major Titmouse admonishes the younger members of the family to be on their guard; and there is a general edging away that is not flattering to the visitor. The Downy Woodpecker is the last to leave, and does so apologetically, as tho he were chagrinned at the unexpected rudeness of his friends. Again, when the Juncos and the Goldfinches insist upon pushing out into the open, Downy

follows and flits along the fence from post to post as long as he can keep his friends in sight, or else he takes to the mullein stalks himself.

In moving from place to place Downy gives a characteristic *pink*, and less frequently a rattling call, which is an exact imitation of that of the Hairy Woodpecker. It is at times difficult to distinguish either the single notes or the longer calls, but while the notes of the smaller bird are usually much less in volume and strength, they have a rather more nasal quality. All Woodpeckers have also a sort of signal system, or Morse code, consisting of sundry tattoos on resonant wood. These calls are used principally, or



Photo by the Author.

WHEN DOWNY FREEZES HIS TOES.
ONE OF THOSE HEAVY HOAR FROSTS WHICH MADE THE WINTER OF 1902-3 MEMORABLE
IN CENTRAL OHIO.

exclusively, during the mating season, and consist in the case of the Downy of six or seven taps in regular and moderate succession.

Nesting is at inconsiderable heights, and both sexes assist in excavation and incubation. Partially decayed wood is selected, and an opening made about an inch and a quarter in diameter. After driving straight in an inch or two, the passage turns down and widens two or three diameters. At the depth of a foot or so the crystal white eggs are deposited on a neat bed of fine chips. Incubation lasts twelve days, and the young are hatched about the first of June. According to Dr. Jones a second brood is sometimes brought off in July.

No. 151.

RED-COCKADED WOODPECKER.

A. O. U. No. 395. *Dryobates borealis* (Vieill.).

Description.—*Adult male*: Crown and hind neck glossy black, continuous across lores with malar stripe which is produced behind, breaking up on sides of breast into heavy black spots; auriculars broadly silky white, bordered above narrowly and posteriorly with bright scarlet "cockades"; touches of white on nostrils, at base of lower mandible on sides, and over and behind eye; remaining upper parts brownish dusky, heavily spotted and cross-banded with white; tail blackening, the outer feathers irregularly barred with white; under parts white, immaculate on chin and throat, elsewhere sordid; heavily spotted with black or dusky on sides of breast, sides, flanks, and crissum; bill bluish black, small for size of bird. *Adult female*: Similar but without scarlet cockades. Length 8.00-8.50 (203.2-215.9); measurements of the Columbus specimen: wing 4.80 (122.); tail 3.23 (82.); bill .86 (21.8).

Recognition Marks.—Chewink size; intermediate between Hairy and Downy; narrow scarlet stripes (1-3 of an inch long by 1-10 broad) on sides of hind head distinctive.

Nesting.—Does not breed in Ohio. *Nest*, in hole of pine tree at considerable heights. *Eggs*, 4-6, white. Av. size, .93 x .69 (23.6 x 17.5).

General Range.—The south-eastern United States, west to eastern Texas and Indian Territory, north regularly to Virginia and Tennessee, casually to Pennsylvania (Coues) and Ohio.

Range in Ohio.—One record, Columbus.

A specimen, found by Professor Hine, in the O. S. U. collection, bears the following label, in the well-known hand-writing of Dr. Jasper: Obverse—"Picus borealis. Red Cockated (*sic*) Woodpecker. March 15. 1872. Loc. Columbus, O.": Reverse—"It was in company with another of its own kind and 2 or 3 Sapsuckers, Nuthatches, etc., and shot from a high tree between Canal and Scioto Rivers."

The appearance recorded above marks the northernmost extension of the species. The bird was evidently trying to do something to justify the name *borealis*, so unwisely bestowed upon it by Vieillot in 1807.

"This species is a common inhabitant of the 'piny woods.' It prefers the higher branches of the trees, and frequently hangs head downward while feeding on a cone at the extremity of a branch. Its call note suggests the *yank, yank*, of the White-bellied Nuthatch, but is louder, hoarser, and not so distinctly enunciated" (Chapman).

No. 152.

ARCTIC THREE-TOED WOODPECKER.

A. O. U. No. 400. **Picoides arcticus** (Swains.).

Synonym.—BLACK-BACKED THREE-TOED WOODPECKER.

Description.—*Adult male*: Above black, lustrous on head, crest, back and scapulars, fading to fuscous on wing-quills, which are narrowly white-spotted on the outer webs of the primaries and on the inner webs of the secondaries; an orange-yellow patch on the center of the crown; of the tail only the central feathers wholly black, the remainder graduated, and white on exposed portions, the intermediate pairs rusty-tipped; a white stripe on side of head meeting its fellow on forehead; below this a black malar stripe; under parts pure white, save as heavily barred with black on sides and flanks; bill and feet light plumbeous. *Adult female*: Similar, but without orange-yellow crown-patch. Length 9.25-10.00 (235.-254.); wing 5.00 (127.); tail 3.54 (89.9); bill 1.38 (35.1); breadth at nostril .43 (10.9).

Recognition Marks.—Robin size; lustrous black without white on back; white with black-barred sides below; the orange-yellow crown-patch of male serves to distinguish from all resident species.

Nesting.—Does not breed in Ohio. *Nest*, in holes in trees, at moderate heights. *Eggs*, 4-6, white. Av. size, 1.00 x .75 (25.4 x 19.1).

General Range.—Northern North America, from the Arctic regions south to northern United States (New England, New York, Michigan, Minnesota and Idaho), and in the Sierra Nevada to Lake Tahoe.

Range in Ohio.—Rare or casual. Two positive records.

SINCE this species is migratory, we may regard the two or three birds which have been found in Ohio as migrants which have overflown their customary southern limit, somewhere in Ontario.

"It is a restless, active bird, spending its time generally on the topmost branches of the tallest trees, without however confining itself to pines. Its movements resemble those of the Red-cockaded Woodpecker, but it is still more petulant than that bird. Like it, it will alight, climb along a branch, seek for insects there, and in a very few moments remove to another part of the same tree, or to another tree at more or less distance, thus spending the day in rambling over a large extent of ground. Its cries also somewhat resemble those of the species just mentioned, but are louder and more shrill, like those of some quadruped suffering great pain. . . . In the afternoon of long days, it very frequently makes sorties after flying insects, which it seems to secure in the air with as much ease as the Red-headed Woodpecker. Besides insects it also feeds on berries and other small fruits.

"Its flight is rapid, gliding, and deeply undulated. Now and then it will fly from a detached tree of a field to a considerable distance before it alights, emitting at every glide a loud shrill note. . . .

"The nest of this species is generally bored in the body of a sound tree, near its first large branches. I observed no particular choice as to timber, having seen it in oaks, pines, etc. The nest, like that of other allied species, is worked out by both sexes and takes fully a week before it is completed, its usual depth being from twenty to twenty-four inches. It is smooth and broad at the bottom, altho so narrow at its entrance as to appear scarcely sufficient to enable one of the birds to enter it. . . . Only one brood is raised in the season. The young follow their parents until autumn, when they separate and shift for themselves." . . . (Audubon).

A recent writer, Mr. James H. Fleming,¹ says also: "This Woodpecker has a habit of sometimes nesting in colonies. I saw the nests of such a colony near Sand Lake in 1896; there were six or seven nests, each cut into the trunk of a living cedar, just below the first branch, and usually eight or ten feet from the ground. The cedars were in a dense forest, overlooking a small stream that empties into Sand Lake. Four eggs seem to be the full set. The young are hatched by the first of June."

No. 153.

YELLOW-BELLIED SAPSUCKER.

A. O. U. No. 402. *Sphyrapicus varius*. (Linn.).

Description.—*Adult male*: Forehead and crown crimson-red, bordered narrowly on both sides and broadly behind with glossy black; chin and throat crimson, bordered with black on both sides, continuous with a broad, glossy black pectoral-patch; a black band beginning at eye and running obliquely downward to join black of scapulars, separating two white stripes, one starting from the eye and meeting its fellow on the nape, the other starting from nostril and joining lower breast; remaining upper parts black and white in longitudinal patches, and black-and-white cross-banded; a central dorsal and scapular patch glossy black, another dead black, formed by primary coverts, and continued obliquely backward by basal black of primaries; lesser, middle, and greater coverts white on exposed webs, forming continuous lengthwise patch; remaining portions of back and wings black-and-white-banded or, in case of wing-quills, white-spotted in such a way as to form continuous white bars on closed wing; tail-feathers black except on inner webs of central pair, which are black-and-white-banded; the outer pair, and even second, sometimes exhibit marginal or terminal white in spots; remaining lower parts sulphury-yellow, clear and intense on area adjoining black of breast, clear but paler on middle line of breast and belly; the sides and flanks sordid, heavily streaked or with subterminal V-shaped markings of dusky. Bill and feet dark plumbeous. *Adult female*: Similar, but with chin and throat white instead of red; and red of crown sometimes wanting. *Immature*: Black, white, and red

¹ Birds of Parry Sound and Muskoka, Ontario. The Auk, Vol. XVIII, p. 39.

of head and breast entirely wanting, or the pattern faintly indicated by changes in the mottled brownish gray of these parts. Length 8.00-8.75 (203.2-222.3); av. of nine Columbus specimens: wing 4.94 (125.5); tail 3.30 (83.8); bill .87 (22.1).

Recognition Marks.—Chewink size; black breast-patch; red or enclosed white of throat; sulphur-yellow tinge of under parts distinctive.

Nesting.—Not positively known to breed in Ohio. *Nest*, in a hole excavated in tree about forty feet up. *Eggs*, 5-7, pure white, not conspicuously polished. Av. size, .87 x .67 (22.1 x 17.).

General Range.—Eastern North America north to about latitude 63° 30' (north of Fort Simpson), breeding from Massachusetts northward; south in winter to the West Indies, Mexico and Costa Rica.

Range in Ohio.—Common, sometimes abundant during migrations.

BEFORE the maple sap has ceased running, our woods are invaded from the south by a small army of hungry Sapsuckers. The birds are rather unsuspecting, quiet, and sluggish in their movements. Their common note is a drawing and petulant *kec-a*, like that of a distant Hawk; but they use it rather to vent their feelings than to call their fellows, for altho there may be twenty in a given grove, they are only chance associates and have no dealings one with another. Starting near the bottom of a tree, one goes hitching his way up the trunk, turns a lazy back-somersault to reinspect some neglected crevice, or leaps out into the air to capture a passing insect. The bulk of this bird's food, however, at least during the migration, is secured at the expense of the tree itself. The rough exterior bark-layer, or cortex of, say, a maple, is stripped off, and then the bird drills a transverse series of oval or roughly rectangular holes through which the sap is soon flowing. The inner bark it eaten as removed and the sap is eagerly drunk. It is said also that in some cases the bird relies upon this sugar-bush to attract insects which it likes, and thus makes its little wells do triple service. According to Professor Butler, an observer in Indiana, Mrs. J. L. Hine, once watched a Sapsucker in early spring for seven hours at a stretch, and during this time the bird did not move above a yard from a certain maple tap from which it drank at intervals.

Pine trees also afford a favorite sustenance for this greedy Sapsucker. A certain group of exotic pines, on the State University campus, has suffered from the attacks of this species, possibly of the same individual, for several successive years. Each season the bird, keeping pace with the growth of the tree, attacks a higher section, and reopens the wounds of the previous year. Of course this sort of thing is not to be encouraged in orchards or ornamental trees, but the amount of damage done the country over is not serious, and the bird is also a large consumer of insects.

It is difficult to believe that this handsome little Woodpecker, which appears so abundantly the second week in April, and even lingers into May,

does not remain anywhere to nest with us. The species is unique among our Woodpeckers, in that it is strictly migratory, while the Red-head, our only other migratory species, frequently breaks the rules and stays the year around. The Sapsucker may breed northerly, since it is known to do so in Indiana, but no authentic reports have come in for Ohio. It winters casually in the southern part of this state, and has appeared at that season as far north as McConnellsville.

No. 154.

NORTHERN PILEATED WOODPECKER.

A. O. U. No. 405 a. *Ceophlœus pileatus abieticola* Bangs.

Synonym.—LOGCOCK.

Description.—*Adult male*: General plumage sooty black, lusterless save on wings and back; whole top of head and lengthened crest bright red; red malar stripes changing to black behind, and separating white spaces; chin and upper throat white; also a white stripe extending from nostrils and below eye to nape, and produced downward and backward to shoulder; a narrow white stripe over and behind eye; lining and edge of wing, and a large spot (nearly concealed) at base of primaries, white; black feathers of sides sparingly white-tipped; bill dark plumbeous above, lighter below, save at tip; feet black. *Adult female*: Similar, but black on forehead, and black instead of red malar stripes. Length 15.50-19.00 (393.7-482.6); wing 8.50-10.00 (215.9-254.); tail 5.85-7.40 (148.6-188.); head 4.50-5.50 (114.3-139.7); bill 1.75-2.65 (44.5-67.3).

Recognition Marks.—Largest size; black, white and red on head in stripes; body mainly black.

