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AND
CHARLOTTE B. BICKMORE

Bird = Lore

*AN ILLUSTRATED BI-MONTHLY MAGAZINE DEVOTED TO
THE STUDY AND PROTECTION OF BIRDS*

EDITED BY

FRANK M. CHAPMAN

Official Organ of the Audubon Societies

AUDUBON DEPARTMENT EDITED BY

MABEL OSGOOD WRIGHT



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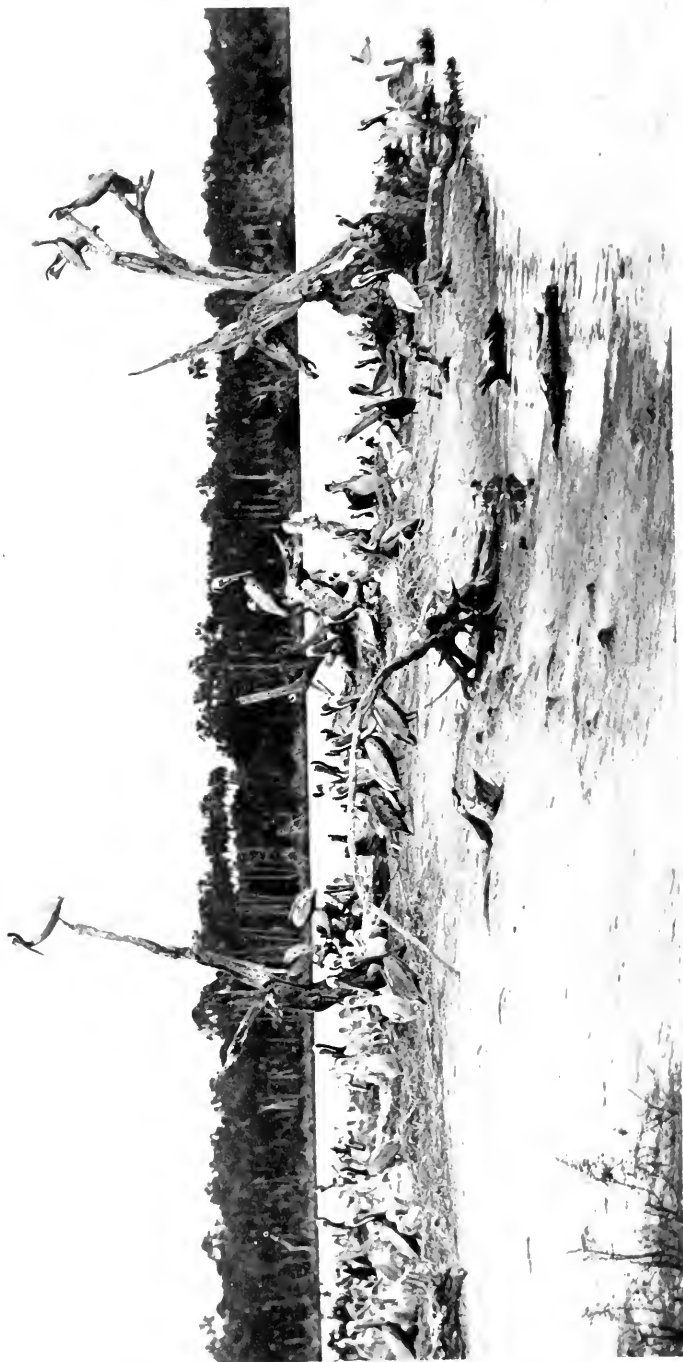
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A VIEW ON PELICAN ISLAND

Bird = Lore

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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. III

JANUARY—FEBRUARY, 1901

No. 1

Pelican Island Revisited

BY FRANK M. CHAPMAN

With photographs from nature by the author



THE results of observations on the inhabitants of Pelican Island, in the Indian River, Florida, made during four days in March, 1898, have already been recorded* in some detail, and it is proposed to add here only certain supplementary notes, secured April 24, 1900. Being armed with a far more effective battery of cameras, I obtained, on this second visit, photographs of several phases of Pelican life, notably views of the birds on the wing, which it had proved impossible to make on my previous trip to the island.

These pictures, it may be of interest to explain, were taken with a reflecting camera, fitted with a focal-plane shutter, similar to the camera described in BIRD-LORE for April, 1899. While the wing-beats of the Brown Pelican are comparatively slow, former experience showed that a lens shutter was by no means rapid enough to take satisfactory pictures of the birds in flight. With the focal-plane shutter, however, sufficiently fast exposures were made to show the wing at every stage of the stroke and with enough definition to enable one to see clearly the separation of the outer primaries.

Returning to Pelican Island one month later in the year than the date of my 1898 visit, I had expected to find few or no eggs and most of the young of the year with flight feathers appearing or fully developed. There was, however, no apparent difference in the proportionate number of eggs or age of the young birds, and it required a careful census, and an analysis of it, to bring out the fact that the breeding season was somewhat more advanced in 1900, and, I regret to say, that the population of the island had decreased.

* Bird Studies with a Camera. Vol. II, pp. 191-214.



BROWN PELICANS

In 1898 there were 845 nests on the island, of which 251, or 42 per cent, were occupied at the time the count was made. In 1900 only 710 nests had been built, of which 179, or 34 per cent, were found to contain eggs or young, on April 24, as follows:

23	nests	with	1	egg	each
38	"	"	2	eggs	"
26	"	"	3	"	"
43	"	"	1	young	"
42	"	"	2	"	"
7	"	"	3	"	"

A high rate of nest mortality is indicated by the fact that while 26 nests, or 30 per cent, contained three eggs each, only 7, or about 8 per cent, contained three young each, and a similar difference was observed in 1898.

Estimating, as in 1898, that three birds would reach maturity from



BROWN PELICANS



BROWN PELICANS ON GROUND NESTS

each pair of nests, we then have a total of 796 birds which had left the 531 deserted nests. Add to this number the 148 young remaining in the nest and two adults for each of the 710 nests built during the 1900 nesting season, and we have as the population of Pelican Island for that year, 2,364, or a decrease of 372 birds since 1898, when it was estimated that there were 2,736 birds on the island.

Pelican Island contains about four acres of ground, of which less than



BROWN PELICAN AND NEST IN YOUNG CABBAGE PALMETTO

The same nest, with a bird seated on it, is shown in the picture on the opposite page.

NOTE.—The head of this bird, from the eye upward, projected beyond the edge of the plate and was not, therefore, photographed. It has here been supplied by Chas. R. Knight, from sketches from life.

one-quarter is occupied by the birds, most of the nests being grouped in one thickly populated area, which, it was interesting to observe, was without a single nest in 1898. No change in the surrounding conditions was observed, and the reason for this desertion of one part of the island for another was not evident.

There was, too, a marked variation in regard to the character of the nests built on the ground as compared with those on the island in 1898,

and I am glad of an opportunity to modify statements made in the article previously mentioned, to the effect that all ground nests were composed of grasses, while those placed in the mangroves were constructed of sticks. There was, therefore, in 1898, a constant relation between the nature of the nest and its location, showing either consistency in the selection of a site or surprising adaptability in habit.

In 1890, however, a number of ground nests were found to be made of sticks, one evidently erected on another, rising to a height of nearly three feet (see photograph on page 8).



A CORNER OF PELICAN ISLAND

The nest on the young cabbage palmetto in the background, with a bird upon it, is shown in detail on opposite page

To yield to the temptation to redescribe the wonders of Pelican Island would only result in a repetition of what I have already written. I may, however, state that this second visit fully confirms my opinion that Pelican Island during nesting time is by far the most fascinating place it has ever been my fortune to see in the world of birds. But this estimate of its charms only serves to increase the desire that this colony of remarkable birds may be preserved. The island is very accessible, the Florida law affords Pelicans no protection, and a party of quill-hunters might easily kill practically all the inhabitants of Pelican Island within a

few days. The loss would be irreparable, and, it is to be especially noted, would not be confined to the vicinity, but would affect the whole east coast of Florida, there being, so far as is known, no other breeding colony of Pelicans on the Atlantic coast of the peninsula.

There is doubtless no area of similar extent in the world so well adapted to the wants of certain aquatic birds as Florida; and if today it were inhabited by even one-tenth of the myriads of Herons, Egrets, Spoon-bills and other large and conspicuous birds which animated its lakes and marshes thirty years ago, the marvel of its wild life would be known the world around and prove of greater interest to tourists than any existing attraction in the state. If Floridians doubt this valuation of birds which they have been accustomed to regard as worthless, or at so much per plume, let them observe the excitement occasioned among the tourists on a St. John's or Ocklawaha steamer by the now rare appearance of White Herons within a short distance of the boat.




YOUNG BROWN PELICAN IN GROUND NEST
BUILT OF STICKS

The birds have gone, and what has the state received? Proportionately nothing. Here and there a poor hunter, or a curio dealer, has made a few dollars, but most of the killing has been done by, or under the immediate inspiration of, northern dealers, and Florida's loss has been their gain.

There are still scattered colonies of these birds in the less accessible parts of Florida, and if the natives of the state ever open their eyes to the indisputable fact that a living bird is of incalculably greater value to them than a dead one, they may perhaps take some steps to defend their rights, and by passing and enforcing proper laws, put an end to the devastations of the northern plume agents, who have robbed their state of one of its greatest charms.

Elliott Coues on Audubon

EDITOR'S NOTE

HILE the guest of the late Mrs. John Woodhouse Audubon, at Salem, N. Y., in July, 1897, Dr. Coues was afforded an opportunity of seeing Audubon's manuscript journals, letters, drawings and other material, which, with exhaustless patience and perseverance, Miss Maria R. Audubon had gathered from many sources to serve as the basis for the two volumes which form such a fitting tribute to the memory of her grandfather. Dr. Coues, it will be remembered, contributed certain zoölogical and other notes to this work, and we may imagine his pleasure as, with the combined enthusiasm of the ornithologist, bibliophile and annotator, he gave himself to the fascinating task of a minute examination of Audubon's manuscripts.

Four months later, at the fifteenth Congress of the American Ornithologists' Union, which was held in the American Museum of Natural History in New York city, under the title 'Auduboniana and Other Matters of Present Interest,' Dr. Coues spoke of the great value of these manuscripts, and exhibited, through the courtesy of Miss Audubon, the original portfolio in which the then comparatively unknown 'American Woodsman' had carried his drawings of birds about Great Britain and the continent, and also the manuscript of the first volume of the 'Ornithological Biographies.' It was an unusually interesting occasion, and those who were privileged to be present are not likely to forget the keen enjoyment with which Dr. Coues exhibited relics so intimately associated with Audubon's life and works.

A stenographer chancing to be present consented to record Dr. Coues' address, of which the portion relating to Audubon is here printed. Although a verbatim report, it conveys only a faint idea of the impression created by the delivery of the address itself. The attractiveness of the speaker's personality, which never failed to hold the tense interest of his hearers, is lost in this reproduction of his words. We believe, however, that to those who knew him, they will clearly recall the genial but commanding presence of a man whose place in ornithology will never be filled.—F. M. C.

DR. COUES' ADDRESS

"Mr. President, Fellow Members, Ladies and Gentlemen :

"We necessarily live in the present, but, as time passes on, the future grows more and more foreshortened and the past correspondingly lengthens out for each one of us. Those who have reached a certain point are, however, inclined to think more of the lengthening past than the foreshortened future. In other words, we reach a stage of the individual

who, in that stage, if he can refrain from growing garrulous, may perhaps make himself presently interesting.

"In the year 1826 there appeared in England an unknown man. This man was already turned of fifty. We may say that he had more years than the popular date of his birth would assign him to here. He was a man of striking personal appearance; he was a man of most engaging manners; he was a man who, in the short space of five years, leaped from obscurity into imperishable renown.

"How could that be? It happened in this wise: That unknown man who appeared in Great Britain and on the continent in 1826 carried abroad the efforts of a lifetime of ornithological study with him that were placed before the public with the result that the nameless John James Audubon, a person, became an illustrious personage.

"These efforts which I have just mentioned as a lifework were hardly to be carried in any very small compass. But the fruits of his work, which were outside of his own head, he had with him on paper.

"How did he present the originals of those drawings which have never ceased from that day to this to excite our wonder and our admiration? He presented them in a certain portfolio. When he went upon a reconnoissance he was in the habit of taking the portfolio under his arm—I trust that he did not long feel poor; when he became a little richer he probably hired a cab; but by whatever means the portfolio was carried in those days, some younger and weaker members of the ornithological fraternity have transported by their efforts the same into the room this morning, and if the secretary will be kind enough to help me for a moment I will show you the portfolio. This (exhibiting a large brown portfolio, worn and faded) is the original portfolio which John James Audubon carried with him through the continent and Great Britain. [Applause.]

"There are a number of other portfolios and a greater variety of Auduboniana in the possession of the family in Salem, New York; but upon the kind offers of Miss Maria Audubon, descendant of the great ornithologist, I suggested this portfolio. You will observe that it has been much worn and some of the brass corners and metal bindings are lost; but portfolios are not carried empty—not even to a meeting of the Ornithologists' Union; let us open it.

"Audubon's engaging manners and fine personal appearance won him friends everywhere among persons in high places in England and elsewhere on the continent, and while his plates of the birds of North America were being engraved by Mr. Robert Havell, of London, and others, the question of text to these great plates came up. We are all familiar with the print of the first volume; but who ever saw the manuscript in the handwriting of John James Audubon? Audubon, besides

being great, had a certain largeness about him. He liked largeness in a physical, mechanical sense, as he strove for greatness in a moral, intellectual sense. He almost always used folio sheets of this character. This manuscript is almost complete, and quite in its original proportions, although sheets have been given to friends, and the family insisted upon my taking a few for myself; but, ladies and gentlemen, fellow members,



*Sincerely yours,
Elliott Coues.*

(From a group photograph of the members attending the thirteenth congress of the American Ornithologists' Union in Washington, D. C., November, 1895.)

you have before you the original manuscript of Audubon's first ornithological work. [Applause.]

"Here rises an interesting question, a remarkable question: Where did Audubon obtain the technical parts of his work? We know that he was slightly unsuited for this part of his undertaking, for he was an American woodsman; he needed assistance in the technicalities of his

work, and he had many to select from. The person he did select was probably the best man that could be found in the world, and no other than William MacGillivray—a scholar, an ornithologist, an especially good anatomist for the time, and an entertaining writer; a writer that was good and truthful about all. He secured the assistance of William MacGillivray for the technical portions of his work.

"I wonder how many ornithologists then and now know that his cooperation with Audubon was secured after the failure of certain negotiations with a different individual. What would have been the effect had Audubon's first attempt to supply the technicalities of his subject been successful? It makes me tremble to think of it.

"He first applied for such assistance to an excellent ornithologist named William Swainson. He was a good ornithologist, there hardly being a better one for the time. He was one of the most accurate ornithological artists; but he had a wheel in his head; he was a crank on one subject, and any one who has ever read his work knows that he there set this wheel to spinning. He was associated with two others, composing a trinity of cranks in England at that time.

"If he had not succeeded with MacGillivray and had succeeded with Swainson North American ornithology would be—I do not know a word to characterize it if it had fallen into the clutches of these cranks.

"How did we escape this infliction? How did it happen that Audubon's ornithological biographies, in all their technicalities, were not compiled under their system? I will show you how it happened that they were not, for I hold in my hand a copy I have made of Mr. Swainson's letter of declination. He declined to accede to the negotiations then pending, as you will see. The original is in possession at present of the family in Salem. The letter will be printed in the next number of 'The Auk.'*

"This letter is dated the 20th of October, 1830. I do not know that it is necessary to read all of it, but the point of my remarks is to show you that Swainson was applied to, to do the technical part of Audubon's work, before MacGillivray was applied to, and he declined to do so because his name was not to appear upon the title page.

"Among the contents of this portfolio I have a number of pictures, to which I will now call your special attention. Those of us who are familiar with the beautiful products of his pencil and those of us who are not ornithologists may look and see one of Audubon's plates in process of construction. There is an original of Audubon's [holding up the cut-out figure of a bird]. In examining a great quantity of the contents of the portfolio I found that it was a very frequent custom in preparing his bird figures to have one of his sons prepare the background. You can

* 'The Auk,' xv, 1898, pp. 11-13.

see two plates, one by John Woodhouse and one by Victor, while Audubon was to insert into them a cut-bird figure and then send it to the engraver to be printed. John Woodhouse Audubon attained a measure of skill in the drawing of birds. There happens to be in this portfolio two or three pictures by John Woodhouse Audubon, showing the degree of skill to which he attained.

"Having spoken to you in some little length of the portfolio and its contents, I am led next to remark upon the numerous biographies of Audubon which have thus far appeared, bringing me to what might be called the subdivision of my title of which I understand I am scheduled to speak, more of matters of present interest.

"Members of the Union and their friends who were present in Cambridge last year will recollect my laying before them a large quantity of manuscript of John James Audubon and a fully implied promise that the material was about to be utilized in the course of a year. I am happy to inform you the promise has been carried out. Miss Audubon has in press now a biography of her illustrious grandfather more full and, I am sure, more accurate than any other heretofore appearing, with the addition of the journals of Audubon, some of which I have shown you, and the further reprinting of the series of American Life and Manners. The three volumes of the three journals that are now being reprinted in full and the proof of which I have read are the European Journal of 1826, the Labrador Journal of 1833, and the Missouri River Journal of 1843. I think the European Journal will be found most generally interesting.

"From the journals I am led to speak of other Audubonian matters, prominent among which is the extraordinary growth of Audubon societies throughout the country, whose humane object is the preservation of our birds. They are springing up everywhere, and I consider them one of the most remarkable growths of the humanitarian side of ornithology that has ever been witnessed in the history of science."



Three Letters to Audubon's "Kentucky Lads"



N EARLY a century ago, in 1809 and 1812, Audubon's two sons were born; Victor in Louisville, and John in Henderson, Ky., and in speaking of them together he often called them his "Kentucky lads." During their boyhood days the father and sons were separated for long periods of time by the nature of Audubon's work, which work became that of all three, as years went on, and the long months while father and sons were thus apart were bridged over by what, for those days, was a very frequent correspondence.

Unfortunately most of these letters have been lost or destroyed; only a few have fallen into my hands—the three given below, written while Audubon was in Edinburgh bringing out the first number of the 'Birds,' and a few others written to the "Kentucky lads" when they too had crossed the ocean and were making what at that time was called the "grand tour," though it really covered only a very moderate portion of Europe.

The letters here given were penned when Victor, a youth of seventeen, was in the office of an uncle by marriage, Mr. Nicholas Berthoud, in Louisville, and John, three years younger, was with his mother on a plantation in Louisiana, near Bayou Sara. They are simple letters, but show the companionship that existed between Audubon and his boys, and the intense desire the former had that no talent or opportunity should be neglected by those whose welfare he had at heart, and who were so dear to him.—MARIA R. AUDUBON.

FIRST LETTER

EDINBURGH, SCOTLAND,

Saturday, October 28, 1826.

MY DEAR JOHNNY:

I am writing to you from the place where I wish most you could have been educated. It is a most beautiful city, perhaps the most so I have ever seen; its situation is delightful, not far from the sea, running on two parallel hills, ornamented with highly finished monuments, and guarded by perhaps impregnable castles. The streets are all laid at right angles in that portion of it which is called the New Town—are well paved and cleaned, and lighted by gas. I have been here now three days. I came from Manchester in a public coach that carried four inside passengers and ten outside, or rather, on the top, besides a guard and a driver, and all the luggage. I sometimes stayed inside, and sometimes

rode outside to have better views of the country I traveled through; now and then I saw some fine English Pheasants that you would delight in shooting, also some curious small sheep with black heads and feet, the rest white, and some of those pretty little ponies you are so fond of; I wish I could send you one.

Before I left Manchester I visited Matlock, Bakewell and Buxton, all watering places. I drove in a carriage with Mrs. Rathbone and her daughter; the latter purchased and sends you a beautiful little black box of Matlock marble, or spar, and Mrs. Rathbone sends your good mamma an inkstand of the same material. I was very much interested in all the places I saw and wished very much that you, mamma and Victor had been with me to enjoy the journey.

Today I have visited the Royal Palace of Holyrood, was in the rooms of Queen Mary of Scotland, and saw her bed, chairs and tables. I looked at my face in the mirror that once was hers, and I was in the little room where the murder of Rizzio was committed. I also saw the chapel where the Queen was married to Lord Darnley. It was all very curious and very interesting. The apartments where the present king of France resided during his exile were also shown to me, and the fine rooms where George the Fourth was, four years ago, when he visited Scotland.

The women of the poorer class work very hard here, and carry heavy burdens, just as our squaws do in Louisiana, in a large basket behind, and a leather strap coming from it over their foreheads.

I bought for your dear mamma eighteen views of different parts of the city that I will send when I make up another box. In a day or so I will go to Roslyn Castle, and afterwards to Melrose to see the chapel and to call on Sir Walter Scott, the great novelist, some of whose books we have enjoyed together.

I hope you are good and obedient, and are improving in your drawing. Draw as much as you can, and study your music also, as men of talents are welcome all over the world. Two hours daily is little enough for you to give to your violin if you intend to become proficient in the handling of that instrument, and more would be better.

When you write to me tell me of all your occupations and write me a *long* letter. Mr. Bentley, of Manchester, will write to you for bird-skins; these you know how to prepare well, and I need not remind you to do your work carefully, and in return Mr. Bentley will send you some books.

I send my love to your mamma; remember me to little Charles, Bourgeat and all, and believe me for ever your most affectionate father and friend.

J. J. AUDUBON.

SECOND LETTER

EDINBURGH, 26 GEORGE STREET,

November 16, 1826.

MY DEAR VICTOR:

I continue to be delighted with this beautiful city; it has a modest and chaste appearance, quite agreeable to the traveller's eye; but the country generally is a barren, poor-looking tract; the mountains are barely covered with earth, and the shepherds the most abject beings I ever saw. None but the rich here seem to enjoy life, and the climate is very rigid. I expect to travel a great deal before long; indeed I am forced to do so, to open the gates for my work, which I hope to make superior to anything of the kind in existence, and this can only be done by unwearying industry and patience. I am overcoming my bashfulness to some extent, and no longer fear to show my drawings. That all may end well, and that I may return to beloved America with some store of wealth and fame, is to be hoped. I shall spare no efforts to reach my ends, I assure you.

I expected long ere this to have had another letter from you; certainly time is not so scarce with you. I do with four hours' sleep, and keep up a great correspondence, copy all my letters myself, even this to you, and my journal keeps apace with all, while the descriptions of my birds are almost ready. My boy, pray read "The Discontented Pendulum," from Dr. Franklin, or some one else (for the world is not certain about the authorship), and see how much can be done if time is not squandered. It would give me much pleasure to receive from you some token of your still thinking about drawing and music, or your natural talent for poetry. Talents will lay dormant in man, if by exercise he does not cultivate them. I have an album that contains many beautiful morceaux from very eminent men, and, as I travel, I gather. Among people of solid understanding outside appearances have no weight, and my looks are, even here, not sneered at. I find myself in company with persons from all parts of the globe, all attired differently, but it is not the coat, but either the mind or the heart that commends man to man.

I sent a fine collection of colored chalks to Johnny. Should you feel inclined to draw—and for your own sake you ought to do so—request him to forward you an exact half. Correct measure and outline, precise tints, and a little life given, make a picture, and keep all your work for future comparison, no matter how indifferent it may be in your own eyes.

During the publication of my work I hope to visit Spain, Italy, Holland, Germany, and of course Switzerland, where I have at Geneva a most powerful friend in the Baron de Sismondi, who introduced me to Baron Humboldt; my letters for Paris, too, are good.

Pray inform me how all about you are, for, thousands of miles away,

all details are agreeable, and were you and John to write to me for one week, I would thank you both. Now may God bless you and keep you well and happy.

Believe that I am and ever will be, your most affectionate father and friend,

J. J. AUDUBON.

THIRD LETTER

EDINBURGH, *December 22, 1826.*

MY DEAR JOHNNY:

As I read your letter it seems to me that I never felt the want of our forests as much in my life as I do now; could I be but a moment with you, I could return to my work here much refreshed. I hope in your walks you collect acorns of all sorts, and other kinds of seeds, and send them to Mrs. Rathbone, who is pleased to have them.

I think if mamma is willing, you might use my gun if you are careful of it, and keep it particularly clean. I am glad to know you are drawing all you can, for your own sake and mine, and I should much like to see your drawing of the Dove, which your mamma says is the best you have done. Be very careful to measure *exactly*, and if there is any error, begin afresh without delay; perseverance is needed in everything, and in nothing more than drawing, and I hope to see great improvement in your work on my return. Besides drawing birds, draw limbs and branches of all kinds of trees, and flowers, and keep a list of the names of all the birds you see; if you should not know the name by any chance, write a brief description. I wish you to train yourself to make regular memoranda respecting the habits, localities, etc., of birds and quadrupeds. It is most useful, and memory sometimes plays us false.

By this time your mamma will have received the first impression from the beautiful seal Mrs. Rathbone gave me. The seal is beautifully cut and valuable to me on that account, as well as for the sake of the donor. Would that I could hear the call of the Wild Turkey as I have so often done, but, alas! I am too far away.

I began this morning a painting in oil of fourteen Pheasants on the wing, attacked by a fox, that I wish to send to the Royal Academy in London next March, so will need to work hard with all else that must be done, and the days are so short now that I can only paint from about nine until half-past three, and I am often interrupted, but my writing goes on until late in the night. Now I am going to dine with Sir William Jardine at Barry's Hotel.

My love to dearest mamma, and remember me kindly to all around you. Believe me ever your affectionate father and friend,

J. J. AUDUBON.

An Adirondack Lunch Counter

BY F. A. VAN SANT, Jay, N. Y.

With photographs from nature by the author

IN the Adirondacks in March, 1900, the snow fell over four feet deep, and wild birds were driven from the deep woods to seek for food near the habitation of man. It occurred to me that a lunch counter with 'meals at all hours' might suit the convenience of some of the visitors to my orchard, so I fixed a plank out in front of the house, nailed pieces of raw and cooked meat to it, sprinkled bread crumbs and seeds around, and awaited results.

The first caller was a Chickadee. He tasted the meat, seemed to enjoy it and went off for his mate. They did not seem in the least afraid when I stood on the veranda and watched them, and after a time paid but little attention to the noises in the house; but only one would eat at a time. The other one seemed to keep watch. I set my camera and secured a picture of one alone. While focusing for the meat one



WHITE-BREASTED NUTHATCHES

Chickadee came and commenced eating in front of the camera, and a second later its mate perched on my hand as I turned the focusing screw.

I saw the Chickadees tear off pieces of meat and suet and hide them in the woodpile. This they did repeatedly, and later in the day would come back and eat them if the lunch counter was empty.

My observation in this respect is confirmed by a lumberman, who noticed that when eating his lunch back in the woods the Chickadees were very friendly and would carry off scraps of meat and hide them, coming back for more time and again.

The next day another pair of Chickadees and a pair of White-breasted Nuthatches came. The Nuthatches had a presumptuous way of taking possession, and came first one and then both together. The Chickadees flew back and forth in an impatient manner, but every time they went near the meat the Nuthatches would fly or hop toward them, uttering what sounded to me like a nasal, French *no, no, no*, and the Chickadees would retire to await their turn when the Nuthatches were away.

The news of the free lunch must have traveled as rapidly in the bird world as gossip in a country town usually does, for before long a beautiful male Hairy Woodpecker made his appearance, and came regularly night and morning for a number of days. Hunger made him bold, and he would allow me to walk to within a few feet of him



HAIRY WOODPECKER

when changing plates in the camera. It was interesting to note his position on the plank. When he was eating, his tail was braced to steady his body. He did not stand on his feet, except when I attracted his attention by tapping on the window, but when eating put his feet out in front of him in a most peculiar manner. This position enabled him to draw his head far back and gave more power to the stroke of his bill, and shows that Woodpeckers are not adapted for board-walking.

Of course the smaller Downy Woodpeckers were around; they always are in the orchard toward spring. I also had a flock of Redpolls come a number of times after a little bare spot of ground began to show, but although they ate seeds I put on the ground, they would not come up on the lunch counter and did not stay very long. Beautiful Pine Grosbeaks came, too, but they preferred picking up the seeds they found under the maple trees. The American Goldfinches, in their Quaker winter dresses, called, but the seeds on some weeds in the garden just peeping above the snow pleased them better than a more elaborate lunch, and saying, "per-chic-o-ree," they would leave.

For Teachers and Students

'Bird-Lore's' Advisory Council

WITH some slight alterations and additions we reprint below the names and addresses of the ornithologists forming BIRD-LORE'S 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the year in which it has been in operation fully equals our expectations, and from both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry sent to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

‡ UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, Biological Survey, Department of Agriculture, Washington, D. C.
- ARIZONA, Northern.—Dr. E. A. Mearns, Fort Adams, Newport, R. I.
- ARIZONA, Southern.—Herbert Brown, Yuma, Ariz.
- CALIFORNIA.—Charles A. Keeler, Calif. Acad. Sciences, San Francisco, Calif.
- COLORADO.—Prof. W. W. Cooke, State Agricultural College, Fort Collins, Col.
- CONNECTICUT.—J. H. Sage, Portland, Conn.
- DELAWARE.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
- DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l Mus., Washington, D. C.
- FLORIDA.—Frank M. Chapman, American Museum Natural History, New York City.
- FLORIDA, Western.—R. W. Williams, Jr., Tallahassee, Fla.
- GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
- IDAHO.—Dr. J. C. Merrill, Army Medical Museum, Washington, D. C.
- ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.
- ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
- INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
- INDIAN TERRITORY.—Prof. W. W. Cooke, State Agricultural College, Ft. Collins, Col.
- IOWA.—Paul Bartsch, U. S. National Museum, Washington, D. C.
- KANSAS.—Prof. D. E. Lantz, Chapman, Kan.
- LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
- MAINE.—O. W. Knight, Bangor, Me.
- MARYLAND.—F. C. Kirkwood, Box 364, Baltimore, Md.

- MASSACHUSETTS.—William Brewster, Cambridge, Mass.
 MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
 MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth avenue south, Minneapolis, Minn.
 MISSOURI.—O. Widmann, Old Orchard, Mo.
 MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
 NEBRASKA.—Prof. E. H. Barbour, University of Nebraska, Lincoln, Neb.
 NEVADA.—Dr. A. K. Fisher, Biological Survey, Dep't of Agr., Washington, D. C.
 NEW HAMPSHIRE.—Prof. C. M. Weed, State Agricultural College, Durham, N. H.
 NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Department of Agriculture, Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Department of Agriculture, Washington, D. C.
 NEW YORK, Northern.—Egbert Bagg, 191 Genesee street, Utica, N. Y.
 NEW YORK, Western.—E. H. Eaton, Canandaigua, N. Y.
 NEW YORK, Long Island.—William Dutcher, 525 Manhattan ave., New York City.
 NORTH CAROLINA.—Prof. T. J. Pearson, Guilford College, N. C.
 OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dep't of Agr., Washington, D. C.
 OREGON.—Dr. A. K. Fisher, Biological Survey, Dep't of Agr., Washington, D. C.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburg, Pa.
 RHODE ISLAND.—J. M. Southwick, Museum Natural History, Roger Williams Park, Providence, R. I.
 SOUTH CAROLINA.—Dr. Eugene Murphy, Augusta, Ga.
 TEXAS, Northern.—J. J. Carroll, Waco, Tex.
 TEXAS, Southeastern.—H. P. Atwater, San Antonio, Tex.
 TEXAS, Western.—Dr. E. A. Mearns, Fort Adams, Newport, R. I.
 UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
 VERMONT.—Dr. F. H. Knowlton, U. S. National Museum, Washington, D. C.
 VIRGINIA.—Dr. W. C. Rives, 1723 I street, Washington, D. C.
 WASHINGTON.—Samuel F. Rathbun, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I street, Washington, D. C.
 WISCONSIN.—H. Nehrling, Public Museum, Milwaukee, Wis.
 WYOMING.—Dr. Mortimer Jesurun, Douglas, Wyo.

CANADA

- BRITISH COLUMBIA.—John Fannin, Provincial Museum, Victoria, B. C.
 MANITOBA.—Ethel Seton-Thompson, 2 W. 36th street, New York City.
 NEW BRUNSWICK.—Montague Chamberlin, Harvard University, Cambridge, Mass.
 NOVA SCOTIA.—Harry Piers, 'Stanyan,' Northwest Arm, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—T. McIlwraith, Hamilton, Ont.
 QUEBEC.—E. D. Wintle, 189 St. James street, Montreal, Can.

MEXICO

- E. W. Nelson, Biological Survey, Department of Agriculture, Washington, D. C.

WEST INDIES

- C. B. Cory, 160 Boylston street, Boston, Mass.

Birds and Seasons

SECOND SERIES

FEBRUARY AND MARCH BIRD-LIFE NEAR BOSTON

BY RALPH HOFFMANN



FEBRUARY seems to be the longest month of the year; so impatient have we become for the first migrant, whose arrival marks for ornithologists the return of spring. Each year, when the February thaw sets in, and the Song Sparrow that has wintered near us in some brush heap begins his somewhat husky song, we remember that there are fortunate people who, even in eastern Massachusetts, have seen Bluebirds in February. Too often, however, the mild weather is followed by heavy snows or bitter winds; it is, therefore, safer to expect no arrivals before the second week of March. Meanwhile some one reports a hardy Bluebird here and another there, and at last our own birds return to the warm hillside orchard. Then winter is over. Often the other birds return fully as early as the Bluebirds, and our first intimation of spring comes from a Bronze Grackle, creaking on his native pine tree, a silent Robin, or a distant flock of Red-wings, rising and falling as they fly. In all the 'back country' Song Sparrows and Flickers act as heralds of spring. To my mind, however, there is something incomplete in the entry of the vernal season unless a male Bluebird in full song is the herald, let whoever will be the pursuivants. No other performs the ceremony so satisfactorily. By the middle of the month the hylas have thawed out, and then come those sunny mornings when the Flicker's shout hardly ceases for a moment; the air is filled with the songs of migrant Bluebirds, passing northward, with the clear whistle of the Meadowlark, and the chorus of Red-wings on the hillsides. Migrant flocks of Song Sparrows and Snowbirds now appear; all are in high spirits and full of song. Even from the silent Creeper a sharp ear may now catch an occasional wiry, high-pitched song. Unless the season is very backward, we may now look for Rusty Grackles and Fox Sparrows, but the weather influences the arrival of the early birds very decidedly, so that in the dates given below the range between those of early and late seasons is much greater than in May. Sometimes great fields of snow lie to the north, and bitter northwest winds blow for days; again there is unusual warmth and sunshine, and flying insects abound. In such years the hardy Phœbe returns to the old shed or to the bridge, and the vigorous whistle of the Cowbird falls from some restless flock 'flying over.' The Robins, Red-wings and Cowbirds, which we see in March, are almost exclusively males.

BIRDS OF THE SEASON

Permanent residents and winter visitants (see BIRD-LORE, Dec., 1900, p. 183).

March Migrants.—March 6-12, Bluebird; 6-15, Robin; 6-20, Redwinged Blackbird; 8-20, Bronzed Grackle; 10-20, Meadowlark; 13-31, Rusty Blackbird, Fox Sparrow; 20-30, Woodcock; 25-31, Cowbird, Phoebe.

NOTE.—Cowbirds and Phoebe occasionally delay till April.

Early in the month Wild Geese are heard, and Sparrow Hawks return. A few Black Ducks return to their inland breeding places. Ipswich Sparrows may be found on the coast certainly by the end of the month, perhaps earlier. From the 13th to the 31st, there are evidences of a decided increase in the number of Song Sparrows, Flickers, Crows, and Juncos. My notes do not enable me to state whether there is, in March, a similar increase in the number of Golden-crowned Kinglets and Brown Creepers. There certainly is in April. Several other birds that arrive in March in exceptional years will be included in the April list.

Winter Visitants leaving for the North.—March 31, Northern Shrike; Pine Grosbeak (1893).

FEBRUARY AND MARCH BIRD-LIFE NEAR NEW YORK CITY

BY FRANK M. CHAPMAN

The conditions prevailing in the bird world in January continue without change until, in the latter half of February, a warm wave gives indication of returning spring. So instantly do the birds respond to the first intimation of winter's retreat that we can readily imagine their earlier coming has been prevented only by the threatening presence of Boreas himself at the gates of their winter quarters.

Generally speaking, the first birds to appear were the last to go. There is also, as might be expected, a more or less close relation between the northern limit of a bird's winter range and the time of its arrival at a given place, and our earlier migrants, therefore, are birds which have wintered a comparatively short distance to the southward. There is no more regularity in their coming, however, than there is in the weather of the season itself, and the bird student must watch the Weather Bureau's charts if he would expect to foretell the coming of the birds in February and March.

The three species of Blackbird and the Robin, the pioneers of this great northward invasion, are birds which can exist in a snow-covered and ice-bound country, and with them come additions to the ranks of Song Sparrows, Purple Finches and other winter birds. But not until the frost leaves the ground and ice the waters need we look for the Woodcock and Wilson's Snipe, Kingfisher, Ducks, and Geese.

Second in importance only to the advent of the birds themselves is the revival of the season of song. With us the Song Sparrow, not the Bluebird, is spring's true herald, and by March 1 his '*sweet, sweet, sweet, very merry cheer*' is heard from every favoring thicket, a heart-warming bit of bird music. Indeed, all bird songs have a special significance or

association for us at this time. The martial choruses of Red-wings and Grackles, the piping of the Meadowlarks, the clarion of the Wild Geese, the morning and evening Robin concerts are all thrilling to the nature lover, but first place in this band of March musicians must be accorded the Fox Sparrow, whose clear, ringing melody stands out in strong contrast to his bleak surroundings, like a beautiful flower blossoming in the snow.

BIRDS OF THE SEASON

Permanent residents and winter visitants (see BIRD-LORE, Dec., 1900, p. 184.)

February Migrants.—February 15 to March 10, Purple Grackle, Rusty Blackbird, Red-winged Blackbird, Robin.

March Migrants.—Appearing when ice leaves the bays and rivers, Loon, Ducks and Geese; March 1-10 (see February); 10-20, Woodcock, Phoebe, Meadowlark, Cowbird, Fox Sparrow; 20-31, Wilson's Snipe, Kingfisher, Mourning Dove, Swamp Sparrow, White-throated Sparrow.

Winter Visitants leaving for the North.—Horned Lark, Redpoll, Snowflake, Pine Grosbeak, Northern Shrike.

FEBRUARY AND MARCH BIRD-LIFE NEAR PHILADELPHIA

BY WITMER STONE

February and March bring us the first migrants from the south. About the middle of the former month we almost always have one or two of those spring-like days which cause nature to stir in her winter slumber. Then we are likely to see the earliest migrant Robins, Bluebirds and, perhaps, Flickers, while little bunches of Grackles, Redwings and Rusty Blackbirds pass overhead, pushing steadily northward.

The next week the country may be wrapped in snow, and long after we have recorded our pioneers from the south we may be surprised by a flock of Redpolls or other visitors from the north. This alternation of weather causes considerable irregularity in the dates of arrival of migrants during these months, but nearly all the species which occasionally winter either about Philadelphia or southern New Jersey will be observed before April 1. We also hear the Canada Geese go honking northward along the river and find Wilson's Snipe on the meadows, while warm weather at the end of March sometimes brings us Martins and Tree Swallows. One observer must not expect to see all the early birds, however, and he who is located close to the river or on the New Jersey side will be more fortunate than his fellow observer west of the city.

Winter visitants begin to leave us during March, but few of them disappear altogether before April 1, and some few Tree Sparrows remain after that date.

Many species previously silent break forth in song and some of our Winter Sparrows give us a taste of their vocal abilities just before they leave us, while the resident Song Sparrows produce such a volume of melody that many think they have just arrived.

BIRDS OF THE SEASON

Permanent residents and winter visitants (see BIRD-LORE, Dec., 1900, p. 185.)

February Migrants.—Purple Grackle, Red-winged Blackbird, Bluebird, Robin, Flicker.

March Migrants.—March 1-20, Canada Goose, Woodcock, Snipe, Phoebe, Meadow-lark, Cowbird, Fox Sparrow; 20-31, Kingfisher, Mourning Dove, Yellow-bellied Sapsucker,* Field Sparrow, Chipping Sparrow,* Martin,* Tree Swallow.

FEBRUARY AND MARCH BIRD-LIFE AT OBERLIN, OHIO

BY LYND S JONES

The weather of February is only less variable than March. We have learned to expect our most severe weather during the first ten days of the month, when the temperature frequently drops considerably below zero. Snow is an almost invariable accompaniment of this week or more of cold, but its depth is very rarely as much as a foot. During this time the resident Hawks may be entirely absent, but they return with a change to warmer and are not again driven away. It is then that we expect to find the Snowflake and Rough-legged Hawk. So seldom that it is hardly fair to count, the rarer birds of prey and the Pine Grosbeak and White-winged Crossbill may be driven into the country. Either a little after the middle or during the closing week of the month the weather becomes so much like spring that the snow almost disappears and the first migrants arrive. These first ones are almost always reinforcements to the small company of permanent resident species, as the Song Sparrows, Flickers and Hawks. At this first touch of spring the Prairie Horned Larks and the two small Woodpeckers and White-breasted Nuthatch begin to mate.

March is a winter-summer sandwich, bringing the first waves of the great migration. It is not until March that Crows and Meadowlarks can be depended upon for the daily horizon. The last week in March is not seldom a red-letter week for the bird lover, for then the birds come up from the south in a great host, bringing many which should linger for at least ten days longer. I have recorded the White-throated Sparrow, Field Sparrow, Chipping Sparrow, Swamp Sparrow, Purple Martin, Barn Swallow and Brown Thrasher during this week. To be sure, one must look in the most sheltered places for these less hardy birds, but there they are, on the sunny hillside or in the sheltered nook in the woods. They are but forerunners of their host and hardly count in the final summing up, except as such. Yet a meeting with a bird out of season is the electric shock which spurs the field student on to greater effort.

* Occasional.

BIRDS OF THE SEASON

Permanent residents and winter visitants (see BIRD-LORE, Dec., 1900, p. 186.)

March Migrants.—March 1-10, Killdeer, Red-winged Blackbird, Rusty Blackbird, Meadowlark, Bronzed Grackle, Robin, Bluebird; 10-20, Canada Goose, Mourning Dove, Kingfisher, Cowbird, Fox Sparrow, Towhee, Loggerhead Shrike; 20-30, Great Blue Heron, Phœbe, Vesper Sparrow, Hermit Thrush.

FEBRUARY AND MARCH BIRD-LIFE AT GLEN ELLYN (NEAR CHICAGO), ILLINOIS

BY BENJAMIN T. GAULT

February is, as a rule, our coldest month, while March easily holds the distinction of being the most disagreeable period of all the year.

February, therefore, brings us but few slight changes among the birds, neither detracting from or adding much to our winter list. If anything, they are less numerous then; the Jays scarcely seem as plentiful about our homes, while with the Crows a marked falling off has actually taken place. But, however changeable the weather of March may be, we are more than equally reminded, before the month is half through, that spring is joyfully on its way.

Our first early arrivals, if not for February, have been the Robins and Bluebirds, which, with us, make their appearance almost simultaneously, or, at the best, but a few days apart, though, in the case of the former, they are usually dark-colored males whose voices for the time being are silent. In our fields the Meadowlarks appear to have become a permanent fixture. Tree Sparrows now are more given to song as the season for their departure northward advances.

The middle of March brings us the Song Sparrow and his bright little lay, without which our still barren fields and leafless woods would seem decidedly dreary. The Geese, too, are now flying northward in V-shaped flocks, though others still, more battalion-like, continue to pass back and forth from the cornfields to their nightly roosts on the bosom of Lake Michigan. Red-winged Blackbirds are at their old stands, some old males at least, while, from the 20th to the 25th of the month, Ducks are flying regularly.

The remainder of the month witnesses new arrivals daily, good examples being the Rusty and Bronzed Grackles, Juncos, Fox Sparrows, Golden-crowned Kinglets, Phœbe, Cowbird and Killdeer, each voicing its sentiments in their own peculiar way. Some of the Crows have completed their nests by this time in the red oaks, and here and there an impatient Blue Jay has also commenced building operations.

The month goes out very spring-like. Near sheltered woodland ponds we now listen to the croaking of frogs, and should we arise early enough it is possible for us, perhaps, to enjoy the rather novel experience of listening to the first spring "booming" notes of the male Prairie

Hen, a sound truly suggestive of the season, impressing us at once as odd, and still further remarkable for its penetrating powers.

BIRDS OF THE SEASON

Permanent residents and winter visitants (see BIRD-LORE, Dec., 1900, p. 187).

A list of February and March arrivals at Glen Ellyn, Ills., observed during the past eight years. Extreme dates are given when more than one record has been made.

February Migrants.—February 12 to March 20, Meadowlark; 19, American Cross-bill; 19 to March 27, Bluebird.

March Migrants.—March 2-31, White-rumped Shrike; 3-26, Rusty Blackbird; 3-27, Killdeer; 4-25, Robin; 6-19, Canada Goose; 7, Cedar Waxwing, Redpoll; 7-24, Song Sparrow; 8-28, Purple Finch; 10, Mallard; 12, Mourning Dove; 12-13, Fox Sparrow; 12-24, Red-winged Blackbird; 17-30, Bronzed Grackle; 18, Cowbird; 19, Brown Creeper; 19-22, Pintail; 19-29, Sharp-shinned Hawk; 20-26, Flicker; 21, Herring Gull; 21-27, Phoebe; 22-28, Ruby-crowned Kinglet; 24, Hermit Thrush; 27, Purple Martin; 28, Ring-necked Duck; 28-29, Golden-crowned Kinglet; 30, Golden Plover; 31, Yellow-bellied Sapsucker.

SUGGESTIONS FOR THE SEASON'S STUDY

Review of the Past Winter's Bird-Life.—Review the bird-life of the past winter as shown by your own experience and BIRD-LORE'S Christmas census. Note comparative absence of snow and the consequent presence, north of their usual winter range, of certain species; also absence of certain winter birds. Compare the Christmas bird lists with the object of ascertaining the distribution of our winter birds. What species appear to be most generally distributed?

Birds and Seasons.—Compare the preceding outlines of the characteristics of the bird-life of Boston, New York, etc., and lists of February and March birds, in the preceding articles.

Migration.—What theories have been advanced to account for the return of the birds from warm winter quarters, where food is abundant, to often bleak surroundings, where food is comparatively scarce? Discuss this question (see Cooke, 'Bird Migration in the Mississippi Valley'; Chapman, 'Bird-Life' and references therein given). Note the relation between a species' winter range and its time of arrival at a given point. What is the northern limit of the winter range of the first species to arrive at your locality? Is it probable that the first individuals to arrive are those representatives of the species that wintered farthest north? Would it follow, then, that the last individuals of a species to arrive are those that wintered farthest south? Or is it possible that birds may linger on their northward journey where they find an abundance of food and thus be passed by individuals from further south? The question as to whether our first arrivals are our summer resident birds or transients en route to a more northern breeding ground, has a direct bearing here. What is your opinion in regard to this point? Try and observe closely the movements of a certain flock of birds—Robins, for instance. Does it have a regularly frequented feeding place where you can always find it at a certain time? A regularly frequented roosting place? How long after a species is first noted do you observe individuals of it in localities where it is known to breed? Robins on your lawn, or Red-winged Blackbirds in certain isolated marshes, for instance.

Note the addition to the ranks of our winter birds,—Juncos, Tree Sparrows, and others. This indicates that their migration is under way. Does it follow that our winter resident individuals of these species have already gone?

It is of special interest to know that at this season migration is also beginning in the

south. Certain species that winter in southern Florida are now for the first time seen in northern Florida, and others are crossing from Cuba.

Note the difference in the times of arrival of males and females of the same species. Do the males always arrive first? How long after the females arrive are the sexes found associated? Why should the sexes migrate alone?

Note the relation existing between the weather and the appearance of migrants. Study the daily weather charts issued by the U. S. Weather Bureau at Washington and observe whether the movement of a warm wave from the south northward is followed by a corresponding advance of the birds. Note the close relation between the disappearance of ice and the return of Ducks and Geese. What evidences of migration during the day are noticed?

Song.—What species sing in February and March? What birds arrive in song? What species sing before the coming of the female? What birds sing in flocks? Is their choral song different from their individual, solo song?

Nesting.—What species nest in February and March? Among summer residents do the first birds to arrive nest first? What species are observed courting at this season? Does the season of courtship and mating long precede the nesting season? Compare here the time of arrival and time of nesting of the Red-winged Blackbird.

[SUGGESTIONS FOR THE SEASON'S READING

Thoreau, 'Spring,' in 'Walden,' 'Early Spring in Massachusetts,' 'Winter'; Burroughs, 'The Return of the Birds' and 'Spring at the Capital,' in 'Wake Robin,' 'A March Chronicle' in 'Winter Sunshine,' 'Spring Jottings' in 'Riverby'; Torrey, 'A Florida Sketch Book'; Flagg, 'February' in 'A Year With the Birds'; Bolles, 'Land of the Lingering Snow'; Davis, 'After the Snow' and 'The Benison of Spring' in 'Days Afield on Staten Island'; Keeler, 'February in Berkeley' and 'March in the Pine Woods' in 'Bird Notes Afield'; Crockett, 'February' and 'March' in 'A Year-book of Kentucky Woods and Fields'; Parkhurst, 'February' and 'March' in 'The Birds' Calendar.'

The Christmas Bird Census

WHILE the exceptionally fine weather on Christmas day was a sufficient inducement to take one afield, we trust that the spirit of wholesome competition aroused by BIRD-LORE'S bird census added materially to the pleasure of those who took part in it.

The results of the census are both interesting and instructive; interesting, because they are definite, comparative, and, in a sense, personal; instructive, because they give a very good idea of the distribution of winter birds on Christmas day, with some indication of the number of individuals which may be observed in a given time. On the one hand the almost entire absence of such northern species as the Crossbills is noticeable; on the other, the mild season and prevailing absence of snow evidently accounts for the presence of a number of species rarely observed in December.

It has not been possible to publish all the notes which have been received, and it has been necessary to omit the descriptive matter which, in some instances, was given. At another time we hope to suggest a bird census on somewhat more exact lines, through the enumeration, not of the birds observed on a given day, but of those occupying a certain area, when a description of the character of the ground, etc., will be of importance.

SCOTCH LAKE, YORK COUNTY, NEW BRUNSWICK

Time, 9 A. M. to 10 A. M. Clear; wind, west, light; temp., 32°.

Goshawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 2; Pine Grosbeak, 1; Brown Creeper, 2; White-breasted Nuthatch, 20; Chickadee, 6. Total, 9 species, 36 individuals.—WM. H. MOORE.

TORONTO, CANADA

Time, 11.30 A. M. to 4.30 P. M. Clear; wind, northwest, 10 miles per hour; temp., 25°.

Crow, 15; White-breasted Nuthatch, 1; Chickadee, 10; Golden-Crowned Kinglet, 25. Total, 4 species, 41 individuals.—E. FANNIE JONES.

KEENE, N. H.

Time, 10.30 A. M. to 1.30 P. M. Clear; wind, northwest, very light; temp., 32°.

Crow, 1; Northern Shrike, 1; Chickadee, 16. Total, 3 species, 18 individuals.—CLARENCE MORRISON BROOKS.

BELMONT AND CAMBRIDGE, MASS.

Time, 7.30 A. M. to 11.30 A. M. Clear; wind, northwest, very light; temp., 34°.

Fresh Pond, Cambridge.—American Herring Gull, according to W. Deane, there were 250 on the pond at 9.30 A. M. Flocks kept coming in all the morning until, at 11.30, there were 1,375; Black-backed Gull, 2; Black Duck, 90; Mallard, 1; Tree Sparrow, 30; Song Sparrow, 14.

Belmont.—Flicker, 7; Downy Woodpecker, 2; Blue Jay, 10; Crow, 17; American Crossbill, 1; Purple Finch, 2; Junco, 10; Northern Shrike, 1; White-breasted Nuthatch, 4; Golden-crowned Kinglet, 10; Chickadee, 17. Total, 17 species, 1,593 individuals.—RALPH HOFFMANN.

BOSTON, MASS. (ARNOLD ARBORETUM)

December 26, 9.30 to 2.30. Clear, snow-squall, clear; wind, southwest to northwest, light; temp., 37°.

Bob White, 12-15; Flicker, 6, 7; Blue Jay, 15-18; Crow, 16; American Crossbill, 1; Goldfinch, 18; Tree Sparrow, 5, 6; Song Sparrow, 2; Junco, 20-25; Myrtle Warbler, 7; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 12-15. Total, 13 species, about 125 individuals.

On December 19, in these grounds, there were also Northern Shrike, 1; Golden-crowned Kinglet, 2; White-throated Sparrow, 2; Fox Sparrow, 1.—HORACE W. WRIGHT.

WINCHESTER (NEAR MYSTIC POND), MASS.

Time, 10 A. M. to 1 P. M. Clear; wind, south; temp., 42°.

Herring Gull, 14 or more; Flicker, 1; Blue Jay, 20; Crow, 5; American Goldfinch, 16; Tree Sparrow, 6-8; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 5. Total, 10 species, about 70 individuals.—KATHERINE BOLLES.

BRISTOL, CONN.

Time, 9:30 A. M. to 12:30 P. M. Fair; wind, southwest, very light; temp., 7:30 A. M., 28°.

Downy Woodpecker, 1; Blue Jay, 20; Crow, 25; American Goldfinch, 9; Tree Sparrow, 6; Song Sparrow, 4; Chickadee, 3. Total, 7 species, 68 individuals.

December 9 and 23 five Bluebirds were seen. On December 13, Mr. B. A. Peck saw a Towhee.—FRANK BRUEN and R. W. FORD.

NORWALK, CONN.

Time, between 8 A. M. and 4.45 P. M. Clear; wind, west, light; temp., 1 P. M., 60°.

American Herring Gull, 8; Crow, 3; Tree Sparrow, 11; White-breasted Nuthatch, 18; Chickadee, 5. Total, 5 species, 45 individuals.—GEO. P. ELLS.

AUBURN TO OWASCO LAKE, N. Y.

Time, 8 A. M. to —. Clear, light snow at 10 A. M.; wind, south to northwest, light; temp., 40°.

Horned Grebe, 5, one calls; Loon, 3, calls; Herring Gull, 3; American Golden-eye, 11; Ruffed Grouse, 2; Crow, 26; American Goldfinch, 4; White-breasted Nuthatch, 2; Chickadee, 12. Total, 9 species, 68 individuals.—FREDERICK J. STUPP.

CENTRAL PARK, NEW YORK CITY

Time, 10 A. M. to —. Clear; wind, southwest, light.

American Herring Gull, 12; Downy Woodpecker, 1; Starling, 4 (singing); White-throated Sparrow, abundant (twice heard singing); Song Sparrow, 2; Robin, 1.—CHARLES H. ROGERS.

ENGLEWOOD, N. J.

Time, 8:30 A. M. to 12:30 P. M. Clear; wind, southwest, light; temp., 33°.

Bob-White, 3; Mourning Dove,* 7; Red-shouldered Hawk, 1; Barred Owl, 1; Downy Woodpecker, 5; Flicker, 3; Crow, 25; Blue Jay, 8; Goldfinch, 1; Tree Sparrow, 150; Field Sparrow,* 2; Junco, 37; Song Sparrow, 3; Northern Shrike, 1 (immature); Myrtle Warbler, 55; White-breasted Nuthatch, 2; Chickadee, 12; Bluebird 4 (one singing). Total, 18 species, 320 individuals. On December 1, and again on the 20th, a single Tufted Titmouse was seen; these observations constituting the first winter records for this species.—FRANK M. CHAPMAN.

MOORESTOWN, N. J.

Time, between 10:30 A. M. and 4:30 P. M. Clear in the morning; cloudy, with light showers, in the afternoon; wind, west, light; temp., 36°.

Red-tailed Hawk, 1; Sparrow Hawk, 3 or 4; Downy Woodpecker, 1; Flicker, 4 or 5; Crow, several hundred; Meadowlark, 8-10; White-throated Sparrow, 3 or 4; Tree

* Illustrating the late stay of certain species in open seasons. (See BIRD LORE, December, 1900, p. 183.)

Sparrow, 1 or 2; Junco, about 12; Song Sparrow, 2; Cardinal, 4; Northern Shrike, 1; Brown Creeper, 2; Tufted Titmouse, 2; Chickadee, 2; Golden-crowned Kinglet, 2 or 3; Bluebird, 3. Total, 17 species.—ANNA A. MICKLE.

NEWFIELD, N. J.

Time, 9 A. M. to 12.30 P. M. Cloudy, clearing at 10 A. M.; wind, northwest, light; temp., 35°.

Bob-White, 1; Downy Woodpecker (heard); Yellow-bellied Sapsucker, 2; Crow, 1; Blue Jay, 2; American Goldfinch, 5; Tree Sparrow, 25; Junco, 25; Song Sparrow, 2; Golden-crowned Kinglet (heard).—MARY R. PASCHALL.

NESHAMINY CREEK AND UPPER DELAWARE RIVER ABOVE PHILADELPHIA

Time, four hours.

Sparrow Hawk, 1; Downy Woodpecker, 1; Crow, immense flocks; Fish Crow, flocks; Tree Sparrow, 25; Song Sparrow, 3; Golden-crowned Kinglet, 1; Chickadee, 1; Bluebird, 4.—H. W. FOWLER.

DELAWARE RIVER MEADOWS, TINICUM TOWNSHIP, DELAWARE CO., PA.

Time, one and a half hours in the morning.

American Herring Gull, 2; Red-tailed Hawk, 6; Red-shouldered Hawk, 1; Crow, 100; Meadowlark, 4; American Goldfinch, 25; Junco, 6; Tree Sparrow, 50; Song Sparrow, 6; Swamp Sparrow, 1. Total, 10 species, 201 individuals.—WITMER STONE.

GERMANTOWN, PA.

Time, 11.30 A. M. to 1 P. M. Clear; temp., 50°.

Downy Woodpecker, 2; Crow, 4; White-throated Sparrow, abundant; Junco, 7 or 8; Song Sparrow, abundant; Cardinal, 2; Winter Wren, 1; White-breasted Nuthatch, 2; Golden-crowned Kinglet, 3 or 4; Robin, 2.

On December 23, a number of American Crossbills were seen. —C. B. THOMPSON and H. JUSTICE.

WYNCOTE, PA.

Time, 8.20 A. M. to 11.30 A. M. Clear; wind, west, but very light; temp., 30°.

Red-tailed Hawk, 3; Red-shouldered Hawk, 1; Sparrow Hawk, 4; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 1; Crow, about 1,000; American Goldfinch, 3; Tree Sparrow, one flock of 25; Junco, about 100; Song Sparrow, 1; Winter Wren, 1. Total, 11 species, about 1,140 individuals.—SAMUEL H. BARKER.

FAIRMOUNT PARK, PHILADELPHIA

Time, one-half an hour.

Flicker, 3; Crow, 12; Junco, 25; White-throated Sparrow, 6; Tree Sparrow, 25; Song Sparrow, 2; Cardinal, 6; Robin, 6. Total, 8 species, 85 individuals.—DR. J. F. PRENDERGAST.

OBERLIN, OHIO

Time, 6.30 A. M. to 10 A. M. Cloudy, occasional snowflakes, increasing to considerable storm at noon; wind, west by south, light to brisk; temp., 28°.

Red-shouldered Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 6; Flicker, 2; Blue Jay, 6; Crow, 4; Purple Finch, 14; Junco, 5; Tree Sparrow, 40; Song Sparrow, 2; Cardinal, 1; White-breasted Nuthatch, 14; Chickadee, 8. Total, 14 species, 103 individuals.

December 24, Bluebirds and Bronzed Grackles sang in my yard, and a Tufted Titmouse was seen just out of town.—LANDS JONES.

GLEN ELLYN, ILLINOIS

Time, 10 A. M. to 12 M., 1.30 to 4 P. M. Cloudy; wind west, fresh; temp., 12 M., 17¹/₂°.

Prairie Hen, 8 (one covey); Downy Woodpecker, 2; Blue Jay, 7; Crow, 17; Tree Sparrow, 1; White-breasted Nuthatch, 1; Chickadee, 19. Total, 7 species, 55 individuals.—B. T. GAULT.

NORTH FREEDOM, SAUK CO., WIS.

Time, 8.50 A. M. to 11.10 A. M. Cloudy, some snow; wind, northwest, medium; temp., 16°.

Bob-White, 15; Hairy Woodpecker, 7; Downy Woodpecker, 1; Red-bellied Woodpecker, 1; Blue Jay, 1; American Goldfinch, 31; Tree Sparrow, 30; Junco, 1; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 11; Golden-crowned Kinglet, 1. Total, 12 species, 105 individuals.

Had the day been favorable, Crows, Evening Grosbeaks, and Ruffed Grouse would have been seen in considerable numbers.—ALICK WETMORE.

LA GRANGE, MO.

Time, 9 A. M. to 12 M. Cloudy, sun seen at times; wind, west, steady; temp., 25°.

Hairy Woodpecker, 5; Downy Woodpecker, 6; Red-bellied Woodpecker, 4; Flicker, 1; Blue Jay, 14; Crow, 15; Purple Finch, 15; Tree Sparrow, 1; Junco, 75; Cardinal, 9; Northern Shrike, 1; Tufted Titmouse, 18; Chickadee, 30; White-breasted Nuthatch, 7. Total, 14 species, 186 individuals.—STAN M. JOHNSON.

BALDWIN, LA.

Observed from the house during five hours. Clear; wind, west, light; temp., 9 A. M., 42°.

Killdeer, 2; Turkey Buzzard, 2; Blue Jay, 6; Grackle, 200; Red-winged Blackbird, 500; Carolina Wren, 1; Mockingbird, 3; Carolina Chickadee heard. Total, 8 species, 715 individuals.—MRS. L. G. BALDWIN.

PUEBLO, COLO.

Time, 11 A. M. to 1.30 P. M. Clear; wind, southeast, light; temp., 34°.

Ferruginous Rough-leg, 2; Red-shafted Flicker, 4; Desert Horned Lark, thousands, in many large, scattered flocks; American Magpie, 1; Woodhouse's Jay, 3; Red-winged Blackbird, one flock of about 20; House Finch, about 50; Western Tree Sparrow, about 100; Pink-sided Junco, about 75; Arctic Towhee, 2; Cañon Towhee, 1; Northern Shrike, 1, carrying Horned Lark; Gray Titmouse, 2.—H. W. NASH.

PACIFIC GROVE, MONTEREY CO., CAL.

(Water birds not included)

Time, 10 A. M. to 12 M. Wind, north, light; temp., 60°.

California Quail, small flock; Band-tailed pigeon, large flock, 200; Western Red-tail, 1; Burrowing Owl, 1; California Woodpecker, 3; Lewis' Woodpecker, 1; Red-shafted Flicker, 20; Dusky Poor-will, 1; Anna's Hummingbird, 3 (sings); Say's Phoebe, 1; Black Phoebe, 4; Coast Jay, 10 (sings); California Jay, many; American Crow, 1; Western Meadowlark, 1; Brewer's Blackbird, 10; Nuttall's Sparrow, 6; Golden-crowned

Sparrow, 5 (sings); Point Pinos Junco, 25; Townsend's Sparrow, 3; Spurred Towhee, 1; California Shrike, 1; Hutton's Vireo, 8; Audubon's Warbler, 10; Townsend's Warbler, 6; Pipit, common; Red-breasted Nuthatch, 2; Pygmy Nuthatch, 2; Barlow's Chickadee, 10; Intermediate Wren-tit, 2 (sings); California Bush-tit, flock of 15; Ruby-crowned Kinglet, 8; Dwarf Hermit Thrush, 3; Western Robin, 110; Varied Thrush, 2; Western Bluebird, several. Total, 36 species, about 475 individuals.—WALTER K. FISHER.

An Additional December Record

On December 13, 1900, I noticed a Wood Pewee trying to find a breakfast among the apple trees on Glen Island. He was alone, and although active in his search—apparently taking insect eggs from the bark like a Chickadee—he had very little to say for himself, a single short chirp being his only note. It was bitter cold outdoors and there is very little shelter for the little fellow here. How he finds enough food adapted to his mode of hunting is a puzzle.—L. M. McCORMICK, *Glen Island, New Rochelle, N. Y.*



What Bird is this?

Field Description—Length, 5.00 in. Upper parts streaked with black, buff and grayish; under parts white, streaked with black, yellow at the base of wings and tail, showing in flight. *Spring Range*—From Great States northward.

NOTE—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some widely distributed, but, in the eastern United States, at least, little-known bird, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with its picture.

The species figured in December is the Lapland Longspur.



AN INCUBATING BALD EAGLE
Photographed from life by C. William Beebe

Notes from the New York Zoological Society

I. ENTERPRISING EAGLES

At the beginning of winter I placed a pair of adult Bald Eagles in the large flying cage of the New York Zoological Park, and they showed their appreciation of their semi-freedom by commencing housekeeping at once. They collected a quantity of sticks and grass around a small hollow in the ground near the center of the cage, and after lining the cavity with moss, the nest was considered finished. Both birds took part in its construction, and from the continual chuckling and screaming, thoroughly enjoyed their work. Eagles usually nest in trees, and these birds placed the nesting material around the roots of several saplings, the stems of which, protruding through the sticks and moss, look not unlike the top branches of a tall tree. Naturally the next thing to be thought of was eggs, but this pair of birds had original ideas, and intended, for a time at least, merely to play at housekeeping. A good-sized stone was brought from another part of the cage and placed in the nest, and the

work of hatching began. The male and female Eagles sit on the nest on alternate days, and the bird not so engaged is always perched on a log near by, on guard.

The temperament of the birds has undergone a complete change. When first placed in the cage they were easily caught and seldom offered resistance. Now one cannot approach to within twenty feet of the nest without being attacked by one or both Eagles. When they rush forward, one on each side, and strike with beak and uplifted feet, it is no easy matter to escape unharmed, as I found when trying to photograph them, their talons reaching the skin every time, clothing and shoes affording little or no protection.

What the outcome of this nesting attempt will be I do not know, but I hope the birds will soon lose faith in the stone and deposit two or three eggs. The fact that they are from Florida doubtless accounts for this early attempt at nesting. — C. WILLIAM BEEBE, *Assistant Curator of Birds.*

Book News and Reviews

THE SEQUENCE OF PLUMAGES AND MOULTS OF THE PASSERINE BIRDS OF NEW YORK. By JONATHAN DWIGHT, JR. *Annals of the New York Academy of Sciences*, Vol. XIII, Part I, pp. 73-345; pl. vii. Oct. 19, 1900.

Although birds are doubtless better known than the members of any other order of animals, the laws governing the loss and renewal of feathers, the bird's unique character, are in this paper adequately treated for the first time. That we have so long existed in comparative ignorance of the manner of molting of many of our commonest birds is due primarily to the lack of proper material with which to study their plumage changes. Collectors desired only perfectly feathered specimens and made no efforts to secure birds during the period of molt. Nor did they attempt to ascertain, by an examination of the cranium, the age of the specimen preserved.

Appreciating the need of proper material to enable us to clearly understand this exceedingly important function in a bird's economy, Dr. Dwight began some twenty years ago to form a collection of New York birds on which to base the studies which are in part presented in the present paper* of over 250 pages.

The work is far too extended for us to review it in detail; furthermore, we hope later that Dr. Dwight will himself favor BIRD-LORE's readers with an extended résumé of his studies. We append, therefore, only a list of the eight leading heads under which the subject has been treated: 1. 'Indoor Study of Molt.' 2. 'Process of Molt.' 3. 'Early Plumages and Moults of Young Birds.' 4. 'Sequence of Plumages and Moults.' 5. 'Color Facts, etc. Color Theories.' 6. 'Outdoor Study of Molt.' 7. 'Plu-

mages and Moults of New York Species.' 8. 'Bibliography.'

To this brief table of contents we may add our estimate that Dr. Dwight's work is the most important contribution to American ornithology since the publication of Dr. Coues' 'Key' in 1884. It should be in the possession of every earnest student of birds.—F. M. C.

ANIMAL LIFE. A first book in Zoölogy. By DAVID STARR JORDAN and VERNON L. KELLOGG. New York, D. Appleton & Co. 12mo, page ix + 329. Numerous illustrations.

This is a text-book which adequately presents the most advanced and approved ideas in the teaching of zoölogy to the general student. The matter of classification which, until recently, has been the leading if not the only theme of class-room manuals, is here accorded only four pages at the end of the volume, and the study of animal life is approached subjectively under such suggestive headings as 'The Life Cycle,' 'Function and Structure,' 'Adaptations,' 'Parasitism and Degeneration,' 'Protective Resemblances and Mimicry,' 'Instinct and Reason,' 'Homes and Domestic Habits,' 'Geographical Distribution of Animals,' etc. As a result of a study of these fundamental factors in the life and the interrelations of animals, the student is not repelled by the terminology of classification, but inevitably must be attracted by the marvelous story of life and impressed by man's kinship with the animals below him. It is, therefore, not alone a book for the student, but also for the general reader.

In the philosophic treatment of so wide a range of topics the authors must necessarily consider many phenomena in the explanation of which authorities still differ, and we could wish, therefore, that in place of a certain positiveness of tone they had seen fit to give more than one view of various disputed cases— if for no other reason than with an object of pointing out lines for further research. For example, the migration of birds is alluded

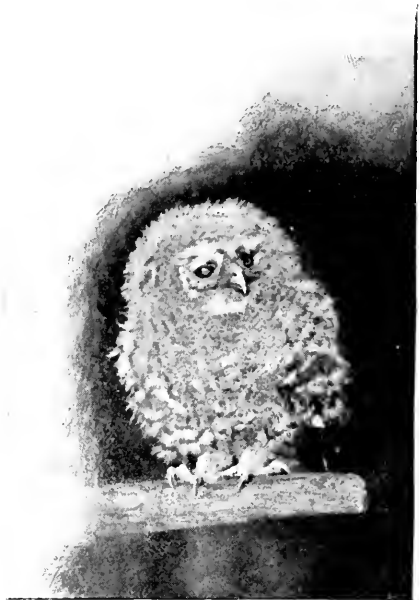
* For additional papers by Dr. Dwight on the molt of birds, see the following: 'The Molt of the North American Tetraonidae (Quails, Partridges, Grouse);' 'The Auk,' 1900, pp. 34-51, 143-166; 'The Molt of the North American Shore Birds (Limicole),' *ibid.*, pp. 368-385; 'The Sequence of Moults and Plumages of the Laridae (Gulls and Terns),' *ibid.*, 1901, pp. 19-64.

to as "a systematic changing of environment when conditions are unfavorable to life," a statement assuredly at variance with the bird's desertion of a southern winter home at a season when food is daily increasing for a comparatively barren breeding resort. Again "the effort of the Sparrow to keep warm in winter" is presented as an illustration of one of the primary factors in the struggle for existence, whereas it is believed by many that, given an abundance of proper food, with birds, at least, temperature is of comparatively little importance. The definiteness with which the duration of life of various animals is stated is, perhaps, hardly warranted by the known facts; while theories in explanation of the significance of so-called recognition, signaling, warning, alluring, etc., colors are still too numerous to render advisable the treatment here accorded them. In this connection we regret to see that Mr. Abbott H. Thayer's very beautiful demonstration ('The Auk,' 1896, p. 125) of the law which underlies protective coloration, a discovery revolutionizing our ideas of what constitutes protective coloration, is not mentioned.

The illustrations are numerous and instructive, many being reproductions of photographs from nature. We would, however, call the attention of the authors to two or three slips requiring correction: thus the "Arctic Black Duck" figured on page 137 with twelve young is evidently one of the Scaups (*Aythya*), which are not known to lay more than ten eggs; the "Canada Jays" on page 138 are clearly Blue Jays and, unless we are mistaken, the artist is indebted to Mr. Dugmore's clever photograph of the young of this species, in Scott's 'Bird Studies' (p. 57); the intertwined horns on p. 148 are those of deer and not of "elk," as stated, and the male Baltimore Oriole, on p. 267, is shown in the act of nest-building, though, as far as we know, the male has not been observed to assist in constructing the nest.

'Animal Life' is such an admirable piece of work that our desire to aid its authors in eradicating the errors which are bound to creep in a book covering so wide a field, has perhaps led us to appear unduly critical, whereas, in truth, we cannot too highly

commend it as an ideal text-book, which, we trust, will speedily replace the antiquated zoölogies that have so long blocked the student's pathway to knowledge.—F. M. C.



WHO SAID MICE?
(From 'Our Bird Friends')

OUR BIRD FRIENDS: A BOOK FOR ALL BOYS AND GIRLS. By RICHARD KEARTON. With 100 original illustrations from photographs by C. KEARTON. Cassell & Co. Ltd. London, Paris, New York and Melbourne, 1900. 12mo, pp. xvi + 215.

With the eminently worthy object of stimulating and properly directing children's inherent interest in birds, Mr. Kearnton has written a book which seems admirably adapted to accomplish not alone the end in view, but to appeal with equal force to grown folk as well.

We have here no rehash of old material or compilation of selected stories for the young, but an original contribution to the literature of ornithology based largely on the author's personal experiences.

The book is not local, and while the birds treated are British species, the subjective method of presentation renders it almost as attractive to American as to English readers. Thus the chapters on 'Nests

and Eggs,' 'Young: How they are Fed and Protected,' 'Feathers and Flight,' and 'Calls and Song Notes,' may be read with profit by the ornithologists of every land.

Mr. Cherry Kearton's pictures add to our appreciation of his skill and patience with the camera, and further illustrate the advantages of photography over any other known method of portraying bird-life. It does not seem to us, however, that they have all been reproduced with full justice to the original, and we especially deplore the loss of accuracy in a bird's outline which often accompanies the etching or cutting out of the backgrounds.—F. M. C.

LAWS REGULATING THE TRANSPORTATION AND SALE OF GAME. By T. S. PALMER and H. W. OLDS. Bulletin No. 14. Division of Biological Survey; U. S. Department of Agriculture, Washington, Government Printing Office, 1900. 8vo, pp. 89, 5 maps, 4 diagrams.

Further evidence of the benefits to the cause of bird protection which have followed making the Biological Survey responsible for the enforcement of the provisions of the Lacey bill, are shown in the publication of this pamphlet. It has been prepared with the especial object of informing shippers, transportation companies, and game dealers of the laws regulating the transportation and sale of game and, possessing the authoritativeness of a government document, it is far more valuable for reference than an unofficial publication.—F. M. C.