Nest, high in trees. *Eggs*, 4-6, white. Av. size, 1.29 x .94 (32.8 x 23.9).

General Range.—Formerly the heavily wooded regions of North America south of about latitude 63°, except in the southern Rocky Mountains. Now rare or extirpated in the more settled parts of the Eastern States.

Range in Ohio.—Rare and locally restricted. Reported recently from Ash-
tabula County, Morgan County, lower Scioto, and Little Miami Rivers, etc.

IF the "curse of beauty" be added to that of large size, the destruction of a bird is foredoomed in this age of automatic shot-guns and unappointed game wardens. This magnificent black Woodpecker, once common throughout the heavily timbered areas of our own and adjacent states, has almost disappeared before the industrious axe and the all-conquering gun. The bird has been recently reported only by Robert J. Sim, of Jefferson, and in "Middle Southern Ohio," by Rev. W. F. Henninger. In an interesting communication, to which I am indebted for an account of the bird's habits, Mr. Sim

states that the Pileated Woodpecker is almost always to be found in the vicinity of Jefferson. An extensive area of primeval forest, near at hand, has afforded it asylum for many years past, but the tract is even now being reduced by lumbering interests; and the day of the passing of the Logcock is not far distant.

In the spring of 1902, according to Mr. Sim, a pair of these birds nested within a mile of town. The nesting cavity was dug in a beech tree, at a height of about thirty feet, and within two feet of the broken-off top, and the work was completed by the middle of April. Chips were strewn liberally over the ground below, and many showed the characteristic chisel marks of the bird's powerful bill. During the nesting season the parent birds remained pretty closely in the neighborhood of the home tree, drumming, calling, and searching for food.

"The drumming song is a series of about twelve taps, increasing in rapidity and growing less in strength to the end. It may be heard for a long distance. I have heard this Woodpecker give three *vocal* songs or calls. One is an exultant, ringing laugh given in high clear soprano. The first note and the last are lower and less loud than the rest. At a distance this call sounds metallic; but when at close range it is sent echoing through the forest, it is full and clear, and is the most untamably wild sound that I know among bird-notes. Another call might be suggested by the syllables *coo-coo-coo* repeated indefinitely, but some times intermittently. When two birds approach each other they often carry on a wheedling conversation which is not unpleasant to hear. It seems to be analogous to the *wichew* note of the Flicker, but is given more slowly and has a peculiar quality which would lead one to believe that the birds have their bills closed while making the sound."

In its search for food the Logcock strikes deliberately but with force, often giving the head a powerful twist to wrench off a piece of wood. Sometimes quite a large fragment is thrown back by a toss of the head. Much time is also spent about fallen tree-trunks, where in addition to grubs and other insect larvæ, it subsists largely upon ants.

No. 155.

RED-HEADED WOODPECKER.

A. O. U. No. 406. *Melanerpes erythrocephalus* (Linn.)**Synonym.**—TRICOLORED WOODPECKER.

Description.—*Adult*: Head and neck all around and fore breast rich crimson; back, scapulars, and wing-coverts glossy blue-black, and sometimes a narrow, pectoral band of the same color below the red (found only in worn plumages); terminal portion of secondaries (save outer webs of first and second, which are black or black-banded), rump, and upper tail-coverts white; edge of wing, primaries and tail black, the latter variously white-tipped on outer feathers below; remaining under parts, including under wing-coverts, pure white,—sometimes with faint crimson tinge on center of belly; bill dark plumbeous, lightening at base. *Immature*: Quite different; without red, or with only traces of it appearing on auriculars, breast and nape; head, neck, and fore-breast brownish gray, mixed with dusky in fine streaks, or almost uniform fuscous; back and scapulars bluish-black, with ashy edgings, or broadly mottled and indistinctly barred with whitish; exposed portions of secondaries with two or three irregular black bars; below sordid whitish, sometimes streaked with dusky on breast and sides. Length 9.25-9.75 (235-247.6); av. of eight Columbus specimens: wing 5.40 (137.2); tail 3.22 (81.8); bill 1.05 (26.7).

Recognition Marks.—Robin size; head all around deep crimson; red, black, and white in broad patches.

Nest, a hole excavated in tree, often living, at considerable heights; unlined, *Eggs*. 4-6, glossy white. Av. size, 1.02 x .76 (25.9 x 19.3).

General Range.—United States west to the Rocky Mountains, and north from Florida to about 50°, straggling westward to Salt Lake Valley and Arizona; rare or local east of the Hudson River.

Range in Ohio.—Common throughout the State; abundant in central portion. Winters irregularly everywhere.

OF all our Woodpeckers the Red-headed is the fittest (or at least the most likely) to survive. As if to compensate the bird for its fatal conspicuousness, Nature has made it hardy, thrifty, versatile and pugnacious. The primeval forests were, no doubt, more to the bird's taste, but with their gradual disappearance the wily Woodpecker has thoroughly accommodated itself to the changed conditions, so that it is now almost as much a bird of the open as of the woodland. Telegraph poles and fence-posts offer acceptable nesting sites, so that it may exist in countries almost destitute of timber.

Ability to meet changed conditions depends upon many factors, but chiefly upon food supply. The Red-headed Woodpecker burrows and probes for worms and ants like his congeners, but to this limited fare is added grasshoppers, crickets, and beetles secured upon the ground; flies, wasps, and all sorts of insects taken in mid air, with all the skill, if not quite the grace, of the Fly-

catchers; besides fruits and berries of many sorts, including cherries, apples, and pears, and in fall and winter beech nuts and acorns. This varied fare is not resorted to upon mere compulsion, but it is sought with avidity; so that it is no wonder that the bird thrives in any situation. Whether or not the Woodpeckers will remain through the winter in any given section, seems to depend entirely upon the local crop of beech nuts, or "mast." No mast, no Red-heads, is the clearly proven rule. In case the bird decides to "lie over", nuts and acorns are gathered and stored in crevices and holes against the coming season; and we may suppose that it is a matter of indifference to the bird whether it gets the nut kernels originally deposited, or a transmuted product of weevils and grubs.

Those birds which have not wintered hereabouts, consti-



Taken near Columbus.

WOODPECKER ROW.

Planned by the Author

tuting as they do the great majority, return north from the middle of April to the first of May. Then the woods and groves soon resound with their loud calls, *Quee-o—quee-o—queer*. These *queer* cries are not unpleasant, but the birds are a noisy lot at best. When one of them flies into a tree where others are gathered, all set up an outcry of *yarrow, yarrow, yarrow*, which does not subside until the newcomer has had time to shake hands all around at least twice. Besides these more familiar sounds the Red-heads boast an unfathomed repertory of chirping, cackling, and raucous noises. The youngsters, especially,—awkward, saucy fellows that most of them are—sometimes get together and raise a fearful racket until some of the older ones, out-stentored, interpose.

In selecting a nesting site the birds usually keep to the dead tops of forest trees, such as those shown in the illustration, but from this rule there is almost every conceivable departure. Large dead branches are sometimes chosen, in which case the entrance is made on the under side of the limb. Holes are sometimes dug in living trees, at the cost, of course, of prodigious labor. Telegraph and telephone poles are coming more and more into favor. Dr. Howard Jones once called my attention to a rather small telephone pole standing on his grounds in Circleville, which contained eleven nesting holes, of which three had been used that season, being occupied by Red-headed Woodpeckers, Flickers, and Bluebirds.

Eggs to the number of five or six are deposited late in May, and the young are hatched about the middle of June. In occasional instances two broods are raised. These Woodpeckers are very devoted to their offspring, but according to Dr. Jones, they do not observe the care in feeding the young that is usual with most birds. "In every brood there is one bird older and stronger than the rest, and this one is sure to be on top and get his head to the hole first, when the old ones come with food. Being stronger at the start than his brothers and sisters, and each day getting more food, he gains more strength; and, gaining more strength he gets each day more food. While this double-acting system progresses, the reverse is happening to his mates, until in extreme cases they actually die of starvation, and are not even carried out of the nest by the parents."

THE WOODPECKER.

He's the sassiest critter that ever I see!
An' he sets there a-peekin' an' bobbin' at me,
While he's carvin' a notch in the wind-shaky crotch
O' that moss-covered hickory tree.
Dinged if ever I see such a tormentin' bird!
When I woke up this mornin', the first thing I heard
Was his "rubby-dub-dub" on an ol' holler stub—
'Fore the other fowls twittered 'r stirred.

See 'im set there a-peckin' that worm-eaten limb,
An' a-winkin' at me as I'm talkin' o' him;
While his hard bullet head shinin' glossy an' red
Drives a bill like a thorn, black an' slim.
Seems in teasin' a feller he takes a delight;
An' he'd rather be killed in a one-sided fight,
Than to give up the grub he has found in that stub—
'R to show the white feather, in flight.

He's the beatenest bird—an' he don't care a straw!
 W'y, he takes what he wants, without license 'r law,
 An' he chatters with fun at the crack of a gun—
 While he's fillin' his famishin' craw.
 I'll be hanged if I don't kind o' fancy 'im though—
 He's so blamed independent an' keerless, you know;
 An' I'd feel sort o' bad—an' consider'ble sad,
 If he'd mind by complainin' an' go.

Malta, O.

James Ball Naylor.

No. 156.

RED-BELLIED WOODPECKER.

A. O. U. No. 409. *Centurus carolinus* (Linn.).

Description.—*Adult male*: Top of head, including nasal tufts, and hind-neck bright scarlet; back, scapulars, wing-coverts, and exposed portion of secondaries regularly and strikingly black-and-white-barred; primaries black terminally but with touches of white on both webs toward base; upper tail-coverts white, or slightly barred; tail black,—the two outer pairs of feathers terminally, and the central pair on the inner web, black-and-white-barred; concealed base of central pair white along shaft of outer web; under parts ashy or sordid white, usually with a buffy tinge on breast and belly, red-tinged on circum-ocular region and on center of belly, rarely also on breast; flanks and crissum black-and-white-barred; bill and feet dark plumbeous. *Adult female*: Similar, but crown broadly ash, separating red areas on forehead and nape. *Immature*: Similar to adults, but duller colored; buff instead of red-tinged on belly. Length 9.00-10.00 (228.6-254.); av. of eleven Columbus specimens: wing 5.27 (133.9); tail 3.18 (80.8); bill 1.15 (29.2).

Recognition Marks.—Robin size; *bright* red on head and neck above; "ladder back" black and white; "*chow-chow*" cry.

Nest, in holes in trees at considerable heights, unlined. *Eggs*, 4-6, pure white. Av. size, .99 x .73 (25.2 x 18.5).

General Range.—Eastern and Southern United States, north casually to Massachusetts, New York, Ontario, southern Michigan, and central Iowa; west to eastern Nebraska, eastern Kansas, Indian Territory, and Texas.

Range in Ohio.—Rather common resident; less common in northern part of state. Non-migratory.

FOR the coincidence I shall not try to account, but it is a fact that whenever the bird-man clears the snow from a log where the wood-choppers have been at work, and sits down after a long morning's work with the birds, to a



RED-BELLIED WOODPECKER

Melanerpes carolinus

♂, Life-size

shivering midwinter lunch, the Red-bellied Woodpecker, till then silent, bestirs himself and begins to pout, "chow—chow—chow." Careful attention discovers the pouting hermit taking his brief nooning in the middle heights of a twinned tree trunk, or else darkly silhouetted against the wintry sky. Here he hitches and grumbles by turns, and is ready for bed again long before the diner-out has brushed the crumbs from his chilly board.

To me there is something uncanny about this ascetic bird, who whiles away his winter hour in the seclusion of a narrow cell; and in spring, scarcely less unsocial, retires to the least frequented depths of the forest to breed. Far from the haunts of men, and secure in the protection of abundant leafage, the birds do unbend somewhat from that austere dignity, and probably have pretty gay times among themselves. At this season they have a chirruping cry, which only the experts can distinguish from the noisiest of the Red-head's notes; and another, a very startling expression of mingled incredulity and reproach, "Clark." This is evidently analogous to the Red-head's *Queer*, but is rendered with quite the style of the English "Walker!"

The bird is nearly a vegetarian, as becomes an anchorite, and lays up frugal stores of mast and corn. The nesting is not different from that of other Woodpeckers, except that the birds are less frequently found in exposed situations, and there are very few sets of eggs from Ohio in collections.

No. 157.

NORTHERN FLICKER.

A. O. U. No. 412 a. *Colaptes auratus luteus* Bangs.

Synonyms.—FLICKER; YELLOW-SHAFTED FLICKER; GOLDEN-WINGED WOODPECKER; YELLOW-HAMMER; HIGH-HOLE; HIGH-HOLDER; PIGEON WOODPECKER; WAKE-UP. (These are the leading types. Mr. Frank L. Burns in his excellent monograph¹ lists one hundred and twenty-six designations of this bird).