The Ornithological Magazines

TIT. AUK.—'The Auk' enters the new century in much the same garb it has worn during twenty-six years of the old, being modeled on the same lines that have proved so successful in the past. Nearly one quarter of the 131 pages of the January number are devoted to reports on bird protection by Mr. Witmer Stone and Mr. William Dutcher, and afford unusually instructive reading. Much good will result from intelligent legislation, and Mr. Dutcher shows how effectively the persecuted Gulls and Terns have been protected the last summer on the Atlantic coast, from Maine to Virginia, by securing the paid services of persons living on or near their breeding

grounds. The molts and plumages of these birds are explained by Dr. Jonathan Dwight, Jr. The opening pages are filled with obituary notices of Dr. Elliott Coues and Mr. George B. Sennett, from the pens of Mr. D. G. Elliot and Dr. J. A. Allen, respectively. One of the most remarkable things about Dr. Coues was the wide reach of his scientific knowledge, which made him in the truest sense of the word a great ornithologist. Some new birds from Panama are described by Mr. Ontram Bangs and others; from Mexico, by Mr. E. W. Nelson, in a couple of brief papers, and a local list, by Mr. James H. Flemming, on the birds of Parry Sound and Muskoka, Ontario, fills thirteen pages. In Mr. John H. Sage's report of the Eighteenth Congress of the A. O. U., we learn officially of a radical change in membership that will take effect at the next Congress. The species "Associate Member" is to be split into two, but which is the subspecies I am still in doubt. Some one has facetiously dubbed one the "killers," and the other the "see-ers," and everybody ought now to be completely satisfied at this new experiment in trinomialism. The reviews of new literature are extensive, especially one on Dwight's molts of passerine species, and one on Grinnell's birds of Alaska. There is also a goodly array of general notes, covering captures and records too numerous to mention.—J. D., JR.

Book News

We learn from Dana Estes & Co., publishers of Coues' 'Key,' that the revised edition of this work, the manuscript of which Dr. Coues completed shortly before his death, will be ready sometime during the coming spring. It will be profusely illustrated, chiefly by Louis A. Fuertes, and will be issued in two volumes, at the price of \$10.

The report of the A. O. U. bird protection committee including Mr. Dutcher's report on the expenditure of the Thayer fund, which occupies thirty seven pages in the January 'Auk,' has been issued separately and may be procured from William Dutcher, 525 Manhattan Ave., New York city, at five cents a copy, or four dollars per hundred.

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A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

A Question of the Day

There is a certain type of systematic ornithologist to whom ornithology means comparing specimens and solving nomenclatural problems, with the sole and ultimate object of changing the existing names of birds and creating new ones. He is sometimes sneeringly designated by the sufficient-unto-himself layman, a 'closet naturalist.'

This same supercilious critic is doubtless indebted to the closet naturalist's text-books for most, if not all, of his exact knowledge of birds' names and consequent proper classification of whatever he may have learned of the birds themselves, but with a fine combination of conceit, ignorance, and ingratitude, he loses no opportunity to hurl a figurative stone at the unconscious author of his information.

There is, however, another side to this subject; in his endeavor to make plain the relationships of birds, the systematist may go too far. Long familiarity with specimens has so sharpened his appreciation of their differences in size, form, and color, that he is led to attach undue importance to variations which are barely, if at all, apparent to the untrained eye. The question is,

where shall he draw the line in naming these geographical races, or subspecies, as they are termed? It is of course assumed that his investigations are conducted with no undue desire for renown through the exploitation of his own name appended to that of the birds he may describe, but that they are made in the interests of ornithology. The question may be repeated then, how far may we go in this division and subdivision of geographical races and best serve the ends of the study of birds?

In publishing a list of North American birds which should harmonize the views of various authorities, the American Ornithologists' Union raised as its standard the motto: "Zoölogical nomenclature is a means, not an end, of zoölogical science." That is, before we can study birds we must give to them certain names in order that we may properly label whatever we may learn concerning them and thus render our discoveries available to others.

It is, or should be, therefore, the object of the systematist to so describe birds that they will be recognizable, thereby preparing the way for further investigation. When, however, he gives names to differences so slight that even experts in his own field cannot with certainty apply the right name to the right bird, it is obvious that he is not serving, but defeating the aims of science.

Doubtless the 'splitter,' as this type of systematist is called, would deny that his hypersensitive powers of discrimination had led him to such extremes. Let us, therefore, examine somewhat into his methods.

When specimens of our birds first came into the hands of European naturalists, many of them were considered identical with certain European species; but as they increased in collections their characters became more definitely understood and being found to differ more or less from Old World forms they were given names of their own (e. g., *Certhio familiaris Americana*, *Losia curvirostra Americana*). Though at first these birds, following the customs of the times, were ranked as species, this was virtually the beginning in the subspecific separation of our birds.

It was not until the Pacific railroad

surveys in 1850 brought considerable collections of birds from the western United States, that we learned that many birds of the more arid west were decidedly different from their representatives in the more humid east. In most instances of this kind we at first had only two forms, an eastern and a western, but subsequent exploration added to the material available for study, and it was discovered that every region possessing marked physiographic and climatic characters had races peculiar to itself, and for the first time the laws of geographic variation, or of evolution by environment, became evident. This is one of ornithology's most valuable contributions to philosophic natural history; an epoch-making discovery the practical application of which, in the vain attempt to definitely name the indefinite, has led us into our present difficulties.

Thus it has happened that of the 1,068 birds included in the 1895 edition of the A. O. U. 'Check-List,' 300 are ranked as subspecies, or, in other words, a subspecies for every two and a half species. But the end is not yet. Since 1895, over seventy so-called 'new' forms have been described and with each fresh revision of a variable group the 'splitting' becomes finer and we are afflicted with added names the application of which is doubtful. As a matter of fact, specimens are no longer separated from specimens, but series of specimens from series of specimens, and herein lies the evil of splitting as it is at present practiced.

We have long passed the stage in our study of the climatic variations of North American birds, when we should expect to discover a subspecies so marked that its characters would be convincing in a single specimen. In fact, large series are usually necessary to make apparent the differences on which it is proposed to separate one bird from another. Placed side by side, it becomes evident that one row of birds, *as a row*, is more or less unlike the other row, and the cumulative differences of perhaps thirty birds are, in describing such forms, ascribed to one, whereas, to a degree, in resolving the series of thirty birds into its component individuals, the value of the characters attributed to the new form are

in effect divided by thirty, that is, theoretically, are evenly distributed among the thirty birds of the series. The probabilities are, of course, against so even a division of differences, but the series will, undoubtedly, contain birds in which the characters attributed to the form are almost wholly wanting. A case in point is furnished by an ambitious splitter, who admits that a series of thirty-six specimens "barely suggested" differences, on which, however, with the assistance of eleven additional specimens, he proposes to found a new subspecies! Now, while we cannot overestimate the importance of determining with the utmost exactness the geographic variations of birds in further elucidating the laws of evolution by environment, we maintain that the recognition by name of such minute and inconstant differences as we have indicated is a perversion of the uses of zoological nomenclature and a menace to the best interests of ornithology.

The layman, whether or not he is inclined to sneer at the closet naturalist, bows to his authority and accepts without question his ruling, whether it be a new name or a new nomenclature. But if we do not mistake the signs the lay ornithologist has become so confused in a vain effort to keep pace with the innovations of the professional, that he is on the border of revolt against what, in the main, he esteems to be a needless juggling with names.

Fortunately, there is a court to which we may appeal in this difficulty. The American Ornithologists' Union, appreciating the need of revision of the work of too enthusiastic systematists, has a standing committee, whose duty it is to pass on the species and subspecies of North American birds, which have been described since its last meeting, with the laudable object of excluding those which seem unworthy of recognition by name. We appeal, then, to this committee to protect us from the undue development of a practice which is bringing systematic ornithology and some systematic ornithologists into disrepute and, by rendering accurate identification impossible, proving a needless source of discouragement to students of birds.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Hats!

Madame Arnold, 7 Temple Place, Boston, sends her name to be added to the "Milliner's White List."

By the way, is Massachusetts to have the milliner's flag of truce all to herself? Will not some member of the Audubon Society, in every large town, make a point of securing at least one name for this list? It is in this way that the honorary vice-presidents can come to the front and be of use. Every well-dressed, well-groomed woman who buys several changes of head-gear a year can exert a positive influence upon her milliner, if she is so minded, and by appearing elegantly charming in bonnets devoid of the forbidden feathers, do more to persuade the milliner to drop them from her stock than by the most logical war of words.

A glance at the holiday hats seen re-

cently at many good shops, theaters, and in the streets of New York, was not without much that is encouraging.

Velvet flowers of exquisite colors and workmanship, jeweled, gold, and steel ornaments, and pompons of lace and ribbon have largely taken the place of any but Ostrich feathers, with people of refined taste.

To be sure, bandeaux of separated feathers offer a Chinese puzzle as to their origin, Ptarmigan wings and questionable quills appear on walking hats, and the Egret still lingers as the apex of many a diamond hair ornament, but the *average is surely better*. Fewer Grebe muffs and capes are seen, and whole Terns seem, by common consent, to be relegated either to the wearer of the molted garments of her mistress or to the 'real loidy,' who, in winter, with hat cocked over one eye, pink tie, scarlet waist, sagging automobile coat, rickety Louis heels, and rings instead of

gloves, haunts the cheaper shops, lurching on either beer or soda water, and in summer rides a man's wheel, chews gum, and expectorates with seeming relish.

The headgear of a fashionable audience, gathered at the first night of a new play, was another encouraging sign. Those who arrived without bonnets wore in their hair a single flower, a filet of ribbon or some flexible metal, or lace choux. I only recognized half a dozen Egrets among them, and these were worn by women of the dubious age and complexion that may be excused from the shock of abandoning time-honored customs. During the five minutes' millinery show allowed, before the rise of the curtain causes the well-bred to unhat, absolutely no feathers were discoverable, save a few white breasts, Ostrich, and Maribou plumes; the effect of so much softly draped, delicately tinted gauze, mingled with gold, silver and flowers, giving greater brilliancy to the house than had a Bird of Paradise, a Humming-bird, or a Cockatoo been perched on every head.

We may ask ourselves if the change has any special significance. Is it a mere freak of fashion? Is it owed to the law or to the lady?

Let us credit it to the law *and* the lady, and hope that the two are standing with locked hands, as they exchange New Year's greetings and form a twentieth century alliance in the cause of Bird Protection, as they have so often done in other things that elevate the race.—M. O. W.

Reports of Societies

NEW YORK SOCIETY

Among the salient features of the recent work accomplished by the New York Audubon Society, especial mention should be made of the satisfactory results which have attended the issuing of the Bluebird button, and the establishment of the free associate membership—open to those under eighteen years of age.

The triumph of the past year was the success of the Hallock Bill, signed by Governor Roosevelt on May 2, 1900. An earnest plea, signed by Mr. Chapman and

Mr. Dutcher, was sent to all adult members of the society, to urge favorable action on the bill upon the assemblymen and senators at Albany. The response to this appeal from all parts of the state proved the advance made by the army of bird protectors, and greatly strengthened the untiring efforts of Mr. Hallock, Mr. Dutcher and Mr. Chapman in securing the passage of this law.

The new law, in poster form, has been sent to over 3,500 postmasters. Large linen posters have also been circulated.

At the annual meeting, held June 2 at the American Museum of Natural History, it was stated that since the former report 11,719 leaflets had been distributed. Since that date 11,405 have been put into circulation. The total number printed by the Society approximates 125,000. Over 100,000 have been distributed. Since the last report of the New York Society appeared in *BIRD-LORE*, the following valuable leaflets have been issued:

'The Educational Value of Bird Study,' by Mr. Chapman; 'Consistency in Feather Wearing,' by Mrs. Wright (kindness of Connecticut Society); 'Save the Birds,' by Mr. Dutcher (first issued by Pennsylvania Society); 'The Passing of the Tern,' by Mr. Chapman, reprinted from *BIRD-LORE*; 'Law Posters and Leaflets,' and 'Letter of Appeal,' by Messrs. Chapman and Dutcher.

The present membership is 2,479.

Through the courtesy of the American Museum of Natural History, the members of the Audubon Society residing in the immediate vicinity of New York city have enjoyed the privilege of hearing the special course of lectures, given by Mr. Chapman at the Museum, on 'Birds in Nature.'

It would be unjust not to speak of the great help afforded by many of our local secretaries, especially in the all-important work among the children.

The New York Audubon Society is constantly deterred in its efforts by the lack of funds. To develop the educational side of this movement will require large additional income, and how to devise means to attain this is the immediate task before us.

EMMA H. LOCKWOOD, *Secretary*

PENNSYLVANIA SOCIETY

The Pennsylvania Audubon Society has been actively engaged during the past year, both in furthering the general interest in bird study and bird protection in this state, and in lending its aid to more widespread efforts in the same direction. The fact that our president, Mr. Witmer Stone, is also chairman of the A. O. U. Committee on Protection of North American Birds, has brought the society into close connection with several of the most important movements towards bird protection that have been undertaken during the year. Foremost among these was the Lacey Act. From the start, the Pennsylvania Society took an active part in urging the members of Congress from this state to support the measure, and the fact that Pennsylvania cast a larger vote for the bill than any other state and not one vote against it, speaks well for our success. The society was also represented in the effort to protect the Gulls and Terns of the Atlantic coast during the nesting season of 1900, the New Jersey colonies being under the care of our treasurer, Mr. Wm. L. Baily, whose very successful work is described in the report in the January number of 'The Auk.' Our society was also active early in the present year in arousing opposition to the killing of Blackbirds in Delaware for millinery purposes. Circulars were distributed throughout the state which attracted much attention and resulted in the abandonment of the slaughter and also in the organization of the Delaware Audubon Society.

During the year our membership has increased to over 6,000, and seven local secretaries have been appointed, while several local clubs for bird study have been organized. This is one of the most important features of our society, and we cannot too strongly urge those interested to volunteer their services in furthering local organizations of this sort.

About 8,000 circulars of various kinds were issued during the year, including an abstract of the state bird laws printed on heavy cardboard suitable for hanging in post offices, reading-rooms, etc.

Through the kindness of one of the

directors, the society has been enabled to purchase a small library and a set of colored pictures of common birds, which have been circulated among country schools to aid the teachers in conducting Bird Day exercises.

On June 1, the teachers of the vacation schools of Philadelphia were invited to meet the directors of the society at the Academy of Natural Sciences and were addressed by Mr. Witmer Stone on the subject of bird study in city schools, while the collection of Pennsylvania birds and nests in the museum was explained to them.

On January 5, 1901, the annual meeting of the society was held at the Academy of Natural Sciences. The attendance was very large and the interest in the proceedings was marked. After the transaction of routine business, Mr. Stone made an address on 'Bird Protection in America During 1900'; Mr. George Spencer Morris followed with an illustrated paper on 'Our Winter Birds,' and Mr. Wm. L. Baily concluded the program with a talk on 'Bird Study With the Camera,' illustrated by lantern slides of birds and nests from nature.

The old board of directors was reelected for the ensuing year.

JULIA STOCKTON ROBINS, *Secretary*.

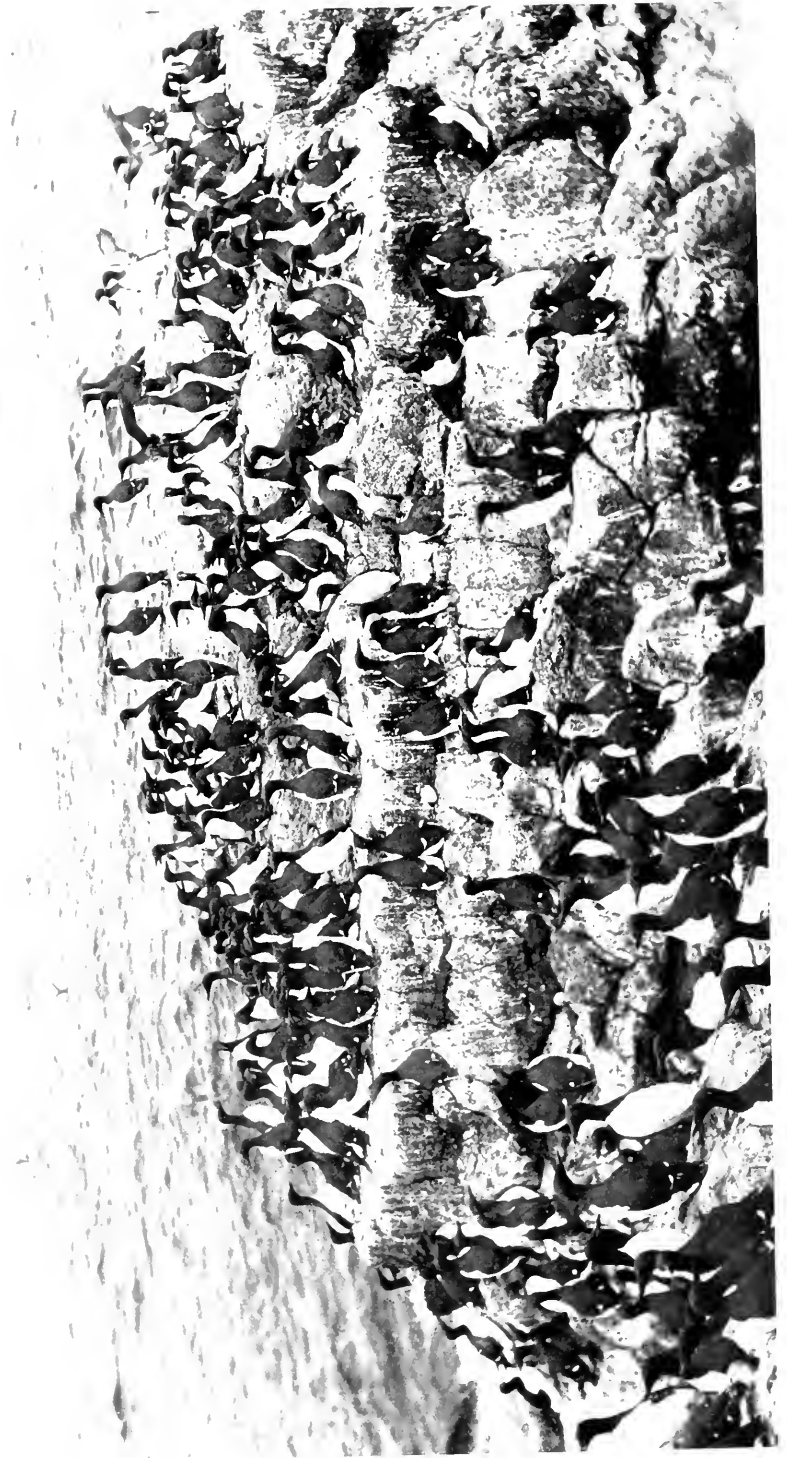
The Baltimore Gull Case

The confiscation of 2,600 Gulls found in the possession of Dumont & Co., of Baltimore, has been followed by the indictment by the grand jury of the manager of this firm, and the case to determine whether they are liable to the fine of from one to five dollars for each bird will probably come up in February.

Proposed New Bird Laws

Efforts are being, or will be made to improve the bird laws of Maine, Connecticut, New York, New Jersey, Pennsylvania, Virginia, North Carolina, Florida and California, and it is hoped that BIRD-LORE readers will use their influence to make these efforts successful.

Further details may be learned, as they are developed, from William Dutcher, 525 Manhattan Ave., New York city.



A SCENE IN THE MURRE ROOKERY OF WALRUS ISLAND
Photographed from nature by H. D. CHICHESTER

Bird = Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. III

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No. 2

Walrus Island, a Bird Metropolis of Bering Sea

BY FREDERIC A. LUCAS

WITH PHOTOGRAPHS FROM NATURE BY H. D. CHICHESTER

IT was a sunny afternoon in July when the cutter *Rush* made a long détour around the treacherous shallows off Reef Point, St. Paul Island, and steaming by Sivutch Rock, with its colony of fur seals fanning themselves in the unwelcome sunshine, headed for Walrus Island. We knew this spot from afar off and indistinctly, for, although but six miles distant from N. E. Point, such is the average summer weather of Bering Sea that most of the time it is enshrouded in a mantle of fog. Some of its inhabitants we knew very well, for the Burgomaster Gulls (*Larus glaucescens*) which dwell there make daily visits to St. Paul in search of the offal of the seal killing-grounds, or to peck at the eyes of the dying and dead pups on the fur seal rookeries, or to carry home a bit of vegetation for a nest. The few walruses, whence the island derived its name, have disappeared, killed or driven away by the persecutions of man, and the last one was shot in 1891. The spot was never a breeding ground, merely the summer haunt of a score or so of old male walruses thrust out of the company of their fellows by younger and abler beasts, or preferring a peaceful bachelorhood to the cares of married life. The birds, however, remain undisturbed, save for a few visits in early summer from the natives, who go over to load a boat or two with eggs that form an agreeable change from salt and canned provisions.

Half the distance between St. Paul and Walrus Island had been covered when a breath of cool air swept over the water, and in another minute everything had vanished and we were steaming through the fog. On we went until the patent log said that the island was not far distant and accordingly the *Rush* was slowed down, while, in addition to the careful lookout that had been continually kept, the lead was cast in order that we might not come upon the land in more ways than one. And now the fog thinned out and rolled up into fleecy clouds, leaving everything visible for some distance ahead, but revealing no trace of Walrus Island. The

rapid and erratic tide had swept us by; instead of twelve miles we had run an unlucky thirteen, and back we turned, into the retreating fog, which, rolling up before us, left Walrus Island not only perceptible to the eye but, as we passed to leeward a quarter of a mile away, decidedly perceptible to our noses.

Nature has considerably furnished two landing places, very excellent ones, too, provided the sea be smooth and the wind in the right direction; and we came to anchor off the most picturesque of these, a little steep-walled cove, on one side of which it was possible to climb out upon a stone quay. The cautious Burgomaster Gulls were circling high overhead with wailing cries long before we reached land, and some of the Kittiwakes and a few of the most nervous Arries deserted their nests or eggs, as the case might be, as we drew near; but the bulk of the bird population declined to budge until we had landed and were close upon them. This bulk consisted of thousands of the Pacific Murre (*Uria lomvia arra*), occupying the cliffs and angular rocks of the southern and western portion of the island, where their many-colored eggs lay thickly scattered about. Mr. William Palmer notes that at the time of his visit in 1890 these birds were mostly on the western side, while on the east and south were the legions of the California Murre (*Uria troile californica*), but no such striking peculiarity of distribution was noticed by our party, nor were the California Murres much in evidence.

It had often been a matter of wonderment how any given member of a great bird colony could find its own particular egg among the hundreds available for a choice, and the behavior of returning Arries was watched with no little interest. If one might judge by their directness of flight as they came whirring in from sea, the birds had a good bump of locality and a pretty clear idea of the whereabouts of their respective eggs. It has been suggested that these birds do not of necessity get each its own egg, but that often an egg is chosen because it seems convenient. Such, however, did not seem to be the case with the Arries. On the contrary, there seemed to be a very definite selective process, for a bird would alight, cock its head on one side, waddle a step or two, cast another knowing look about, and after a few such trials apparently find an egg that seemed satisfactory and settle contentedly down upon it. May it not be that the wonderful variation in the color of the eggs, a variation that is most striking when seen in nature, enables each bird to find its own with ease? Another suggestion in regard to the eggs of Murres is that the very pale eggs (and some are absolutely devoid of markings) are the later layings of birds whose earlier eggs have been destroyed, and this suggestion seems very plausible.

The Kittiwakes (*Rissa brevirostris* and *R. tridactyla pollicaris*) were mostly confined to the ledges of rock about the landing place, but the Burgomasters occupied the higher central portion of the islet where the

A CORNER OF THE ROOKERY



rock was covered by a scanty soil, forming a colony of goodly size, although by no means crowded. In view of the numbers of old birds circling overhead, the scarcity of eggs and apparent absence of young seemed a little remarkable; but a more careful look showed them all about us, squeezed among the rocks, half concealed under the scanty tufts of grass or, with tightly closed eyes, flattening themselves into some slight depression in the soil. Not one, if memory be not treacherous, was in its nest; and some of the larger birds were a long way from home, skulking along among the rocks in the endeavor to put as much distance as possible between themselves and the unwelcome intruders. A number of young Burgomasters may usually be seen about the village of St. Paul, their legs



YOUNG BURGOMASTER GULLS

or bills decorated with a colored bead or two, or a strip of red flannel, these being nestlings brought back by the eggging parties early in the season and kept for pets, not, as Herring Gulls are in parts of Newfoundland, to be used for food later on. They are readily domesticated and become very tame, running about the village and along the shore in search of food, or, later on, taking long flights with the wild Gulls. It always seems a little singular to see a bird leave a flock and come flying to the village, or to be approached by a big, gray Gull with open mouth and an appealing squeal for food. For young Gulls are always "so hungry;" possibly, at times, they get all they wish to eat, but the few whose acquaintance I have made seemed blessed with "a perfectly lovely appetite."

A few Tufted Puffins (*Lunda cirrhata*) and Cormorants (*Phalacrocorax*

urile) completed the population of Walrus Island, and as there is no soil in which to burrow, the Puffins had ensconced themselves here and there beneath some overhanging rock, making valiant resistance with beak and claw to any attempt to dislodge them. The Cormorants of the Pribilof appear to be a waning race; Mr. Palmer noted that they were much less abundant than formerly, and now they are comparatively scarce on St. Paul, a few scattered birds breeding on the bluffs of Polovina. Very few nests were to be found on Walrus Island and, although the Cormorants arrive early in the season, one of these contained two perfectly fresh eggs. Near by was another nest with an egg and two small, naked chicks which, later on, we saw the parent bird busily engaged in feeding.



RED-FACED CORMORANTS

The Choochkie (*Simorhynchus pusillus*), abundant on St. Paul and swarming by millions (I refuse to remove a single cipher) on St. George, was noticeably absent, owing probably to the lack of suitable breeding places, since there are neither crevices in the rocks nor soil in which to burrow.

The Paroquet Auklet (*Cyclorhynchus psittaculus*) was not seen, although noted by Mr. Palmer on his visit in 1890; so, as far as species go, Walrus Island may be considered poor, although this lack is compensated for by the great abundance of individuals.

The afternoon drew on, and in spite of occasional puffs of drifting fog, it was one favorable for the work of the surveyors, so that before six o'clock their work was done, and when the whistle of the *Rush* blew 'all aboard' every one was ready to depart. Fifteen minutes later the inhabitants of Walrus Island were enjoying their accustomed solitude.

Our Blue Jay Neighbors

BY MRS. HARRIET CARPENTER THAYER, Minneapolis, Minn.

Illustrated by photographs from nature by Thos. S. Roberts

IT is perhaps a rare privilege, in the midst of a large city, to be chosen as neighbors by a family of Blue Jays, yet such was our good fortune. They came one May morning into the top of a young elm tree close by our bedroom window. One had a twig in his mouth which he was endeavoring to get into position in the site selected for the nest. He pulled



BLUE JAY ON NEST

and tugged, now bending his body, now twitching his head, until at last he succeeded; and the news spread abroad that a pair of Blue Jays were building a nest in our tree. For two days they worked, completing the outside; then they came at longer intervals for two days more, bringing choice bits of finishing for the inside. Both birds took part in the labor of house-building.

During these days three small heads were often peering at them from the window near by and shrill little voices often interrupted their work. But at last, though we trembled lest we had frightened them away by our frantic efforts to keep quiet, the mother settled down on her nest and only whispers were heard at the window.

The many weary hours during which the eggs had to be kept warm were divided between the two birds, each relieving the other at more or less regular intervals. And the bird at play did not forget its imprisoned mate, but returned now and then with a choice bit of food, which was delivered with various little demonstrations of sympathy and affection.

We watched and waited patiently, and were well rewarded; for though the birds kept an eye on us they let us enjoy their daily life and attended to their duties in full view. The nest, built so near the top of the slender tree, swayed and bent to every breeze, and as Minnesota breezes are apt to be-



BLUE JAY ON GUARD AT THE NEST

come high winds, often hung at a perilous angle, keeping the mother busy balancing herself and settling her eggs. Almost every day we expected to find on the ground one or more eggs that had been thrown out and broken.

Blue Jays are very numerous in Minneapolis, and their loud screams are almost as familiar as the incessant chatter of the English Sparrows. They are always discussing something vigorously, and using their voices tortissimo. We were delighted therefore to hear low, sweet, little notes and measures, and what might be called talking. They reserved their best efforts evidently for wooing and early morning conversations, and only their intimate friends overheard.

The nest, eighteen feet or thereabouts from the ground, was visible from our bed; and one morning on first awakening we saw with a thrill the father and mother gravely bending over five wide mouths, plainly to be seen at that distance. The birds had all hatched out within twenty-four hours. Then began the process of filling up those mouths, always opening and stretching to their widest extent, as if afraid of missing something. This was impossible, however, as their parents forcibly and effectually stuffed each morsel down their throats, seemingly into their very stomachs.

The father, it might be, would arrive with a long worm, which he and the mother then swallowed by bits, commencing at either end and working toward



A BLUE JAY FAMILY

the middle, where it would break, leaving each parent with half the worm. Then, after a pause during which the five mouths quivered with suspense, the softened food was given up to the babies by a sort of regurgitation, and away went the father after more. While the birds were incubating the eggs only the head and tail were visible above the rim of the nest, but after hatching they sat or stood so much higher and puffed out their feathers to such an extent that they appeared twice their former size. The Jays were not at all shy, but on the contrary were very valiant and determined in standing by their home. Soon after the eggs were laid, the house-painters began work opposite the nest, and many sharp pecks they received on their ears and backs. People inside the house could be endured, but people outside were a little too much, and the birds challenged each man to fight it out.

The birds were very neat about their nest, both parents cleaning it daily. The excrement was not simply thrown out, as one would naturally expect, but was carefully removed to a distance.

On a platform built outside the window, a camera was placed bringing the nest somewhat less than ten feet away. The birds, accustomed to children's and painters' voices, paid no attention, and a series of photographs were taken of the family life in the tree.

One afternoon when the growing birds had come to fill their nest to overflowing, a severe storm came up, turning the tree-top and nest upside down. As we sat together inside the house our one thought was for the birds outside in the increasing storm. In the flashes of lightning we could see the mother, soaked by the rain, with head bent, her feathers spread out over her little ones, keeping her place in spite of the violent gusts of wind. Next morning one fat little bird, showing blue on his wings, was found dead on the ground, while the process of stuffing the remaining four went on above just as usual.

At last the nest was discovered empty, and by the cries and excitement on the lawn we traced the young birds to their perches in the trees, solicitously guarded by their anxious parents. They were coaxed and urged into trying short flights, and blundered about with an aimless and uncertain motion.

For several days we could distinguish them by the yellow of their beaks; but soon we lost them from sight, and "our Blue Jays" were no longer known amid the throng, though their memory will long live in our traditions and their story be well preserved in the camera studies that were so happily and harmlessly stolen.





SHORE-LARK ABOUT TO FEED YOUNG. Photographed from nature by F. A. Van Sant

Early Larks

BY F. A. VAN SANT, Jay, N. Y.

DURING March, 1900, there was a heavy fall of snow in the northern part of the Adirondacks, and by the middle of April the ground was still covered with a feathery blanket, except on the slopes of the sand-hills facing the south, where the snows had slipped and wasted.

Part way down one of these hills, on a patch of sand and dried grass surrounded by snow, I found, on the 12th of April, the nest of a Prairie Horned Lark. It was about two inches deep, was lined with dead grasses and contained four delicately speckled eggs. Three days later something interesting transpired in that little brown nest. As though to commemorate the amazing mysteries of the first great Easter morning, the little prisoners of the shell, on Sunday, April 15, burst from their confinement. Only a short time elapsed ere their little notes of hope and ecstasy were added to the grand chorus of nature's hallelujahs. The parent birds twittered the anthems of this festive day as they diligently searched for food with which to feed their tiny nestlings.

The next day was cloudy and Tuesday was cold, with snow squalls all day, but Wednesday came clear and bright, and I spent the day in watching the birds and taking their pictures. I used a Pony Premo Sr. camera, $6\frac{1}{2} \times 8\frac{1}{2}$, with rapid rectilinear lens and a 4×5 Hammer plate in a kit. I set the camera quite early in the morning, so that the birds would become accustomed to it. After the sun was high enough to make a snap shot possible, I tied a long black thread to the shutter release and, keeping my opera glasses ready for instant use, sat down to await results.

The parents at first were shy, flying in circles overhead and calling in their clear voices to each other. After reconnoitering, they evidently arranged a plan of action. Both disappeared entirely; then I heard a call and, looking up, saw on the brow of the hill to the left, away from the nest, which was to the right, a bird I judged to be the male. He ran toward me, called, ran still nearer, then flew away; and as I looked toward the nest I saw the mother just leaving. In this way he tried to attract my attention every time the female neared the site of their precious home. Then I watched the mother. She never *flew* to the nest. I would first see her on the hillside some distance away running around as though she had no particular aim in life, but still she kept getting nearer and nearer to the nest. The surface of the ground was rough with stones, ridges, hollows, and drifts of snow, and taking advantage of these she would finally run quickly a short distance, stop and huddle down, then run, and in this way reach the nest. As I could only get an occasional glimpse of her when nearing her young, she time after time fed them and flew away before I could be sure she was in a position that would not cast a shadow on them. I have watched Phœbes, Robins, Wax-wings and other birds feed their young, but I never saw it done so quickly or in such a secretive manner.

They grew so fast that they crowded one another out of the nest, which was on such a slant that before they were half grown they would tumble out and roll a little ways down hill, and twice I had to replace them. I intended getting a picture of the birds when they were nearly feathered, but cloudy weather followed by storms of rain and snow prevented. Ten days after hatching it was again clear and I went to get another negative, but found that the nest was empty.

Saw-whet Homes

BY P. B. PEABODY, Hibbing, Minnesota

With photographs from nature by the author

THE breeding habits of the Acadian Owl are little known even by those who are personally familiar with the little fellow. But there are haunts of his where the patient may find him thoroughly at home. Riding across a sea of flooded prairie, along the Red River of the North, April 4, 1898, on the saddest of errands, I renewed acquaintance with the Saw-whet, after an interim of many years. Brought to a halt by a washed-out bridge, I had led my mare over a twelve-foot drit to shelter, and kept on along the railroad track that threaded the waste of waters. It was near midnight. Nearing Hallock, along the South Fork, narrowly, but heavily, wooded with primeval trees, I heard, delightedly,

upon the wind that sweet fluting unheard for many years. Astounded at the bird's persistence, I counted the notes. Seven hundred, without a break, I counted, and then gave it up. There were about two notes per second, with occasional bursts at half the interval. (Explanation of this came later.) The few irregular intervals of silence would not exceed three seconds' duration.

By noting the source of the night-song from two directions I located the spot so nearly that when, on the morning of May 5, at dawn, I scoured the place, I readily located the elm stub in which the nest was hidden. This old tree stood beside the bank of the creek, a little remote, in the midst



YOUNG SAW-WHETS

of many large elms. Twelve feet up was the opening of the Flicker-made cavity. From this, at my very first rap, the Saw-whet's head protruded. As I climbed, she, having disappeared within, came out again and flew fifteen feet away to a dead branch, where she sat long in utter silence. The hollow was sixteen inches deep. It was well filled with bark strippings, placed there by red squirrels. Well jumbled together in this mass were seven eggs, whose incubation varied from nothing to well-formed small embryos, a headless meadow-mouse and many contour feathers of the Pine Grosbeak, with flight-feathers and tail feathers of Juncos, Warblers and other small birds. Many of these feathers were stuck into bark crevices, and the habitation of the stub seemed to have covered a number of years. A few pellets lay at the base of the tree. This pair of birds I never found again.

On the wings of a howling wind, across the mile-wide flood, at Pembina, on April 13, I heard the fluting of another Saw-whet. I found the cavity, an open hollow, inhabited by this bird, later; but nothing more. During 1899, no signs of the Saw-whet were vouchsafed me.

In 1900, some ten miles east of Hallock, while looking critically for the nest of a located pair of Hooded Mergansers, I found a kiln-dried elm stub, on a sort of island, well secluded, on the South Fork. This large stub contained a Flicker hole, some sixteen feet up. Herefrom, at a slight rap, appeared a Saw-whet. Returning, down-stream, at dusk, about a mile above this point, I suddenly heard a Saw-whet's song. When very near the spot whence the sound proceeded, I heard the doubled-time note ringing out, as if the bird were in motion; and then instantly saw the male bird sweep down, from a stub-top, with a long downward and upward curve; and perch near by. The sound he made was strangely like the distant fire-warning of a steam whistle. The female seemed away at the moment, but before I was within six feet of the Flicker hole that marked her home, she darted by me, and into the hole. I could not dislodge her. The date of these two findings was May 14.

Three days later, I opened the first of these two nests. The young were about three-fourths grown. They bore no down, to speak of, but many pin-feathers. There were three of the young birds. The mother allowed me to take her in hand, her only protest being the snapping of her beak. There were but few pellets at the base of the nest-tree; while the nest-hollow contained no rubbish, but only the young, the putrescent body of a gravid meadow-mouse, a Loring's red-backed mouse, and the tail of a jumping mouse. On May 29, these young were in full feather. While photographing them I could not but note the furtive manner of two of the young birds; this amounting, at times, almost to the appearance of the feigning of death. The parents were not seen, and the young had left the nest before June 5.

On the 14th of June, I opened the second nest. The female kept the cavity persistently, returning several times while I was yet in the tree. The nest-cavity was some twelve feet up, in the dead top of a still-living elm. The cavity contained squirrel-nest material, mingled with a few



SAW-WHET AT NEST-HOLE

feathers of small birds and of the fledgling Flickers. There were six eggs, neatly arranged in triangular form.

These eggs all seemed dead; though one or two may have still been alive. One was infertile. Various stages marked the incubation, which, in two eggs, amounted to perhaps one-fourth.

At neither of the first two nests did I ever see the male. Nor did I, at the third nest, after my first visit, find him at home, though making several visits at different times of the day.