Description.—*Adult male*: Top of head and cervix ashy gray, with a vinaceous tinge on forehead; a bright scarlet band on the back of the neck; back, scapulars, and wings vinaceous gray with conspicuous black bars, brace-shaped, crescentic or various; primaries plain dusky on exposed webs; lining of the wing and shafts of the wing-quills yellow; rump broadly white; upper tail-coverts white, black-barred in broad, "herring-bone" pattern; tail double-pointed, black, and with black shafts on exposed upper surface; feathers sharply acuminate; tail below, golden-yellow and with yellow shafts, save on black tips; chin, sides of head, and throat vinaceous, enclosing two broad, black, malar stripes, or moustaches; a broad, black, pectoral crescent; remaining under parts white with heavy vinaceous shading on breast and sides, everywhere marked with sharply defined and handsome round, or cordate, spots of black. Bill and feet dark plumbeous. *Adult female*: Similar, but without black moustache. Sexes about equal in size.

¹ The Wilson Bulletin, No. 31. A Monograph of the Flicker (*Colaptes auratus*), By Frank L. Burns. Oberlin, Ohio, April, 1900.

Length 12.00-12.75 (304.8-323.9); av. of thirteen Columbus specimens: wing 6.13 (155.7); tail 4.34 (110.2); bill 1.34 (34.).

Recognition Marks.—Size not comparable to that of any better known bird; white rump; yellow "flickerings" in flight; pectoral crescent; black-spotted breast, etc.

Nest, an excavation in a tree or stump, usually made by the bird, at moderate heights; unlined, save by chips. *Eggs*, 4-10, usually 7 or 8, glossy white. Av. size, 1.09 x .85 (27.7 x 21.6).

General Range.—Northern and eastern North America, west to the eastern slope of the Rocky Mountains and Alaska. Occasional on the Pacific slope from California northward. Accidental in Europe.

Range in Ohio.—Abundant. Sparingly and irregularly resident throughout the state, increasingly southward.

FEW birds are better known in town or country than this noisy, energetic and usually confiding Flicker. He is perhaps better known hereabouts under the name Yellow-Hammer, but this title has long been preempted by an Old World Bunting, *Emberiza citrinella*, and its use in the present connection should be discontinued. All the greater pains should be taken to employ an American name for this bird, because he is a true son of the soil, widely distributed, characteristic, familiar, and if unhindered, well able to adapt himself to the rapidly changing conditions of American life.

It is perhaps as a musician that the Flicker is best known. The word musician is used in an accommodated sense, for the bird is no professional singer, or instrumental maestro; but so long as the great orchestra of Nature is rendering the oratorio of life, there will be place for the drummer, the screamer, and the utterer of strange sounds, as well as for the human obligato. The Flicker is first, like all other Woodpeckers, a drummer. The long rolling tattoo of early springtime is elicited from some dry limb or board where the greatest resonance may be secured, and it is intended both as a musical performance and as a call of inquiry. Once, as a student, the writer roomed in a large building, whose unused chimneys were covered with sheet-iron. A Flicker had learned the acoustic value of these elevated drums, and the sound of this bird's reveille at 4:00 A. M. was a regular feature of life at "Council Hall."

The most characteristic of the bird's vocal efforts is a piercing call delivered from an elevated situation, *clape* or *kly-ak*, and *cheer* or *kee-yer*. The scythe-whetting song is used for greeting, coaxing or argumentation, and runs from a low *wce-co*, *wce-co*—through *wake-up*, *wake-up*, *wake-up*—to an emphatic *wy-kle*, *wy-kle*, *wy-kle*, or, in another mood sounds like *flicker*, *flicker*, *flicker*.

Altho the bird is resident more or less throughout the state, it is not able to withstand the most severe weather, and its numbers are greatly augmented by the returning migrants in spring. In the early days of April courtship





NORTHERN FLICKER

Colaptes auratus fulvipes

³/₄ Life-size

Illustration by J. S. Silliman

is in progress, and the love-making of the Flicker is both the most curious and the most conspicuous of anything in that order. An infatuated Flicker is a very soft and foolish-looking bird, but it must be admitted that he thoroughly understands the feminine heart and succeeds in love beyond the luck of most. A bevy of suitors will lay siege to the affections of a fair lady, say in the top of a sycamore tree. Altho the rivalry is fierce, one gallant at a time will be allowed to display his charms. This he does by advancing toward the female along a horizontal limb, bowing, scraping, pirouetting, and swaying his head from side to side with a rythmical motion. Now and then the swain pretends to lose his balance, being quite blinded, you see, by the luster of milady's eyes, but in reality he does it that he may have an excuse to throw up his wings and display the dazzling cloth of gold which lines them. The lady is disposed to be critical at first, and backs away in apparent indifference or flies off to another limb in the same tree. This is only a fair test of gallantry and provokes pursuit, as was expected. Hour after hour, and it



Photo. by
The Author.

Taken near Columbus

A LOWLY NEST.

may be day after day, the suit is pressed by one and another until the maiden indicates her preference, and begins to respond in kind by nodding and bowing

and swaying before the object of her choice, and to pour out an answering flood of softly whispered adulation. The best of it is, however, that these affectionate demonstrations are kept up during the nesting season, so that even when one bird relieves its mate upon the eggs it must needs pause for a while outside the nest to bow and sway and swap compliments.

In nesting the Flicker usually chisels out a hole at a moderate height in orchard tree, fence-post, stub, or telegraph pole, but sometimes resorts to the dead tops of forest trees. In the West, in places where timber is less abundant, it sometimes drills holes through the roofs or sheathing of houses, and nests in the crannies within. Seven or eight highly polished, white eggs are laid upon the chips, which usually line the nest, and incubation begins customarily when the last egg is laid. The female is a close sitter, and instances are on record where pebbles dropped in upon her have failed to dislodge her, or where once being lifted off she brushed past the disturber to re-enter the nest. Altho provided with a bill which might prove a formidable weapon, the Flicker is of too gentle a nature to wield it in combat, and seldom offers any resistance whatever to the intruder.

After fourteen days young birds are hatched, blind, ugly, helpless. In a few days more, however, they are able to cling to the sides of the nesting hollow, and are ready to set up a clamor upon the appearance of food. This noise has been compared to the hissing of a nest of snakes, but as the fledglings grow it becomes an uproar equal to the best efforts of a telephone pole when the wires are singing.

The young are fed entirely by regurgitation, not an attractive process, but one admirably suited to the necessities of long foraging expeditions and varying fare. When able to leave the nest the fledglings usually clamber about the parental roof-tree for a day or two before taking flight. Their first efforts at obtaining food for themselves are usually made upon the ground, where ants are abundant. These with grasshoppers and other ground-haunting insects make up a large percentage of the food, both of the young and adults.

In many parts of the state the Flicker has suffered much from ignorant and thoughtless persecution. Indeed, it has been regarded in some quarters as a game bird. To those who have any sense of economic or sentimental values, it must seem a shame to sacrifice such a beautiful, honest, and useful bird for his paltry mouthful of meat. As well shoot Cupid and roast him on a spit.

No. 158.

BELTED KINGFISHER.

A. O. U. No. 390. *Ceryle alcyon* (Linn.).**Synonym.**—Commonly called plain KINGFISHER.

Description.—*Adult male*: Above, bright bluish gray, feathers with blackish shafts or shaft-lines; loosely crested; edge of wing white; primaries dusky, white-spotted on outer web, narrowly white-tipped, broadly white on inner web; coverts often delicately tipped or touched with white; tail bluish gray above, the central feathers with herring-bone pattern of dusky; remaining feathers only blue-edged, dusky, finely and incompletely barred with white; lower eyelid white, and a white spot in front of eye; throat and sides of neck, nearly meeting behind, pure white; a broad band of bluish gray across the breast; remaining under parts white, sides under wing, and flanks, heavily shaded with blue-gray; bill black, pale at base below; feet dark: *Adult female*: Similar, but with a chestnut band across lower breast, and with heavy shading of the same color on sides. *Immature*: Like adults, except that the plumbeous band of breast is heavily mixed with rusty (suggesting chestnut of female). Length 12.00-14.00 (30.48-355.6); wing 6.21 (157.7); tail 3.84 (97.5); bill from nostril 1.69 (42.9).

Recognition Marks.—"Kingfisher" size; blue-gray and white coloration; piscatorial habits; rattling cry.

Nest, at end of tunnel in bank, four to six feet in, unlined. *Eggs*, 6-8, pure white. Av. size, 1.31 x 1.04 (33.3 x 26.4).

General Range.—North America from the Arctic Ocean south to Panama and the West Indies. Breeds from the southern border of the United States northward.

Range in Ohio.—Common along streams and reservoirs; resident southerly. Found casually in winter throughout the state wherever streams are open.

WHEN we were small boys and had successfully teased our fathers or big brothers to let us go fishing with them, we were repeatedly admonished not to "holler" for fear of scaring the fish. This gratuitous and frequently emphatic advice would have been discredited if the example of the Kingfisher had been followed. Either because noise doesn't matter to fish, or because he is moved by the same generous impulse which prompts the cougar to give fair and frightful warning of his presence at the beginning of an intended-foray, the bird makes a dreadful racket as he moves up stream and settles upon his favorite perch, a bare branch overlooking a quiet pool. Here, altho he waits long and patiently, he not infrequently varies the monotony of incessant scrutiny by breaking out with his wierd rattle—like a watchman's call, some have said; but there is nothing metallic about it, only wooden. Again, when game is sighted, he rattles with excitement before he makes a plunge; and when he bursts out of the water with a wriggling minnow in his beak,

he clatters in high glee. If, as rarely happens, the bird misses the stroke, the sputtering notes which follow speak plainly of disgust, and we are glad for the moment that Kingfisher talk is not exactly translatable.

It is not quite clear whether the bird usually seizes or spears its prey, altho it is certain that it sometimes does the latter. The story is told of a



Taken near Elyria.

Photo by the Author.

"OVERLOOKING A QUIET POOL."

Kingfisher which, spying some minnows in a wooden tub nearly filled with water, struck so eagerly that its bill penetrated the bottom of the tub, and so thoroughly that the bird was unable to extricate itself; and so died—a death almost as ignominious as that of the king who was drowned in a butt of Malmsey wine.

When a fish is taken the bird first thrashes it against its perch to make sure it is dead, and then swallows it head

foremost. If the fish is a large one its would-be host often finds it necessary to go through the most ridiculous contortions, gaspings, writhings, chokings, regurgitations, and renewed attempts, in order to encompass its safe delivery within.

Kingfishers have the reputation of being very unsocial birds. Apart from their family life, which is idyllic, this reputation is well sustained. Good fishing is so scarce that the birds deem it best to portion off the territory with others of their own kind, and they are very punctilious about the observance of boundaries and allotments. For the rest, why should they hunt up avian companions, whose tastes are not educated to an appreciation of exposed, water-soaked stubs, and a commanding view of river scenery? However, I once did see a Kingfisher affably hobnobbing with a Kingbird, on a barren branch which overlooked a crystal stream in Idaho. I wonder if they recognized a mutual kingliness, this humble fisherman and this petulant hawk-driver?

Kingfisher courtship is a very noisy and spirited affair. One does not know just how many miles up and down stream it is considered proper for the gallant to pursue his enamorata before she yields a coy acceptance; and it is difficult to perceive how the tender passion can survive the din of the actual proposal, where both vociferate in wooden concert to a distracted world. But la! love is mighty and doth mightily prevail.

The nesting tunnel is driven laterally into the face of a steep bank, preferably of sand or loam, usually directly over the water, but occasionally at a considerable distance from it. Dr. Brewer reports one in a gravel pit at least a mile from the water. The birds are not so particular as are the Bank Swallows about digging near the top of the bank, but, especially if the bank is small, usually select a point about midway. The tunnel goes straight in or turns sharply to suit an occasional whim, until a convenient depth, say five or six feet, is reached, when a considerable enlargement is made for the nest chamber. Here, early in May, six or seven white eggs are laid, usually upon the bare earth, but sometimes upon a lining of grass, straw and trash. From time to time the birds eject pellets containing fish scales, the broken testæ of Crawfish and other indigestible substances, and these are added to the accumulating nest material. Sanitary regulations are not very strict in Kingfisher's home, and by the time the young are ready to fly we could not blame them for being glad to get away. The female is a proverbially close sitter, often permitting herself to be taken with the hand, but not until after she has made a vigorous defense with her sharp beak. If a stick be introduced into the nest she will sometimes seize it so tightly that she can be lifted from the eggs, turtle fashion.

The parents are very busy birds after the young have broken shell, and it takes many a quintal of fish to prepare six, or maybe seven, lusty fisher princes

for the battle of life. At this season the birds hunt and wait upon their young principally at night, in order not to attract hostile attention to them by daylight visits. Only one brood is raised in a season, and since fishing is unquestionably a fine art, the youngsters require constant supervision and instruction for several months. A troop of six or eight birds seen in August or early in September does not mean that Kingfisher is indulging in mid-summer gaities with his fellows, but only that the family group of that season has not yet been broken up.

No. 159.

YELLOW-BILLED CUCKOO.

A. O. U. No. 387. *Coccyzus americanus* (Linn.).

Synonym.—RAIN-CROW.

Description.—*Adult*: Above nearly uniform, satiny, brownish gray, with something of a bronzy-green sheen; the inner webs of the primaries cinnamon-rufous, the outer webs and sometimes the wing coverts tinged with the same; central pair of tail-feathers like the back and completely covering the others during repose; remaining pairs sharply graduated,—blackish with broad terminal white spaces, the outer pair white-edged; a bare space around the eye yellow; under parts uniform silky white or sordid; bill curved, upper mandible black, except touched with yellow on sides; lower mandible yellow, with black tip. *Immature*: Similar to adult, but plumage of back with slight admixture of cinnamon-rufous or vinaceous; tail-feathers narrower,—the contrast between their black and white areas less abrupt. Length 11.20-12.60 (284.5-320.); wing 5.60 (142.2); tail 6.00 (152.4); bill 1.00 (25.4).

Recognition Marks.—Robin to Kingfisher size; slim form and lithe appearance; brown above, white below. Distinguishable from the next species by definite yellow lower mandible, more or less extensive cinnamon-rufous of wing, and sharply-graduated, broadly white-tipped tail feathers.

Nest, a careless structure of twigs, bark-strips, and catkins, placed in trees or bushes, usually at moderate heights. *Eggs*, 4, sometimes 5, 6, or even 8, pale greenish blue, becoming lighter on continued exposure. Av. size, 1.27 x .91 (32.3 x 23.1).

General Range.—Eastern temperate North America, breeding from Florida north to New Brunswick, Canada and Minnesota, west to the eastern border of the plains, and south in winter to Costa Rica and the West Indies.

Range in Ohio.—Abundant summer resident. Less common northerly.

MOST birds prefer to face the enemy, so to keep his every movement well in eye, but Cuckoo presents his back, a cold gray affair, from behind which he peers now and then, turning his neck and giving you one eye in a lofty, well-bred way. I recall no other bird whose gaze is so calm, so direct,



Photo: National Audubon Society

YELLOW-BILLED CUCKOO

Coccyus americanus

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

so fearless, yet withal, so decorous. But nothing escapes him. He is not so vulgarly devoted to curiosity that he forgets business. Mercy, no! You may be within ten feet of him, but he plucks and swallows a caterpillar with as little ado and apology as tho you were in the next county. But make a false motion and the bird glides away into the deeper foliage with an ease and grace born of long practice. Silken, silent, sinuous, are adjectives which you instinctively apply to this sober, sly bird as he steals through the upper branches, scarcely seen, but not unseeing, to emerge at length from the opposite side of the tree and to dart away like a lithe brown arrow into some distant copse.

The association of birds and seasons has nowhere a more striking exemplification than in the case of the Yellow-billed Cuckoo and the month of August,—at least here in central Ohio. The month belongs to the bird. While other birds are hiding in the underbrush or sulking somewhere in the shade, the Cuckoo is in the best of humor. It is then that he shows himself most freely as he reaps his staple harvest of tent caterpillars. Nesting has been purposely deferred to late June, or even early August, in order that the young might grow during this time of greatest plenty. The bird's conduct at this season is quite in contrast with his behavior in spring. *Then* he probably remained undiscovered until the end of the first week or the middle of the second week in May, but it is almost certain that he had been in the country for a week or so. He had only been waiting for the novelty of the strange land to wear off before he should venture to proclaim himself. This he does by a series of explosive pouting notes, *Cook, cook, cook, cook, cook, cook, cook, cook, cook*, delivered rather slowly, *rallentando et diminuendo*.

The female Cuckoo is a rather slovenly nest builder, and nowise regular in her habits. Nesting may be undertaken as early as the last week in May, but I once found a nest with fresh eggs at this latitude on the 16th of August—the latter perhaps a second set. In construction the nest is usually little more than a careless platform of small sticks lined with catkins, chiefly of the oak. Occasionally twigs bearing green leaves are worked in to aid in concealment. The location may be a thorn bush, black haw tree, or wild plum thicket, or even an exposed horizontal branch well up in a forest tree. The eggs are sometimes laid at intervals of three or four days, and incubation may commence with the deposition of the first egg. A nest may thus contain at the same time growing young and fresh eggs, altho the latter are likely to suffer from neglect or final ejection. In keeping with this general carelessness is an ancestral habit, not yet quite overcome, of occasionally imposing eggs upon foster parents. Thus, Dr. Jones of Circleville tells of finding an egg of this bird in a Cardinal's nest, and another, which he thought belonged to this species, among the eggs of a Catbird.

That the Cuckoos are thoroughly useful birds the following quotation

from Butler's "Birds of Indiana," will go to prove: "Few birds are of so much service to the farmer. Especially are the fruit growers and nurserymen its debtors. In early spring they love the orchard. I have known them to destroy every tent caterpillar (*Clisiocampa americana*) in a badly infested orchard and to tear up all the nests in half a day. While they may have eaten some caterpillars, out of the most of them the juices were squeezed and the hairy skin dropped to the ground. Almost every watchful fruit grower has had a similar experience. Prof. F. H. King found upon examination, that one had eaten nine larvæ of a species that destroys the foliage of black walnut trees. They also eat many canker worms. . . . While they occasionally eat some of the smaller fruit, their work all summer long is to protect the fruit tree from its enemies. Altho it has been accused of robbing the nests of other birds and eating their eggs, I do not believe the charge has been sustained."

No. 160.

BLACK-BILLED CUCKOO.

A. O. U. No. 388. *Coccyzus erythrophthalmus* (Wils.).

Synonym—RAIN CROW; RAIN DOVE.

Description.—*Adult*: Color of upper parts like that of preceding species; no rufous on wing; outer pairs of tail-feathers like back, but paler; narrowly and indistinctly dusky-and-white-tipped; tail averaging longer than in *C. americanus*; circum-ocular bare space livid yellow; the edges of the eyelid bright red; under parts white,—the throat, sides of neck, and sometimes flanks and crissum washed with pale buffy, or buffy ash; bill normally black all over, sometimes obscurely touched with yellow on lower mandible. *Immature*: Like adult, but without dusky subterminal bar on tail-feathers; wings with rusty edgings; eyelids pale yellow. Length 11.00-12.50 (279.4-317.5); wing 5.30-5.85 (134.6-148.6); tail 6.60 (167.6); bill .87 (22.1).

Recognition Marks.—Robin size; slender form and lithe appearance; sober colors; bill black; no rufous on wing; tail-feathers *narrowly* tipped with white.

Nest, similar to preceding, but more carefully constructed, and somewhat deeper; at moderate heights, often in brushy swamps. *Eggs*, 3-5, rarely 6, greenish blue, deeper in shade than those of the foregoing species. Av. size, 1.10 x .83 (27.9 x 21.1).

General Range.—Eastern North America west to the Rocky Mountains, breeding north to Labrador, Manitoba, and eastern Assiniboia; south in winter to the West Indies and the Valley of the Amazon. Accidental in the British Islands and Italy.

Range in Ohio.—Common migrant. Rather common summer resident in northern Ohio; less common southerly. Everywhere less common than preceding species.

IT is difficult at best to dissociate this bird in one's mind from the other species, the Yellow-billed Cuckoo. Very similar they are both in habits and in general appearance, altho there are infallible rules for distinction in the latter respect, if a fair view is afforded. Both the absence of rufous in the wing, and smaller, less pure, terminal white spots in the tail-feathers, serve to mark this bird during flight; but it is more satisfactory to ogle the bird in the bush until the "red eye" and black bill show up. Indeed it must be confessed that the chief interest of the Cuckoos to an ornithologist lies in the constant practice in identification which they afford.

The note of this species is phrased, rapidly uttered, and more unmusical than that of *C. americanus*,—*Cookkookook, cookkookook, cookkookook*. At some distance the sound is not unlike that made by a farmer mending his fence, as he pounds a resonant board into position by two or three smart strokes of the hammer. The bird is fond of wet weather, and especially appreciates that sultry mugginess which often precedes a rain. It is at this time that his notes are most likely to be heard, this habit having won for him in connection with the Yellow-billed species, the title of Rain-Crow or Rain-Dove.

In view of recent evidence it seems probable that the Cuckoos, at least the birds of this species, are largely nocturnal in their habits. Mr. Gerald H. Thayer in a recent article in *Bird Lore*¹ reports a remarkable series of observations taken near Mt. Monadnock in southwestern New Hampshire. He finds that these Cuckoos are habitually abroad during the pleasant nights of mid-summer and that they travel about at great heights, apparently going on long journeys in search of food, and that their presence is indicated by frequent gurgling notes by which their aerial course may be traced and their altitude inferred. These "mid-summer, mid-night, mid-sky gyrations" certainly put the bird before us in a new light, and it is to be hoped that observers here in Ohio may discover whether such habits prevail locally.

At the nesting season the Black-billed Cuckoo is to be found chiefly in low damp woods or bottomland thickets. The nest is placed at moderate heights and is usually well concealed in thorn bushes or clustering vines. In construction it is a little more substantial than that of the other species, being deeper, with sticks and thorn twigs interwoven. It is provided with a greater abundance of catkins and is often lined with grass. The top, however, is only slightly concave, so that accidents not infrequently befall, especially if the first-hatched finds it convenient to roll out some belated brother. The eggs are four or five in number, somewhat smaller, less elliptical, and noticeably darker-tinted than those of the previously described bird.

The parent birds often manifest a curious indifference to molestation, and appear to take downright robbing little to heart. The male, in particular,

¹ *Bird-Lore* (published by the Macmillan Company, Harrisburg, Pa.) Vol. V., September-October, 1903, p. 143-145.

is commonly accused of hard-heartedness. On the contrary, Dr. Brewer relates an instance which came under his own observation, where the female having been thoughtlessly killed by a small boy, the male bird took up the incompleted task of incubation, and successfully reared a brood of five birds.



Photo by R. F. Griggs.

YOUNG BLACK-BILLED CUCKOOS.

The American Cuckoos deserve great credit for endeavoring to forsake the ways of Old World species, which are inveterate cuckolds, like our own Cowbirds. There are, however, marked instances of a lapse from virtue. I once caught a Black-billed Cuckoo in a Catbird's nest, sitting closely, and doubtless in the act of oviposition. Their eggs have been found besides in the nests of Wood Thrushes and Robins, to whose eggs their own bear a close resemblance.

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



AMERICAN BARN OWL
Scree noctuides
1/4 Life-size

AMERICAN BARN OWL
Scree noctuides
1/4 Life-size

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 (1901)

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 *The 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-ov*," 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 undersized 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 x 1.23 (39.9 x 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 "filing 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 6.30 (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 quaked 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,—*H' hoo, 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 Erie 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 x 1.24 (38.9 x 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-buffy edging; otherwise not appreciably, or at least constantly, different from adult. Adult male length 10.00-11.50 (25.4-29.1); 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

♂, Life-size

Illustration by J. J. Audubon, 1826. Original in the collection of the Academy of Natural Sciences, Philadelphia, Pa.

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 handsomest of oological treasures. The line 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. Heninger 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 (44.5-50.8.); wing (13.00-14.00 (33.0-35.6); tail 8.50-10.00 (21.9-25.4.); bill from nostril .65 (16.5). Adult female length 19.00-24.00 (48.2-60.6); wing 14.00-16.00 (35.6-40.6.); tail 9.50-10.50 (24.1-26.7).

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, Juncos, 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.



7000 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, 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 x 1.79 (58.9 x 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 superlatively 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
1, 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 (482.6-571.5); 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.

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

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

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 (44.5-50.8.); wing 12.00-13.50 (30.48-34.29); tail 7.50-9.50 (19.05-24.13); culmen from cere .80 (20.3). Adult female length 19.00-22.00 (48.26-55.8.8); wing 13.25-14.25 (33.66-36.2.) tail 8.50-10.00 (21.59-25.4).

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, *Butco*, 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 unpre-



Taken near Youngstown Photo by Geo. L. Fordyce.

NEST AND EGGS OF THE RED-SHOULDERED HAWK

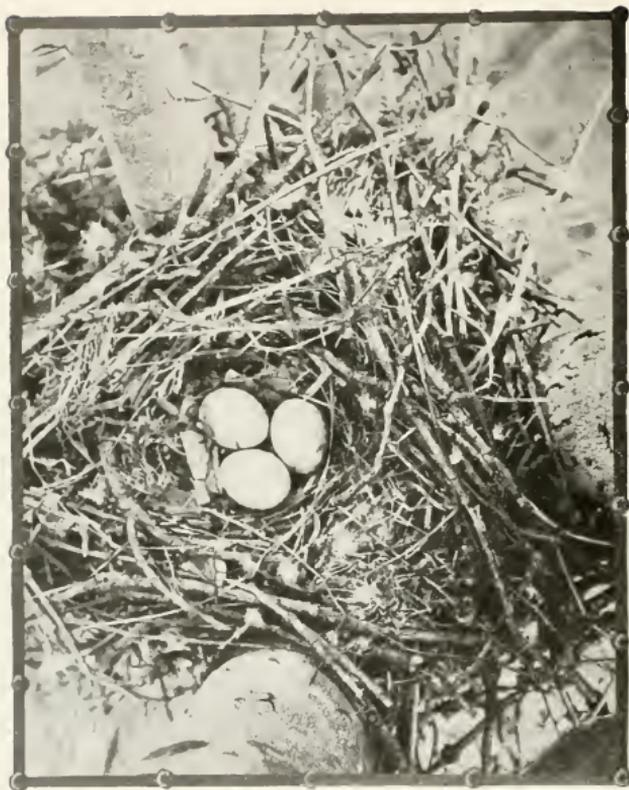


Photo by R. F. Griggs.