These observations leave one in perplexity as to the normal nesting-date of the Acadian Owl in northern Minnesota. All the dates given above are inconclusive. One may, perhaps, be permitted to infer that this little Owl who has so warm a place in our affections is rather a nomad and erratic, though loving tenaciously his one-time nesting place; and that the nesting times are quite uncertain. This much, at least, is fairly sure: that *acadica* loves the wooded streams, and that a Flicker hole is his great desideratum. Open cavities are too insecure, and smaller artificial holes too small. The pretty sight of a mother Saw-whet squeezing her way into a good-sized Flicker hole gives us a fair gauge of the size of this, the smallest and most attractive of American Owls.

The Song Sparrow

By the road in early spring
 Always hopefully you sing;
 It may rain or it may snow,
 Sun may shine or wind may blow,
 Still your dainty strain we hear—
 "Cheer— Cheer—
 Never, never fear,
 May will soon be here."
 Darling little prophet that you are!

When at last the leaves are out
 And wild flowers all about,
 Songs of other birds are fraught
 With the spirit that you taught.
 Still you sing on sweet and clear—
 "Hear— Hear—
 Happy, happy cheer,
 Singing all the year."
 Jocund little brother of the air.

LYNN FEW SPRAGUE.

For Teachers and Students

Tree-Planting

THIS is the season for tree-planting, and we cannot too strongly urge the desirability of making our lawns, gardens, and orchards more attractive to birds by planting in them trees which will furnish birds with food in summer as well as in winter.

If, as a result of a widespread movement in this direction, the supply of food for birds should be greatly increased, there would doubtless be a corresponding increase on the part of the birds. Practical bird-protection means not only preventing the destruction of birds but creating conditions which shall make the world more habitable for them.

We hope that this matter of tree-planting for the birds will be given especial consideration on Arbor Days when, among the trees which are set out, there should be the mulberry, wild cherry, dogwood, Parkman's apple, mountain ash, and other trees bearing fruit of which birds are fond.

In this connection we would refer our readers to Lange's 'Our Native Birds' and to Mrs. Merriam Bailey's 'Birds of Village and Field' for further information in regard to this exceedingly important subject.

Birds and Seasons

THIRD SERIES

APRIL AND MAY BIRD-LIFE NEAR BOSTON

BY RALPH HOFFMANN

HARDLY two observers will agree on the date of arrival of the same species; for many factors enter into the problem. In the first place, few people can devote their days to playing the "detective of nature:" on our way to our work we too often hear voices calling us to the woods where many new arrivals wait to be recorded. In the second place, individual birds vary greatly in hardiness; a certain Phoebe or Chebec almost always comes a day or two before the rest of the species; breeding birds naturally precede the migrants, whose northern homes are not yet ready for them. Unless, therefore, an observer lives very near a bird's home, he often misses the arrival. Thus it will always happen in the case of rare or local birds that the man who has a Martin box under his window or a White-eyed Vireo on his beat, is the best authority for the arrival of that bird. Again, some places are on much more favorable migration routes than others; where many birds pass, the chance for an early one is of course better. At the head of Lower Mystic Lake in Medford, Tree Swallows may be seen in early April in hundreds — among them is often a Barn Swallow a week or ten days ahead of his fellows. Lastly, certain

birds occur so rarely that it is impossible to say with certainty that the first one seen is the first arrival. The weather has a greater influence on the date of arrival in April than in May. The continued warm weather in 1896 brought Black-throated Green Warblers to this vicinity on the 19th of April; two years later a cold spring kept them back till May 5, a difference of over two weeks. Orioles, on the other hand, show surprisingly slight variation in a long series of years. A cold northeaster coming after many birds have started keeps them all back, so that when warm weather succeeds, birds come in a rush. The smallest gardens in large cities are then visited by almost any species. Continued cool, bright weather, on the other hand, seems to send the birds through in small bands, so that the migration makes little impression.

I have given below, as in the list for March, two dates for each bird; the bird is not to be expected before the first, and should almost always be here before or on the second. The dates should in no sense be taken as showing the time when the whole number of the species arrive, but the time when keen and well-informed observers, much in the field, should see the first individual. The arrival of Blackpolls in force has been well said to sound the death-knell to migration, yet a few Blackpolls almost always reach us in the first great Warbler wave, but are easily overlooked. Even when we judge the migration over, and some busy pair of Vireos bids us turn our attention to nest-building, we must still keep our ears open for the "quee-quee" of an Alder Flycatcher or the hurried warble of a Mourning Warbler. (Mr. Walter Faxon has kindly let me compare my dates of arrival with some of his.)

BIRDS OF THE SEASON

For permanent residents and winter visitants see BIRD-LORE, Dec., 1900, p. 183.

Arrivals in April and May.—April 1-10, White-bellied Swallow,* Mourning Dove,* Marsh Hawk,* Pied-billed Grebe;* 1-15, Kingfisher;* 2-15, Pine Warbler; 3-12, Savanna Sparrow;* 4-10, Vesper Sparrow; 5-15, Myrtle Warbler,† Yellow Palm Warbler,† American Pipit,† Wilson's Snipe,† American Bittern, Great Blue Heron,† Purple Finch; 5-20, Field Sparrow, Chipping Sparrow, Hermit Thrush;† 10-20, Ruby-crowned Kinglet,† Winter Wren,† Sharp-shinned Hawk;‡ 10-25, Barn Swallow, Purple Martin;‡ 12-20, Swamp Sparrow; 13-30, Sora; 15-20, Cooper's Hawk,‡ Osprey,† Night Heron; 18-25, White-throated Sparrow,† Yellow-bellied Sapsucker;† 20-30, Blue-headed Vireo,† Virginia Rail; 22-29, Black and White Warbler; 22-30, Towhee; 23-30, Least Flycatcher; April 25 to May 1, Brown Thrasher, Spotted Sandpiper, Cliff Swallow, Bank Swallow; April 26 to May 1, Black-throated Green Warbler; April 28 to May 3, Yellow Warbler, House Wren; April 28 to May 5, Whip-poor-will; May 1-8, Warbling Vireo; 1-9, Parula Warbler;*† 1-10, Long-billed Marsh Wren,* Kingbird; 1-11, Redstart; 2-5, Yellow-throated Vireo; 2-9, Ovenbird; 2-10, Nashville Warbler; 3-8, Maryland Yellow-throat; 3-9, Baltimore Oriole; 3-10, Catbird, Northern

* Occasionally, or not infrequently, earlier.

† Migrant. See, however, June list (in JUNE BIRD-LORE) for rare breeders.

‡ Date uncertain.

Water-Thrush, † Green Heron; 4-11, Rose-breasted Grosbeak; 5-11, Bobolink, Chestnut-sided Warbler, Prairie Warbler; 7-10, Wilson's Thrush; 7-12, Wood Thrush; 7-13, Hummingbird; 7-15, Blackburnian Warbler; † 8-11, White-eyed Vireo; 8-15, Night Hawk, Black-billed Cuckoo; 8-16, Scarlet Tanager, Black-throated Blue Warbler, † Magnolia Warbler; † 9-12, Golden-winged Warbler, Orchard Oriole; ‡ 9-15, Crested Flycatcher, Lincoln's Finch, † White-crowned Sparrow, † Florida Gallinule, ‡ Henslow's Sparrow, ‡ Red-eyed Vireo, Yellow-breasted Chat; 9-18, Olive-backed Thrush, † Yellow-billed Cuckoo; 10-15, Wilson's Blackcap, † Solitary Sandpiper; † 10-17, Blackpoll Warbler; † 10-20, Indigo Bunting; 13-21, Wood Pewee, Canadian Warbler; † 15-20, Bay-breasted Warbler, † ‡ Tennessee Warbler, † † Cape May Warbler, † † Short-billed Marsh Wren, ‡ Sharp-tailed Finch, ‡ Grasshopper Sparrow; ‡ 15-25, Gray-cheeked and Bicknell's Thrushes; † May 23 to June 3, Alder Flycatcher, † Mourning Warbler, † Olive-sided Flycatcher. † †

Departures in April and May.—April 15-25, Fox Sparrow; 20-30, Tree Sparrow; 25-30, Golden-crowned Kinglet; — Red-poll, White-winged Crossbills, Shore Larks, Snowflakes; April 20 to May 1, Junco, Brown Creeper, Winter Wren; May 3, Yellow-bellied Sapsucker, American Pipit; 5-10, Hermit Thrush, Herring Gull; 6, Wilson's Snipe; ‡ 9, Rusty Blackbird; 10, Ruby-crowned Kinglet, Yellow Palm Warbler; 12, Blue-headed Vireo; 15, Pine Finch; 15-24, Myrtle Warbler, White-throated Sparrow; 20-23, Black-throated Blue Warbler; 20-25, Parula Warbler; 25-28, Magnolia Warbler, Wilson's Blackcap; 28, Gray-cheeked Thrush; 30, Canadian Warbler; May 30 to June 1, Northern Water Thrush; June 1, Olive-backed Thrush; 2-3, Blackpoll Warbler. NOTE.—Red Crossbills often linger well into May; stragglers, in fact, may be seen at any time.

* Occasionally, or not infrequently, earlier.

† Migrant. See, however, June list (in June BIRD-LORE) for rare breeders.

‡ Date uncertain.

APRIL AND MAY BIRD-LIFE NEAR NEW YORK CITY

BY FRANK M. CHAPMAN

April and May are exciting months for the field student. Throughout the winter they have been anticipated with an eagerness and enthusiasm which the events that so crowd them never fail to satisfy. Time cannot pass too rapidly until the calendar marks "April 1;" then we live in the assurance that each day may bring some old friend or new acquaintance. The feast of spring follows the famine of winter.

From April 1 to about May 10, birds increase in number daily; then, as the transient visitants pass onward to more northern summer homes, they become rapidly less abundant and by June 5 we have left only the ever-present permanent residents and the birds which have come to us from the south to nest.

As the days become warmer and the weather more settled, so do the birds return with greater regularity. The times of arrival of the early migrants may vary several weeks, from year to year, but the birds of May come almost on a given day. The date of a bird's appearance depends primarily, in most instances, on the nature of its food. The length of its journey, or, in other words, its winter range, is also to be considered here; but since that is also, to a greater or less extent, determined by food, we may consider the ever-important question of food as the most potent single factor governing a bird's time of arrival.

The opening of ponds and bays is followed, as we have seen, by the return of the Ducks and Geese; the Woodcock comes when the thawing ground releases his fare of earthworms; the Sparrows appear when the melting snow uncovers the remains of the preceding season's crop of seeds. It is not, therefore, until a higher temperature brings into activity myriad forms of insect life that we may expect to find Warblers and Flycatchers.

The region about New York is a favored one during the migrations. The nearness of the coast, the great highways of migration formed by the Hudson River valley and Long Island Sound give to the observer exceptional opportunities. But in no place, hereabout, can the migration be studied to better advantage than in Central Park, in the heart of New York city. The park, in effect, is an island surrounded by a sea of houses, and during the migration receives a greater number of bird visitors than any area of similar size with which I am acquainted. As a matter of local interest, therefore, in place of general notes on the spring migration in this vicinity — which have already been published in the 'Hand-Book of Birds' and 'Bird-Life' — I append records of the spring migrations of 1899 and 1900, in the Park, which have been contributed by Mr. S. H. Chubb.

SPRING MIGRATIONS OF 1899 AND 1900 IN CENTRAL PARK, NEW YORK CITY

BY S. H. CHUBB

1899

April Migrants.—April 22, Yellow Palm Warbler, Myrtle Warbler; 24, Black and White Warbler, Pine Warbler, Blue-headed Vireo; 28, Yellow Warbler; 30, Parula Warbler, Wilson's Thrush.

May Migrants.—May 1, Chimney Swift, Baltimore Oriole, Redstart, Ovenbird, Warbling Vireo, Maryland Yellow-throat, Water-Thrush, Black-throated Green Warbler, Brown Thrasher, Catbird; 2, Little Green Heron, Crested Flycatcher, Yellow-throated Vireo, Wood Thrush, Hermit Thrush; 3, Rose-breasted Grosbeak, Scarlet Tanager, White-eyed Vireo, Nashville Warbler, Blue-winged Warbler, Chestnut-sided Warbler, Black-poll Warbler, Blackburnian Warbler; 5, Red-eyed Vireo, Magnolia Warbler; 6, Prairie Warbler; 8, Olive-backed or Gray-checked Thrush; 10, Worm-eating Warbler, Black-throated Blue Warbler; 11, Hummingbird, Yellow-breasted Chat; 13, Wilson's Blackcap, Canada Warbler; 14, Bay-breasted Warbler.

1900

April Migrants.—April 29, Parula Warbler, Yellow Warbler, Water-Thrush.

May Migrants.—May 1, Least Flycatcher, Yellow-throated Vireo, Warbling Vireo, Brown Thrasher; 2, Towhee, Blue-headed Vireo, Catbird; 3, Wood Thrush, Prairie Warbler; 4, Ovenbird, Chestnut-sided Warbler, Canada Warbler; 6, Kingbird, Baltimore Oriole, Purple Finch, Rose-breasted Grosbeak, Swamp Sparrow, Blue-winged Warbler, Magnolia Warbler, Maryland Yellow-throat, Hermit Thrush; 7, Red-eyed Vireo, Nashville Warbler, Wilson's Thrush; 8, Scarlet Tanager, Black-throated Blue Warbler, Olive-backed or Gray-checked Thrush; 9, Black-billed Cuckoo, Wood Pewee, White-eyed Vireo, Blackburnian Warbler, Bay-breasted Warbler, House Wren; 10, Eave Swallow; 14, Black-poll Warbler, Wilson's Blackcap; 17, Olive-sided Flycatcher; 31, Mourning Warbler.

APRIL AND MAY BIRD-LIFE NEAR PHILADELPHIA

BY WITMER STONE

April and May are preëminently the months of migration. March, with its frequent cold and stormy days, offers many a setback to the traveling birds, but once past the early days of April, the tide sweeps steadily on, reaching its highest point during the first week of May. The great waves of Warblers which arrive suddenly over night and fairly swarm in the tree-tops are characteristic of the May migration. The first of these waves usually reaches Philadelphia about the first of May and is followed by others, until the 20th or 25th, when the flight begins to wane, and by Decoration Day all the transients are gone save a few stragglers, mainly Black-polls and Gray-checked Thrushes.

The great wealth of bird-life, the swarms of minute Warblers in the tree-tops and their various songs that we have not heard for a whole year, are almost disheartening to the careful observer. There is not time to identify every individual of this host, and who knows but we may have passed by a Cerulean or Mourning Warbler, or other rarity!

With the presence of all our summer and permanent residents as well as practically all of our transients, May naturally affords opportunities for very large daily lists. My notes show fifty-four species observed within the northern limits of Philadelphia on the morning of May 13, 1888, and again May 19, 1891, but I was not very favorably situated. Across the river, at Haddonfield, N. J., upward of eighty species have been noted on a single day at the height of the migration, by Mr. Samuel N. Rhoads.

Beside the numerous arrivals from the south we have not a few of our winter visitants with us during April, and some Juncos and White-throated Sparrows stay regularly until after May 1.*

Many of our summer residents begin nesting during April and May and some of the earliest breeders have young on the wing before the 1st of June.

BIRDS OF THE SEASON

For permanent residents and winter visitants see BIRD-LORE, Dec., 1900, p. 185.

April Migrants.—April 1-10, Green Heron, Vesper Sparrow, Savanna Sparrow, Chipping Sparrow, Tree Swallow, Purple Martin, Myrtle Warbler, Hermit Thrush; 10-20, Chimney Swift, Towhee, Barn Swallow, Bank Swallow, Yellow Palm Warbler; 20-25, Solitary Sandpiper, Spotted Sandpiper, Whip-poor-will, Rough-wing Swallow; Blue-headed Vireo, Black and White Warbler, Maryland Yellow-throat, House Wren, Brown Thrasher; 25-30, Least Flycatcher, Cliff Swallow, Grasshopper Sparrow, Red-eyed Vireo, Warbling Vireo, Black-throated Green Warbler, Blue-winged Warbler, Parula Warbler, Yellow Warbler, Redstart, Ovenbird, Catbird, Wood Thrush.

May Migrants.—May 1-10, Yellow-billed Cuckoo, Black-billed Cuckoo, Night-hawk, Ruby-throated Hummingbird, Wood Pewee, Crested Flycatcher, Green-crested

*An unaccountable slip of the pen in the February BIRD-LORE implies that our winter visitants usually leave about April 1. As a matter of fact, all our regular winter visitants, except the Tree Sparrow, remain until the end of the month, at least.

Flycatcher, Kingbird, Bobolink, Orchard Oriole, Baltimore Oriole, Indigo Bunting, Rose-breasted Grosbeak, White-crowned Sparrow, Scarlet Tanager, Yellow-throated Vireo, White-eyed Vireo, Nashville Warbler, Black-throated Blue Warbler, Magnolia Warbler, Chestnut-sided Warbler, Prairie Warbler, Hooded Warbler, Blackburnian Warbler, Worm-eating Warbler, Chat, Water Thrush, Wilson's Thrush; 10-20, Yellow-bellied Flycatcher, Golden-winged Warbler, Tennessee Warbler, Cape May Warbler, Bay-breasted Warbler, Black-poll Warbler, Wilson's Blackcap, Canadian Warbler, Mourning Warbler, Olive-backed Thrush, Gray-checked Thrush.

APRIL AND MAY BIRD-LIFE NEAR OBERLIN, OHIO

BY LYNDS JONES

April weather is a very uncertain quantity, yet the first few days are frequently pleasant and enticing to the more venturesome birds. In the last five years the first week has four times witnessed a decided wave of northward migrants which sweeps the Northern Shrike and the Rough-legged Hawk away. This mild weather is likely to be followed by a decidedly wintry week, with snow or at least freezing nights. It is not until the beginning of the third week that any other marked movement occurs, when such birds as Lapland Longspur, Tree Sparrow and Horned Lark leave us. During the last ten days the spring-like weather brings the greatest movement of the year, carrying northward Junco, Golden-crowned Kinglet, Fox Sparrow, Hermit Thrush, Horned Grebe, and, usually, Ruddy Duck.

With the arrival of May the later migrants crowd in, even should the nights be frosty, as they sometimes are until the middle of the month. The May weather is rarely too inclement for the eager birds. During the first five days we lose Wilson's Snipe, Rusty Blackbird and Pectoral Sandpiper; then there is a lull of five days when none depart; but during the third five days—10th to 15th—we lose Ruby-crowned Kinglet, Myrtle Warbler, Black-and-white Warbler, Blue-headed Vireo, Winter Wren, and sometimes Palm Warbler. From the 15th to the 20th we lose American Crossbill, White-throated Sparrow, Black-throated Green Warbler, Black-throated Blue Warbler, Solitary Sandpiper, Water Thrush, Tennessee Warbler, White-crowned Sparrow and American Pipit. The last ten days of the month witness the departure of practically all other migrants, including Nashville Warbler, Chestnut-sided Warbler, Blackburnian Warbler, Magnolia Warbler, Least Flycatcher and Olive-backed Thrush, leaving us with only the summer resident species. Such ducks as Lesser Scaup, Greater Scaup, Buffhead, Blue-winged Teal and Baldpate are likely to tarry well into May.

BIRDS OF THE SEASON

For permanent residents and winter visitants, see BIRD LORE, Dec. 1900, p. 186.

April Migrants.—April 1-10, Pied-billed Grebe, Pectoral Sandpiper, Chipping Spar-

row, Field Sparrow; 10-20, Bartramian Sandpiper, Spotted Sandpiper, Yellow-bellied Sapsucker, Chimney Swift, White-throated Sparrow, Barn Swallow, Swamp Sparrow, Myrtle Warbler, Purple Martin, Brown Thrasher, Ruby-crowned Kinglet; 20-30, Wilson's Snipe, Solitary Sandpiper, Kingbird, Crested Flycatcher, Least Flycatcher, Bobolink, Baltimore Oriole, Grasshopper Sparrow, Cliff Swallow, Bank Swallow, Scarlet Tanager, Red-eyed Vireo, Warbling Vireo, Black-and-white Warbler, Blue-winged Warbler, Nashville Warbler, Yellow Warbler, Black-throated Green Warbler, Palm Warbler, Ovenbird, Maryland Yellow-throat, Redstart, House Wren, Catbird, Wood Thrush, Wilson's Thrush, Olive-backed Thrush.

May Migrants.—May 1-5, Orchard Oriole, Rose-breasted Grosbeak, Indigo Bunting, Yellow-breasted Chat, Yellow-throated Vireo, Cerulean Warbler, Blackburnian Warbler, Green-crested Flycatcher; 5-10, White-crowned Sparrow, Parula Warbler, Tennessee Warbler, Cape May Warbler, Bay-breasted Warbler, Black-throated Blue Warbler, Magnolia Warbler, Canadian Warbler; 10-15, Yellow-billed Cuckoo, Black-billed Cuckoo, Ruby-throated Hummingbird, Wood Pewee, Black-poll Warbler, Mourning Warbler; 15-20, Least Sandpiper, Traill's Flycatcher.

APRIL AND MAY BIRD-LIFE AT GLEN ELLYN (NEAR CHICAGO), ILLINOIS

BY BENJAMIN T. GAULT

With the real opening of spring, which may take place here anywhere between the 15th and 25th of April, it is clearly observable that a new order of things is apparent on every hand, though we do not feel that the season is actually upon us until the hepatica and the little spring beauty have contributed their matchless charms to the yet incipient plant-life of our hitherto flowerless woods. Even then it is sometimes a question more undecided than otherwise when we carefully take into account the weather. The birds, too, offer us almost a parallel illustration when we stop to consider and study their ways. The largely insectivorous species, the true harbingers of spring, do not appear in anything approaching wave-like movements until about the closing days of the month, or when the rejuvenating influences of milder weather have set into active motion the various forms of insect-life. Several species that have passed the winter with us, or made their appearance during the days of February and March, now make their exit for more northern breeding latitudes; and of this class we may mention the Tree Sparrow, Short-eared Owl, Rough-legged Hawk, Junco and Fox Sparrow; also the Rusty Grackles, which have added so largely to the animated life of the woodlands during the earlier days of the month. At this period they are great ground-searchers for the several kinds of larvæ snugly hidden beneath the dead and moistened leaves, and as they pass hither and thither in restless flocks through the woods, prospecting as they go, they present indeed a most interesting sight.

Our early breeders, the Hawks and Owls, Crow, Jay and White-rumped Shrike, are covering well-advanced eggs by this time.

In favorable seasons we may confidently look for the arrival of the Bobolink, Baltimore Oriole and, possibly, the Rose-breasted Grosbeak, during

the closing days of the month, but the opening days of May are surer by the rule in finding them here.

May is the month of bees, bird music and wild flowers, and possibly is the gayest of all gay periods of the year. To the true nature lover it encompasses a season of really pronounced pleasures.

Who has not for ever to be associated in his memory the *O-yes-I-am-a-pretty-bird-pretty-bird* of the Baltimore Oriole, the apple blossoms and the Warblers?

The Flycatchers and Vireos, too, are upon the calendar, in addition to the smaller Thrushes and Scarlet Tanager, whose fiery tropical plumage, in the case of the latter, very strikingly offsets the more somber tints of many of our commoner birds.

The bulk of our Warbler hosts and the Thrushes continue onward to their more northern summer homes, and with us, are simply transients.

BIRDS OF THE SEASON

For permanent residents and winter visitants, see BIRD-LORE, Dec., 1900, p. 187.

April and May Migrants, showing extreme dates of arrival and departure of transient visitants, from data collected at Glen Ellyn, Illinois, during the past eight years: April 1, Turkey Buzzard;* 1-8, Lesser Scaup Duck;* 1-22, Wilson's Snipe;* April 2 to May 5, Loon;* April 2 to May 10, Winter Wren; April 2 to May 19, Blue-winged Teal;* April 4, Tufted Titmouse;* April 4 to May 16, Sparrow Hawk;* April 8-27, Hooded Merganser;* April 8 to May 18, Myrtle Warbler; April 8 to May 24, Pine Siskin; April 9 to May 20, White-throated Sparrow;* April 10-19, Greater Scaup Duck; April 10 to May 25, Broad-winged Hawk;* April 11 to May 10, Pectoral Sandpiper; April 14, Green-winged Teal* and American Coot;* April 14-17, Red-throated Loon; April 14 to May 25, Water Thrush;* April 15, American Pipit; April 15-26, Great Blue Heron;* April 15 to May 5, Yellow-Legs;* April 17-24, Pine Warbler;* April 19, Buffle-head Duck; April 19 to May 21, Whip-poor-will;* April 23 to May 13, Palm Warbler; April 23 to May 30, Olive-backed Thrush;* April 24 to May 21, Red-breasted Nuthatch;* April 24 to May 25, White-crowned Sparrow; April 24 to May 29, Wilson's Thrush;* April 27 to May 21, Solitary Sandpiper;* April 27 to May 25, Nashville Warbler;* April 28, Bald Eagle;* April 28 to May 26, Swamp Sparrow;* April 29 to June 4, Black-throated Green Warbler;* April 30 to May 9, Cape May Warbler; April 30 to May 21, Ruddy Duck;* April 30 to May 26, Tennessee Warbler; May 1-21, Orange-crowned Warbler; 1-23, Black-and-white Warbler;* 1-28, Alice's Thrush; 2-27, Black-throated Blue Warbler; 2-30, Black-poll Warbler; 3-28, Parula Warbler;* 4, LeConte's Sparrow and Least Sandpiper; 4-18, Golden-winged Warbler;* 4-25, Magnolia and Blackburnian Warblers; 5-16, Bank Swallow;* 6-21, Willow Thrush; 6-26, Canadian Warbler;* 7, Kirtland's Warbler; 7-30, Wilson's Warbler; 8-23, Bay-breasted Warbler; 9-18, Blue-headed Vireo; 12, American Merganser; May 12 to June 8, Connecticut Warbler; May 13, Wood Duck* and Prothonotary Warbler;* 13-27, Olive-sided Flycatcher; 15, American Osprey;* 18, Philadelphia Vireo;* 18-27, Mourning Warbler;* 19, Harris' Sparrow, Belted Piping Plover*(?) and Forster's Tern;* 20-25, Yellow-bellied Flycatcher; 21, Yellow-headed Blackbird;* May 24 to June 5, White-eyed Vireo.*

Latest dates of departure of winter residents and early spring migrants: March 17,

*Summer resident in northern Illinois.

Northern Shrike (should have been included in the notes for February and March); April 7, Mallard* and Pintail Ducks;* 17, Herring Gull; 19, Fox Sparrow and Short-eared Owl;* 23, American Rough-legged Hawk; 25, Tree Sparrow; May 2, Purple Finch;* 5, Canada Goose* and Golden Plover; 7, Hermit Thrush; 8, Junco, Ruby and Golden-crowned Kinglets; 12, Sapsucker; 15, Sharp-shinned Hawk;* 16, Lapland Longspur; 19, Brown Creeper; 24, Ring-necked Duck.*

APRIL AND MAY BIRD-LIFE AT STOCKTON, CALIFORNIA†

BY LYMAN BELDING

BIRDS OF THE SEASON

April Migrants.—April 1-10, female Bullock's Oriole and increase of earlier arrivals, Black-chinned Hummingbird, Rufous Hummingbird, Ash-throated Flycatcher, Western Chipping Sparrow, Yellow Warbler, Black-throated Gray Warbler, Townsend's Warbler, Hermit Warbler, Pileolated Warbler; April 20-30, Black-headed Grosbeak, Lazuli Bunting, Louisiana Tanager, Cassin's Vireo, Least Vireo, Lutescent Warbler.

May Migrants.—Western Wood Pewee, Western Flycatcher, Little Flycatcher, Hammond's Flycatcher, Wright's Flycatcher, Western Blue Grosbeak, Russet-backed Thrush.

Most of the following are often met with during the spring migration: Northern Phalarope, Long-billed Dowitcher, Least Sandpiper, Red-backed Sandpiper, Western Sandpiper, Greater Yellow Legs, Yellow Legs (rarely), Western Willet, Spotted Sandpiper, Long-billed Curlew, Hudsonian Curlew, Black-bellied Plover, Semipalmated Plover, Snowy Plover.

The following abundant winter visitants leave us about May 1: Intermediate Sparrow, Golden-crowned Sparrow, Junco, Townsend's Sparrow, American Pipit. Most of the northern breeding Ducks and Geese leave us prior to May.

SUGGESTIONS FOR THE SEASON'S STUDY

Birds and Seasons.—Compare the preceding outlines of the characteristics of the bird-life of Boston, New York, etc., with their accompanying lists of April and May birds.

Migration.‡—Too much time cannot be spent in the field during the migration. If possible one should go out both in the early morning and late afternoon, visiting as great a variety of ground as opportunity permits. A knowledge of what birds to expect greatly increases the probability of seeing a species on or soon after its arrival.

Weather conditions should be observed as closely as the migration itself, and the charts issued by the Weather Bureau, at Washington, should be studied. The blooming of plants, shrubs and trees and the advance of vegetation in general, together with the appearance of various forms of insect life, calling of hylas, etc., should all be closely noted and these phenomena recorded with as much detail as the arrival of birds.

The record of each migrant should show when it was first observed, the number seen, giving, if possible, the sex, if in song on arrival, if migrating singly, in scattered companies or in flocks, if observed to migrate during the day. Succeeding observations of the same species should be entered with as much detail as the first one in order to ascertain its increase or decrease in numbers.

* Summer resident in northern Illinois.

† The notes here given refer to the country within a radius of fifteen miles of Stockton. These data being designed wholly for popular use, it has not been deemed necessary to employ the latest subspecific names.

‡ See also BIRD LIFE for February, 1901.

A form for record book, which has stood the test of many years' experience, is shown in part below. (See also, Merriam, Auk, I, 71; Stone, Auk, V, 194; Jones, Auk, XII, 117, 231, 237; Pyncheon, BIRD-LORE, II, 21; Hand-Book of Birds, p. 21).

PLAN OF PART OF THE FIRST PAGE

<i>April</i>	1901											
Date.												
Start.												
Weather.												
Temperature.												
Wind.												
Locality.												
Return.												
Remarks.												
Bluebird.												
Robin.												

PLAN OF PART OF THE SECOND PAGE

Cut this off.

If a ruled roll-call book cannot be secured, take a large blank book, measuring at least 8 by 10 inches, rule the first page as shown above, with a space at the left for the entry of birds' names, etc. Rule the second page as shown, and cut from its right side a strip equal in width to the space allowed on page 1 for names, so that when page 2 is turned the left-hand edge of page 3 will just meet the column of birds' names at the left-hand side of page 1, when the record may be continued without re-writing the column of birds' names. Treat page 4 in the same manner, when page 5 will meet the column of names. In this way the right-hand or free margin of each even numbered page, 6, 8, etc., may be trimmed until enough pages have been arranged to enter the records relative to "Date," "Start," etc., for a certain period. For example, if one's observations cover the spring migration, from March 1 to May 31, a period of 92 days, and if one could expect to go afield twice each day during this period, 184 columns or squares would be required

after the first column of names, that is "Date," "Start," etc. Knowing this, one may leave the needed number of pages before entering the second column of birds' names.

Such a record should begin first with a list of Permanent Residents following "Remarks"; then should come Winter Residents, and migrants may be added as they are observed. Of course as the season advances less pages should be left. When the migration is ended a new series of records should be begun, beginning with "Date," "Start," etc., then entering the Permanent Residents and after them the Summer Residents.

These roll books are easily kept and their contents form graphic records of the rise and fall of the migration, showing when a species was first observed, when it was most numerous, and, if transient, when it was last seen.

If possible the approximate number of birds seen should be given, and in recording other details noted above a simple system of abbreviations may be employed. For instance, a number enclosed in a circle implies that the birds seen were in a flock; S indicates singing; the signs, ♂ or ♀, male or female respectively, while an asterisk refers to your journal of the same date wherein you may enter some observation at length. Whatever system of abbreviations is adopted, however, should be fully explained in the opening pages of your roll book.

SUGGESTIONS FOR THE SEASON'S READING

Thoreau: 'Spring,' in 'Walden,' 'Early Spring in Massachusetts.' Burroughs: 'The Return of the Birds' and 'Spring at the Capital' in 'Wake Robin,' 'April' in 'Birds and Poets,' 'A Spring Relish' in 'Signs and Seasons,' 'Spring Jottings' in 'Riverby.' Torrey: 'A Bird-Lover's April,' 'A Month's Music' in 'Birds in the Bush,' 'A World of Green Hills,' 'Spring Notes from Tennessee.' Flagg: 'April' in 'A Year with the Birds.' Bolles: 'Land of the Lingering Snow.' Keeler: 'April in Berkeley,' 'Berkeley in May' in 'Bird Notes Afield.' Wright: 'A New England May-Day' and 'When Orchards Bloom' in 'The Friendship of Nature.' Crockett: 'April' and 'May' in 'A Yearbook of Kentucky Woods and Fields.' Parkhurst: 'April' and 'May' in 'The Birds' Calendar.'



What bird is this?

Field Description.—Length, 6.25 inches. Upper parts brownish; wings and tail darker, outer tail-feathers tipped with white; a whitish line over the eye; under parts whitish, with dark streaks.

The species figured in February is the Pine Finch.

For Young Observers

THE A B C OF BIRD-LORE

BY ELIZABETH HOPPIN LEWIS



is for *Auk*, now extinct, we are told.



is for *Blue-jay*, so handsome and bold.



is for *Cat-bird*, who mocks everything.



is for *Dick-cissel*, and how he can sing!



is for *Eagle*, who sees far away.



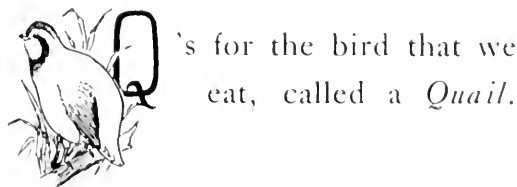
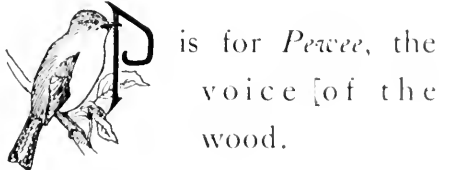
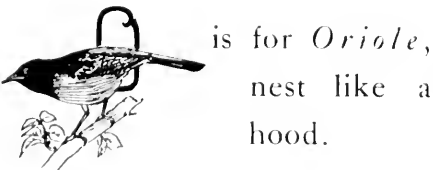
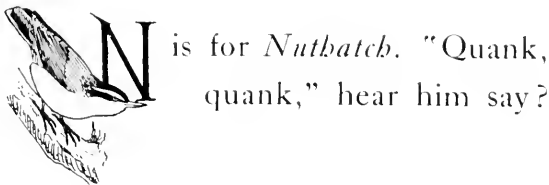
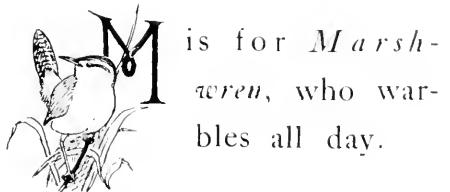
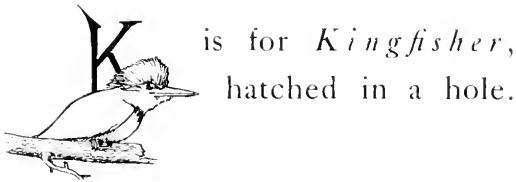
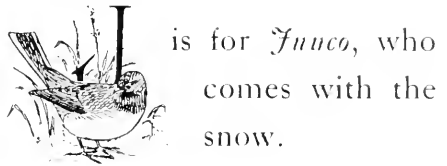
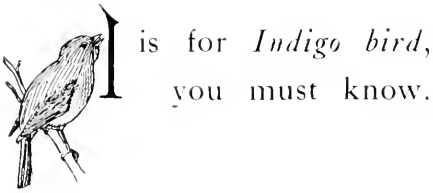
is for *Fly-catcher*, silent and gray.



is for *Goldfinch*, a gallant young man.



is for *Hawk*, who will hunt if he can.





is for *Redstart*
and *Robin* and
Rail.



is for *Sparrow*, too
many for choice.



is for *Thrush*, with a
glorious voice.



is the long Latin
name for a
Loon.



is for *Vireo*, voice
of high noon.



's for *Warblers*, the
gay butterflies.



is a *Gull*; if you
know him you're
wise.



is a *Yellow-*
throat, with a
black mask.



's a poor *Mourner*, who
makes life a task.

Notes from Field and Study

The Brown Creeper's Force of Habit

My office is on the fifth floor of a building in a thickly built up portion of Philadelphia, and not the sort of place where one would expect to see much in the way of birds. But late in the fall, while our winter birds were still coming from the north, a Brown Creeper, exhausted or temporarily disabled, was discovered one cold day huddled up in a bunch, lying on the window-sill against the sash of one of my windows.

The man who discovered it supposed it to be a kind of mouse, but when I slowly opened the window and gently placed my hand over its tiny form, its head popped up and it at once made itself known. It was apparently too weak to make much of a flight, but the warm room infused new life into the little creature, and after remaining on the window-sill a few minutes, he hopped to the end of the sill and climbed up the varnished sash to the meeting rail, where I saw he was attracted by a fly walking on the glass. He had forgotten his ailments, having been lured away by the appetizing dipter. As the fly kept out of reach, I volunteered assistance, and the Creeper took the dainty morsel from my fingers as contentedly as though he understood the situation as well as I did. Food was scarce at that time of the year, and but three or four flies could be found, all of which went quickly down the red lane.

Two or three hours later, the boys put on their coats and bid good-night, leaving me until the last. I had actually forgotten all about the bird, and would have gone home without it, had it not for the first time flown across the room and alighted on the lower end of my overcoat just as I was about to close the door behind me. He had evidently seen his friends vanishing, and had decided at the last moment to remind me that he would please like to have some more flies. Under the circumstances, I was his only source of supply, and this

remarkable intelligence so touched me that by the time he had climbed up to my shoulder I placed my hand over him again and decided to make him, if possible, a household pet.