ANOTHER NEST.

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

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

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* (Vicill.).

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 1; Life-size

Buteo borealis

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-banded 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 1.65 (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 real 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 crummy 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.



Walden, near Sandusky

Painted by R. F. GREGG

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
1/2 Life-size

Illustration by J. S. Silliman

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.

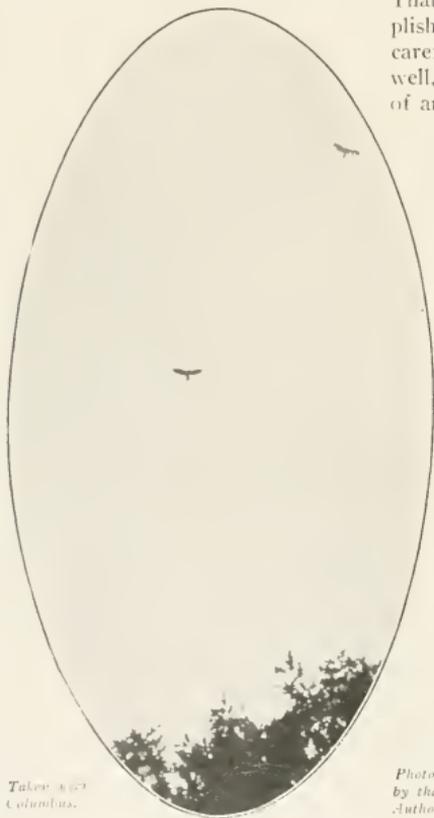
NO summer day is quite complete unless it affords a sight of some half dozen Turkey Buzzards lazily drifting across the middle distance, soaring, shifting, wheeling, weaving endless circles, in restful monotony of midsummer content. As a decorative feature in a landscape the Vulture possesses unqualified 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 Coates: "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 by
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 offal 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

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 scatteringly to the Pacific Coast. The birds were, however, rather

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.'"¹

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

¹ Bendire Life Histories, Vol. I. p. 137.

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 (304.8); w. *hg* 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 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 Eagan.

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.
♂ Life size

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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).

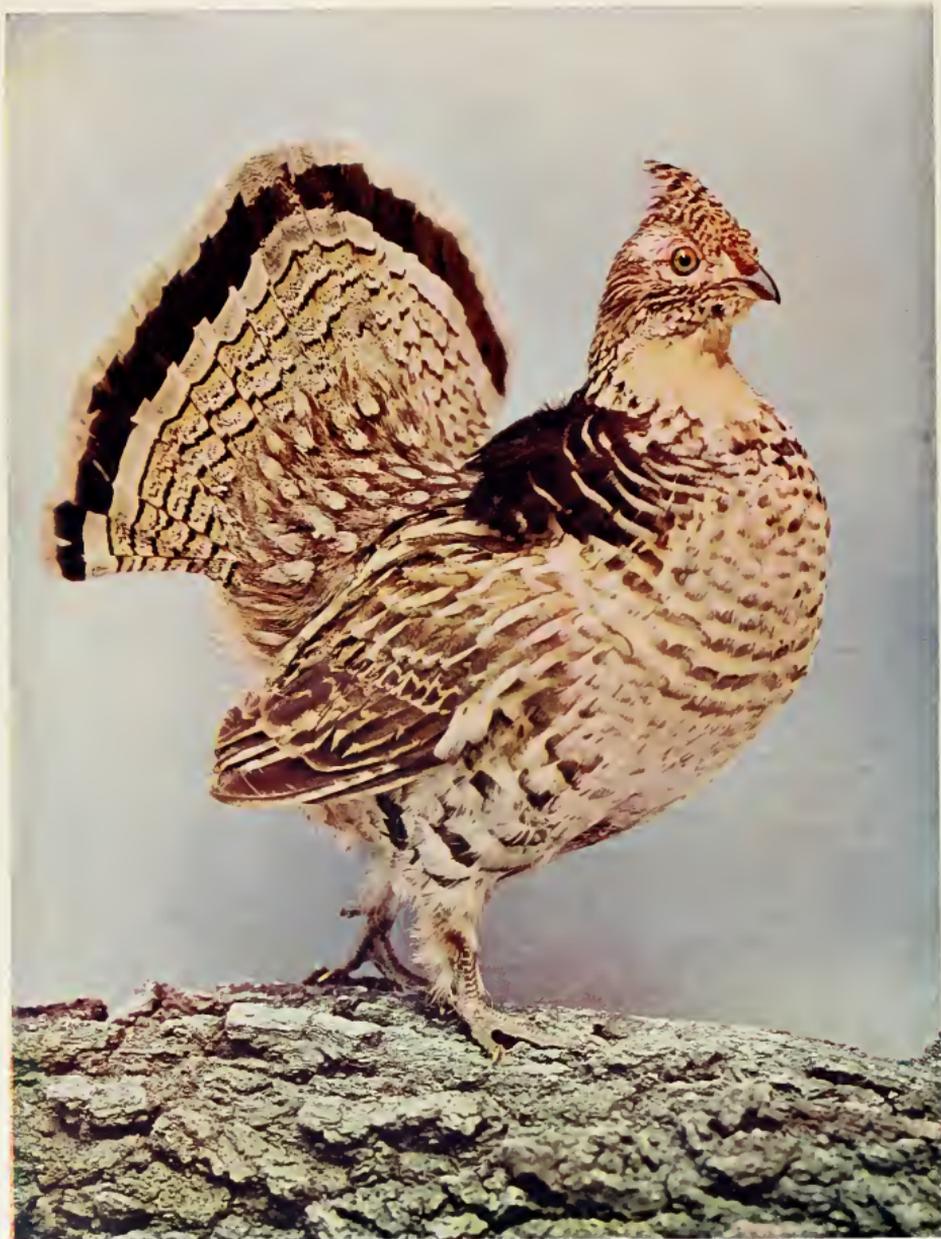
General Range.—United States from Chesapeake Bay to the Gulf Coast, and west to the Plains, along wooded river valleys; formerly north to southern Maine, southern Ontario, southern Michigan, etc., and up the Missouri River to North Dakota.

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 coming 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 $\frac{1}{2}$ 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



PRAIRIE HEN
Tympanuchus americanus
3; Life-size

PLATE 10. THE WASHINGTON PUBLICATION CO.

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. 395. *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-co-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
Life-size

Illustration by J. J. Audubon

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 fuscous 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, check-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."

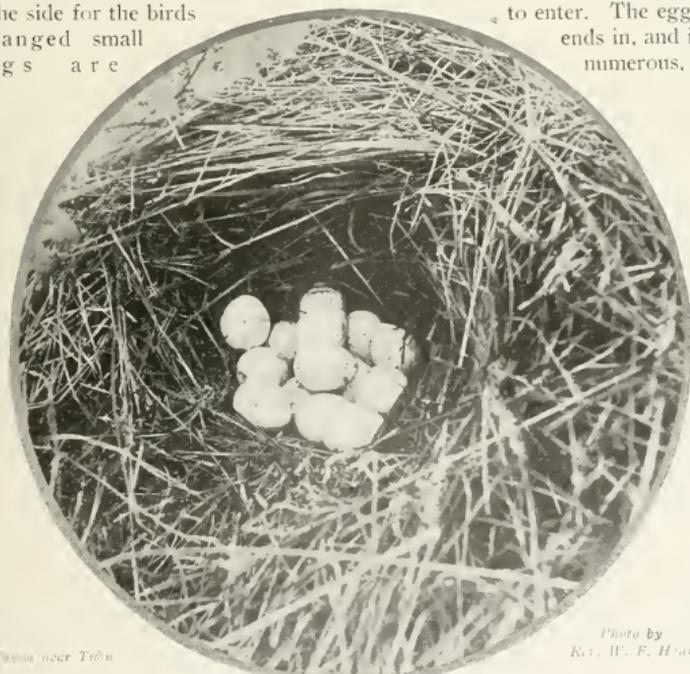
While this signal is being given the birds are running to a place where they can fly up suddenly and away swiftly. Following the scattering of the flock there is certain to be the assembly call, which is loud enough to be heard by the most distant bird, but might be unnoticed by an unpracticed ear. It 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, *H'hoocce-che, whoocce-che whoocce-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



Texas near Tiffin

*Photo by
K. C. W. F. H. Aung*

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.

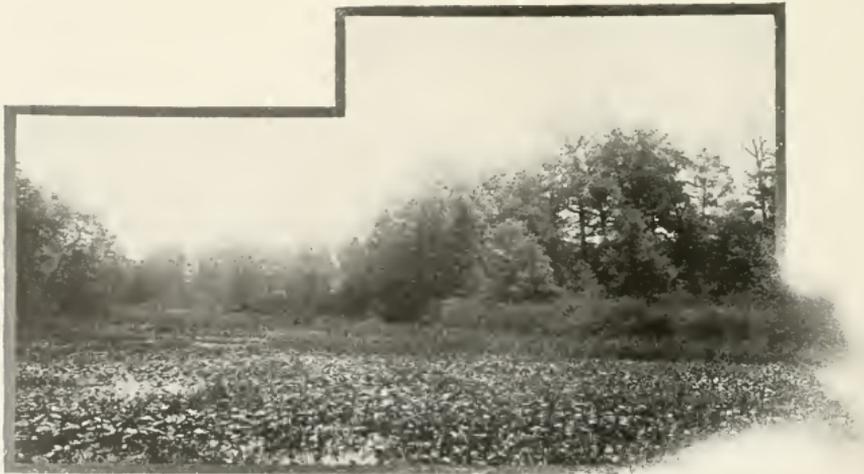
Description.—*Adult*: An almost exact miniature of the preceding species (*q. r.*); generally coloration perhaps more strongly rufous; blackish barring of lower parts more restricted; *sides of head ashy gray*; bill red, darker above. *Immature* birds show blackish more extensively on lower parts. Length 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.



Common in Lucas 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 dud-geon.

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 Loran 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 Louisiana.

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 quails of conscience make poor sauce.



1904 in
Linnæus
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
Aythya americana
in LA FOSSATO

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 Lynda 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, *kre-kre-kre-kre, kre, kre, 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 x 1.14 (40.1 x 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
Isonxys martinica
About $\frac{1}{2}$ Life-size

REPRODUCED FROM THE WORKS OF A. A. WOODS, CHICAGO
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"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 landsmen 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

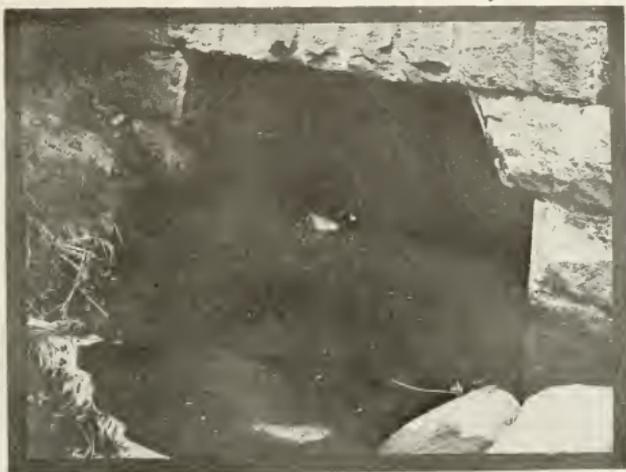


AMERICAN COOT
Fulica americana
1/2 Life-size

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 wound-

ed. 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



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 (114.3); 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

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.

Illustrated 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

Phot. 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. Cones, 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

1/2 Life-size

MAINTAINED BY THE NATIONAL MUSEUM, WASHINGTON, D.C.

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; SHUTEPOKE (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 surprised at his work, the frog-catcher either rises with a frightened *squawk* and clears



Taken in Franklin County

Photo by F. C. Irlace.

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 Esquiman 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 *sukowok*, 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 nœvius* (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 *quack*, 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 Dr. Taylor.

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 × 1.47 (51.1 × 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 at 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.).

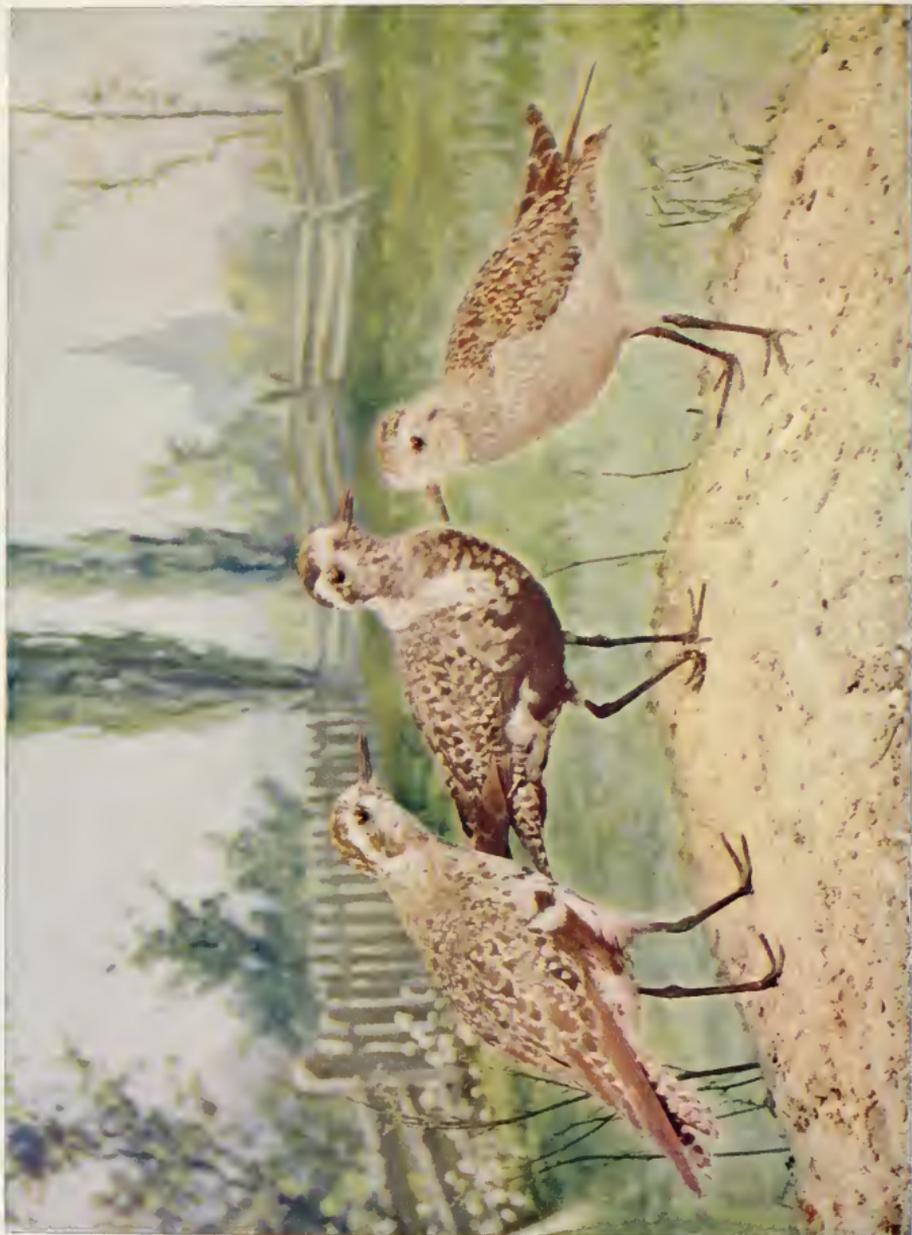
Recognition Marks.—Killdeer size or larger; black and white in broad design, and without distinct yellow above; below black (in summer) or nearly white (in winter or young); *axillaries black* at any season. Similar to succeeding species, but larger; bill and head larger; presence of hind toe distinctive.

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

Ploverina dominicensis

$\frac{1}{3}$ Life-size

ILLUSTRATED BY A. S. REYNOLDS
FROM A PHOTOGRAPH BY THE U. S. GEOLOGICAL SURVEY

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 2.50 (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, *tecccc-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. *Aegialitis 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 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.

Photo by the Author.

SHORE BIRD INN.

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 Limicole 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 awlwhirl 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. *Egialitis 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

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



Taken at Cedar Point.

Photo by the Author.

NEST AND EGGS OF THE BELTED PIPING PLOVER.

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.

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 *queeplex*. 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

Philohela minor

$\frac{2}{3}$ Lifesize

ILLUSTRATED BY J. W. WOODRUFF, WASHINGTON, D. C.
PHOTOGRAPH BY J. W. WOODRUFF, WASHINGTON, D. C.

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 hump 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; BOG-SUCKER.

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 (25.4-27.9.4); 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 1.60 (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.





ILLUSTRATED BY H. C. SHARPE, PHOENIX
ENGRAVED BY G. H. R. AND THE MESSRS. PUBLISHED BY

PECTORAL SANDPIPER

Tringa maculata

$\frac{1}{2}$ 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 plashes. 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; PEEV.

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 blackish 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 manœvering 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.



Illustration by H. W. Henshaw, 1900. From the collection of the U.S. National Museum.

SANDLING
Actitis macularia
¾ Life-size

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 x 1.64 (55.4 x 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 SNIPER.

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 hundred 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-banded; tail white or ashy gray, centrally, banded 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).



COAST IN MASSACHUSETTS

SHORE BIRDS GALORE.

Photo by Lynde Coles.

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 (254.-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
♂; 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 Whippoorwill. 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



THE BARTRAMIAN SANDPIPER
IN A PRAIRIE

Photo by the Author.

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 buffiness 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

Placed 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. *Pect-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 sandstratum 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 x 1.35 (49.5 x 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 fulicarius* (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 (19.5); 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



NORTHERN PHALAROPE

Phalaropus lobatus

♂ Late-size

PREPARED BY J. S. MILLER, U. S. GEOLOGICAL SURVEY
PLATE 164, PART 1, OF THE BIRDS OF NORTH AMERICA
BIRDS ILLUSTRATED IN OIL BY THE WILSON BROTHERS, WASHINGTON, D. C.

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. McIlwraith 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 gonys .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 north.

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 sub-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 gonys 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** Brüm.

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
Linn.

SEPTEMBER 1908, BY A. W. ANDERSON, ILLINOIS.
BIRDS ILLUSTRATED BY 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, "ower 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
♂ 6 Laros-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

♀ Late-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 (30.4-35.6); 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, *vide 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 grayer; 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 umber, 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

Nesia brevicauda

1/2 Lifestize

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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; underparts 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 Bluebeard 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—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 *paradisca* (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 *Creck* 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 *paradisca*.

"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



BLACK TERN
Hydrochelidon nigripes arcticumensis
T. A. COOPER

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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 cozy 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 circle 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 × 2.92 (113.3 × 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 hyperborca 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. 109.1 *Chen carulescens* (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 *carulescens* 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 (88.9-106.6.8); wing 20.00 (50.8); tail 7.00 (17.7.8); 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



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-cheeked 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.

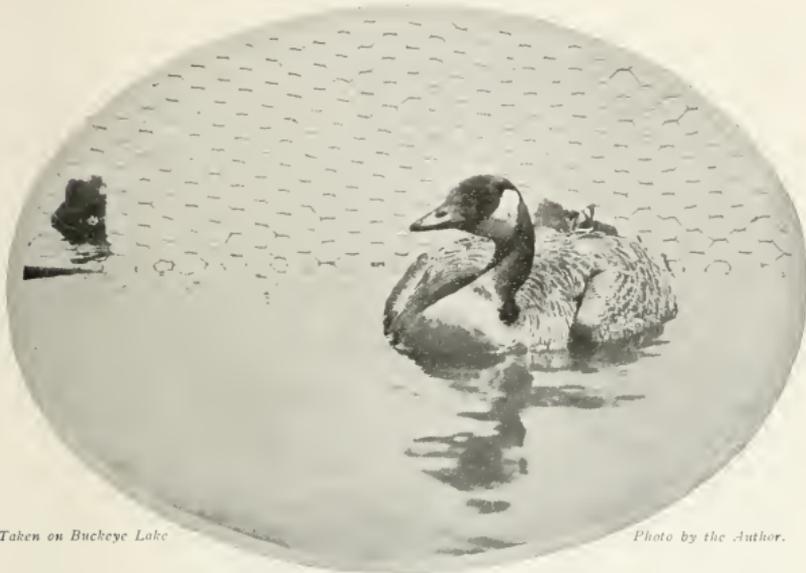
Nesting.—Does not breed in Ohio. *Nest*, on ground or in deserted nest of Hawk or Crow, lined with grass and leaves or not, and with abundant down. *Eggs*, 4-6, averaging lighter than those of *B. canadensis*. Av. size, 3.20 x 2.10 (81.3 x 53.3).

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 cer-



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.

tainly, 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-

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 (558.8); 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 x 1.75 (61.7 x 44.5).

General Range.—“Eastern North America, west to the Mississippi Valley,



BLACK DUCK

Anas obscura
4 in. Life-size

Illustration by [unreadable] © [unreadable]

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 (260.2); 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 pale buffy or clay-colored. Av. size, 2.09 x 1.57 (53.1 x 39.9). *Eggs*, 8-12.

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 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 (45.2-55.8.8); wing 10.50-12.66(.7); tail 3.00-4.50 (7.6-11.4.3); 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, inter-scapulars, 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 1.10 (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 127 (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,



Illustration by J. A. McNeill, 1904.
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BLUE-WINGED TEAL
Querquedula discors
1/4 Life-size

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" (Coues). *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).

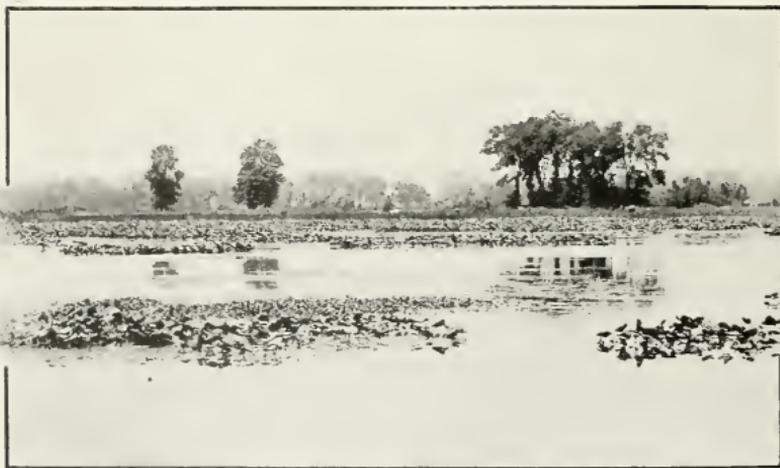
Recognition Marks.—"Teal" size; white facial crescent of male; grayish blue wing-coverts distinctive (except from the following which is rare and otherwise quite different).

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 Luding 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 20th 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 × 1.41 (47.5 × 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 tiny islet, in a convenient corner of the swamp, or in an open country.



Taken at Buckeye Lake.

Photo by the Author.



PINTAIL
Dafila acuta

♂, Late-Stage

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-banded on lower belly; hind-neck, back, sides of breast, and sides finely wavy-banded 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-banded above, and wing early showing adult characteristics. *Young female*: Similar to adult, but more heavily tinged below, and more heavily streaked and banded 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



WOOD DUCK

Aix sponsa

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

Illustration by J. S. Silliman
Photograph by J. S. Silliman

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 (482.6-520.7); wing 9.15 (232.4); tail 3.88 (98.6); bill 1.30 (33.); tarsus 1.36 (34.5). Female, length 17.00-19.25 (431.8-489.); 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 × 1.55 (52.1 × 39.4).

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. Linnaeus 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-eek*", 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 Litching Reservation

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



CANVAS-BACK
Aythya collaris
by Lafcadio

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 × 1.75 (62.2 × 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 (7.37); bill 1.75 (4.5); tarsus 1.50 (3.81).

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 on 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 anteriorly 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; short 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 tomtia .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

Thalitia americana

Life-size

Prepared from the life by G. S. Sisson, U.S.G.P.
Photos collected in part by the American Expedition to
Greenland, 1933-34

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 × 1.77 (62.7 × 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 lore 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 lore 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. 105. *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; loreal 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 loreal feathers as in adult male, but bill only slightly gibbous, and with less orange. Length 19.00-24.00 (48.2.6-60.9.6); wing 11.00 (27.9.4); tail 3.25 (8.2.6); bill along culmen 1.60 (4.0.6); anterior margin of loreal feathering to tip of bill 1.55 (3.9.4); tarsus 2.00 (5.0.8).

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 loreal 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 Chas. 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 (35.6-41.9.1); wing 5.67 (14.4.); tail 2.65 (6.7.3); bill 1.60 (4.0.6); 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
Erythrorhynchus cristatus
 $\frac{1}{2}$ 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. LYND'S 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 rise 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

Life-size

Specimens of A. Wetmore, Inc.,
New York, N. Y., U. S. National Museum

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 brushwood, 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 headlong 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-banded 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 (431.8-482.6); 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 × 1.75 (53.3 × 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. 1878.

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 \times 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 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.] *Æstrelata 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 holbœllii* (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 × 1.35 (57.2 × 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 Holbøll 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 inexhaustible 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 (30.4-38.1.); wing 5.10 (12.95); 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 (71.2-91.4); wing 14.00 (35.6); 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).



LOON
Gavia immer
About 1/2 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



View in Michigan 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. Moseley. 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 cheeks 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. *Compothlypis 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. *Scieurus noveboracensis notabilis* (Ridg.).

Description.—*Adult*: Similar to *Scieurus 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 harbs. *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. 191.1. **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-neck 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 (60.6-75.2); wing 13.00 (33.0-2); tail 5.00 (12.7); bill 1.50 (38.1); tarsus 2.10-2.40 (53.3-61.) (R.).—the Columbus specimen 2.60 (66.3).