All the way home I guarded my pocket with great care, and upon arriving there and liberating him from his close quarters, he seemed just as tame and natural as ever. I had not hurt him in any way, and he took small pieces of earthworms and flies from my hand without the least fear.

His natural habit of always flying downward and climbing upward in searching for food was most surprisingly illustrated, for just as in nature, he would fly across the room and invariably alight close to the bottom of the curtain, for instance, and then would make his way gradually to the top, looking for something to eat among the folds. Several times he alighted on my trousers, just above my ankles, and climbed all the way to the top of my head, only to drop off again to the table cover or one of the chairs.

The next morning I brought a stump from the woods, and with healthy vigor he pulled away at the decayed portions and extracted the larva, etc., that were hiding there.

One night I took him to see a friend, and when I let him climb up on to my neck in the car, a man behind exclaimed, "Say, there's a bug on your back!" He was just as much at home in my friend's house as elsewhere, and exhibited his characteristic flight, climbing up all the curtains, hunting for food as usual.

I kept him but three days; and partly because I had not the time to hunt insect food, and partly because I thought he would be happier free again, I opened the window and let him go. He flew immediately to a large pine on the lawn, where I soon lost sight of him.—Wm. L. BAILEY, *Ardmore, Pa.*

A Birds' Bath

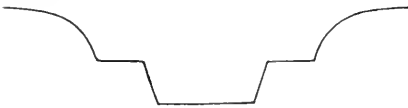
There is no better way to attract birds about our homes during the summer than to supply them with water for drinking and bathing.

The accompanying photograph shows a bath which evidently met with the approval of most of the birds in the vicinity of my



A BIRDS' BATH

house in the summer and autumn of 1900, it being patronized even by Screech Owls. It is made of bricks and cement and in cross-section resembles the appended diagram:



Boards may be used to form partitions, which should be filled with earth. The plants introduced were sagittaria, iris, yellow pond lily, wild rice, duckweed and water hyacinth.

The pond is filled with a hose and replenished as evaporation requires.—FRANK M. CHAPMAN, *Englewood, N. J.*

Buried Treasure

On February 10, 1901, I observed a rather amusing incident. The snow was nearly a foot deep here on that day and the weather had been quite cold for some time. I was walking through a small piece of woods in search of birds, when I noticed a commotion near an embankment where the snow had drifted to a considerable depth. On drawing near I found a large number of Chickadees, White-breasted Nuthatches and Downy Woodpeckers assembled, the former most in evidence. All the birds seemed much interested in something in the snow, for one after another would fly down, then back into the low trees, in the meantime keeping up a busy chattering. I went forward to examine the object of their curiosity and found that they had hollowed out a hole in the snow the size of a large bowl. I scraped the snow aside, but could find nothing unusual. My interference was strongly resented by the birds, who raised a great disturbance, several of the Chickadees almost flying in my face in their rage. I was finally obliged to leave without solving the mystery.

Just one week later I visited the place again. It had snowed since my former visit, but on reaching the spot I found a much deeper hole and the same flock of birds, reinforced by several Blue Jays and a pair of Red-bellied Woodpeckers. This time I made a closer examination and detected something yellow at the bottom of the hole which, on being brought to light, was found to be a piece of butter. More scraping revealed more butter, and when all the snow was cleared from the spot it was found that a large round hole had been made in the earth in which had been placed about fifteen pounds of good sweet butter. The stuff had evidently been placed there by thieves, but the birds had detected the plunder, and it was high living for the feathered inhabitants of the woods. I later found that the pair of Red-bellied Woodpeckers had carried about half a pound to a cavity in a large tree, which they were hoarding for future use.—W. O. DOOLITTLE, *Painesville, Ohio.*

Book News and Reviews

THE BIRD BOOK. By FANNIE HARDY ECKSTORM, Boston, U. S. A., D. C. Heath & Co., 1901. 12mo. Pages xii + 276. Ills. 56. Price, 60 cents.

We believe that the author of this book has accomplished the far from easy task of making a desirable addition to the literature of popular general ornithology. While she appears to be thoroughly familiar with what has previously been written and has often made use of it, her treatment of her theme is distinctly original. In other words, her book is not a compilation along well-worn paths, but an independent expression of opinion.

The book is designed for the primary teacher, and the author's estimate of the educational value of bird study shows in a few words such a comprehensive grasp of its potentialities that we are tempted to quote it. She says: "If we adopt bird-study as the representation of zoölogical science, as we seem likely to do, it must be not only because it is fairly illustrative of zoölogical principles, and because its materials are abundant and easily referred to, but because it is pleasurable to beginners.

"Bird-study, or any other special science, is justified in demanding an educational hearing if it contribute generously either to a knowledge of the principles and methods of science in general or to the training of the powers of observation." (Preface.)

The subject matter is somewhat unusual for a first book of birds' and seems to us to be better for young ornithologists than for young people whose interest in birds should be fed on simpler, more palatable food. The first 57 pages are devoted to water birds, few of which come within the range of a child's observation, with the object, it is said, of giving the student "some notion of the breadth of the subject." Part III, 43 pages, on 'Problems of Bird-Life,' is excellent, but, as before said, seems more suitable for ornithologists than

for beginners, such subjects as 'Zoögeography,' 'Subspecies,' etc., being somewhat advanced for the student who perhaps does not know a dozen birds. Part II, 'Structure and Comparison,' and Part IV, 'Some Common Land-Birds,' are admirable; an Appendix has sections on the zoögeographical divisions of the world, with a map of the chief divisions in North America, 'Hints on Observing Birds,' 'Hints on Identifying Strange Live Birds,' 'Certain Questions Answered' (e. g., Shall a school own mounted birds? Is there any substitute for collections?), and 'Lists of Books.'

The author's well-known experience as a practical ornithologist gives its due value to her work and ensures accuracy of statement. We note, however, one or two slips. Pigeons, for instance, are not the only birds that drink without removing the bill, Sand Grouse resembling them in this respect; nor is the eastern "Bronzed Grackle," a subspecies of the western bird; the Grackle of New England, except in the southern part, being the same as that of the Mississippi valley.

The pen and ink full-page drawings of birds are good only when the artist is indebted to Seton-Thompson or J. L. Ridgway, an indebtedness, however, which is not acknowledged.

Fortunately the value of the book does not depend on its illustrations, and we take pleasure in commending it most heartily to all bird students.—F. M. C.

BIRDS OF WESTERN NEW YORK. By ELON HOWARD EATON. Proc. Rochester Acad. Sci., IV, pp. 1-64, Feb., 1901.

This excellent paper contains brief sections on the faunal areas of western New York, a Bibliography, 'Migration and Residence' tables, an annotated list of the 297 species known to occur, and a 'Hypothetical List' of species which may occur.

The 'Migration and Residence' table graphically presents in a clear, simple and

effective manner the relative abundance of, and season of occurrence, of the species treated, and is well worthy of imitation. The annotated list tells of a species' manner of occurrence, and the character of the ground in which it is found. The author's long experience in the region and thorough grasp of his subject makes his work authoritative. The diversity of views, however, in regard to the breeding Shrike of Western New York has led him into the error of including both the Loggerhead and White-Rumped Shrikes. Doubtless the best way out of this difficulty is to accept Mr. Palmer's name of *migrans* for the intermediate New York and New England form. The hypothetical list would be improved by the exclusion of the Man-o'-War Bird, Masked Duck, Corn Crane, European Woodcock, Burrowing Owl and other species whose occurrence would be wholly accidental.

These criticisms are of minor importance, and the list will at once take its place as a standard treatise on the birds of the region covered.—F. M. C.

A YEAR BOOK OF KENTUCKY WOODS AND FIELDS. By INGRAM CROCKETT. Illustrated by the author. Buffalo, Charles Wells Moulton, 1901. 16mo, pp. 112; 4 full-page plates.

The rise and fall of a Kentucky year are here graphically depicted in twelve prose poems, one for each month. The author is evidently a passionate nature lover—earth, air, and water and all that in them is, appeal to him; but from the first bird note of spring to the last one of autumn, it is the songs of birds more than anything else that echo through his pages. We welcome this book from the south. Would that more of her sons were moved to tell the world of the beauties of their native land.—F. M. C.

PACIFIC COAST AVIFAUNA, No. 1. BIRDS OF THE KOTZEBUE SOUND REGION, ALASKA. By JOSEPH GRINNELL. Published by the Cooper Ornithological Club of California. Royal 8vo, pages 1-80; 1 map.

In this paper Mr. Joseph Grinnell presents the most important contribution to the life-histories of Alaskan birds that has appeared

in recent years. A short introduction giving the climate and character of Kotzebue Sound and its affluent streams, especially the Kowak river, on which most of Mr. Grinnell's work was done, is followed by field-notes, a bibliography, map and a check-list in which 150 species are recognized from this region, of which seventeen first appear in this volume.

That Mr. Grinnell was able between July, 1898, and July, 1899, to record 112 species from personal observation under the difficulties attendant on field-work in Alaska, testifies to his zeal as a collector, as do his annotations to his ability as an observer.

Pine Grosbeaks and White-winged Crossbills were found breeding the last of May, and the Alaskan Jay early the same month, all placing their nests between six and twelve feet from the ground in small spruces. The nests of all these were composed largely of spruce twigs; the Grosbeaks' were frail and lined with grasses, the Crossbills' closely felted internally with a black wool-like lichen, and the Jays a well-woven mass of grass, black lichens and feathers, evidently designed to retain as much warmth as possible in below-zero weather. The American Hawk-Owl was found nesting in an enlarged Woodpecker's hole, Short-billed Gulls in trees, and Bank Swallows in ground frozen almost to the point where the nests were situated.

The Shrike of Alaska is separated from *Lanius borealis* as *L. b. invictus* on the basis of larger size, greater pallor and broader white markings, but all the measurements given, with the possible exception of the wings, may be duplicated with the New England specimens.—L. B. B.

The Ornithological Magazines

THE CONDOR.—The opening number of the third volume of 'The Condor' contains ample evidence of the activity of the Cooper Ornithological Club. Among the articles of general interest are Bowles' 'Bird Notes from Tacoma Gulches,' Silloway's 'Flat-head Lake Findings,' Atkinson's 'Nesting Habits of the California Shrike,' and Mc-

Gregor's 'Dichromatism in the Genus *Carpodacus*.' Grinnell's 'Record of Alaskan Birds' in the collection of Stanford University, adds the Wheatear (*Saxicola arncliffei*) to the list of birds of the Pribilof Islands.

Four species or subspecies are described as new, viz., a Leucosticte and a Savanna Sparrow, from Kadiak Island, a Song Sparrow from Sanak Island, Alaska, and the form of Red-breasted Sapsucker which occurs in southern California. Constant differences in closely related birds are always worth recording, but the mere description of supposed new species is not necessarily the most useful form in which to present the results of a critical comparison of specimens. Certainly in one of these cases there is an indication of superficial examination of the literature, and the adoption of a questionable method of fixing the type of an old species. An innovation of very doubtful value is the publication of the first (and we hope last) of a series of caricatures. Such cuts are likely to be misconstrued, even though published in a friendly spirit, and are certainly out of place in a journal of this character.

The Cooper Club is to be congratulated on its good work for bird protection and the firm stand it has taken in behalf of better legislation for non-game birds. Its efforts will be appreciated by bird lovers in all parts of California, in case the bill which the club has prepared becomes a law at the present session of the Legislature.—T. S. P.

THE OSPREY.—It is so long since we have seen 'The Osprey' that we are glad to welcome the first two numbers of the current volume, dated, respectively, September-October, 1900, and November-December, 1900, which have appeared since our last issue went to press. Each opens with an original article by Paul Bartsch; one on the birds found in and about the wild rice (*Zizania*) marshes in the vicinity of Washington, and the other a record of the winter birds seen on 'A Trip to the Zoölogical Park.' He brings out many points of interest, but personally we wish he would keep nearer to the earth, and in his exuber-

ant enthusiasm not allow his expressed thoughts to soar too far above commonplace narrative.

The learned editor continues his valuable sketch of 'William Swainson and His Times,' and in the second number gives us a paper on 'Correspondence of and about Audubon with Swainson.' A continued article on 'The Osprey, or Fishhawk; its Characteristics and Habits,' which will appear in at least three numbers, is the beginning of a series of biographies of American birds by Doctor Gill. There are, also, interesting papers by Milton S. Ray, Verdi Burtch, Addie L. Booker, and Percy Shufeldt, on 'Observations in Central Monterey County;' 'A Grosbeak Colony;' 'The Mockingbird in Western Kansas and its Environments;' and 'Notes Regarding the Migration of Birds as Observed at the Washington Monument.'

We should like to see the letter-press and illustrations brought up to a higher standard, and have it explained why, with such a constellation of renowned editors, we are able to find a page disfigured with a dozen or more typographical errors.—A. K. F.

THE WILSON BULLETIN, No. 33.—In this number Lynds Jones and W. L. Dawson record their ornithological observations made during a two months' trip of 7,000 miles through fourteen states and territories. There is much of interest in the itinerary, as well as in the twenty-seven separate lists which are records made at certain points or between given places on the railroads traversed. Watching birds from the car windows is a fascinating pastime, and one which we have followed for over twenty-five years. Still it has its drawbacks and vexations, in that it is not justifiable to publish records of unusual occurrences made under such uncertain conditions, on account of the chance of error. From the standpoint of geographic distribution it is unfortunate, though probably through no fault of the authors, that the trip was not undertaken earlier, and thus enable the observations to be more nearly an index to breeding species in the localities visited. We heartily commend this number.—A. K. F.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

'THE OUTLOOK' for December 1, 1900, published a series of ten short articles on the ten books which have most influenced the thought and activities of the past century. The writers included James Bryce, Edward Everett Hale, Henry van Dyke, Arthur T. Hadley, Thomas Wentworth Higginson and other representative men of the day, each of whom presented a list of the ten books produced during the past one hundred years, which, in his opinion, had been most potent in the advancement of mankind.

We do not propose to analyze the lists given or even to mention the works contained in them, but we cannot refrain from calling attention to the fact that the only book given in each of the ten lists was Darwin's 'Origin of Species.'

What an unparalleled tribute, this, to the patient, tireless, conscientious, gentle naturalist, whose labors, in spite of continuous ill-health and discouragements, which would soon have disheartened a less courageous seeker after truth, are thus virtually declared to be the dominant factor of the nineteenth century in the elevation of his race.

With what satisfaction the naturalist reads the estimate of these ten eminent men, not one of whom is a biologist, of the value

to humanity of 'The Origin of Species'! No matter how humble be one's part, how insignificant one's achievements, what an inspiration it is to feel that one is working at the same structure of which Darwin laid so stable a foundation!

DURING the past few months the legislatures of a large number of states have paid unprecedented attention to proposed laws designed for the protection of non-game birds. The whole movement aptly illustrates Thoreau's remark, "What a wedge, what a beetle, what a catapult is a man in earnest; what force can withstand him?"

The man, or rather men, in this case, are William Dutcher, representing the committee on bird protection of the American Ornithologists' Union, and T. S. Palmer, of the Biological Survey of the United States Department of Agriculture, in charge of the enforcement of the Lacey law. It is due to the energy of these gentlemen, and the support of Audubon and other societies, as well as of individuals, which they have enlisted that the model A. O. U. bird law, with but slight modifications, has been passed by the legislatures of Maine, New Hampshire, Delaware, Wyoming and in the District of Columbia. The same admirable law, or amendments to existing laws, have been introduced into the legislatures of Massachusetts, Connecticut, New Jersey, North Carolina, Michigan, California and Oregon, and are still (March 16) under consideration.

The New York state law has been so amended that the "web-footed wild fowl" of the old law are now defined as "Ducks, Geese, Brant and Swan," thereby excluding Gulls, Terns and Grebes from the list of birds which may be legally killed between certain dates and consequently bringing them under that section of the law applying to birds which may not legally be killed or possessed at any time. The passage of this amendment is of far-reaching importance. Supported by section five of the Lacey law, its enforcement means that the plumage of Gulls, Terns and Grebes cannot be sold in New York state, while its influence on the trade in the feathers of these birds will doubtless be felt throughout the country.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Notes

The work of a far-seeing Connecticut gentleman, Mr. E. Knight Sperry, in securing the coöperation of farmers in allowing their lands to be, without interference to cultivation, banded in retreats where, in addition to protection, game birds may find food in the hungry season, has suggested a work on similar lines that may be done for non-game and song birds and at the same time give an added field of labor and interest to all protectionists.

This topic will be fully discussed in the next issue of BIRD-LORE.

Acting on a suggestion made in this department in December, 1899, Dr. T. S. Palmer has kindly sent BIRD-LORE the following admirable statement of the legal status of birds.—M. O. W.

Some Fundamental Principles of Bird Laws

BY T. S. PALMER

Adequate laws necessarily form the foundation of effective bird protection.

But it is not enough merely to enact laws; they must be enforced and doubtful points must be settled by the courts. The bird laws of the United States, usually called game laws, are of two kinds (*a*) State or local laws and (*b*) Federal laws.

State laws prescribe the kinds of birds which may or may not be killed, the time and manner in which they may be taken, and the purpose for which they may be captured. Thus the Illinois game law defines game birds and prohibits the killing of other birds at any time. In providing for game it fixes a definite season for shooting quail and ducks, but forbids the killing of ducks at any season from a sail boat, with a swivel gun, or after sunset; furthermore it declares that it shall be unlawful to capture quail in the State for sale, or to ship to other States except under license. In all these matters the State is supreme and violations of its laws are tried in the State courts.

The Federal law, commonly known as the Lacey Act, or the Act of May 25,

1900, deals merely with the shipment of birds from one State to another and the importation of birds from foreign countries. It is general in its provisions and does not mention special birds, but nevertheless supplements the State laws very effectually. Thus if a State prohibits the killing of any particular bird, the shipment of the bird out of that State is an offense under the Federal law and the shipper, carrier, and consignee, each or all, may be prosecuted in the United States courts.

Some of the principles on which these laws are based may be stated very simply as follows:

(a) STATE LAWS

1. All wild birds are the property of the State, hence:
2. Killing birds is a privilege, not a right.*
3. State ownership of birds carries with it the right to impose restrictions, hence:
4. Birds may be captured, possessed, transported, bought or sold only under such conditions as the State prescribes.
5. Land-owners have no more right to kill birds out of season than other persons, unless the law specifically grants this privilege.

(b) FEDERAL LAW

6. Birds are protected by the Federal law only when shipped from or into a State which protects them by a local law.
7. Birds killed or shipped contrary to law in any State cannot lawfully be transported to other States.
8. Birds brought into a State become subject to its laws in the same manner and to the same extent as birds produced in that State.
9. Packages of birds shipped from one State to another must be marked so as to show the name of the shipper and the nature of the contents.
10. Foreign birds can be imported into

*Michigan (Acts of 1893, p. 312) and Minnesota (Laws of 1897, p. 413) declare that birds protected by law shall always remain the property of the State. When their killing is not prohibited, they may be used in the manner and for the purposes authorized, but not otherwise.

the United States only under permit from the U. S. Department of Agriculture, and birds declared injurious by the Secretary of Agriculture cannot be imported into the United States or shipped from one State to another.

Simple as these propositions may seem, they have been the cause of much discussion. Most of them, however, have been passed upon by the higher courts and are no longer open to question. The right of the crown to all wild game was established in England years ago and the State ownership of game now clearly stated in the laws of Colorado, Illinois, Michigan, Minnesota, Texas and Wisconsin is an inheritance from the English common law. The Supreme Court of the United States has upheld this claim as well as the right of a State to prohibit killing game for sale (125 U. S. 465), or export (Geer v. Connecticut, 161 U. S. 519)*.

Possession of birds out of season was long regarded merely as evidence of illegal killing, but is now made an offense punishable by fine in several States. The right of a State to make laws regarding birds imported from other States has been vigorously contested and has been variously decided by the courts, but the question has now been practically set at rest by the passage of the Lacey Act. Some States have hesitated to encroach upon the rights of the individual, as shown by the exception in favor of land-owners in the section of the Delaware law relating to insectivorous birds, and also by the provisions in the laws of Illinois, Kansas, Kentucky, Louisiana, Ohio, and South Carolina, which permit a person to kill birds found destroying fruit on his own premises. On the other hand, Massachu-

*Those who are interested in practical bird protection should read the decision of the Supreme Court in Geer v. Connecticut, which is one of the most comprehensive decisions on game law ever written. It has been reprinted in full in 'Forest and Stream,' XLVI, pp. 209-211, March 14, 1896, and also in 'Game Laws in Brief,' I, pp. 114-130, April, 1899. A brief but excellent popular review of 'Game Laws' by Chas. E. Whitehead may be found in 'Hunting in Many Lands' (Boone and Crockett Club series) New York, 1895.

sets declares that game artificially reared shall be the exclusive property of the person raising it, but forbids the owner to sell it for food during close seasons. Illinois exacts a \$10 hunting license from non-residents, even though they lease or own a game preserve within the State, and Wyoming in the famous 'Race Horse case,' carried up to the Supreme Court in 1896, has successfully maintained her right to compel Indians to obey her game laws (163 U. S. 504).

During the last fifty years, the sentiment in favor of bird protection has developed rapidly. Many laws have been enacted, amended, and sustained by the courts. That these laws are still imperfect is partly the result of carelessness and partly of strong opposition due to ignorance or selfishness. Our game laws, unlike those of Europe, are maintained for the good of the people as a whole, not for the benefit of any one class, and their enforcement depends very largely on a general appreciation of the principles upon which they are based.

Reports of Societies

MASSACHUSETTS SOCIETY

The Massachusetts Audubon Society is now five years old. There are abundant proofs that it has been an important agent in increasing an interest in the study and protection of birds; and it is rapidly acquiring an equipment of permanent service to bird students. While there are many friendly critics who protest that our methods are too general and that we lack aggressive force, we are convinced that the society has made for itself a firm place in the affections of a large number of people, and is already a respected institution of the state.

Last winter the society took active measures to aid the passage of the legislative bill for "making Sunday close season for birds and game." This winter a bill was presented to repeal this very beneficent law; again the society made earnest effort to defeat the measure. The society has also done excellent duty in influencing the legislature, affecting two

other important bills relating to bird protection.

Our register now numbers 3,334 persons: of these 42 are life associates, having paid \$25; 530 are associates, paying \$1 annually, and 502 are junior members, persons under sixteen years, and having paid 10 cents; the others are life members, having paid 25 cents.

We have issued thirty-three different publications; many of these have been freely distributed throughout the country; other publications dealing with bird protection we have secured by purchase or gift for distribution. Our two Audubon Calendars have been favorably received; a third is in preparation with original drawings by the same artist; this will be issued in time for the 1901 Christmas sales. We issued the second chart of common birds last August. The sale of the charts had not been as large as was anticipated, probably because we have not been able to properly advertise them.

Last winter the society arranged with Mr. Frank M. Chapman to give his lecture "Bird Studies with a Camera." His large audience greatly enjoyed the lecture, the proceeds of which added to our treasury. This winter the society secured Mr. Ralph Hoffmann for a course of six lectures; his subjects are, Winter Birds; Early Spring; The Month of May; Nesting Time; Summer Ornithology; Birds and Man. The lectures are well attended by an appreciative audience. We expect that a lecture course will be an annual feature of the societies' work.

February 1, of this year, our traveling lecture started on its journey. The lecture is entitled "An Invitation to Bird Acquaintance," and was written and donated by Mr. Hoffmann. A lantern and fifty slides make up the outfit. The slides were made from negatives presented by Messrs. Herbert K. Job, Lyman Underwood, Herbert W. Gleason, James H. Emerton, Robert S. Morrison. Already it has visited, or is booked to visit, over fifty schools, clubs and societies. The lecture is sent free to any responsible person in Massachusetts who guarantees its safe return and will

pay all expense of carriage. We are obliged to refuse, for the present, all calls for the lecture outside of Massachusetts. Without doubt a traveling lecture should be a part of the equipment of every Audubon Society.

A friend has agreed to give the society \$50 annually, to be devoted to prizes to junior members. This year the committee have decided to award it in four prizes: viz: \$20, \$15, \$10, and \$5, for the best drawing of a Bobolink in full summer plumage.

It gave us pleasure last autumn to welcome the first conference of state Audubon Societies, which was held at the Agassiz Museum, Cambridge, the afternoon of November 15. Delegates were present from Connecticut, Illinois, Massachusetts, New Hampshire, New Jersey, Pennsylvania, District of Columbia, New York, Rhode Island and West Virginia. Mrs. William Brewster and Mrs. Frank Bolles entertained the delegates and officers, with prominent members of the A. O. U., at receptions on the evenings of November 12 and 14. Mr. Chapman invited the societies to meet in a second conference November 11, 1901, in New York city.

There are many problems that the Audubon Societies have in hand that can be solved only by persistent and united effort of all the state societies. A committee has been chosen to arrange for a national federation of the societies, and a full attendance at an annual conference by delegates from all the societies would, in a few years, consolidate and strengthen the work and raise it to a powerful position throughout the country.

HARRIET E. RICHARDS, *Sec'y.*

Meeting of the New York Society

At the annual meeting of the Audubon Society of New York state addresses were made by Charles R. Skinner, State Superintendent of Public Instruction, T. S. Palmer, William Dutcher, and Frank M. Chapman.

Mr. Skinner's address on "The Educational Value of Bird Study" showed a thorough appreciation of the pleasure and the mental and moral profit which may come from an acquaintance with the birds

about us. He said "the value of any study is the use we make of it," and after expressing his belief that a practical education which would fit us to enjoy nature as we daily come in contact with it was of more importance than special or technical training in certain details, added, "I believe it to be more essential to the happiness of our children to teach them to know our native birds, flowers and trees than to tell them stories in Latin and Greek of events that happened 2,000 years ago."

Dr. Palmer presented an admirable review of the history of bird laws in this country and explained the powers of the Lacey Act, particularly in its relation to state laws. Contrasting present conditions with those which prevailed at the opening of the nineteenth century, it was shown that the only bird law then in force in New York state was one protecting Heath Hens, Ruffed Grouse, Bob-White and Woodcock on Long Island and in New York county, while now scarcely a state or territory was without laws designed to protect song, as well as game birds.

Mr. Dutcher spoke on the subject of practical bird protection, and illustrated its results, as well as his remarks, with a series of views from nature made by himself on the coast of Maine in July, 1900, while visiting the colonies of Herring Gulls which were under the protection of wardens employed through the Thayer Fund.

Mr. Chapman, in proof of the work accomplished by the Audubon Societies, compared the fashions of fifteen years ago, when our native song birds could be seen on almost every other hat, with their practically complete absence today. He also attributed the present wide-spread interest in bird study largely to the efforts of the Audubon Societies.

The Audubon Conference Committee

Dr. C. S. Minot, presiding officer of the first Audubon Conference, has appointed as a Conference Committee for the joint meeting of the Audubon Societies to be held in New York city, in November, 1901, H. C. Bumpus, F. M. Chapman, and Ralph Hoffmann.



LANDLORD AND TENANT

(See page 90)

Bird = Lore

A BI-MONTHLY MAGAZINE
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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. III

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No. 3

A Bewildered Phœbe

BY JOHN BURROUGHS

With photographs from nature

I HAD a good illustration last summer of how limited the mother-wit of a Phœbe bird is when new conditions and surroundings confront her. A pair of these birds had annually built their nest in a little niche in a ledge of rocks near my 'Slabsides,' or rather several years ago they built a nest there, and as there was no room for a second nest, each subsequent spring they had repaired and refurnished the old one and reared their brood in it. It was in a lonely place, at the mouth of a deep recess in the ledge, and I thought quite secure from all creeping and climbing enemies of the birds. A thick growth of small trees formed a screen in its front, to hide it from the eye of winged marauders, and no snake or squirrel could reach it from the rock itself.

When the nest contained three or four eggs I allowed a young friend of mine to take one for his collection. This intrusion seemed to invite disaster, for in less than a week the eggs were all gone and the birds had deserted the place. A new stone house had been built upon the rocks above me, with a piazza all around it, covered by a continuation of the main roof down the required distance. After much inspecting of this piazza the birds concluded to build a nest upon the plate beside one of the rafters. Now this plate was about thirty feet long and there were ten rafters notched upon it, and hence ten places exactly alike. The bird selected the fourth rafter from the end nearest the woods, and began her nest upon the plate beside it. She was in a great hurry and worked 'on the jump,' so to speak. She got her mortar in the ditch near my cabin. One morning I watched her for some time. She made a trip every minute carrying her load up a steep grade about one hundred yards. The male looked on and cheered her, but did not help. He perched upon a dead sunflower stalk near the ditch, flirted his tail, and said, or seemed to say, 'Go it, Phœbe, you are doing well; you are

the wife for me.' Every trip the mother bird made he would accompany her a short distance and then return to his perch.

As the nest-building seemed unusually prolonged, I went up one morning to the new house to see how matters were progressing. Instead of one nest I found five in process of construction. Some had only the foundation laid, others were an inch or two high, and one was three-fourths finished. I sat down to see what it all meant. Presently the eager builder came with her beak loaded and dropped down upon one of the nest foundations. She seemed to hesitate a moment, as if she had a suspicion that something was wrong, and then put down her material and flew quickly away. The next time she struck the nearly finished nest and



PHOEBE ON NEST

put down her load without hesitating. I watched her for half an hour and soon saw how it was with her—why she scattered so. I concluded she was misled by the sameness of the rafters—they were all alike, and whichever one she chanced to hit in her hurry, there she deposited her mortar. She had been used to a ledge where there was but one building site; here there were half a dozen or more, with no perceptible difference between them. So I hit upon a plan to concentrate her—I put blocks of wood or stones in all the nests but one and watched the result. When now she came upon these strange obstacles she would hover about for a moment until she discovered the largest and unincumbered nest, when she would alight upon it and leave her load. She then soon took the hint, finished the one nest, laid her second set of eggs and went forward with the incubation. But the evil fates still pursued her. One

morning the nest was empty. Whether the mother bird, too, was carried off is not known. She was not again seen about the place.

The art of the bird in the new site was at fault in more than one respect; the moss that served to conceal her nest upon the gray mossy rock only emphasized it and made it conspicuous upon the new yellow timber.



A PHOENIX'S NESTING SITES

The Wood Thrush

He has a coat of cinnamon brown,
 The brightest on his head and crown,
 A very low cut vest of white
 That shines like satin in the light,
 And on his breast a hundred spots,
 As if he wore a veil with dots;
 With movement quick and full of grace,
 The highbred manner of his race;
 A very prince of birds is he
 Whose form it is a joy to see.

And *music* — was there ever heard
 A sweeter song from any bird?
 Now clarion-like, so loud and clear,
 Now like a whisper low and near,
 And now, again, with rhythmic swells
 And tinkling harmony of bells,
 He seems to play accompaniment
 Upon some harp-like instrument.

GARRETT NEWKIRK

Bird-Nesting with Burroughs

BY FRANK M. CHAPMAN

With photographs from nature by the author

WHEN two men whose combined years closely approach five-score can go a-bird-nesting with an enthusiasm which knows no decrease, and count mere discovery a sufficient reward for hours of searching, the occupation is evidently worthy of investigation by every boy who would prolong his youth.

I say boy advisedly, for the bird-nesting habit is not to be acquired in later life, and, indeed, had better never be acquired at all if its object be the taking of the nests and eggs. One does not search for a rare or beautiful flower to uproot and destroy it, but to admire it, and to cherish the memory of its perfections until, with returning spring, it renews itself and our delight in its existence.

Bird-nesting, then, does not mean egg-collecting. The latter holds no antidote for age, but loses its powers as gratified desire checks species after species off the list, or increasing years bring a realization of its folly.

Your true bird-nester values his good fortune too highly to rob the nest and himself at the same time. The discovery of a bird's nest is the discovery of a bird's home with all the fascinating possibilities attending the study of a bird's home life. It is an event. One never forgets the circumstances attending the finding of any but the commonest birds' nests. The species then becomes the individual. One may claim an actual acquaintance in the bird world and perhaps establish personal relations with some feathered neighbor, whose family affairs become matters with which we are intimately concerned. Witness Mr. Burroughs' story of his Phœbe neighbor in the preceding pages.

Furthermore, that almost universal heritage, the hunting instinct, finds a natural outlet in bird-nesting. The farmer's boy who hunts hens' nests just to triumph over some particular fowl whose eggs have long defied search, exhibits in primitive form the motive which impels one again and again to look for the nest of a more or less common bird whose home has been discovered many times before. And, finally, as Mr. Burroughs has said, "Bird-nesting is by no means a failure even though you find no birds' nests. You are sure to find other things of interest; plenty of them."

Perhaps, after all, this is the true secret of the perennial charm of bird-nesting. The discovery of the nest is only the crowning event of a quest which has been filled with pleasant incidents. Certain it is that in the outing here briefly described there were "other things of interest" besides birds' nests, and "plenty of them," too. First among them was



HUMMER ABOUT TO FEED YOUNG

yield results of unusual interest or scientific value, and I have nothing more important to record than the mere joy of seeing and discovering objects which never fail to excite a bird-lover's enthusiasm; with the added satisfaction of being able, in some instances, to picture far more graphically than could be done with pen alone, the scenes from bird-life which are here presented.

The difference between casual and continuous observation is eloquently illustrated by our comparative knowledge of the first bird we visited—the Phœbe of whom Mr. Burroughs writes in the preceding pages. To me she was interesting simply as a Phœbe

the presiding genius of 'Slab-sides': one could not imagine fitter companion with whom to go a-nesting; for be the paradox especially noted that the enjoyments of nest-hunting are doubled when you halve them.

Then there was 'Slab-sides' itself, ideal haunt for man and bird, and round about were inviting wooded hills, with here and there cultivated valleys between them, and, not far away, fields and orchards.

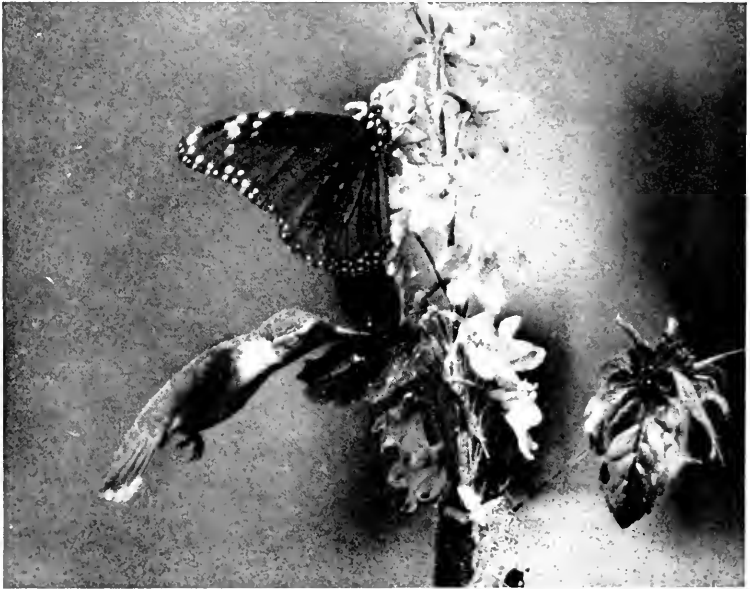
Through these pleasantly varied surroundings, on the morning of June 16, 1900, we wandered, visiting old acquaintances as well as searching for new ones. It was not to be expected that a passing tour of observation and investigation should



HUMMER FEEDING YOUNG

who had occupied a new nesting site the first season it was available and already had become so accustomed to man that she permitted herself to be photographed at short range; but how little I knew is evident on reading Mr. Burroughs' history of her season's experiences. Doubtless he could give similarly interesting accounts of other of his bird neighbors to whom he introduced me that day and the next, and whose portraits I present with only passing comment.

The Hummer, for instance, who, with rare consideration for the needs of bird photography, had placed her nest in the low sweeping limb of an apple tree (see frontispiece), was an old acquaintance of his,



HUMMER FEEDING

and no detail of her domestic affairs, from the building of the nest to the appearance of the young, had escaped him. Acquaintance, I say, rather than friend, for in spite of the fact that her nest was within a few feet of a pathway, the suspicious little creature invariably darted from it whenever any one approached to within twenty feet of her. However, she returned in four or five minutes, sometimes alighting and settling in the nest as though with one movement, at others perching on its edge when the two surprisingly short bills of her half-fledged young could be seen projecting slightly beyond the rim of their downy home. This pose preceded what Mr. Torrey has so well described as the "frightful looking act" of feeding, of which the accompanying picture shows the attitude assumed by the parent.

Just at this point I take occasion to introduce a picture of a Hummer poised before a flower made later in the season, but which serves very well to represent the appearance of Mr. Burroughs' bird while visiting his honeysuckles gathering food for her young. It will be observed that the filmy halo, constituting the wings of the Hummer in flight, does not appear in this picture, and nevertheless it was made, if my focal-plane shutter scale does not prevaricate, in less than a five-hundredth part of a second.

On one occasion we observed another Hummer in the vicinity, a bird that flew directly up to the one on the nest, and evidently looked



HUMMER BROODING YOUNG

her straight in the eyes, but for so small a fragment of time that we do not know whether it was a male or female. At any rate, the bird seemed to be quite familiar with the air-line to the nest, though, as Mr. Burroughs said, it is possible that Hummers may have an eye for Hummers' nests.

Fully as unapproachable was a Flicker, who, when we tapped gently at the base of her home in an old cherry stub, left the exit above with a precipitation defying the speed of a lens shutter. While technically a failure, the picture of her hasty departure, nevertheless, forms an interesting study in the use of the wing in flight. It will be observed that, although a third of the bird still remains in the hole, the wing

is extended to a surprising degree and is already in motion, as is shown by the failure of the lens to record the outer primaries while securing, with some detail, an outline of the secondaries. Indeed, the evidently much higher speed with which the primaries were being moved, together



FLICKER LEAVING NEST-HOLE

with the space shown in the picture between the outermost secondary and innermost primary, suggest the possibility of an independent movement of the distal portion of the wing. A close examination of the negative shows that the outer primaries are spread out fan-like to such an extent as to be in contact only at their bases. Profiting by experience, this bird subsequently left her tree before one could approach near enough to plant a camera.

The following morning was devoted to securing the picture of a Scarlet Tanager, whose home had been discovered by a good type of the all-seeing farmer's boy. Neither conditions of location, site, or light were favorable, and after the camera had been fastened in the apple tree which the birds had selected for a home, it was found necessary to build a blind of bushes beneath a neighboring tree, whence the photographer could not see his subject. From a distance, therefore, with the aid of a glass, Mr. Burroughs kept watch and gave word when the exposure was to be made. The results, with one exception, demonstrated that the photographer's point of view is not always his camera's, only one

of several pictures showing the bird clear of the surrounding leaves. The male proved to be the braver of the two and, to our surprise, visited the nest more frequently than did his mate.

To find a nest is one thing; to find one that can be photographed quite another; so I may only mention the House Wren who lived well within the gable of Mr. Burroughs' study at Riverby, the Wood Thrush composedly incubating in her nest on a high maple branch stretching across the driveway at her landlord's threshold, and the Orchard Orioles, who, with rare discrimination, chose the ball of leaves at the top of a recently transplanted maple sapling.

It should, unfortunately, be added that to photograph a nest is but one step in the process of securing a picture of it. The verdict of the dark-room is not always a favorable one, and there is left only the possibility of a new trial. Of this side of bird photography perhaps the less said the better. It may, however, be set down as a result of a patience-testing experience in securing two exposures on an Indigo Bunting feeding her young that it is never advisable, at least in bird photography, to make more than one exposure on the same plate!



MALE SCARLET TANAGER ABOUT TO FEED YOUNG.

A Sudden Friendship

BY ANNIE TRUMBULL SLOSSON

Author of 'Fishin' Jimmy,' etc.

IT was at Ormond, in Florida, on a summerlike day in February. I was at dinner in the early afternoon, when a friend came in and laid something on the table before me. It was something soft and fluffy and blue—a tiny bird, and seemingly a dead one. It had just been picked up from the floor of the piazza under a window, against the glass of which it had evidently flown.

It was a Blue Yellow-backed or Parula Warbler, an exquisite little creature. I had never seen one of this species so near, and wished to examine it closely, so I placed the pitiful little body, with its tiny curled-up claws and half-shut, dull eyes under a glass finger-bowl near me and left it there to await my going to my room. A few minutes later as I took the bird in my hands I thought I felt a faint throb of life. I hastened to my room, but before I reached it the little body was quivering and stirring perceptibly. I sat down by my window, holding the bird, and gently smoothing the soft blue feathers. Very soon the eyes brightened, opened wide, and the little beauty raised itself upon its feet and looked up at me. It did not seem frightened, but thinking it was still dazed and half unconscious and would be alarmed at my presence when fully aroused, I put it quickly and gently down upon the sill of the closed, sunshiny window, and left it. I always begin my friendships with what are called the lower creatures by letting them quite alone. It is not a bad method to use with certain higher beings; but this is irrelevant. It was a very warm, enervating Florida day, and I had been out all the forenoon, so I threw myself down upon the lounge with a book. But, of course, I kept an eye upon my new acquaintance, and the bird kept its eye upon everything. It tapped the window-panes with its bill, surveyed the landscape without, turning its head from side to side, then looked about the room. From the window-sill it hopped to a table near by and began its investigations, examining with apparent curiosity and interest each object, pecking softly at the books and pictures. Then it threw back his head and looked up at the white ceiling. This was so unlike the blue depths overhead in his old life that it seemed to puzzle him. After a long, curious look, he soared towards it, fluttered near it for a few seconds, then flew to a cornice over the door and perched upon it. There he stayed, like the Raven of poetry, "just above my chamber door." For a full half hour he rested there, pluming and preening his feathers, sometimes pecking at or tapping the wall with his bill, often, very often, looking across at me as I lay watching him. By

and by a fly came by and lighted near him. He darted at it, missed it, and returned to his perch. He was hungry, and I am given to hospitality where birds are concerned, so I looked about for proper food. Catching a fly upon the window, I laid it upon the outside of my butterfly net — always near at hand — and held it up by the long handle, very cautiously and slowly, towards the bird. When it was within his reach I waited, silent and breathless. You bird people know the feeling, that suspense, that mingling of hope and fear, when one is trying to win the shy heart of a bird. I need not have been afraid. He was not; a glance at the fly, then one at me, and he reached out his little bill and took the food. I drew a long breath of relief. Then I repeated the process. Again and again I caught a fly and held it up for my little friend. For he was a friend, even then, though I did not know how close a friend until later. At last, as I was standing at my window watching for another morsel for my guest, there was a flutter of wings, a breath of air on my cheek, and the jewel of a bird, a sapphire surely, was on my shoulder. I scarcely breathed or moved. But, again, I need not have feared. Turning his pretty head, he looked at me with his bright, soft eyes, then touched my cheek with his bill.

He was mine; I had won him. Whatever had been his old world, his old friends, he had waked up into a new life, and I was a part of it; the best part of it, I think, for from that minute he was a friend and lover. In all my life I have never had so close a bird friend; he took food from my hands, he nestled against my cheek and sat upon my shoulder. At first I was very cautious, for fear of frightening him, but I soon found there was no danger. So I held him gently in my hand and examined the plumage; the blue feathers with a sort of whitish, misty bloom on them, the yellowish patch on the back almost hidden until I parted the outer feathers to see it, the creamy breast with just the suggestion of a brownish band across it, and the white spots on tail feathers. I am sure few, if any, lovers of birds ever had such opportunity of studying closely the living Parula. I grew bolder as I saw his boldness, and tried little experiments with my new friend. I shook him from my hand, pushed him gently away from me, refused him food or caresses; but he came back to me, pecked my hands and face, pulled at my hair with his beak, crept into my half-shut hand and nestled there. All that soft, warm afternoon we were together and in closest intimacy.

As the sun went down across the Halifax river, but before it had disappeared from sight, the bird was suddenly missing. For some minutes I searched for him in vain. At last I found him. There was a pot of English Ivy on one end of my mantel. On the earth in the flower-pot under the sheltering ivy leaves was a little ball of blue down, — my visitor with his head tucked under his wing, asleep. It was bed-

time and he had retired, going to sleep as peacefully, as trustingly as if in his own nest among the hanging moss. I could not leave him there, for I wanted to open my window before I left the room for the evening, so I made a cosy bed-room of my wicker scrap-basket and placed him in it. As I took him out of bed very gently he made a faint, protesting, drowsy little noise, a chirp or peep; the only sound I ever heard him utter. When I came upstairs two or three hours later, I looked in at my little friend and found him fast asleep. But at dawn he was awake and stirring. I uncovered the basket and he at once sprang toward me, darting upward, lighting upon my clothing and nestling against my neck. He had not forgotten me. But I had forgotten that the window was open. Before I remembered, the bird flew to it, lighted upon the sill and looked out through the open slats of the shutters. The air came softly in, full of the breath of flowers, and birds were singing just outside. Had I lost him? No; he listened, looked, then turned away and flew to my shoulder. He was a very silent lover, but I understood him.

At the breakfast table I talked about my new friend, and, of course, all wished to see him. So I brought him down stairs, and exhibited him in the large front hall. He stood upon my outstretched hand and looked about him, took the flies I offered, pecked at my cheek, my fingers, but took no notice at all of the people who gathered around him. He and I were alone together in this new life, and he was content.

Now came the question as to what I should do with the bird. It was scarcely a question; I knew what I ought to do, what I must do. I could not keep him. We were leaving Ormond next day, and I could not carry this active, restless, insect-eating warbler on my travels, caged and unhappy; but it was a little hard to let him go. I fed him till he would eat no more. I smoothed the blue feathers, looked into the soft, dark eyes and perhaps said a few foolish good-by words he could not understand. Then I took him out into the sunshine, among the trees and flowers and butterflies, and tossed him lightly into the air towards liberty. He fluttered there an instant, then darted towards me and settled upon my shoulder. Again and again this was repeated. He would not leave me. I saw that I must treat him as one sometimes treats a clinging child: I must steal away stealthily so that he would not find me. So I took him away from the house, up the road to a hammock where the trees grew thickly and where there were many birds, and some *Parulas* like himself. I placed him upon a branch among the leaves, his head turned away from me, then tried to steal quickly away unseen. In an instant he was on my shoulder. Three times I tried this, with the same result. But the fourth time it was successful. As he reached out toward a fly-

ing insect in the air I disappeared behind a clump of trees and, stealing in and out quickly and quietly among the vines and shrubs, eluded him. I am not ashamed to say that my eyes were full of tears as I crept along and there was a homesick lump in my throat. I wonder if he missed me. I wonder if he understood that I had to do it.



IN ARCADIA

Photographed from nature by William Rollins

For Teachers and Students

Birds and Seasons

FOURTH SERIES

JUNE AND JULY BIRD-LIFE NEAR BOSTON

BY RALPH HOFFMANN

EVEN before the May migrants return, the early arrivals and some of the winter residents have chosen nesting-sites in the old apple orchards, and all through May and early June a student of birds is kept busy following up old friends or making new acquaintances. Birds return to their old homes with startling regularity, and yet there is a considerable amount of change from year to year in the avine population of a township. One species has had a successful year, and overflows from an old locality, so that a pair of House Wrens appear where there were none the year before, or some calamity overtakes the Prairie Warblers, and the old corner where the male sang is silent. While many birds are generally distributed, others are very rare, or abundant only in a few peculiar regions. Only in extensive marshes can we expect to find the Rails and the Marsh Wrens; the Purple Martin and the Cliff Swallow are found in one village, but not in the next. We may live near the edge of the breeding range of certain species, and find only a few pair, while to the south or north the bird becomes common. This is the case with the White-eyed and Solitary Vireos.

By the middle of June the young begin to be hatched, and the parents' busiest time begins. In July the young appear in the fields and lanes, and by the end of the month are wandering about with their parents, learning their first lessons in geography. Some morning late in the month the first Solitary Sandpiper, returning from the north, reminds us that each season passes insensibly into the next.

BIRDS THAT BREED IN THE VICINITY OF BOSTON

Pied-billed Grebe,* Black Duck,* Wood Duck,* American Bittern, Least Bittern,* Green Heron, Black-crowned Night Heron, Virginia Rail,* Sora Rail,* Florida Gallinule,* American Woodcock,* Spotted Sandpiper, Bob-white, Ruffed Grouse, Mourning Dove,* Marsh Hawk, Sharp-shinned Hawk,* Cooper's Hawk, Red-tailed Hawk,* Red-shouldered Hawk, American Sparrow Hawk, Long-eared Owl,* Barred Owl,* Screech Owl, Great-horned Owl,* Yellow-billed Cuckoo, Black-billed Cuckoo, Belted Kingfisher, Hairy Woodpecker,* Downy Woodpecker, Flicker, Whippoorwill, Night-

* Rare, or very locally distributed.

hawk, Chimney Swift, Ruby-throated Hummingbird, Kingbird, Crested Flycatcher,* Phoebe, Wood Pewee, Least Flycatcher, Bluejay, Crow, Bobolink, Cowbird, Red-winged Blackbird, Meadowlark, (Orchard Oriole), Baltimore Oriole, Bronzed Grackle, Purple Finch, American Goldfinch, Vesper Sparrow, Savanna Sparrow,* Grasshopper Sparrow,* Henslow's Sparrow,* Sharp-tailed Sparrow,* Chipping Sparrow, Field Sparrow, Song Sparrow, Swamp Sparrow, Towhee, Rose-breasted Grosbeak, Indigo Bird, Scarlet Tanager, Purple Martin,* Cliff Swallow,* Barn Swallow, Tree Swallow, Bank Swallow, Cedarbird, Red-eyed Vireo, Warbling Vireo, Yellow-throated Vireo, [Solitary Vireo], (White-eyed Vireo), Black-and-White Creeper, Golden-winged Warbler, Nashville Warbler, Parula Warbler,* Yellow Warbler, Chestnut-sided Warbler, [Blackburnian Warbler], Black-throated Green Warbler, Pine Warbler, Prairie Warbler, Ovenbird, Maryland Yellow-throat, (Yellow-breasted Chat), [Canadian Warbler], American Redstart, Catbird, Brown Thrasher, House Wren, Short-billed Marsh Wren,* Long-billed Marsh Wren,* White-breasted Nuthatch, Chickadee, Wood Thrush, Wilson's Thrush, [Hermit Thrush], Robin, Bluebird.

* Rare, or very locally distributed.

[] Rare, commoner to the northward.

() Rare, commoner to the southward.

JUNE AND JULY BIRD-LIFE NEAR NEW YORK CITY

BY FRANK M. CHAPMAN

For the students of birds in nature June in this latitude is the most important month of the year. The distractions of the migration no longer prevent us from careful, continuous study of the home life of birds, with its innumerable illustrations of highly developed instincts and interesting evidences of intelligent adaptation to the demands of the hour.

The nesting season may be said to begin with the spring migration itself, when, about March 1, the Great Horned Owl, and, a little later, other birds of prey go to housekeeping; the time of a bird's nesting being more or less closely related to the character of the food of its young. June, however, is the true home month, and either in building, incubating, in feeding or training their young, fully ninety per cent of our breeding birds are then occupied with domestic affairs. An early lesson in forming orderly and regular habits is found in the establishment of roosts, to which the young, with one or both parents, of such early-breeding birds as Grackles and Robins repair each night.

The song season reaches its height late in May before most birds are occupied with care, and inspired males have little to do but give expression to their emotions and eloquently, if unconsciously, voice the joy of the season. It is a merry time, all too quickly ended, as the one-brooded birds soon drop from the choir to begin at once preparations for the first stages of the journey to their winter quarters, Bobolinks, Red-winged Blackbirds, Veeries, and Orchard Orioles and some others being rarely heard after July 15.

By July 1 the tide of the birds' year begins to ebb. Then we look for the returning Tree Swallow, a bird which does not, as a rule, nest

in the immediate vicinity of New York city, but during July and August roosts in great numbers in our Hackensack marshes. Here, in early July, it is joined by the Red-winged Blackbirds, and now the careful observer may find many changes in the character of the bird-life of a district with which he has become familiar in June, as birds no longer confined by the cares of the nesting season, and not as yet impelled to migrate, wander irregularly about the country.

BIRDS OF THE SEASON

For permanent residents see BIRD-LORE, Dec., 1900, p. 184.

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

* Rare or local

JUNE AND JULY BIRD-LIFE NEAR PHILADELPHIA

BY WITMER STONE

June and July mark the summer period of rest in bird-life, so far as migration is concerned, but a period of intense activity to the birds themselves. It is then that all species are on their breeding-grounds and consumed with the care of nests and young. Owing to the early nesting of many species, however, we find them scattering over the country or beginning to flock long before others have guided their young from the nest. The Goldfinch, Cedarbird and Dove may be found breeding later than any other species, the last, however, like many other birds, raises more than one brood in a season. Occupied with family cares the birds become less musical and less conspicuous, and these months seem almost commonplace after the excitement and bustle of May, were it not for the interest to be found in watching the nests and studying the development of the young.

About ninety species breed within ten miles of Philadelphia, but half that number is a fair average for one's immediate neighborhood.

With the young on the wing, our songsters grow less and less musical, and by the middle of July most of them are silent, though the Red-eyed Vireo and Indigo-bird may still be heard after the other voices have been hushed.

About July 15 we also begin to recognize visitors from near by that did not breed immediately about us, and our rarer breeders are increasing in number, while a tendency to flock is evident on all sides. This is the beginning of the fall migration, and generally by July 30 we note the first real stranger from the north — the Water-thrush.

In July also we see the molt in progress: the annual shedding of the worn breeding plumage and the substitution of a fuller feathering, which is to serve as a winter wrap. Most young birds, too, have a molt at this time and lose the scant 'juvinal plumage' which covered them when they first launched forth from the nest.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE, December, 1900, p. 183.

Night Heron, Green Heron, Least Bittern, Killdeer, King Rail, Virginia Rail, Spotted Sandpiper, Turkey Vulture, Yellow-billed Cuckoo, Kingfisher, Flicker, Red-headed Woodpecker, Hummingbird, Chimney Swift, Night Hawk, Kingbird, Crested Flycatcher, Pewee, Wood Pewee, Green-crested Flycatcher, Orchard Oriole, Baltimore Oriole, Red-winged Blackbird, Purple Grackle, Cowbird, Indigo-bird, Towhee, Chipping Sparrow, Grasshopper Sparrow, Vesper Sparrow, Scarlet Tanager, Barn Swallow, Rough-winged Swallow, Bank Swallow, Red-eyed Vireo, White-eyed Vireo, Ovenbird, Maryland Yellow-throat, Blue-winged Warbler, Black and White Warbler, Kentucky Warbler, Yellow Warbler, Worm-eating Warbler, Chat, Long-billed Marsh Wren, House Wren, Brown Thrasher, Catbird, Wood Thrush, Robin, Bluebird.

Rare or Local Breeders.—Wood Duck, Field Plover, Osprey,* Black-billed Cuckoo, Whip-poor-will,* Least Flycatcher, Cliff Swallow, Purple Martin,* Yellow-throated Vireo, Warbling Vireo, Prairie Warbler,* Pine Warbler,* Louisiana Water-thrush, Redstart, Rose-breasted Grosbeak.

* Plentiful in southern New Jersey.

JUNE AND JULY BIRD-LIFE NEAR OBERLIN, OHIO

BY LYNDIS JONES

During the whole of June there are present only the summer resident species, if we except an occasional stray drake Mallard. The closest scrutiny of June bird-life has failed to bring to light any movement of species either northward or southward, but there may be movement of some individuals of the latest spring arrivals northward in early June, and a slight southward movement among the earlier breeders of the earliest arrivals, late in the month. Thus the Bronzed Grackles and Robins begin to gather in considerable flocks, to form roosts, even late in May. The movement is no doubt rather a preparation for migration than an actual migration. In the list of summer residents I have included eight species which do

not appear in the lists of arrivals in previous numbers, because they are too irregular and too scarce to determine their dates of arrival, even approximately.

July witnesses a good deal more activity of southward movement among the summer resident birds, but a careful search during the whole of the month has failed to bring to light any stragglers from the north. The molting period so drives the birds into seclusion that it is difficult to be sure that the apparent decrease in the numbers of species is really a decrease, or that they are only in hiding. Toward the end of the month most of the birds have wholly deserted their nesting places, and must be looked for in other places where concealment is easy. The larger Hawks have already renewed their fall dress, but the hot weather holds them in retirement. At this time they seem to be less alert than is their habit, for many times I have stolen upon them within almost reaching distance. I have often wondered if the presence of Lake Erie, lying as a barrier to southward migrations as it does to the northward, might not account for the lack of northern breeding Warblers and shore birds in July. Do they prefer to pass around the ends of the lake until the advancing season makes a more direct return necessary?

SPECIES PRESENT DURING JUNE AND JULY

For permanent residents see BIRD-LORE, December, 1900, page 186.

Killdeer, Red-winged Blackbird, Meadowlark, Bronzed Grackle, Robin, Bluebird, Mourning Dove, Belted Kingfisher, Cowbird, Towhee, Migrant Shrike, Great Blue Heron, Phoebe, Vesper Sparrow, Pied-billed Grebe, Chipping Sparrow, Field Sparrow, Bartramian Sandpiper, Spotted Sandpiper, Yellow-bellied Sapsucker, Chimney Swift, Barn Swallow, Purple Martin, Brown Thrasher, Kingbird, Crested Flycatcher, Least Flycatcher, Bobolink, Baltimore Oriole, Grasshopper Sparrow, Cliff Swallow, Bank Swallow, Scarlet Tanager, Red-eyed Vireo, Warbling Vireo, Blue-winged Warbler, Yellow Warbler, Ovenbird, Maryland Yellow-throat, Redstart, House Wren, Catbird, Wood Thrush, Wilson's Thrush, Orchard Oriole, Rose-breasted Grosbeak, Indigo Bunting, Yellow-breasted Chat, Yellow-throated Vireo, Cerulean Warbler, Green-crested Flycatcher, Yellow-billed Cuckoo, Black-billed Cuckoo, Ruby-throated Hummingbird, Wood Pewee, Traill's Flycatcher, Least Bittern, Nighthawk, Whip-poor-will, Lark Sparrow, Dickcissel, Tree Swallow.

JUNE AND JULY BIRD-LIFE AT GLEN ELLYN (NEAR CHICAGO) ILLINOIS

BY BENJAMIN T. GAULF

The final days of May have witnessed the disappearance of the transient migrants, and, though some of our later Warblers, the Connecticut and Black-throated Green, may have extended their visit for a brief spell longer—occasionally well into June—we must regard them at this season strictly as loiterers.

On the whole, it is far safer in concluding that with the departure

of the Black-poll Warbler, and the silencing of his quaint pebble-like clicking notes—one of the very best indicators, by the way—the season of spring migration has happily drawn to a close. So, with the going out of May, the exciting period of the past few weeks has suddenly terminated, and we find ourselves face to face with a new order of things.

With the birds it is the central or focusing point in many of their careers, while to ourselves as students it should bring forth a season of no mean importance.

First, for the opportunity thus given us for determining to a degree of certainty the number and kind of our permanent and summer-resident forms; second, for the very great interest attachable to a more thorough knowledge of their nesting ways.

June, to the majority of our birds, means the great nursery month of the year. A very considerable number of them, it is true, may have anticipated it from one to several weeks' time. Again, there are others that will delay all nest-building operations for several weeks yet to come. In any event, however, the question of food suitable for the needs of their growing young, at the proper season, has much to do in explaining their otherwise eccentric habits, whether they are late or early breeders, as the case may be.

June is also the month when a gradual cessation of the season of song is noticeable. The Bobolinks, Grasshopper and Henslow's Sparrows of our meadows and fields, the Marsh Wrens in the sloughs, or the Red-eyed and Yellow-throated Vireos of the deeper woods, together with the Indigo Buntings in the sproutland clearings, may continue to interest us with their songs, some for a few weeks, others, like the Indigo, the entire summer through; still we, nevertheless, have not failed of detecting a degree of listlessness on the part of others, for example the Robin, Baltimore Oriole, Thrasher and Scarlet Tanager.

An over-taxed parental care may suggest an explanation in the case of some, but for the many a much better solution is offered in the approaching season of molt. As it is, the middle of July finds our mid-summer chorus sadly decimated, both in the number of individual performers, as well as in the quality of songs offered.

So to study, then, our birds to the best advantage we must visit them in their weedy lowland haunts, the hedges and the wet meadows, where many have congregated prior to the formation of their summer roosts.

We are sure to find there the Dickcissel and the Bobolink—old males of the latter in molting parti-colored dress—the Song and the Henslow's Sparrows, and at certain times and places, the Bronze and Red winged Blackbirds in mixed flocks of old and young. In the lowlands, too, the Black-crowned Night Heron is also much in evidence during wet seasons.

Scarcely has this month commenced to subside before the first indications of the fall migration have set in.

With us the Solitary Sandpiper always takes the lead, followed in turn by other members of the wading family, early though it may seem to be.

BIRDS OF THE SEASON

Summer resident, exclusive of permanent residence, species (for which see BIRD-LORE, Dec., 1900, p. 187) near Glen Ellyn, Illinois, from data collected during the past nine years, earliest dates of arrival being given:

Jan. 21, Cedarbird; Jan. 24, Meadow-lark; Jan. 25, American Robin; Feb. 19, Bluebird and Red-headed Woodpecker; March 3, Killdeer; March 8, Song Sparrow; March 12, Mourning Dove and Red-winged Blackbird; March 17, Bronzed Grackle; March 18, Cowbird; March 20, Flicker; March 21, Phoebe; March 28, Martin; April 1, Kingfisher; April 3, Grass Finch; April 4, Field Sparrow and White-rumped Shrike; April 5, Chipping Sparrow; April 7, Pied-billed Grebe and Chewink; April 8, Black-crowned Night Heron and Savanna Sparrow; April 10, Bartramian Sandpiper; April 12, Marsh Hawk; April 14, Carolina Rail; April 16, Kingbird; April 17, Brown Thrasher and Barn Swallow; April 19, American Bittern, King Rail and Spotted Sandpiper; April 22, Chimney Swift and Blue-gray Gnatcatcher; April 23, Tree Swallow; April 25, Eave Swallow, Green Heron and Virginia Rail; April 26, Baltimore Oriole; April 27, Bobolink and Rose-breasted Grosbeak; April 28, Ovenbird and Orchard Oriole; April 29, Catbird; April 30, Yellow Warbler, Wood Thrush and Scarlet Tanager; May 1, Night Hawk, Ruby-throated Hummingbird, Crested Flycatcher, Warbling Vireo, Indigo Bird, Chestnut-sided and Blue-winged Yellow Warblers; May 2, Yellow-throated Vireo and Maryland Yellow-throat; May 3, Dickcissel, American Redstart and House Wren; May 4, Grasshopper Sparrow; May 5, Red-eyed Vireo; May 6, Acadian and Least Flycatchers; May 7, Black-billed Cuckoo; May 8, Short-billed Marsh Wren and Henslow's Sparrow; May 9, Wood Pewee; May 10, Yellow-breasted Chat; May 11, Cerulean Warbler; May 15, Yellow-billed Cuckoo; May 18, Traill's Flycatcher; June 5, American Woodcock; breeding records for Least Bittern, Long-billed Marsh Wren and Lark Sparrow.

SUMMER BIRDS OF STOCKTON, CALIFORNIA

BY LYMAN BEIDING

Water Birds which probably breed within ten miles of Stockton, though extensive reclamation of tule marsh makes their presence uncertain:

Western Grebe, Forster's Tern, American Black Tern, Farallone Cormorant, Mallard, Cinnamon Teal, Gadwell, Wood Duck, Ruddy Duck, Fulvous Tree Duck, White-faced Glossy Ibis, American Bittern, Least Bittern, Great Blue Heron, American Egret, Snowy Heron, Green Heron, Black-crowned Night Heron, Sandhill Crane (rarely), Florida Gallinule, American Coot, Avocet, Black-necked Stilt, Killdeer.

Land birds which breed near Stockton, California:

Valley Partridge, Mourning Dove, Turkey Vulture, White-tailed Kite, Marsh Hawk, Western Red-tailed Hawk, Red-bellied Hawk, Swainson's Hawk, Golden Eagle, American Sparrow Hawk, American Barn Owl, California Screech Owl, Burrowing Owl, Belted Kingfisher, Gairdner's Woodpecker, Nuttall's Woodpecker, Californian Woodpecker, Lewis' Woodpecker, Red-shafted Flicker, Black-chinned Hummingbird, Anna's Hummingbird, Arkansas Kingbird, Ash-throated Flycatcher, Black Phoebe

Western Wood Pewee, Western Flycatcher, Little Flycatcher, Mexican Horned Lark, Yellow-billed Magpie, California Jay, American Crow, Yellow-headed Blackbird, Bicolored Blackbird, Tricolored Blackbird, Western Meadowlark, Bullock's Oriole, Brewer's Blackbird, House Finch, American Goldfinch, Arkansas Goldfinch, Western Lark Sparrow, Western Chipping Sparrow, Herman's Song Sparrow, English Sparrow, Spurred Towhee, Californian Towhee, Black-headed Grosbeak, Western Blue Grosbeak, Lazuli Bunting, Western Martin, Cliff Swallow, Barn Swallow, Tree Swallow, Phainopepla, California Shrike, Warbling Vireo, Hutton's Vireo, Least Vire, Yellow Warbler, Western Yellow-throat, Long-tailed Chat, Californian Thrasher, Vigor's Wren, Parkman's Wren, Tule Wren, Slender-billed Nuthatch, Plain Titmouse, Pallid Wren-tit, Californian Bush-tit, Western Gnatcatcher, Russet-backed Thrush, Western Bluebird.

SUGGESTIONS FOR THE SEASON'S STUDY

[We learn with much pleasure that Dr. W. L. Ralph, who succeeded Major Bendire as Honorary Curator of the Section of Birds' Eggs in the National Museum, has undertaken the continuation of Major Bendire's great work, entitled the "Life Histories of North American Birds." Dr. Ralph has therefore issued a list of questions concerning the nesting habits of birds, and as the subject is directly in line with BIRD-LORE'S "Birds and Season" articles we give the list in full below.]

QUESTIONS RELATING TO BIRDS' AND BIRDS EGGS

(1) The average number of eggs in a set or clutch? (2) The largest number of eggs in one nest? (3) The earliest date of nesting? (4) The latest date of nesting? (5) Whether this species has one or more broods in a season? (6) The favorite site of nest when on the ground? (7) The location of nest when found in a tree or bush? (8) The kind of a tree or shrub for which this species has a preference? (9) The height of the nest above the ground? (10) The period of incubation, if known? (11) Any unusual nesting sites which have come under your observation? (12) The various call notes and songs, so far as you are able to describe them? (13) The kinds of localities most frequented by this species during the breeding season? (14) Whether or not this species is a constant resident? (15) The dates of arrival and departure, if migratory? (16) Whether this species is as abundant now as formerly? (17) The principal causes of increase or decrease in abundance? (18) Any change in its habits which you may have noted? (19) Whether the nest is built by the male, the female, or both? (20) Whether the process of incubation is performed by the male, the female, or both? (21) Whether the young are cared for by the male, the female, or both? (22) Composition of nest? (23) Remarks on the general habits of this species (especially during the breeding season), its food, care of young, etc.

SUGGESTIONS FOR THE SEASON'S READING

Thoreau: 'Summer,' Burroughs: 'In the Hemlocks' and 'Birds' Nests' in 'Wake Robin'; 'Birds'-Nesting' in 'Locusts and Wild Honey'; 'The Tragedies of the Nests' in 'Signs and Seasons'; 'Birds' Eggs'; 'Bird Courtship' in 'Riverby.' Torrey: 'Confessions of a Bird-Nest Hunter' in 'A Rambler's Lease'; and 'June in Franconia' in 'The Foot-path Way,' Flagg: 'June' and 'July,' in 'A Year with the Birds,' Miller: 'In Nesting Time,' 'Little Brothers of the Air,' 'A Bird-Lover in the West,' 'Upon the Tree-Tops,' Merriam: 'My Summer in a Mormon Village,' 'A-Birding on a Bronco,' Keeler: 'Summer Birds of the Redwoods' and 'In Nesting-Time' in 'Bird-Notes Afield,' Crockett: 'June' and 'July' in 'A Yearbook of Kentucky Woods and Fields.'



What Bird is This?

Field Description.—Length, 5.00 in. Upper parts olive-green, streaked with black, rump brighter; crown blackish, ear-coverts chestnut; a large white patch on the wing coverts; under parts yellow, streaked with black; outer tail feathers with white patches.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some widely-distributed, but, in the eastern United States, at least, little-known bird, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with its picture.

The species figured in April is the American Pipit or Titlark.

A June Bird Census

During June birds are more sedentary than in any other month. Domestic cares then prevent them from leaving the vicinity of their nests, and one may find the same individuals day after day. June, therefore, is the best season in which to make a census of the bird population of a given area, and we would suggest to those of BIRD-LORE'S readers who are so fortunate as to be afield in June, that much time could be profitably employed in ascertaining the numbers of birds living within certain limits in their neighborhood. Select an area about half a mile square containing, if possible, ground sufficiently varied in character to fairly represent the locality, and then explore it thoroughly, making a list of the species and numbers of individuals seen. The ground should be gone over many times until the observer is assured that practically every bird living in it has been tabulated. The lists of birds secured should be arranged after the classification of the American Ornithologists' Union, and BIRD-LORE will be glad to give space to those which seem worthy of publication.

For Young Observers

Song of the Whippoorwill

BY GARRETT NEWKIRK

" I am a bird misunderstood,
So-called the Whippoorwill;
One always trying to be good,
With reputation ill.

" For people say that when I speak
I am to William bad;
That every night I only seek
To punish that poor lad.

" Now I love William just the same
As I do John or Jim;
And never think of laying blame
Or wishing harm to him.

" And when you hear my plaintive call
While hours are growing late;
I'm thinking not of him at all
But crying to my mate:
'Fear no ill,

" When darkness comes upon the sky,
I take my searching flight,
For moths and beetles as they fly,
Above the earth at night.
Keep you still,
Come I will.'

" Then while at intervals I rest
Upon a rock or rail;
To comfort her I think it best
My loving wife to hail:
My loving wife to hail:
'Fear no ill,
Keep you still,
Come I will.'"

Notes from Field and Study

Two Young Hummingbirds

On May 25, 1900, I found a Hummingbird's nest in a small beech, on a branch about ten feet from the ground, and with the aid of a step-ladder was able to keep watch of the incubation of the eggs and growth of the young birds.

The nest was just finished, for the first egg appeared the next day, and by the 28th both eggs were there. Two weeks from the day it was laid—on June 9th—the first egg hatched and the other egg the day after. The little things bore slight resemblance to most young birds, for as they lay flat on the bottom of the nest, with necks outstretched, they were a little less than an inch in length, dark slate-color, with a little yellowish fuzz on the bodies, exceedingly thin necks, three-cornered heads and short yellow bills. The eyes were closed.

Two days later the fuzz had grown so that the bodies were nearly hidden by it, though the heads were still bare, and the bills were almost twice their original length. On June 18, when the first-hatched bird was nine days old, I noted the following: "The young Hummingbirds nearly fill the nest. They are much browner than at first, and the fuzz does not seem to have grown much, if any. They have, however, quantities of tiny pin-feathers like needle-points, on the heads as well as the bodies, and the bills are nearly a third of an inch in length. The eyes are still closed." Four days later both had their eyes open and a few of the pin-feathers were breaking.

Until nearly ready to fly the growth was so rapid—especially of the bills—that the difference was easily noticeable from day to day, while two days made a decided change. And before they were many days old the younger of the pair caught up in size so that the difference between them, at first so pronounced, was entirely lost.

For several days before leaving the nest the birds were well feathered and well grown, showing the head and white throat over one edge of the nest and the white-cornered tail at the other, but up to the last day the bills looked to me not quite full length. They flew the first day of July, having been twenty-one and twenty-two days in the nest.

A week or two later began a great deal of chipping and love-making in the vicinity of the old nest, and July 21 I found a second nest, no doubt built by the same pair, in another beech almost touching the first tree, but in too inaccessible a position for close observation.

At no time did I see the male near either nest.

In this neighborhood Hummingbirds seem to build almost always in beeches, for of nine other nests found not far from these two, seven were in beech, the others in oak and sweet gum.—ISABELLA McC. LEMMON, *Englewood, N. J.*

My Robin Neighbors

There are two large maple trees in front of my home, both within ten feet of the windows of my room. One morning in April, 1900, two robins attracted my attention by flying about one of the trees. They kept flying from branch to branch, and it was evident that they were looking for a place to build a nest. Finally they decided to build their nest between two branches on a level with my window.

They immediately began bringing dry grass and pieces of straw, but the third or fourth time that the male came with his bill full of straw he met with an accident. The place between the branches was very narrow and, as he was flying in, he hit against one of them and rumbled both his feathers and his temper. This evidently made him dissatisfied with the place and they both flew away.

The next morning, much to my delight, they both reappeared in the other tree, and in a few minutes decided on a place which was much better than their first choice. Soon they were bringing grass and straw, as before, and by night had the foundation of the nest completed.

A little girl, who lives in the next house, furnished the birds with nesting material by cutting white twine in short pieces, and the male Robin took it almost as soon as she threw it on the ground. There was a quantity of twine and he evidently thought it a prize as he hurried back and forth and took it all.

Soon there was a lively discussion between the pair, which ended in a real fight, and then the male Robin took his departure.

I cannot understand bird-talk, but it seemed to me that the female Robin did not like the looks of that white twine, for it made the nest very conspicuous, and being placed in bunches, with the ends hanging, gave the nest a ragged appearance.

The female Robin continued the work alone, pulling out some of the twine and covering some of it up. It was very interesting to watch her as she worked. She always worked from the inside, placing her straw or grass where she wanted it, and then pressing against it with her breast to press it into shape.

The birds began building the nest on the 19th of April, and the female completed it on the 27th. On the 29th the third and last egg was laid.

After this the female never left the nest except to make a quick trip to a neighboring field for food. On rainy days she had no food, and would sit there all day with her wings spread out over the nest in such a way that no water touched it.

On the tenth day after the eggs were laid the male Robin appeared. He lighted on a branch close to the nest and as soon as the female saw him she ruffled up her feathers and flew away. He went to the edge of the nest, looked in and then flew away, and the female returned.

On the next day, the 10th of May, two

Robins were hatched, and on the day following the third one appeared. They began their clamor for food almost immediately.

When the young were two days old the male came with some worms in his mouth. He didn't appear at all good natured and fairly pushed the female, who had ruffled up her feathers, out of the nest. His manner seemed to say, "I suppose that these are my children, and that I have got to feed them." He kept coming with worms, and after a few days the female would stand on the edge of the nest when she saw him coming, take some of the worms from him, when they fed the little ones together.

Early one morning I was awakened by a great outcry from the birds. I rushed to the window and there was a neighbor's cat within a few inches of the nest. I succeeded in frightening the cat away, and although I made quite a commotion, the birds acted as if they knew it was being done by a friend to help them. That morning the boy who owned the cat got a wide piece of tin large enough to go around the tree and we tacked it on, so the birds had no more trouble with cats in that way. But in a day or two one of the little ones fell from the nest and the same cat caught and ate him.