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 (68.5 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 Kiriland 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) (Seebohm).

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 (55.8-76.2); wing 11.75 (29.8-51); tail 6.00 (15.2-4); 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 (59.0 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).

GREATHER 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.—Cook9. (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.). Holtbøll 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*. Often 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. 260.			Winter visitor.
47. <i>Larus marinus</i> (Linn.). Great Black-backed Gull. 261.	Mar. 21, 1900.		
51. <i>Larus argentatus</i> (Brunn.). Herring Gull. 262.	Mar. 8, 1901.	Feb. 13, '03, c. Mar. 30 November.	c. Mar. 20. Sept.-Dec.
54. <i>Larus delawarensis</i> Ord. Ring-billed Gull. 263.		Rare.	Rare.
60. <i>Larus philadelphia</i> (Ord.). Bonaparte Gull. 264.	Sept., 1878.	Ap. 3, '03, Ap. 22, '75. Nov. 4, 1878.	Apr. 20—May 20. June 3, 1903.
62. <i>Nema sabinii</i> (Sab.). Sabine Gull. 264.			Casual.
63. <i>Gelochelidon nitotica</i> (Hasselq.). Gull-billed Tern. 266.			Casual.
64. <i>Sterna caspia</i> Pallas. Caspian Tern. 267.	Oct. 8, 1882.	June 1, 1902.	Oct. 9, 1896.
69. <i>Sterna forsteri</i> Nutt. Forster Tern. 278.	May 4, 1879.		
70. <i>Sterna hirundo</i> Linn. Common Tern. 269.	Nov. 11, 1898.	c. May 1. Apr. 4, '03. October.	May 1-10. Aug. 20—Oct. 20.
72. <i>Sterna dougalli</i> Montag. Roseate 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> (Kubl.). 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, 1800. 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>Chaulelasmus streperus</i> (Linn.). Gadwall. 284.		Mar. 28, 1877.	

	VINCENNES		COLUMBUS		LEVELAND	
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.	Apr. 23.	Apr. 3, '99. 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. Apr. 25.	Apr. 3, '99. Sept.-Oct. 15.
141. <i>Querquedula cyanopectera</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>Daflia 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.	Nov. 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 hymnalis</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>Oidemia deglandi</i> Bonap. White-winged Scoter. 305.			Casual.		Casual.	
167. <i>Erismatura jamaicensis</i> (Gmel.). Ruddy Duck. 305.	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.

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171a. <i>Anser albifrons gambeli</i> (Hartl.). American White-fronted Goose. 278.	Rare. Nov. 1876.	Rare.	Rare.
172. <i>Branta canadensis</i> (Linn.). Canada Goose. 279.	November Feb. 29-Apr. 10.	c. March 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. 29.	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. 13.	c. May 10. c. Sept. 13.
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 noevius</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 galeota</i> (Licht.). Florida Gallinule. 203.	Nov. 16, 1898.	Apr. 20, 1876.	c. May 1. c. Sept. 15.

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221. <i>Fulica americana</i> (Gmel.). American Coot. 204.	c. Mar. 25. Oct.-Nov.	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. 225.	Mar.-Apr.-Jan. 27, 1898. November.	Mar. 27-May 7. October.	Apr. 1-May 10. October.
231. <i>Macrorhamphus griscus</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. Nov. 9, 1877.	
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. 30. July 24. Oct.	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. 30-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>Symphotona semipalmata</i> (Gmel.). Willet. 244.	Rare.		
[260.] <i>Pavonella pugnae</i> (Linn.). Ruff. 245.		Apr. 20, 1878. 1880, 10, 187.	
261. <i>Bartramia longicauda</i> (Bechst.). Bartramian Sandpiper. 249.	Mar. 27, 1867. c. Oct. 1881	Apr. 1880 c. Oct. 20	c. Apr. 15 c. Oct. 15
262. <i>Tryngites subruficollis</i> (Vieill.). Buff-breasted Sandpiper. 247.		Aug. 31, 1870.	Rare.
263. <i>Actitis macularia</i> (Linn.). Spotted Sandpiper. 248.	c. Apr. 25 c. 20, 1871	Apr. 10, 20. September.	c. Apr. 17 Sept. 10
264. <i>Numenius longirostris</i> Wil- Long-billed Curlew. 249.		May 31, 1902.	
265. <i>Numenius hudsonicus</i> Lath. Hudsonian Curlew. 250.	Rare.		Rare.
266. <i>Numenius borealis</i> (Forst.). Eskimo Curlew. 251.		Oct., 1869.	
270. <i>Squatrola squatarola</i> (Linn.). Black-bellied Plover. 218.	Apr. 15-May Aug. 20-Oct. 1	May 11, 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.
326. <i>Catharista uruba</i> (Vieill.). Black Vulture. 189.	Rare, perhaps res. Seen in winter.		
327. <i>Elanoides forficatus</i> (Linn.). Swallow-tailed Kite. 175.	Aug. 1808, 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. 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. 189.	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>Scotiopteryx 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>Cornus carolinensis</i> (Linn.), Carolina Paroquet. 161.	Extinct.	Extinct.	Extinct.
387. <i>Coccyzus americanus</i> (Linn.), Yellow-billed Cuckoo. 150.	c. May 5. c. Sept. 29 ⁹⁸	c. May 8. c. Sept. 20 ⁹⁹	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. 22 ⁹⁸	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.
394c. <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.	Apr. 1-May 1. c. Ap. 14. c. Oct. 1.
405a. <i>Leopoldus 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. c. Oct. 5. 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 vireescens</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. 7	May 8-20. c. Sept. 10	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?
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 20, '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.	Rare.	

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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, 1804. Winter visitor.	
540. <i>Poocetes 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. 26. (Wils.)	April.		Apr. 6-30. Mar. 10,'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.	Nov. 17,	c. Apr. 28. Ap. 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.	c. May 1.	Apr. 1-20. October.		Apr. 15—May 15. Sept. 20-Oct.	
550. <i>Spizella monticola</i> (Gmel.). Tree Sparrow. 34.	Oct.—Nov.		Mar.—Apr. October. April.		c. Oct. 10. c. Apr. 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. 1807.	Mar. 12, 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>Peucaea 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.		c. May 15. c. Oct. 15.		May 17, 1898.	
584. <i>Melospiza georgiana</i> (Lath.). Swamp Sparrow. 41.	Apr. 15, 1808.		Apr. 20—May 1. Oct. 1-30		Apr. 21, May 15. Sept. 20-Oct. 20	
585. <i>Passercella iliaca</i> (Merr.). Fox Sparrow. 42.	March. Oct. 15—Nov. 15.		c. Mr. 12. Feb. 27,'77. Oct. 15—Nov. 10.		c. Mar. 15-Apr. 20. October	
587. <i>Pipilo erythrophthalmus</i> (Linn.). Towhee. 43.	c. Apr. 15. c. Nov. 15.		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>Pragne 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. 27, '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.
(22a) <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.	
(27) <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. 10, 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.		
635. <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>Helminthos termicorus</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. 27, —	May 1-8.
645. <i>Helminthophila rubricapilla</i> (Wils.). Nashville Warbler. 55.	c. Oct. 1	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 7-15, 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 castrea</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.	May 5-21, August-Sept. 20.
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. 21, —.	May 1-21, Aug. 15-Sept. 25.
663a. <i>Dendroica dominica albiflora</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 virens</i> (Aud.) Pine Warbler. 73.	Apr. 15, 1886, Apr. 24, 1879, Oct. 8, 1864.	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 14, 1874.	Apr. 20-30. (Jones).
674. <i>Scirurus aurocapillus</i> (Linn.). Oven-bird. 77.	c. Apr. 20, September.	Apr. 25—May 6, Sept. Oct. 16, '02.	Apr. 24—May 7, c. Oct. 1.

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675. <i>Scirurus noveboracensis</i> (Gmel.). Water-Thrush. 78.	Apr. 23. Oct. 1, 1893.	Apr. 25, Apr. 17, May 15, Sept. Oct. 17, '74.	c. May 3. May 1-22. Aug.-Sept.
676. <i>Scirurus motacilla</i> (Vieill.). Louisiana Water-Thrush. 79.	Apr. 10-20. Sept. 1. Oct. 15.	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 trichos 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. 83.	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>Galcoptes 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.	Apr. 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>Telmatorytes palustris</i> (Wils.). Long-billed Marsh Wren. 118.	Oct. 4, 1901.	c. May 1. c. Oct. 15.	May 1-5. c. Sept. 15.
725. <i>Certhia familiaris americanus</i> (B. & M.). 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- c. Apr. 25. Winter resident.	c. Oct. 1, c. Apr. 25. 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>Poliophtila 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 pallasi</i> (Cab.). Hermit Thrush. 97.	April. Oct.-Nov.	Ap. 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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Bittern, American, **463** 650.
Cory Least, **643**
Least, **465** 650.
Blackbird, Cow, **14**
Crow, **32**
Marsh, **18**
Red-shouldered, **18**
Red-winged, **18** 655.
Rusty, **30** 655.
Skunk, **11**
Swamp, **18**
Thrush, **30**
Yellow-headed, **17** 655.
Blackhead, **604**
Blackhead, Little, **605**
Bluebill, **604** 605.
Bluebird, **226** 660.
Eastern, **226**
Wilson's, **226**
Bobolink, **11** 655.

- Bob-white, **437** 652.
 Bog-bull, **463**
 Bogsucker, **495** **498**
 Bonasa umbellus, **433** 652.
 Botaurus lentiginosus **463**, 650.
 Brant, **644**
 White bellied, **644**
 Branta bernicla, **644**
 glaucogastra, **644**
 canadensis, **578** 650.
 hutchinsii, **580** 650.
 Brant-bird, **494**
 Bride, The, **598**
 Broad-bill, **594**
 Bulo virginianus, **384** 653.
 Bufflehead, **610** 649.
 Bull-bat, **341**
 Bull-head, **483**
 Bunting, Bay-winged, **54**
 Black-throated, **105**
 Indigo, **102** 657.
 Painted, **641**
 Snow, **50**
 Burgomaster, **646**
 Butcher-bird, **287** **290**
 Buteo borealis, **403** 653.
 calurus, **405** 653.
 lineatus, **403** 653.
 platypterus, **409** 653.
 Butorides virescens, **474** 650.
 Butter-ball, **610**
 Buzzard, Broad-winged, **409**
 Red-shouldered, **406**
 Red-tailed, **403**
 Turkey, **419**
- CALCARIUS lapponicus**, **52** 650.
 Calico-back, **494**
 Calidris arenaria, **515** 651.
 Campephilus principalis, **643**
 Canary, Wild, **47**
 Canvas-back, **602** 649.
 Cardinal, **96** 656.
 Cardinalis cardinalis, **96** 656.
 Ceropodacus purpurpeus, **38** 655.
 Cuckoo-bird, **254** 650.
 Catharista urubii, **423**.
 Cathartes aura, **419** 652.
 Cedar-bird, **285**
 Centurus carolinus, **356**, 654.
 Ceophleus pileatus abieticola, **351** 654.
 Certhia familiaris americanus, **250** 659.
 Ceryle alcyon, **361** 654.
 Chetonia pelagica, **336** 654.
 Charadrius dominicus, **483** 652.
 Charitonetta albeola, **610** 649.
 Chat, Yellow-breasted, **185** 650.
 Chauleasmus streperus, **583** 648.
 Chebec, **332**
 Chen caerulescens, **576** 649.
 hyperborea, **574** 649.
 nivalis, **575** 649.
 Cherry bird, **285**
 Chewink, **93**
 Chickadee, **245** 660.
 Black-capped, **245**
 Carolina, **247** 660.
 Southern, **247**
 Chicken, Prairie, **435**
 Chippy, **71**
 Chondestes grammacus, **63** 656.
 Chordeiles virginianus, **341** 654.
 Circus hudsonius, **394** 652.
 Cistothorus stellaris, **268** 659.
 Clangula clangula americana, **608** 649.
 islandica, **609** 649.
 Coccyzus americanus, **364** 654.
 erythrophthalmus, **366** 654.
 Coffin-carrier, **547**
 Colaptes auratus lutes, **357** 654.
 Colinus virginianus, **437** 652.
 Colymbus auritus, **630**, 647.
 hollisellii, **628** 647.
 Compsothlypis americana, **642**
 usnea, **131** 658.
 ramalinae, **132** 658.
 Contopus virens, **320** 654.
 Conurus carolinensis, **369** 654.
 Coot, American, **455** 651.
 Black, **615**
 Sea, **615**
 White-winged, **616**
 Cormorant, Double-crested, **624** 648.
 Florida, **644**
 Corvus americanus, **3** 655.
 corax principalis, **1** 655.
 Coturniculus savannarum passerinus, **58** 656.
 Cowbird, **14** 655.
 Crane, Blue, **467**
 Brown, **461**
 Little Brown, **460** 650.
 Sandhill, **461** 650.
 White, **459**, **471**
 Whooping, **459** 650.