When the young Robins were nearly large enough to fly their mother left them one day to hunt for worms, but she never came back again, as a cat caught her. On the 26th of May, when they were sixteen days old, the little Robins left their nest for the first time. They hopped out on a branch by the side of the nest, and, after looking about for awhile, flew across the street into another tree and then on to the ground.

Every one in the neighborhood had been very much interested in the birds, and word immediately went around that the young birds had left the nest and cats must be kept shut in. In a day or two they were taking care of themselves like old birds. — ANNA A. JORDAN, *Bethel, Maine.*

Swallow's Nest on Board Boat

While at Lake George, New York, in the summer of 1900, a curiously placed nest was brought to my notice. I had often heard of birds building in strange places about buildings; but I had never heard of them nesting on a steamer that traversed daily so large a body of water as Lake George. Upon inquiring, I found out that, since the *Horicon* had been in commission that season, large numbers of Swallows had been seen hovering about the boat, especially toward evening after her arrival at Caldwell. A few days afterward some boys, while in bathing off the railroad wharf, discovered a nest beneath one of the guard-rails of the *Horicon*. Upon examination, they found it to be made of mud and to contain three young birds, which had recently broken from their shells. Every day, for some time, on the arrival of the boat at her pier, the old birds were seen bringing food to their young, which continued their trips of eighty miles daily, until they were able to fly.

Captain Harris, of the *Horicon*, informed me that this nesting on board his boat was not an unusual nor new occurrence. He said that usually every year, before the boat was in use, great numbers of Swallows gathered on and about his steamer, and that he had known, previously, of other nests similarly placed. I was unable to gather a full description of the birds, but was told that they were the kind so commonly seen about farm buildings. It may be supposed, although it was not authoritatively stated, that the parent birds must have followed the steamer throughout the day. When sitting, one bird of course had to be upon the nest, and at the same time the other, without doubt, followed the boat. After hatching the youngsters had to be fed at short intervals through the day, thus proving that the old birds, with their brood, completed a course of eighty miles daily, either upon the wing or nest.—BURTON N. GATES, *Worcester, Mass.*

[Should any of our readers learn of the return of these birds, we trust they will report to us.]

The Barred Owl in Bronx Park

For nearly two years there has lived in the Hemlock Grove a Barred Owl, or rather a pair of them, and though neither of them were often seen, yet at morning and early evening their weird hoots were familiar and delightful to us all. Early in February, an old dead hemlock was cut down, and the Owl's nest was discovered to be in it, much to our regret, for it might have been spared. During the next snow-storm an Owl was reported to have been seen perching low down in an old tree, and after the next storm it was found on the ground too feeble to fly. It was brought into the museum, and found to be very thin and sick, for while trying to feed it with finely chopped raw meat, it was discovered that it had two large ulcers in its throat, which prevented its swallowing, and that it was slowly starving to death. It died after ineffectual attempts at curing it by swabbing its throat with kerosene, and it seems likely that it had caught "*the roup*" from some chicken, stolen from our neighbors' poultry yards. The symptoms were pronounced to be the same, extreme lassitude and indifference, sitting with its head down, running at the mouth, an inability to swallow. Its mate has been seen since near the place where their nest used to be.—ELIZABETH G. BRITTON, *New York Botanical Garden, Bronx Park.*

On the seventh of December, at the home of Mrs. Edward Robins in Philadelphia, the Spencer L. Baird Ornithological Club was organized, its object being the study and advancement of ornithology.

The following officers were elected: President, Miss E. W. Fisher; Secretary and Treasurer, Miss M. P. Nicholson. Regular meetings of the club are held twice a month from November to April, consisting of a business and a scientific session, each member being responsible for two papers annually.

During the winter the club has had the pleasure of listening to addresses from Dr. Charles C. Abbott and Mr. Witmer Stone, and hopes to hear papers in the future from other prominent ornithologists.—MARY PARKER NICHOLSON, *Secretary.*

Book News and Reviews

THE WOODPECKERS. By FANNIE HARDY ECKSTORM. Boston and New York. Houghton, Mifflin & Co. 16mo, 131 pages; 5 full-page colored plates by LOUIS AGASSIZ FUERTES; 21 text cuts by J. L. RIDGWAY.

Selecting a group of widely-distributed and easily-identified birds, Mrs. Eckstorm has treated certain of its members, not from the conventional or biographical point of view, but as living object lessons in a study of the relation between structure and habit. There are chapters on courtship, the care of the young, "acquired habits," and a key to the Woodpeckers of North America, but the book deals primarily with the forms and uses of the bill, tongue, feet, and tail. The facts presented bespeak the author's familiarity with her subjects, both in the field and in the study, and she discusses their significance with unusual ingenuity, logic, and facility of expression. The book, therefore, possesses a far greater value than its title would lead us to expect. It forms not only a contribution to our knowledge of Woodpeckers, but is an admirable exposition of methods of observation and presentation in philosophic ornithology, and as such it should be in the hands of every thinking student.—F. M. C.

BIRD DAY AND HOW TO PREPARE FOR IT. By CHARLES A. BABCOCK, A.M., LL.B., Superintendent of Schools, Oil City, Pa. Silver, Burdett & Co. Boston and Chicago. 16mo, 95 pages, 16 illustrations. Price 50 cents.

As the originator of so successful an idea as Bird Day has been proven to be, the author of this book should command an attentive audience. After giving a "History of the Movement for 'Bird Day,'" he writes at length of the value of birds and of their wanton destruction, these chapters being, in effect, reasons for the study of birds. Methods of study are then considered, and are followed by programs for "Bird Day," references to poems on birds, "Objects and Results of Bird Day," and

notes on sixteen representative birds, with cuts from the Biological Survey publications.

Professor Babcock writes from an unusually extended experience; his suggestions have all stood the test of repeated trial, and no one interested in the spread of bird study in the schools can afford to lose the benefit of his advice.—F. M. C.

BIRD PORTRAITS. By ERNEST SETON-THOMPSON. With descriptive text by RALPH HOFFMANN. Boston. Ginn & Co. 1901. 4 to, 20 full-page half-tones, 40 pages text.

Eight of these "portraits" originally appeared in Stickney & Hoffmann's 'Bird World,' and the remaining twelve illustrated Mr. Torrey's text in the 'Youth's Companion' for 1900. They are well worthy, however, of republication in their present form, either because of their larger size, more careful printing, or the better quality of the paper here employed.

Seton-Thompson's distinguishing characteristic as a bird artist is a sympathy with his subject, and his representation of it, therefore, is not a mere chart of form and feathers, but a subtly expressed rendering of the bird's own personality, which makes his pictures glow with the true sentiment of bird-life.

Mr. Hoffmann's text adequately, and, it is needless to say, accurately, sets forth the principal features in the biographies of the species treated.—F. M. C.

The Ornithological Magazines

THE AUK.—The Auk for April contains several readable articles, among them, "Nesting Habits of *Lecotes Sparrow*," by P. B. Peabody; "*Cerulean Warbler* * * * in Maryland," by F. C. Kirkwood; "A Visit to Audubon's Birthplace," by O. Widmann, and "Birds of Prey as Ocean Waifs," by H. W. Henshaw. Mr. Kirkwood's effort to portray the *Cerulean Warbler's* song is novel, but as his diacritical

marks are not explained, they are somewhat unintelligible. After all, birds' songs are seldom a success when reduced to printer's ink.

Much space is given to technical articles, one on "The Pterylosis of Podargus, with Notes on the Pterylography of the Caprimulgi," deserving particular mention. Descriptions of new subspecies take up a number of pages, especially the republication of those scattered in other journals, and here brought together with critical notes by Dr. J. A. Allen. It is to be hoped some forms will not survive the tribunal of the A. O. U. committee, for just now we seem to be approaching a point where, having exhausted the possibilities of series of specimens from adjacent farms, we shall soon be driven to recognize north light and south light races, according to the rooms in which they are studied. This is no fling at careful work, but describing is a line of least resistance and attracts many who see differences so minute that they cannot be intelligibly expressed by words.

Mr. R. H. Howe, Jr.'s, "A Study of the Genus *Macrorhamphus*," furnishes a refreshing exception to the multiplication of races that regularly follows examinations of large series. With 250 specimens he evolves no new race, instead reducing the two species to one with *scelopaceus*, a subspecies of *griseus*. There is room for a great deal more of this synthetical work, although it is not so much fun as "splitting." —JONATHAN DWIGHT, JR., M. D.

THE CONDOR, March-April, 1901.—The first of a series of articles on Mexican birds, by E. H. Skinner, is devoted to an account of Giraud's Flycatcher, based on observations made near Tapachula, Chiapas, in extreme southern Mexico. A somewhat similar article by R. D. Lusk describes the habits of the Buff-breasted Flycatcher in Arizona. Both are welcome contributions to the scanty literature of these comparatively little known Flycatchers. Chamberlin's notes on the nests of the Western Gnatcatcher and Williams' 'Trait of the Western Robin' (in drooping the wings while feeding) suggest interesting

lines of work for careful field observers. Of somewhat more local interest, but none the less valuable, are two faunal papers, one on 'Rare and Unusual Occurrences at Stockton, Calif.,' by W. B. Sampson, the other a list of birds of the Pima Reservation, Arizona, by G. F. Breninger.

Two notes on nomenclature are important to students of western birds. Richmond shows that the generic name of the Condor, *Pseudogryphus*, must give way to the shorter but scarcely more euphonious name, *Gymnogyps*, so that the California Condor will hereafter be known as *Gymnogyps californianus*. McGregor calls attention to an earlier name for the western Blackheaded Grosbeak, described in the November number of the 'Condor'—another instance of careless work on the part of an author who was more anxious to name a new subspecies than to study its history.

Under the head of communications Os-good presents arguments in favor of recognizing closely related forms by name, and McGregor calls attention to the desirability of dropping the possessive form of bird names and of securing greater uniformity in the common names in the A. O. U. Check-List.

The Cooper Club's interest in bird protection is shown by a list of thirty names on the Protection Committee for 1901—a larger committee than that appointed by the A. O. U. Fifteen members belong to the Northern Division and fifteen to the Southern Division, representing in all fourteen counties, or one-fourth of all those in the state. There is ample work for such a committee to do along educational lines, since the bill which the club supported so energetically and which passed both branches of the Legislature failed to receive the Governor's approval. Bird protection in California needs more general support, so that there may be no question as to the enactment of a comprehensive measure in 1903.—T. S. P.

BOOKS RECEIVED. — Other publications received for review will be noticed in BIRD-LORE for August.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

It is often remarked, with equal truth and triteness, that laws are not self-acting; and, in many instances, the same statement might be applied to the makers of laws. Thus, the average legislator has little or no interest in securing the passage of laws designed to protect non-game birds. He is, however, as a rule, not opposed to such legislation, and when its desirability has been made known to him the facts in the case are so clear, the arguments so unanswerable, that he rarely fails to give a bird-protective measure his support—be it said to his credit.

The difficulty has been in bringing the matter to his attention in such a manner that he cannot but realize its importance. Circular letters and other forms of indirect appeal are not sufficient, but the experience of Mr. Dutcher and Dr. Palmer during the past winter proves conclusively that if the bird-protectionist properly pleads his cause before the legislative game committee he will win the day.

So these gentlemen, representing the American Ornithologists' Union and the Biological Survey of the U. S. Department of Agriculture, have journeyed from Maine to Florida to urge upon the legislators of various states the necessity of giving to their

birds adequate legal protection. In some instances they found a sympathetic sentiment already established by local Audubon or Ornithological Societies, in others, their almost unaided efforts secured the reconsideration of a bill which had previously been rejected; and it speaks volumes for their energy, skill, and tact when we say that wherever they have gone good laws have been secured. In Florida, however, the legislature is still in session, but with every prospect of passing the law introduced and personally advocated by these tireless workers for the cause of bird protection.

In Maine, New Hampshire, New Jersey, Delaware, District of Columbia, and Wyoming (where we are glad to hear an Audubon Society has just been formed) good laws have been passed; and there is every reason to hope that Connecticut and Florida will be added to the list. California loses its place on this honor roll solely through the surprising act of its governor, who vetoed a bill which had passed both branches of the legislature.

Now let us make the legal protection, which has so happily been secured, actual protection by subscribing liberally to the Thayer fund. Mr. Dutcher's success with the small sum at his disposal last year tells in the most satisfactory manner possible how much may be accomplished at a comparatively low cost. The new laws which have been secured now greatly widen the field which may be profitably covered, and it is greatly to be hoped that funds may be at once forthcoming to hire wardens wherever they can be employed to advantage.

Already twenty-five wardens have been employed, but the number should be largely increased if bird-lovers would send their contributions to William Dutcher, 525 Manhattan Avenue, New York city.

THE publication of reports of Audubon Societies has necessarily been postponed to give space to Mr. Van Name's important paper on practical bird protection. Every one living in the country can do something in the direction outlined by Mr. Van Name, even if his efforts be confined to his own garden.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Song Bird Reservations

When the progress of civilization, via the demands of an agricultural and manufacturing people, encroached upon and finally overran the hunting grounds of the North American Indian, tracts of land were reserved for him where he might live partly by his own industry and partly by bestowed rations, this method being only successful in a degree, owing to the uneconomic nature of the individual so aided.

Now that the same civilization is reducing the woodlands and wild tracts that for ages have been the birds' hunting grounds, should not they too be provided with suitable reservations, where the food natural to such places shall be sufficiently supplemented and the supply placed beyond the vicissitudes of weather, etc.? For, unlike the roving Indian, the bird is as great an encourager of the agriculture that often de-

prives it of its time-honored haunts, as the farmer who sows the seed.

Everything that is said in the following paper regarding the practicability of combining farms in great preserves for game birds can be even more easily accomplished for Song Bird Reservations, it being generally conceded that the day has passed when it is enough to satisfy the demands for bird protection by simply ceasing to kill.

Not only may owners of large estates arrange suitable winter shelter for resident birds and establish feeding places where daily rations are distributed, but small land owners may pledge themselves, combine, and by systematic arrangement convert whole squares in suburban towns into these reservations, appointing one member of the union as "food agent" for a specified time, so that there may be no forgetting, for that "every one's business is nobody's business"

is especially visible in the care and feeding of animals.

It seems to me that this idea opens vast possibilities, and I beg every one who is now reveling with a grateful heart in the bird music of June, to aid in establishing a Song Bird Reservation this summer, be it of one acre or of one thousand.

M. O. W.

A Connecticut Game Preserve

For a number of years past there has been maintained in the town of Hampton, in Windham county, Connecticut, a game preserve, which has features of unusual interest, not only for sportsmen but for all concerned in bird protection.

Obviously, a preserve which is to be a useful agent in the work of game protection, and is intended to make up in some degree for the shortcomings of the game laws, must be based upon less selfish motives than the sportsman's preserve of the ordinary kind. It must provide a refuge and suitable breeding ground for the birds, and not simply protect them from one man in order that another may kill them.

Such preserves are more often advocated on paper than tried in reality, for they are generally supposed to involve such large outlay for land and maintenance and to offer so little benefit in return, that they are held to be far beyond all possibility of attainment.

The preserve which is here described is of interest, as it shows how far wrong this assumption is, and how an almost ideal game preserve, on a considerable scale, was established through the efforts of one man, Mr. E. Knight Sperry, of New Haven, with so little difficulty and with an outlay so insignificant that there is the best of hope that it can and will be initiated elsewhere; and with a degree of success that was far in advance of the most sanguine of those who watched the experiment.

This preserve comprises between one and two square miles of farm and woodland, and includes a small stream. The ownership of this property is distributed among seven or eight people, who have granted Mr. Sperry the right to preserve the game on their farms,

on condition that he would not shoot there himself, and would bear the expense of posting the land with the necessary signs forbidding hunting, and would stock the grounds with birds. The land-owners, on their part, agreed to do no shooting on their lands and to allow no others to shoot there. As they live on the farms they are able to enforce this prohibition without much difficulty, and the expense of watching the preserve is thus practically nothing.

The chief item of expense was to procure and post the signs forbidding hunting. These were stenciled upon boards one foot square. About sixty signs were put up. The cost of these is not recorded.

Though there are a considerable number of Partridges on the preserve, the principal game birds are Quail. Each year about two dozen of these birds, costing seven or eight dollars for the lot, have been liberated on the grounds. The birds have been obtained from one of the northwestern states, as southern birds do not endure the climate well and either migrate or die off during the winter.

In order to be a success, a game preserve must, first of all, provide food for the birds, or they will not be able to remain there. The natural resources of the land are generally sufficient to support the birds during the summer months, but in winter the case is different, and if a large bird population is to be supported with such liberality that they will not be driven to forage elsewhere, some additional food supply must be provided at that season. This has been done by planting each year a couple of small patches of wheat or buckwheat, which is left to go to seed, and as the stalks of the plants project above the snow in winter the birds are able to find the food at all times and are kept in good condition, even in the severest weather.

There have been no other expenses worth mentioning. The total cost has been so small, both for starting and keeping up the work, that the sum necessary could be raised without much difficulty by subscription among the sportsmen of even the smallest towns, if they could be con-

vinced of the advantage of such work. The results which Mr. Sperry has attained are no less interesting than his methods.

It is now about seven years since the plan was put in operation, but only a small part of this period had elapsed before the effects of the experiment began to be apparent. As would be expected, the birds soon became very abundant on the preserve, but it is by the effect on the number of birds in the surrounding country that the practical utility of the work must be judged, as no shooting is allowed on the preserve itself. The best evidence on this point is the opinion of the people living in the vicinity. With them the preserve is decidedly in favor; in no case has any land-owner withdrawn from the agreement, though it is a purely voluntary one, which can be broken off at any time. On the contrary, another person has recently become a party to it, thus increasing the original area. The birds have increased to such an extent that they have spread to the surrounding country, and now furnish good shooting on lands where there were very few birds when the preserve was started, and as a method of stocking a region with game this plan has proved vastly more successful than the usual one of liberating birds on lands where they receive no special food or protection, and are shot as soon as the open season comes, if not before.

It is believed that the preserve has been far more liberally stocked with the western Quail than was necessary, and that even a smaller outlay would have been rewarded with almost as much success. It was, however, Mr. Sperry's purpose to give his plan a thorough trial and to err on the side of liberality rather than in the other direction. It is hoped that the Hampton preserve will not remain the only one of its kind.

Though it is perfectly feasible to carry out such a plan under existing laws, it is evident that a law insuring their greater permanence, by making the agreement of the land-owners more binding when once entered into, and providing special means and penalties to safeguard the game, would encourage and help those who wish to start

similar preserves. A bill of this kind will be presented to the Connecticut Legislature, and as it will apply only to the lands of those who voluntarily enter into the contract, it is difficult to see what arguments can be brought up against its passage.

In conclusion, it may be pointed out that game protection by means of preserves is applicable to birds of many more kinds than is generally supposed. A few preserves comprising some of the marshes or beaches along the coast, or some of the ponds or swamps in inland districts, which would furnish safe resorts and feeding grounds for the various water birds during the migrations, and during the breeding season for such as would remain and breed, would help to preserve birds which the state game laws have never properly cared for, and would induce the birds to visit regions which they have to a great extent deserted on account of the constant persecution they suffer.

One reason for the apathy and indifference with which most people regard the extermination of the birds, is the widespread belief that it is an inevitable result of the progress of civilization. There is no greater fallacy. A few of our birds cannot adapt themselves to life in a thickly settled and cultivated country, but this list is a short one. Most of them, including most of the game birds and water birds, could and would, if they were given a chance, adapt their mode of life to the changed conditions due to man's occupation of the country. They are disappearing through our fault and neglect and for no other reasons.

There are few more promising ways of making amends for our past mistakes than by the establishment of such preserves as the one just described. Often no greater difficulties would be encountered than in the case of the Hampton preserve if someone could be found to take the initiative.

WILLARD G. VAN NAME.

New Haven, Conn.

NOTE.—We are glad to receive the annual reports of the Audubon Societies of Kentucky and Florida, which will appear in the next issue.



IN THE HEART OF A HAWAIIAN FOREST
Photographed by H. W. Henshaw

Bird = Lore

A BI-MONTHLY MAGAZINE
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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. III

JULY — AUGUST, 1901

No. 4

First Impressions of Hawaiian Birds

BY H. W. HENSHAW

THE first experiences of the bird lover in the Island of Hawaii are likely to prove disappointing. The towns are enshrouded in tropical foliage, which offers inviting homes to birds, but the greenery harbors no avian life, save the Mynah and the little Rice Bird, both introduced species. Moreover, the harbors and coast line of Hawaii are, for the most part, almost as barren of native bird-life as the towns. The waters flash in the glorious tropical sunlight; the tidal pools, full of gorgeously colored fish, reflect the tropical vegetation that overhangs them; the sandy and rocky shores stretch invitingly away; everything is present to welcome the birds—they alone are absent.

Yet not quite solitary are the shores of Hawaii. Its rocky islets and coasts have proved a magnet strong enough to draw hither as a permanent resident the Wandering Tattler, the Ulili of the natives, whose running note, as he flits from rock to rock, forms a fitting accompaniment to the murmur of the waves as they break against the rocky barriers. I say a permanent resident, for, although the Ulili is not known to breed on Hawaii, the bird never wholly abandons its shores. The greater number leave, presumably for Alaskan breeding grounds, in April, but many remain the year round. The summer residents are the barren birds and such as are still too immature to breed, or too weak to essay the long ocean flight.

Moreover, if the observer lingers along shore till just before dark, or happens to be abroad at daybreak, he will see large flocks of Turnstones, accompanied by a few Plover, as they wing their way from the uplands, where alone they feed. Here, in pastures or on freshly plowed land, or among the sprouting sugar-cane, the birds find an abundant feast of worms and small insects. By destroying vast numbers of insects they do the planter good service, and in turn are protected by him—for upon

most plantations the Plover, as the two species are indiscriminately called, are wisely protected.

I know of few facts pertaining to birds that are stranger than the yearly migrations of the Plover, the Turnstone and the Tattler to and from these islands. Leaving Hawaii in April by thousands and returning in August and September, in the interim they brave the passage each way of some three thousand miles of ocean, more or less, according to the point of the American continent they steer for. What a wearisome flight across the watery wastes these trips must be! If a storm is encountered thousands must perish, and under any circumstances no doubt many find a watery grave. Wing power has its limits, and many a brave bird heart homeward bound is each year forever stilled in the remorseless waters as strength fails and the never ceasing wing-beats grow fewer and feebler till the end comes.

Why do these birds insist upon such long and dangerous journeys? Their first discovery of Hawaii must have been accidental. A southward migration of Plover and Turnstones was, doubtless, interrupted by a storm. The birds were blown out to sea and, bravely striving against fate, the fortunate survivors discovered Hawaii many centuries before the English navigator was born. But when once the "Paradise of the Pacific" was discovered, why leave it? Why brave the weary and dangerous journey back? The temperature varies but little in Hawaii the year round. The uplands frequented by the birds are cool at all times of the year; apparently, too, they offer as much food in summer as in winter. Perhaps in time the birds will come to realize the advantages of a permanent residence in Hawaii. But first they must overcome that passion—the most powerful that stirs the avian brain—the homing instinct, which impels them to leave Hawaii's hospitable shores for the far away Alaska for no other reason than that they have always done so. In the far north they first saw the light, in the far north they reared last year's brood, and back to the far north they must hark at the cost of no matter what danger and fatigue. Like the Tattler, both the Plover and the Turnstone leave a contingent in Hawaii, which consists, as in the case of the former, of the young and the decrepit.

But three other coast inhabitants remain to be mentioned, for the Bristle-thighed Curlew, or Kiowea, is so rare upon this island that I have never seen one.

In some respects the Noddy Tern, or Noio, is the most notable and interesting of all Hawaii's coast birds, but its distribution is very local. Long sections, in fact, of Hawaii's coast line appear to be without these interesting birds, perhaps because of the absence of proper cliff shelters. Upon the ledges of cliffs and upon the shelves of rocky caves the Noddies doze away their idle hours by day and roost at night. Here upon the

bare rock they lay their eggs, and from their dim recesses the baby Noddy catches its first glimpse of the outer world through the mist of the breakers as they thunder beneath it. The Noio is extremely sociable and is always found in large colonies, which live together in the utmost harmony.

In holes far up the faces of the same cliffs nests the Tropic Bird, the Koae of the natives. Only occasional glimpses of the Koae are caught, as singly or in pairs they wing their way along the cliffs or oceanwise for food. Several pairs of this fine bird have always nested in the cliffs on the west side of Kilauea, and from the Volcano House the birds may often be seen, floating idly in the air or actively chasing each other in play over the pit.

No one unfamiliar with such a solitary coast as Hawaii can realize how greatly the charm of the seaside is enhanced by the presence of birds. It may, at least, be claimed for Hawaii that its desert shores are not the result of man's act. In the way of sea birds Nature has been as prodigal to America as she has been niggardly to Hawaii. But the teeming shores of the mainland have been stripped of Tern and Gull, Pelican and Grebe to satisfy man's greed and woman's caprice. It is to the deep and turbulent waters offshore, to the absence of inshore shoals, and to the general lack of suitable nesting grounds that must be attributed the general absence of waders and sea birds around the island of Hawaii.

But let us leave the coast and its infrequent birds and bend our steps to the forest, where a different experience awaits us.

The Hawaiian forest is a veritable jungle, and to explore its depths one should employ a native who is skilled in the use of the heavy cane-knife, by means of which a passage is cut through the tangle with surprising rapidity. A short time since there was no other way to penetrate the forest, but now it is far easier to follow one of the numerous trails that pass from the infrequent road to the coffee clearings, far within the woods. Many of these have been ferned, that is, have been paved with the trunks of tree ferns halved and laid down for walks, along which the observer may pass swiftly and with noiseless steps. Let us suppose ourselves upon such a trail at an altitude of some two thousand feet. At this height the bulk of the forest proper consists largely of the ohia tree, which attains a height of upward of 100 feet, and supports upon its stalwart trunk and ample branches a whole forest of vines, ferns and berry-bearing shrubs. For so fierce is the struggle for existence in the Hawaiian forest that such plants, and even trees, as are denied a foothold on Mother Earth preempt a home upon their more fortunate brethren, and thus each tree perforce has to furnish standing room for a whole plant colony.

In some localities at an altitude of about four thousand feet a beautiful acacia, the well-known and highly prized koa of the natives, largely replaces

the ohia, while elsewhere is found a mixture of the two trees, such mixed woods being a favorite resort of Hawaiian birds.

By reason of its great abundance and luxuriant growth, the ieie is the most prominent of the creeping vines, and its existence seems to be indissolubly connected with the ohia, every tree being married to one of the vines, whose loving embrace ceases only with death.

Tree ferns, extreme examples of which attain a height of 40 feet with a girth of 4 feet at the base, are very numerous; thick clumps of bananas grow here and there, and the tangle is still further made up by a great number of small shrubs, tree lobelias and ferns which go to swell the bulk of a semi-tropical forest.

Such a forest, as is here hinted at but not described, clothes the entire windward side of Hawaii save for a belt of sugar-cane fields, some three miles wide, which extends upward from the sea, each year encroaching more and more upon the forests above.

This forest, impenetrably dense, always moist, lighted but dimly and ever silent, is the chosen haunt of Hawaiian birds, and in its depths have been developed those curious forms of avian life unlike any others in the world. Penetrate into the ferns a few steps and then pause a moment. The ohias are in blossom, and from their far-away summits, crowned with clusters of rich crimson blossoms, come the calls and songs of birds. By means of a good glass and with the exercise of much patience most of them may be readily identified. The brilliant crimson plumage of the Iiwi and the dull red of the Akakani, with its white crissum, instantly proclaim the presence of these beautiful species. These birds are the honey-eaters, par excellence, of the Hawaiian woods. Their long curved bills and brush-tipped tongues are preëminently adapted to glean nectar from flowers, and they drink from nature's crimson cups till the liquid nectar fairly runs from their bills.

The tree-tops, in the height of the ohia blossoming, are the scene of one mad revel all day long. At such times both the Iiwi and the Akakani sing almost incessantly, and, as other feathered denizens of the forest join the throng, the scene is one of the most interesting and inspiring possible to be conceived. It can be compared only to our American woods in the height of the spring migration, but in the number of individuals gathered in favored spots and in the united sound of their tumultuous voices it far eclipses our vernal woods. There seems to be a general impression in Hawaii that the Iiwi and the Akakani live almost entirely on honey. This is a mistake. Nectar must contain very little nourishment, for these birds, even when nectar is most abundant, eat great numbers of insects, especially a small green worm that infests the ohia all the year round.

In the deep forests, in tall trees, and in the undergrowth of clear-

ings and along the roads, lives the Amakihi, a small greenish bird which finds its insect food among the foliage. It has a characteristic upward tilt to the tail, somewhat like our Titlark. The Amakihi, too, is fond of nectar by way of dessert, and in many ways it is a very interesting species. I must pass it by with the statement that of all Hawaiian birds the Amakihi, in habits and motions, most nearly resembles our Wood Warblers. Oddly enough, its song is a faint, simple trill, which recalls the song of our Pine Warbler. Go where you will in the Hawaiian woods, if one of these little birds is not visible, one has but to squeak a few times, when a pair appear with answering notes, full of curiosity as to the nature of your business.

The ieie vine has a spike of nutritious seeds, which form the chief food of the Ou, the thick bill of which, developed, no doubt, chiefly for the purpose of extracting these same seeds, together with its yellow head and green plumage, always inspires the stranger with the idea that the bird belongs to the Parrot family. In fact, Latham, its first historian, called it the Parrot-billed Grosbeak! The trim, finch-like shape of the Ou, and its beautiful plumage, are enough to inspire regard in the breast of any bird observer, but the Ou possesses an even stronger claim to affection, for it is the most beautiful songster of the Hawaiian forest. The song is unmistakably fringilline in character, and so much resembles the Canary's, that it is the generally received opinion among the settlers that the forest is full of escaped cage-birds; yet in purity, sweetness and power the song of the Ou far surpasses the Canary's best efforts. Unfortunately the Ou, as a rule, is not very generous with its song, and too often the listener has to be content with snatches of melody in place of the finished performance. Yet I remember on one occasion to have heard more than a dozen males singing in a small patch of woods for at least an hour, and the chorus was worth going far to listen to.

The Ou has a soft, plaintive call, much like a Goldfinch's, which can be imitated so closely as to always elicit a response if an Ou is within hearing. More than once I have called down a passing party from mid-air to a perch in low trees. Often, too, when quietly resting in the forest, I have sent forth the soft call-note of the Ou at a venture, to be instantly answered, and to find myself in the midst of a party of these birds which, unnoticed, had been quietly feeding in the trees overhead. While the fruit of the ieie forms the chief food of the Ou, the bird is fond, also, of several kinds of berries, especially of mamaki berries, of bananas, and even of guavas. Such a varied fare leads to the belief that this beautiful songster might be domesticated in the warmer portions of the United States. It may be doubted, however, if the bird would be welcomed by the fruit-grower, as cherries,

peaches, and other small fruits would almost certainly be eaten by it, and it is a greedy feeder.

Another notable dweller of the Hawaiian woods is the Omao, the only Island representative of the Thrush family. In some districts the Omao is the shyest of all shy recluses, while in others it is quite familiar. I know of no possible explanation of this extraordinary change of disposition. But shy or familiar, it is never chary of its song and often sings the day through. My English friends speak in high terms of the Omao's song, and I regret that I cannot heartily subscribe to their encomiums.

When really bent upon singing, the Omao perches upon the topmost twig of a tall tree, and thence for an hour or more seems to challenge the whole bird world to a musical contest. Its song consists of a series of odd, disconnected syllables, now rapidly uttered, now with widely-spaced measures, but always defying description. In this medley there are occasional melodious fragments which suggest bits of our Brown Thrasher's song, but at best they are the merest suggestion, and the song as a whole is not for a moment to be compared with the poorest effort of our olive-backed fraternity. In general method and effect the Omao's song is not dissimilar to the musical efforts of our Chat (*Icteria*). The Omao, however, has inspired moments, and I have seen a male leave the top of a tall tree and circle about on wing, leaving behind a trail of ecstatic song, the memory of which bids the critic pause.

The ordinary call-note of the Omao is a deep and loud chuck, neither like nor very unlike the notes of the Wood Thrush. Its alarm note, uttered when the bird hears a suspicious noise, is a sort of sworling call that again is a little suggestive of our Catbird's familiar note.

The Omao passes its life in the trees of the deep forest, pretty well up, and I have never seen an individual on the ground. I have searched carefully for the nest of the Omao, for the nest may have something to tell of the bird's not over-clear relationship, but thus far without success.

I must not forget to mention a very curious habit of the Omao. He seems to be afflicted with chronic ague. Standing upright upon a bough in a thrush-like attitude and drooping his wings, he shakes them with a tremulous motion, precisely as young birds do when begging for food from their parents. He is particularly prone to one of these seizures when he sees an intruder, and at first I interpreted the ague to be the result of nervousness or fright. But more than once I have watched the Omao when he was wholly unaware of my presence, and have caught him in the act of having a good shake all by himself. What the performance means, if it means anything, only the Omao knows.

In such a forest as above described, the Oo, prince among Hawaiian birds, used to be common, but alas! the love of feathers is not confined solely to women or to civilization. The old chiefs of Hawaii had to

have emblems of their rank and authority, and the Hawaiian belles of today covet the beautiful yellow feathers of the Oo for leis for the neck. As a consequence, the Mamo is probably entirely extinct, while the Oo still lingers in certain restricted and inaccessible districts.

The Oo is a noble bird, with brilliant black plumage and a far-reaching voice, but with no song as far as I am aware. Its activity as it glides over the branches of the tall ohias, jetting its long tail like a Magpie, is astonishing. At some seasons, at least, it is a most assiduous and persistent insect-hunter, and its loss to Hawaii is to be deplored.

In this brief notice of some of the commoner Hawaiian birds, I have omitted some notable species, such as the orange-colored Akepeleuie, smallest of all Hawaiian birds, the green Akialoa, and the yellow-bellied Akipoloau. The latter species, I may briefly remark, has attempted in a way to play the role of Woodpecker, despite the long, thin, curved mandible. The skull is thick and broad at base, and the maxillary and neck muscles are very powerful, so as to confer great driving power upon the short and blunt lower mandible. As a consequence, the bird can hammer off and wrench away small excrescences from the bark and limbs of trees so as to expose the hidden insect burrows. The delicate, curved upper mandible appears to have a double function: first, as a probe to detect the presence of larvæ and beetles in their burrows; second, as a hook to haul them out within reach of the brush-tipped tongue.

In richness of tone and a certain deliberateness of utterance, the song of the Akialoa suggests that of the Yellow-throated Vireo. It is short, but rich and full, and is frequently uttered as the bird flies from tree to tree or climbs about the trunks.

I must not omit all mention of the single Hawk peculiar to the Islands, especially as it is the only bird of prey, except the Short-eared Owl. The latter is so recent a settler from the mainland that it is indistinguishable from mainland specimens. In making the above statement I do not overlook the fact that specimens of the Marsh Harrier have been taken upon the Island of Oahu, where it is probable that the species will in time become established and may spread thence to the other islands. Io, the hawk, is a heavy-winged, sluggish fellow, with much the disposition and many of the habits of the Broad-winged Hawk. He shuns the heavy forest and lives on its skirts and in the clearings. He has a liking for perching upon the branches of isolated trees, where he sits and scans the ground beneath for mice and small rats. Small rodents are his natural food, and so heavy and awkward on the wing is he that only under exceptional circumstances can he catch small birds, to the presence of which, usually, he pays not the slightest attention.

(To be concluded.)

A Nighthawk Incident

BY FRANK M. CHAPMAN

With photographs from nature by the author

A DISCUSSION of the specific distinctness of the Whip-poor-will and Nighthawk, following an address to Connecticut agriculturists, some years ago, led to my receipt, in July, 1900, of an invitation from a gentleman who was present, to come and see a bird, then nesting on his farm, that he believed, combined the characters of both the



NIGHTHAWK AND YOUNG ON ROCK

Whip-poor-will and Nighthawk; in short, was the bird to which both these names applied.

Here was an opportunity to secure a much-desired photograph, and, armed with the needed apparatus, as well as specimens of both the Nighthawk and Whip-poor-will, I boarded an early train for Stevenson, Conn., prepared to gain my point with bird as well as with man.

The latter accepted the specimens as incontrovertible facts and readjusted his views as to the status of the birds they represented, and we may therefore at once turn our attention to the Nighthawk who was waiting so patiently on a bit of granite out in the hay fields. The sun

was setting when we reached the flat rock on which her eggs had been laid and young hatched and where she had last been seen; but a fragment of egg-shell was the only evidence that the bare-looking spot had once been a bird's home. The grass had lately been mowed and there was no immediately surrounding cover in which the bird might have hidden. It is eloquent testimony of the value of her protective coloring, therefore, that we should almost have stepped on the bird, who had moved to a near-by flat rock, as we approached the place in which we had expected to find her.

Far more convincing, however, was her faith in her own invisibility. Even the presence of a dog did not tempt her to flight, and when the



NIGHTHAWK ON FENCE

camera was erected on its tripod within three feet of her body, squatting so closely to its rocky background, her only movement was occasioned by her rapid breathing.

There was other cause, however, beside the belief in her own inconspicuousness to hold her to the rock; one little downy chick nestled at her side and with instinctive obedience was as motionless as its parent.

So they sat while picture after picture was made from various points of view and still no movement, until the parent was lightly touched, when, starting quickly, she spread her long wings and sailed out over the fields. Perhaps she was startled and deserted her young on the impulse of sudden fear. But in a few seconds she recovered herself and, circling, returned and spread herself out on the grass at my feet. Then followed the evolutions common to so many birds but wonderful in all. With

surprising skill in mimicry, the bird fluttered painfully along, ever just beyond my reach until it had led me a hundred feet or more from its young, and then, the feat evidently successful, it sailed away again, to perch first on a fence and later on a limb in characteristic, length-wise Nighthawk attitude.