- Creeper, Black-and-white, **112**
 Brown, **250** 659.
 Crossbill, American, **43** 655.
 Red, **43**
 White-winged, **45** 655.
 Crow, American, **3** 655.
 Carrión, **423**
 Crymophilus fulcarius, **539** 650.
 Cuckoo, Black-billed, **366** 654.
 Yellow-billed, **334** 654.
 Curlew, Eskimo, **536** 652.
 Hudsonian, **535** 652.
 Jack, **535**
 Long-billed, **534** 652.
 Cyanocitta cristata, **8** 655.
 Cyanospiza ciris, **341**
 cyanea, **102** 657.

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 Dendroica aestiva, **135** 658.
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 caerulescens, **139** 658.
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 coronata, **140** 658.
 discolor, **169** 658.
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 maculosa, **143** 658.
 palmarum, **167** 658.
 hypochoysea, **168** 658.
 pennsylvanica, **149** 658.
 rara, **145** 658.
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 Dickcissel, **105** 657.
 Diedapper, **631**
 Dipper, **631**
 Diver, Black-throated, **637**
 Red-throated, **638**
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 Dolichonyx oryzivorus, **11** 655.
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 Dove, Carolina, **427**
 Mourning, **427** 652.
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 Dowitcher, **501** 651
 Long-billed, **502** 651.
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 Dryobates borealis, **347** 654.
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 villosus, **343** 654.
 Duck, American Eider, **613**
 American Scaup, **604** 649.
 Black, **584** 648.
 Canvas-back, **602** 649.
 Crow, **455**
 Fish, **619**
 Gadwall, **583** 648.
 Gray, **586**
 Greater Scaup, **604**
 Harlequin, **646**
 King Eider, **614** 649.
 Lesser Scaup, **605** 649.
 Long-tailed, **612**
 Mallard, **582** 648.
 Pintail, **597** 649.
 Raft, **604**
 Redhead, **601** 649.
 Red-legged Black, **585** 648.
 Ring-necked, **607** 649.
 Ruddy, **618** 649.
 Saw-bill, **619** **621**
 Shoveller, **594** 649.
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 Spoon-bill, **594**
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 Wild, **582**
 Wood, **598** 649.
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 Black, **414**
 Golden, **412** 653.
 Gray, **414**
 Ectopistes migratorius, **425** 652.
 Egret, American, **471** 650.
 Great White, **471**
 Little White, **472**
 Egretta candidissima, **472** 650.
 Eider, American, **613** 649.
 King, **614** 649.
 Elanoides forficatus, **393** 652.
 Empidonax flaviventris, **322** 654.
 minimus, **332** 655.
 traillii, **328** 655.
 alnorum, **343**
 virescens, **323** 654.
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 Erismatura jamaicensis, **618** 649.

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- Finch**, Grass, 54
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- Flicker**, Yellow-shafted, 357
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- Florida** *cærulea*, 473 650.
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 Crested, 312 654.
 Green-crested, 323 654.
 Least, 332 655.
 Olive-sided, 319 654.
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 Traill, 328 655.
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- Fregata aquila**, 627 648.
- Frigate**, 627
- Fulica americana**, 455 651.
- GADWALL**, 586 648.
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- Gallinago delicata*, 498 651.
- Gallinula galeata*, 453 650.
- Gallinule*, Florida, 453 650.
 Purple, 452 650.
- Garrot**, 608 609
- Gavia arctica**, 637 647.
imber, 634 647.
lumme, 638 647.
- Gelochelidon nilotica*, 555 648.
- Geothlypis agilis**, 179 650.
formosa, 177 650.
philadelphia, 181 650.
trichas brachidactyla, 183 650.
- Gnatcatcher**, Blue-gray, 235 660.
- Godwit**, Hudsonian, 518 651.
 Marbled, 517 651.
- Golden-eye**, 608
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 Barrows, 609 649.
- Goldfinch**, American, 47 656.
- Goosander**, 619
- Goose**, American White-fronted, 577 650.
 Blue, 576 649.
- Blue Snow, 576
 Canada, 578 650.
 Common Wild, 578
 Greater Snow, 575 649.
 Hutchins, 580 650.
 Lesser Canada, 580
 Lesser Snow, 574 649.
 Little Wild, 580
- Goshawk**, American, 401 653.
- Grackle**, Bronzed, 32 655.
 Rusty, 30
- Grebe**, Holboell, 628 647.
 Horned, 630 647.
 Pied-billed, 631 647
- Green-head**, 582
- Grosbeak**, Blue, 641
 Canadian Pine, 36 655.
 Cardinal, 96
 Evening, 35 655.
 Pine, 36 655.
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- Grouse**, Pinnated, 435
 Ruffed, 433 652.
- Grus americana**, 459 650.
canadensis, 460 650.
mexicana, 461 650.
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- Gull**, Bonaparte, 552 648.
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- Haliaeetus leucocephalus*, 414 653.
- Hangbird**, 27
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- Harelda hyemalis*, 612 649.
- Harrier**, Marsh, 394
- Hawk**, American Rough-legged, 410 653.
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- Cooper, **399** 653.
 Duck, **388** 653.
 Fish, **417**
 Hen, **403 406**
 Marsh, **394** 652.
 Pigeon, **390** 653.
 Red-shouldered, **406** 653.
 Red-tailed, **403** 653.
 Sharp-shinned, **397** 653.
 Western Red-tailed, **405**
- Helinaia swainsonii*, **645**
 Hell-diver, **631**
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 peregrina, **129** 658.
 pinus, **120** 657.
 rubricapilla, **127** 658.
Helmitheros vermivorus, **118** 657.
Helodromas solitarius, **522** 651.
 Hen, Indian, **463**
 Marsh, **442**
 Mud, **455**
 Prairie, **435** 652.
Herodias egretta, **471** 650.
 Heron, Black-crowned Night, **477** 650.
 Great Blue, **467** 650.
 Green, **474** 650.
 Little Blue, **473** 650.
 Louisiana, **645**
 Snowy, **472** 650.
 White, **471**
- Hesperiphona vespertina*, **35** 655.
 High-holder, **357**
 High-hole, **357**
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Hirundo erythrogaster, **276** 657.
Histrionicus histrionicus, **646**
 Hummingbird, Ruby-throated, **334** 654.
Hydranassa tricolor ruficollis, **645**
Hydrochelidon nigra surinamensis, **568** 648.
Hyllocichla aliciae, **215** 660.
 fuscescens, **214** 660.
 guttata pallasii, **217** 660.
 mustelina, **209** 660.
 ustulata swainsonii, **216** 660.
- Ibis, Glossy, **481** 650.
 Wood, **480** 650.
Icteria virens, **185** 659.
- Icterus galbula*, **27** 655.
 spurius, **25** 655.
Ictinia mississippiensis, **645**
 Indigo-bird, **102**
Ionornis martinica, **452** 650.
Iridoprocne bicolor, **278** 657.
- JAEGER, Parasitic, **545** 647.
 Pomarine, **543** 647.
 Pomatorhine, **543**
 Richardson's, **545**
- Jay, Blue, **8** 655.
Junco hyemalis, **76** 656.
Junco, Slate-colored, **76** 656.
- KILLDEER, **485** 652.
 Kingbird, **308** 654.
 Kingfisher, Belted, **361** 654.
 Kinglet, Golden-crowned, **231** 660.
 Ruby-crowned, **233** 660.
 Kite, Mississippi, **645**
 Swallow-tailed, **393** 652.
 Kittiwake, **545** 648.
 Knot, **504** 651.
 Krieker, **507**
- LANIUS borealis*, **287** 657.
 ludovicianus, **289** 657.
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- Lark, Brown, **207**
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 Horned, **198** 655.
 Hoyt Horned, **201** 655.
 Prairie Horned, **202** 655.
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- Larus argentatus*, **548** 648.
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 delawarensis, **551** 648.
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 Logcock, **351**
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- Loon, **634** 647.
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- MACRORHAMPUS** griseus, **501** 651.
 scolopaceus, **592** 651.
 Mallard, **582** 648.
 Black, **584**
 Gray, **582**
 Man-o'-War Bird, **627** 648.
 Mareca americana, **588** 649.
 penelope, **587** 649.
 Marlin, Brown, **517**
 Ring-tailed, **518**
 Martin, Purple, **272** 657.
 Sand, **279**
 Meadowlark, **22** 655.
 Meadow-wink, **11**
 Megascops asio, **382** 653.
 Melanerpes erythrocephalus, **353** 654.
 Meleagris gallopavo silvestris, **431** 652.
 Melospiza cinerea melodia, **83** 656.
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 Merganser americanus, **619** 648.
 serrator, **621** 648.
 Merganser, American, **619** 648.
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 Minus polyglottos, **251** 659.
 Mniotilta varia, **112** 657.
 Mockingbird, **251** 659.
 Molothrus ater, **14** 655.
 Mouse-bird, **200**
 Murre, Brunnich, **639** 647.
 Muscivora forficata, **307** 654.
 Myiarchus cinerascens, **312** 654.
- NETION** carolinensis, **590** 649.
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 Red-bellied, **240**
 Red-breasted, **240** 659.
 White-breasted, **238** 659.
 Nuttallornis borealis, **319** 654.
 Nyctala acadica, **380** 653.
 Nyctea nyctea, **383** 653.
 Nycticorax nycticorax nevius, **477** 650.
- ODIEMMA** americana, **615** 649.
 deglandi, **616** 649.
 perspicillata, **646**
 Olbiorchilus biennialis, **237** 659.
 Old-squaw, **612** 649.
 Olor buccinator, **573** 650.
 columbianus, **571** 650.
 Oriole, Baltimore, **27** 655.
 Orchard, **25** 655.
 Osprey, American, **417** 653.
 Otocoris alpestris, **198** 655.
 hoyti, **201** 655.
 praticola, **202** 655.
 Oven-bird, **171** 658.
 Owl, American Hawk, **387** 653.
 American Long-eared, **374** 653.
 American Barn, **371** 653.
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 Short-eared, **376** 653.
 Snowy, **386** 653.
 Virginia, **384**
- Ox-bird, **512**
 Ox-eye, **482** 513.
 Oxyechus vociferus, **485** 652.
- PANDION** haliaetus carolinensis, **417** 653.
 Parakeet, **339**
 Paroquet, Carolina, **369** 654.
 Partridge, **433**
 Parns atricapillus, **245** 660.
 carolinensis, **247** 660.
 Passer domesticus, **40**
 Passerculus sandwichensis savanna, **57** 656.
 Passerella iliaca, **91** 656.
 Passerina nivalis, **59** 656.

- Pavoncella pugnax, **526** 652.
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 Petrochelidon lunifrons, **274** 657.
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 Wood, **320** 654.
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 Phalacrocorax dilophus, **624** 648.
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 Phalarope, Northern, **540** 651.
 Red, **539** 651.
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 Chinese, **430**
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 Ring-necked, **430** 660.
 Philohela minor, **495** 651.
 Phebe, **314** 654.
 Picoides arcticus, **348** 654.
 Pigeon, Migratory, **425**
 Passenger, **425** 652.
 Wild, **425**.
 Pinicola enucleator leucura, **36** 655.
 Pintail, **597** 649.
 Pipilo erythrophthalmus, **93** 656.
 Pipit, American, **207** 650.
 Piranga erythronelas, **107** 657.
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 Plegadis autumnalis, **481** 650.
 Plover, American Golden, **483** 652
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 Black-bellied, **482** 652.
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 Piping, **490** 652.
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 King, **442** 650.
 Little Black, **451**
 Red-breasted, **442**
 Sora, **447** 650.
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 Raven, Northern, **1** 655.
 Recurvirostra americana, **537** 651.
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 Cardinal, **96**
 Summer, **110**
 Redhead, **601** 649.
 Redpoll, **46** 655.
 Common, **46**
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 Redstart, American, **195** 659.
 Red-tail, **493**
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 Thick-billed, **21** 655.
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 Reeve, **526**
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 satrapa, **231** 660.
 Rice-bird, **11**
 Ring-neck, **488**
 Riparia riparia, **279** 657.
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 Buff-breasted, **530** 652.
 Least, **510** 651.
 Pectoral, **507** 651.
 Purple, **506** 651.
 Red-backed, **512** 651.
 Semipalmated, **513** 651.
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 Spotted, **531** 652.
 Stilt, **503** 651.
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 Sayornis phoebe, **314** 654.
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 Lesser, **605**
 Scissor-tail, **307**
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 Scoter, American, **615** 649.
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 Surf, **645**
 White-winged, **616** 649.
 Scotiaptex nebulosa, **379** 653.
 Seiurus aurocapillus, **171** 658
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 Jack, **498**
 Red-bellied, **502**
 Red-breasted, **501**
 Robin, **504**
 Stone, **519**
 Wilson, **498** 651.
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 spectabilis, **614** 649.
 Sora, **447** 650.
 Soree, **447**
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 Chipping, **71** 656.
 Clay-colored, **645**
 Domestic, **40**
 English, **40** 660.
 Field, **74** 656.
 Fox, **91** 656.
 Grasshopper, **58** 656.
 Harris, **65** 656.
 Henslow, **60** 656.
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