NIGHTHAWK FEIGNING LAMENESS

How are we to account for the development in so many birds of what is now a common habit? Ducks, Snipe, Grouse, Doves, some ground-nesting Sparrows and Warblers, and many other species, also feign lameness with

the object of drawing a supposed enemy from the vicinity of their nest or young. Are we to believe that each individual, who in this most reasonable manner opposes strategy to force, does so intelligently? Or are we to believe that the habit has been acquired through the agency of natural selection and is now purely instinctive? Probably neither question can be answered until we know beyond question whether this mimetic or deceptive power is inherited.



NIGHTHAWK ON LIMB

The Birds of a Marsh

BY VERDI BURTCH

SEPARATED from the foot of Keuka Lake, N. Y., by a strip of land about three hundred feet wide, and bordering on its outlet, is a marsh of about fifty acres in area. At some time in the remote past this marsh was a forest, as is attested by the numerous stumps that remain to this day, some of which are upwards of three feet in diameter.

Ten or twelve years ago the water in the marsh was three or four feet deep, but, owing to a period of extended drought, it has been steadily receding into the outlet, carrying with it the soft mud, water-soaked sticks and various sorts of débris. This obstructed navigation to such an extent that the state built a great fence, or breakwater, between the outlet and the marsh, making of the latter a shallow, mud-bottomed pond, the shores covered with cattails, coarse grass and weeds, a patch of alders and willows in one corner, a fringe of trees on one side, and the state fence, beside which are cattails and rank grass, on the outlet side.

As the water recedes, exposing large areas of soft mud, which contains various minute mollusks, worms and the larvæ of insects, the swamp becomes the resort of various species of birds, especially the shore birds. These stop on their way south, bringing with them their families, which were reared in the far north, in some cases way within the arctic circle.

July 28, 1899, at 6.30 P. M., I sat on a stump at the edge of the muddy shore commanding a view of the whole marsh. Four Great Blue Herons were stalking about among the stumps. Leveling my glass at one of them, I saw it move its head slowly forward and downward; then suddenly it shot down into the water and came back with a frog in its bill. With a gulp the frog disappeared, and the Heron resumed his slow walk. The little Green Herons were everywhere, some wading in the shallow water or standing on stumps and others flying about. Belted Kingfishers were perched on the stumps, from which they would fly up and poise in the air with rapidly beating wings, then dart to and into the water, frequently coming out with a small fish, which they would take to a stump to devour. Killdeers were running about all over the muddy shore. Chattering in the cattails were numbers of Red-winged Blackbirds and many Bobolinks, which had changed their bright plumage of spring to a dull buffy olive streaked with black and their song to a single note, *pink*. A few Bronzed Grackles were walking about in the mud. Cedar Waxwings were perched about on the stumps, from which they arose frequently, in true Flycatcher style, to snap up a passing insect. Song Sparrows were running hither and thither among the tufts of grass at the edge of the mud and occasionally mounting a stump to sing a short song.

Now and then a Goldfinch flew by, uttering his merry *per-chic-o-ree* as he flew. A Marsh Sparrow mounted a cattail and sang a low, sweet song. Then a Pectoral Sandpiper, hotly pursued by a Cowbird, alighted near me, where the Cowbird left it to feed in peace. Next a Yellowlegs came flying by. The Pectoral and Yellowlegs are the advance guards of the flocks of shore birds that come here later in the season. A Spotted Sandpiper which has been with us all summer and several Robins now came around me, and numbers of Barn, Cliff and Bank Swallows and Chimney Swifts were flying to and fro over the marsh catching their evening's meal.

August 4, I noted a Solitary and several Least and Semi-palmated Sandpipers. The last two are the smallest of our Sandpipers, and are usually found together, when it is hard to tell them apart. The Semi-palmated is slightly the larger.

August 7, Yellowlegs were common and it was interesting to watch them as they moved about with a jerking motion, saying *cler-clerk*, flying a few feet and alighting gracefully with their long and beautiful wings spread straight up for a second, then carefully closing them to their sides. They were continually on the move and saying *cler* and *cler-clerk*. Several Savannah Sparrows were running about like mice at the edge of the cattails, and a Flicker flew over.

August 13, the Pectorals and Least were common and noisy. A Sparrow Hawk was circling around overhead. At 5 P. M. I was sitting on the state fence when three Virginia Rails came stealthily out of the flags, dodging about among the tufts of grass, thrusting their slender bills deep into the soft ground in search of food. They were quite close to me and I noticed that one of them was slightly larger than the others, the plumage of the breast was streaked and the wing coverts were quite rufous. I saw them at this place several times during the following month.

In the early morning of August 15 I was walking on the "fence," when I came to a family of five young Cliff Swallows. They were in a row perched on the rail of the fence overlooking the outlet. I was so close to them that I could see their little eyes glisten as they looked inquiringly at me. King-birds were common, and I heard a Yellow-billed Cuckoo.

August 19, at 5.30 A. M., a Louisiana Water Thrush was running on the mud close to the "fence." A Long-billed Marsh Wren climbed up a cattail to scold me. Heard a Warbling Vireo, Catbird and Baltimore Oriole. A Brown Creeper was creeping zigzag up the trunk of a tree near the marsh.

I did not visit the marsh again until August 29, and noted but one new bird, a Semi-palmated Plover.

My next visit was September 10, and I found the marsh nearly dry and

deserted by the birds, excepting a few Green Herons, a Kingfisher, Pectoral, Semi-palmated Plover and about a dozen Least and Semi-palmated Sandpipers.

September 13. In the bushes were Maryland Yellowthroats, which gave an imitation of their spring song, some immature Blackpoll Warblers, Purple Finches and a pair of Phœbes.

September 19, a pair of Black Ducks flew over, and a pair of Mourning Doves joined the shorebirds, Robins and Cowbirds on the mud.

September 21, saw an Indigo Bunting in a bad state of molt in the cattails. A Cooper's Hawk was soaring about, then alighted on a stump. I was watching it with my glass, when suddenly a mink ran up the stump and grabbed it. The Hawk started to fly and was pulled to the ground, but before I could get to them it broke loose and flew away.

White-throated Sparrows made their appearance in the bushes September 22.

October 9 two lovely Pectorals stood at the edge of a small pool, and in the bushes were Blackpoll (immature) and Myrtle Warblers, White-throated, Song, Swamp and a few White-crowned Sparrows, a Hermit Thrush, Hairy and Downy Woodpeckers, White-breasted Nuthatch, some Chickadees and Rusty Grackles. At dusk flocks of Robins, Cowbirds and Redwings gathered in the alders to roost.

October 22, an American Pipit was feeding near a flock of Pectorals, and I flushed a pair of Wilson's Snipe from the edge of the weeds. Saw a Ruby-crowned Kinglet in the bushes.

October 29, a Long-tailed Duck was swimming in the shallow water, and an Osprey stood on the partly eaten body of a Horned Grebe, where he was bothered by a flock of Crows.

November 12 was a cold, windy day, and I saw only a few Song and Tree Sparrows, a couple of Killdeers and a Pectoral.

During the season I had observed 61 species about this marsh and in the years 1896, '97 and '98, 30 species which were not seen this year making a total of 91 species seen about this marsh.

The 30 species not mentioned before were: Red-shouldered Hawk, Pied-billed Grebe, American Herring Gull, Least and Black Terns, American and Least Bitterns, Coot, Greater Yellowlegs, Red-backed Sandpiper, Marsh Hawk, Bald Eagle, Nighthawk, Tree, Chipping, Vesper and Arcadian Sparrows, Nashville, Yellow, Magnolia and Black and White Warblers, American Golden Eye and Wood Duck, Ruby-throated Humming-bird, Slate-colored Junco, Sora, Wood Pewee, Least Flycatcher, Meadow-lark and Golden-crested Kinglet.



OVENBIRD AT ENTRANCE TO NEST, ABOUT TO FEED YOUNG
Contact print, no enlargement



OVENBIRD AT ENTRANCE TO NEST, ABOUT TO FEED YOUNG
Part of same subject as above, enlarged about $3\frac{1}{2}$ times

An object lesson in enlarging. Two pictures of an Ovenbird, the upper the same size as the negative; the lower enlarged about $3\frac{1}{2}$ times. From nature by Frank M. Chapman, Englewood, N. J., June 8, 1900.

For Teachers and Students

Birds and Seasons

FIFTH SERIES

AUGUST AND SEPTEMBER BIRD-LIFE NEAR BOSTON

BY RALPH HOFFMANN

WHILE there is undoubtedly a steady diminution in our bird-life during August, it is extremely difficult to name the exact date when the bulk of any one species departs. Many birds are molting, and are consequently silent and retiring. The Yellow Warbler, however, sings constantly through July and early August; when, therefore, we cease to hear his song, we assume that he and his tribe have gone. Individual Yellow Warblers may be observed late in September, but these are almost certainly migrants from farther north. In September again little bands of Chimney Swifts may sometimes be observed nearly to the end of the month, but our own birds have probably left us long before. The chief interest in August bird-study lies in studying the plumages of the young birds, and in learning to recognize the adult males in their autumn dress. There is also a certain amount of wandering going on, which may bring to us an early northern migrant before the regular September movement begins. Along the shore there is a regular migration in August, and there Sandpipers, Plover and the various sea birds offer a fascinating but difficult field for study.

September comes after August, somewhat as the spring does after mid-winter. No other month except May offers so great a variety of birds. But the birds sing little, are often much less conspicuously marked, and seem more restless than in spring, so that the study of the autumn migrants keeps one even more alert and watchful than the more stirring mornings of May. Since the very first returning migrant in the fall is not awaited so anxiously as in the spring, I have adopted a different system in recording their arrival. I have given two dates, but the second is the time when the last of the species leaves us for the winter, while the first is the approximate date when the first may be looked for. Where no second date is given, the species remains all winter.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LIFE, Dec., 1900, p. 183.

Departures of Summer Residents in August and September—August 18, Yellow Warbler, Purple Martin; August 31, Cliff Swallow, Bank Swallow, Red-winged

Blackbird; September 5, Kingbird, Crested Flycatcher, Least Flycatcher, Baltimore Oriole, Barn Swallow, Chimney Swift †; September 10, Bobolink, Whippoorwill, Wilson's Thrush; September 15, Chestnut-sided Warbler, Prairie Warbler, Warbling Vireo, Yellow-throated Vireo, Wood Thrush, Rose-breasted Grosbeak; September 20, Green Heron, Hummingbird, Nighthawk; September 25, Black and White Warbler, Ovenbird, Redstart; September 30, Red-eyed Vireo, Scarlet Tanager, Wood Pewee, Short-billed Marsh Wren, Long-billed Marsh Wren, Nashville Warbler, Black-billed Cuckoo, Yellow-billed Cuckoo, Spotted Sandpiper.

Arrivals and Departures of Migrants in August and September.—August 1–October 1, Solitary Sandpiper, Blue Heron; August 20–October 1, Northern Water Thrush; September 1–October 15, Red-bellied Nuthatch* ; September, early, Canada Warbler, Wilson's Blackcap; September 7–October 15, Blackpoll Warbler; September 13–30, Connecticut Warbler; September 15–October 5, Magnolia Warbler, Parula Warbler; September 15–October 10, Lincoln's Finch; September 15–October 1, Western Palm Warbler; September 15–November 20, White-throated Sparrow; September 19, Brown Creeper; September 20–November 10, Myrtle Warbler ‡, Winter Wren; September 20–October 5, Black-throated Blue Warbler; September 20–October 10, Olive-backed Thrush, Gray-cheeked and Bicknell's Thrushes; September 20–October 15, Solitary Vireo; September 22, Golden-crowned Kinglet; September 25–October 10, Yellow-bellied Sapsucker; September 25–November 5, Rusty Grackle, American Pipit; September 28–October 25, Ruby-crowned Kinglet; September 30–October 15, Yellow Palm Warbler.

* Sometimes absent.

† Individuals often much later.

‡ Individuals often much earlier.

AUGUST AND SEPTEMBER BIRD-LIFE NEAR NEW YORK CITY

BY FRANK M. CHAPMAN

The first week in August sees practically the conclusion of the nesting season and of the song period. Goldfinches, Waxwings, and three-brooded Song Sparrows may still be in attendance on their young; Red-eyed Vireos and Wood Pewees will still be in voice, but their conspicuousness at this season marks them as striking exceptions. Birds are now molting and are difficult to find, and until the southward migration becomes pronounced the woods often seem deserted.

Careful, skilled observers will find migrants beginning to arrive from the north as early as August, but it is not until about the 20th that the first real 'wave' appears. Among the interesting migrants to be found, so far as records go, only at this time is the northeastern form of the Loggerhead Shrike, which nests in northern New England.

For bird students near New York city the Hackensack marshes will be found of unusual interest. Each night the Swallows return to roost in them, and, as the wild rice ripens, Soras, Bobolinks and Red-winged Blackbirds become more numerous.

In September migrants from the north grow rapidly more abundant, and the height of the fall migration is reached between the 10th and 20th. About the latter date, the Junco, Brown Creeper, and some other winter visitants may be looked for.

BIRDS OF THE SEASON

For permanent residents see BIRD-LORE Dec., 1900, p. 184.

Migrants Arriving from the North.—August: August 1-15, Sora, Yellow-bellied Flycatcher, Golden-winged Warbler, Canadian Warbler, Water Thrush; 15-31, Olive-sided Flycatcher, Tennessee Warbler, Nashville Warbler, Parula Warbler, Cape May Warbler, Black-throated Green Warbler, Black-throated Blue Warbler, Magnolia Warbler, Blackburnian Warbler, Wilson's Warbler, Red-breasted Nuthatch.

September: September 1-10, Lincoln's Sparrow, Blackpoll Warbler, Connecticut Warbler; 10-20, Blue-headed Vireo, Olive-backed Thrush, Bicknell's Thrush; 20-30, Herring Gull, Junco, White-throated Sparrow, White-crowned Sparrow, Myrtle Warbler, Yellow Palm Warbler, Brown Creeper, Golden-crowned Kinglet, Ruby-crowned Kinglet, Winter Wren, Gray-checked Thrush.

Summer Residents Leaving for the South.—September: September 1-10, Acadian Flycatcher, Orchard Oriole, Rough-winged Swallow, Worm-eating Warbler, Blue-winged Warbler; 10-20, Baltimore Oriole, Yellow Warbler, Yellow-breasted Chat; 20-30, Green Heron, Hummingbird, Kingbird, Crested Flycatcher, Wood Pewee, Rose-breasted Grosbeak, Yellow-throated Vireo, Warbling Vireo, Hooded Warbler, Louisiana Water Thrush, Wilson's Thrush.

AUGUST AND SEPTEMBER BIRD-LIFE NEAR PHILADELPHIA

BY WILMER STONE

August and September are the great months of southward migration, corresponding to April and May of the spring movement. It is true that none of our summer resident species leave us entirely until the first week in September, but migrants are passing during the greater part of both months. The berry-bearing trees and bushes are great rendezvous for birds at this season, and many species can be seen and studied if the observer takes his stand in the vicinity of a group of wild-cherries or clump of pokeberries. The molt of many birds may be noted at this time, and we can easily distinguish the 'fork-tailed' Robins, which are just beginning to lose their feathers, and the 'wedge-tails' in which the new plumage is nearly grown.

Much that goes on during these months is missed by the observer because of the heat and other drawbacks of midsummer, which render field work a serious matter. Then, too, the birds are silent, retiring and listless, in marked contrast to their activity during the spring migration or the first crisp days of October.

By September 1, nearly all birds, old and young, have assumed their winter plumage, and the dull blended colors and lack of many characteristic markings of the nuptial season render identification more difficult.

Our first winter visitants, the White-throated Sparrows, reach us by September 20, and sometimes the Junco is to be seen before October 1.

BIRDS OF THE SEASON

For permanent residents see BIRD-LORE, Dec., 1900, p. 185.

Transients Arriving from North.—August 1-15, Golden-winged Warbler, Chestnut-

sided Warbler, Canadian Warbler, Redstart, Small-billed Water-Thrush; August 15-31, Yellow-bellied Flycatcher, Bobolink, Nashville Warbler, Tennessee Warbler, Parula Warbler, Black-throated Blue Warbler, Back-throated Green Warbler, Magnolia Warbler, Bay-breasted Warbler, Blackburnian Warbler, Wilson's Warbler, Veery; Sept. 1-15, Yellow-bellied Sapsucker, Savanna Sparrow, Blackpoll Warbler, Connecticut Warbler, Pine Warbler, Prairie Warbler, Blue-headed Vireo, Olive-backed Thrush, Red-bellied Nuthatch; Sept. 15-30, Herring Gull, Junco, White-throated Sparrow, Myrtle Warbler, Brown Creeper, Golden-crowned Kinglet, Ruby-crowned Kinglet, Purple Finch, Winter Wren.

Departure of Summer Residents.—Sept. 1-15, Acadian Flycatcher, Orchard Oriole, Baltimore Oriole, Rough-winged Swallow, Cliff Swallow, Barn Swallow, Purple Martin, Worm-eating Warbler, Kentucky Warbler, Blue-winged Warbler; Sept. 15-30, Hummingbird, Whippoorwill, Kingbird, Crested Flycatcher, Wood Pewee, Yellow-throated Vireo, Warbling Vireo, Yellow-breasted Chat, Yellow Warbler.

AUGUST AND SEPTEMBER BIRD-LIFE NEAR OBERLIN, OHIO

BY LYND S JONES

There is a good deal of movement among the birds during August, yet only two species come down from the north with any regularity, and they late in the month. However, a number of our summer resident species wholly disappear before the month draws to a close. While there are no frosty nights, there is likely to be some chilly weather as early as the middle of the month. There is no lessening of the foliage, except possibly the dying of some of the lower leaves in the thicker woods. The heat, combined with swarming mosquitoes and gnats and the deer flies, makes the life of the ornithologist miserable. The dense foliage renders work with the woods birds extremely difficult, especially so since the birds are inclined to be silent except during the early morning hours. Many of the birds have not fully recovered from the annual molt, and are more than usually retiring on that account.

September brings good cause for thoughts of the sunny south in that forcible suggestion of the coming winter season, frosty meadows and withering vegetation. The month is too likely to contain many days too disagreeable for all but the most ardent devotee of our chosen study. It is not so disappointing as August, for it brings many travelers from the north, and the foliage has thinned with each touch of frost. Not a few of the birds sing again, but the most are silent or only call.

We are accustomed to think of May and June as the months when birds' nests are to be found. In this region many birds are still nesting in July, a few in August, and at least the Goldfinch and Mourning Dove even into September. These and Song Sparrow, Vesper Sparrow and the Cuckoos regularly nest during August. In Iowa I have many times found fresh eggs in the Cuckoos' nests as late as September 6.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE, December, 1900, p. 186.

Arrivals in August.—Olive-backed Thrush, Solitary Sandpiper.

Departures in August.—1-10, Traill's Flycatcher, Orchard Oriole, Blue-winged Warbler, Long-billed Marsh Wren, Wilson's Thrush; 10-20, Rose-breasted Grosbeak, Purple Martin, Rough-winged Swallow, Yellow Warbler, Blue-gray Gnatcatcher; 20-31, Bartramian Sandpiper, Nighthawk, Ruby-throated Hummingbird, Phoebe, Cliff Swallow.

Arrivals in September—1-10, Bonaparte's Gull, Sanderling, Semi-palmated Plover, Greater Yellowlegs, White-crowned Sparrow, White-throated Sparrow, Black and White Warbler, Nashville Warbler, Black-throated Green Warbler, Black-throated Blue Warbler, Magnolia Warbler; 10-20, Blackpoll Warbler, Tennessee Warbler, Blue-headed Vireo, Winter Wren; 20-30, Black Tern, Pintail, Shoveler, Pine Siskin (rare), Myrtle Warbler, Palm Warbler, Ruby-crowned Kinglet, Golden-crowned Kinglet.

Departures in September.—1-10, Kingbird, Crested Flycatcher, Bobolink, Baltimore Oriole, Migrant Shrike, Yellow-breasted Chat, Wood Thrush; 10-20, Great Blue Heron, Sanderling, Green-crested Flycatcher, Wood Pewee, Spotted Sandpiper, Red-headed Woodpecker, Grasshopper Sparrow, Scarlet Tanager, Warbling Vireo, Bank Swallow, Cerulean Warbler, Redstart, Ovenbird, Black-throated Blue Warbler, Brown Thrasher; 20-30, Yellow-billed Cuckoo, Black-billed Cuckoo, Barn Swallow, Maryland Yellowthroat, Indigo Bunting, Red-eyed Vireo, Catbird, House Wren, Nashville Warbler, Magnolia Warbler, Blackpoll Warbler.

BIRDS OF STOCKTON AND VICINITY

By L. BELDING

I wrote the notes in the March-April BIRD-LORE with the purpose of interesting and instructing the school children of Stockton, relying upon my observations of former years for necessary data, knowing, however, that there had recently been a great change in the area under consideration but did not think the change as great as it is. The western half, or thereabout, of this area was until recently tule marsh in which water birds were abundant all of the year, but it has been mostly drained, plowed and quite deserted by the water birds. In extensive explorations through the tule ground in May of this year I did not see a solitary Egret, and other conspicuous species which, like the Egrets, were formerly very common appeared to be entirely absent.

In the city, owing to the superabundance of the English Sparrow, but few native birds breed now. Fortunately, the Western Martin is still very common and some other fine songsters breed sparingly. A few Black-headed Grosbeaks, House Finches and Bullock's Orioles manage to hold the fort against the Sparrows which are rapidly spreading through the surrounding country. Our spring migrants all arrive on or before May 10, and by August 1 the birds, excepting the Mourning Dove and rare individual exceptions, have finished breeding and most species are in flocks. Millions of Blackbirds fly every morning from their roosts in the tule marsh to the grain fields to the eastward, at night returning to their roosts; and this occurs every day of the year when these birds are not breeding.

Many Crows make the same journey by straggling flight over favorite routes from and to their roosts in willows in the tule ground and the Yellow-billed Magpie, now becoming rare, has a similar habit of flight and purpose.

During August there is a southward movement of the summer residents, quite imperceptible, but so effectual that by September 1 but few of them remain. At the same time some of our resident species are reinforced by individuals which breed in Nevada or north of us.

In the first week of September Gambel's Goose and a few other water birds which breed in cold climates begin to arrive, but not until the 20th is there a marked inflow of winter sojourners. Then the Intermediate Sparrow, Western Savanna Sparrow and American Pipit may be confidently sought. Four or five days later the Golden-crowned Sparrow arrives.

These birds are as constant in date of arrival and departure as any that visit us and being abundant are easily traced.

The following sometimes arrive as early as September 20: Short-eared Owl, Sharp-shinned Hawk and Audubon's Warbler; from 25-30, Townsend's Sparrow, Lincoln's Sparrow, Mountain Song Sparrow and Junco.

In the March-April BIRD-LORE I intended to name the Western Savanna Sparrow as leaving about May 1 instead of Townsend's Sparrow.

Several confusing forms of Song Sparrows, Juncos and Horned Larks visit us in winter.

SUGGESTIONS FOR THE SEASON'S STUDY

Nesting.—What birds are found nesting in August? Are they rearing first or subsequent broods? Among the birds breeding in your vicinity which species raise one brood? Which two? Which three broods? Have you positive evidence that any species succeeds in rearing three broods?

Song.—Note the dates when various birds are last heard to sing. What young birds are heard singing in August? What evidences are observed of a second song period after the molt is concluded?

The Molt.—The molt cannot be studied to advantage in living wild birds, but various evidences of it may be observed at this season among young birds changing their nesting for the first winter plumage, and with such adult birds as the male Bobolink or Scarlet Tanager when losing their bright breeding dress for a dull winter costume.

Migration.—Note the first signs of migration in the flocking of birds and the return nightly to a given roost; good examples are Swallows, Red-winged Blackbirds and Robins. The roosting habits of these birds form most interesting studies. When are the first migrants from the north observed? Which of the birds nesting in your vicinity is the first to go south, that is, to disappear? What is the northern limit of the breeding range of these species? Do you observe any connection between their breeding range and the date of their departure? During the first half of August some previously common birds will be very rare—Baltimore Orioles, for instance—but in the latter half they will again become common. Are the late August birds newcomers from the North or our summer resident birds, who in early August were molting? Among migrants from the north are the first comers young or old birds? At the time of the full moon in September,

night migrating birds may be observed in large numbers with a low-power telescope; even a mariner's hand-glass will prove serviceable. The telescope should be focused on the moon, against which birds in passing are silhouetted. (See Scott, Bull. Nuttall Orn. Club, V, 1880, p. 151; Chapman, 'The Auk,' V, 1888, p. 37.) Why do more birds strike lighthouses in the fall than in the spring? (See Allen, Bull. Nuttall Orn. Club, V, 1880, 131. On the general subject of migration, see especially, Brewster Memoir No. 1, of the Nuttall Orn. Club, of Cambridge, Mass.)

SUGGESTIONS FOR THE SEASON'S READING

Thoreau: 'A Week on the Concord and Merrimac Rivers.' Torrey: 'The Passing of the Birds' in 'The Foot-path Way.' Flagg: 'August and September' in 'A Year with the Birds.' Bolles: 'At the North of Bearcamp Water.' Wright: 'A Song of Summer' and 'Rustling Wings' in 'The Friendship of Nature.' Crockett: 'August' and 'September' in 'A Yearbook of Kentucky Woods and Fields.' Ingersoll: 'Nature's Diary.' Chapman: 'Where Swallows Roost' in 'Bird Studies with a Camera.'



What Bird is This?

Field Description.—Length, 5.25 in. Upper parts olive-green. Under parts soiled yellowish white.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some widely-distributed, but, in the eastern United States, at least, little-known bird, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with its picture.

The species figured in June is the Cape May Warbler.

For Young Observers

Bird Rhymes

BY FAITH C. LEE

I

OVENBIRD

See him as he struts around!
Who could be more dignified?
Perhaps it is his golden crown
That lends that air of foolish pride.
With olive back and spotted breast,
He thinks he's cousin to the Thrush!
Well, I'll tell you, but don't tell him,
He's but a little warbler! Hush!

II

RED-EYED VIREO

When overhead you hear a bird
Who talks, or rather, chatters,
Of all the latest woodland news,
And other trivial matters,
Who is so kind, so very kind,
She never can say no,
And so the nasty Cowbird
Drops an egg among her row
Of neat white eggs. Behold her then,
The Red-eyed Vireo!

Notes from Field and Study

Does the Green Heron Fish in Deep Water?

That the Green Heron is an habitual wader is well known to all who are familiar with it, but that it will go into water beyond its depth is a fact I have not seen recorded. One day in September, 1898, I observed an individual of this species standing on the edge of a plank projecting some six inches out of water. Seeing that he was on the lookout for prey, I watched him closely, wondering why he had chosen so inconvenient a place from which to fish, when presently, as if to show that he understood perfectly well what he was about, he suddenly and without the least hesitation, plunged into the water after a fish that had come to the surface some three or four feet away. Although he missed his aim, the effort was well meant and, to judge by appearances, not the first of the kind. Turning about in the water, he rose from it with little difficulty and with a few flaps was back on the plank, where, shaking out his plumage, he proceeded to plume himself carefully. Before he had completed this operation he was unfortunately frightened off by the approach of some boys.

The scene of the above incident was a deserted iron pit, which, lying in a low place, has for several years been more or less deeply flooded, according to season and rains. Having become well stocked with small fish and frogs, and offering the additional attractions of mud flats, shallows and considerable seclusion, this old iron pit, somewhat over an acre in extent, has been a favored feeding ground for both Green Herons and their larger relatives, Night Herons. To further describe, the plank spoken of above was a remaining part of the old shaft. This, at the time in question, was well out in the pool and surrounded on all sides by water ranging from three to six feet deep.

With these facts before us, two points are clear. First, there was nothing to pre-

vent, but on the contrary everything to urge this Heron to feed in the usual way; second, in plunging into the pool where he did he entered water so much beyond his depth that he could not possibly have touched bottom in a way to assist him in getting out.

That this one instance of an individual Green Heron plunging into deep water after food proves such to be a natural habit of the species can hardly be said. I would add, however, that further study of the feeding habits of the Green Heron, with a view to settling this question, convinces me that a quite usual method of fishing is for it to watch from a stand a few inches above the water and from there to jump quickly down upon its prey.—SAMUEL H. BARKER, *Wyn-cote, Pa.*

Notes on the Ruby-throated Hummingbird

We have had Ruby-throated Hummingbirds for many years regularly in our garden, but did not find any nest till 1898. We were then greatly gratified by finding a nest on an apple tree. The old birds were very tame when they had young; a photograph was taken of the female feeding only a yard from the camera. Next year we were surprised that they had built their nest on a low branch of a pear tree, that one could reach. The nest was seen as soon as commenced; only the foundation was laid on a thin outer branch, which was added to every morning till completed.

There was no appearance of hurry, for it took two weeks to finish the nest. The building went on so slowly that I sometimes thought it would be abandoned. I saw only the female take any part in the work. The motion of the bird while shaping the nest was comical, bouncing down and turning around quickly. What was wanting in weight was made up in energy. The nest was built with vegetable wool, I think the woolly part of the seed-

bolts of the buttonball tree, being of that color and texture; the sides of the nest were solidly compacted. Unlike the usual style of nest-building, the nest and all inside was finished before the outside received its embellishments. This was done lastly, and was the most interesting part of the building; or, I may truly say, decorating. The little bird, with its long bill, could reach nearly all the outside of the nest while sitting in it; looking over the side she artistically covered it piece by piece with lichens that gave the domicile the appearance of the bark of the tree. These little pieces of lichen stick on quite tightly; there is a network of fine spiderweb over the rough finish, and on this the little plates of lichen was stuck and pressed on firmly. I am inclined to think the bird used a gum from the balsam of fir tree, for while finishing the nest she frequented a tree of that kind and pecked at the terminal buds; it may have been for insects, but I think for the sap that exudes from the buds, as some other birds use it—particularly the Baltimore Oriole. I never see them so engaged after building time. The female Hummer seemed very anxious about external appearances, as she frequently looked over the outside and touched up the beautiful covering while incubating. I did not look into the nest while the eggs were in it, but in due time two little downy heads appeared above the edge of the nest. The female bird did not cover either eggs or young as regularly as most small birds do. I was afraid her absence would spoil the eggs, for she slid off when any one passed down the path or was working in the garden near by; yet the eggs hatched.

I never saw the male take any part in feeding; he was often looking on from a dead twig of a near-by tree, and once I saw him make an attempt to drive away a Sparrow; this was worth observing, as there were many Sparrows and other small birds about. I took particular notice they did not alight on the branch this nest was on, but on all other parts of the tree. There was a pear growing on the tip end of the branch, and as it grew larger it began to lower the nest on one side, but

the inmates seemed equal to the occasion, for they kept their heads and bodies as far on the opposite side of the nest as possible. While the bills of many young birds are proportionately longer, the bills of the baby Hummers are shorter than their parents'—not more than half their length. The method of feeding is a curious instance of nature's means to an end; the old bird puts its bill quite down the throat of the young, and with a gurgling and quivering motion, shaking its head up and down, discharges the nourishment into the young one's crop or stomach. This is often repeated, especially in the early morning and evening, at an interval of seven or ten minutes. The little creatures soon fill the nest tightly; in two weeks they appear uncomfortably close, when one will get on the side of the nest, and, soon after, out of it, returning at night to sleep in the nest, till able to fly well, after which they do not forsake the locality as many birds do, but feed and rest near by for several weeks; they choose a dead twig of a near tree or shrub, where one rests at a time; as soon as another one comes the first moves off as if playing tag. The young remain grayer in color than the old birds, probably till the spring. I frequently saw them catch small flies on the wing in late summer and return to their perch, sometimes uttering a very light twitter. About the middle of September they left for more congenial climes. This year, 1900, a pair came, perhaps the same birds, as they built on a low branch of a pear tree close to the old site.—HENRY HALES, *Ridgewood, New Jersey*.

Food of the Downy Woodpecker

On August 9 and 10, 1898, I saw a Downy Woodpecker at work on a mullein head pecking open the seed-cases, almost every one of which held a little yellowish white grub rolled up inside. I found that seed-vessels that contained grubs were brown, while those on the same stalk free from them were still green, and observed that the Woodpecker only opened the brown ones.—W. E. CRAM, *Hampton Falls, N. H.*

Book News and Reviews

MY BIRDS IN FREEDOM AND CAPTIVITY. By the Rev. HUBERT D. ASTLEY. New York: E. P. Dutton & Co. London: J. M. Dent & Co. 1901. 8vo. xvi + 254; 22 full-page photogravures; 17 line cuts.

The author of this beautiful volume writes from extended experience both in the field and in the aviary. As a keeper of caged birds he insists that the captive shall be well housed, well fed and well watered, and under these conditions he believes that, as the bird cannot reason or "look backward or forward in actual thought," it has therefore neither regrets nor longings, and with all its wants properly cared for is presumably happy. Wild and untamable birds, he adds, should never be caged. Many of the birds treated have been studied both in confinement and in nature, and it is apparent that the intimate knowledge of a bird's traits which may be derived from a close study of captive individuals is of decided assistance in studying the ways of the same species in its haunts. Of special interest to American readers is the account of the breeding of a released pair of Cardinals.

The illustrations in photogravure and line are all by the author and are a very decided addition to the text. Several indeed, particularly of the line cuts, we should rank among bird drawings of the first class. Both as author and illustrator, Mr. Astley has therefore paid fitting tribute to feathered friends in whose companionship he has evidently found life-long pleasure.—F. M. C.

THE BIRDS OF MASSACHUSETTS. By REGINALD HEBER HOWE, JR., and GLOVER MORRILL ALLEN. Published by subscription. Cambridge, Mass. 1901. 8vo. 154 pages.

After devoting eight pages to an outline of the faunal areas of Massachusetts, the authors present annotated lists of (1) 362 species and subspecies as entitled to recognition as Massachusetts birds, (2) four extirpated species, (3) two extinct species, (4)

fifteen introduced species, (5) seventeen erroneously recorded species and (6) two hypothetical species. The main list "gives the status of each species, then the dates of arrival and departure of species in Massachusetts, followed by annotations taken from already published local lists of importance, and others supplied by trustworthy ornithologists from desirable localities, especially along the coast." Evidently both care and judgment have been duly exercised in bringing together the information here presented, the authors' conservatism in excluding species of doubtful status as Massachusetts birds being especially commendable, and adding greatly to the value of their work. It is unfortunate, however, that they evidently did not avail themselves of the guidance of some one whose wider experience would have prevented them from rejecting the only system of classification current in this country. It was to establish and maintain a standard system of classification and nomenclature that the ornithologists of this country formed the American Ornithologists' Union, and in failing to follow the classification of the Union's Check-list, the authors of 'The Birds of Massachusetts' have greatly impaired the practical value of their work and have shown an undesirable, because unwarranted, spirit of independence.—F.M.C.

MR. CHUPES AND MISS JENNY. The Life Story of Two Robins. By EFFIE BIGNELL. New York. Baker and Taylor Co. 16mo. xi + 250 pages; 8 half-tones.

The author of this volume may claim to be a bird-lover in the best sense of the word. Having rescued two Robins, one from cats, the other from caged life, she evidently devoted the greater part of her time to their care. That they more than repaid her, no one who reads this account of their lives, with its many surprising illustrations of individuality and intelligence, will doubt. The book is attractively written, and its author's evident sympathy with her subjects, and close observation of their

habits, make her story not only an interesting, but valuable contribution to the literature of biographical ornithology.—F. M. C.

The Ornithological Magazines

THE OSPREY.—Since our last notice the January-February and March-April numbers of 'The Osprey' have appeared. The following list gives the titles of the papers, all of which contain much of general interest: 'A Trip to the Dismal Swamp,' by Paul Bartsch; 'William Swainson and His Times' and 'The Osprey or Fishhawk,' by Dr. Gill; 'Photographing the Caprimulgidae,' by H. K. Job; 'Warden's (the first) List of the Birds of the District of Columbia,' by William Palmer, and 'Nesting of the Inca Dove in Mexico,' by Josiah H. Clark.

The articles by Dr. Gill and Paul Bartsch appear in both numbers, and will be completed in some subsequent issue. It is evident that the original photographs were good, consequently we are sorry a little more care was not exercised in making the reproductions, for most of the illustrations are poor.—A. K. F.

THE WILSON BULLETIN No. 34.—Beginning with this number Frank L. Burns assumes responsibility for the editorial and general management of the 'Bulletin,' which is now issued from Berwyn, Pa. The subject matter consists of a number of short articles, general notes, editorial remarks and notices of publications received. Among the more important and interesting articles may be mentioned the following: 'Rough-winged Swallows Nesting on a Government Tug in Port Royal Harbor,' by Walter Hoxie; 'Bachman's Sparrow in DeKalb County, Georgia,' by R. W. Smith; 'Notes on the Mergansers,' by William B. Haynes; 'The First 20th Century Horizon at Oberlin, Ohio,' by Lynds Jones; 'Vernacular Ornithology of Delaware' and 'Crow Language,' by the Editor. Under the heading of 'Birds of Pennsylvania,' *et al.*, by B. H. Warren, M. D., we get an insight into the history of these publications ordered printed by authority of the Commonwealth, and consequently have a better understanding of the vague rumors

which have drifted beyond the borders of the state.—A. K. F.

THE CONDOR.—The May-June number of 'The Condor' presents an unusually interesting series of articles and notes. Barnhart describes the breeding habits of the Fulvous Tree Duck, Anthony contributes notes on the Guadalupe Wren, Skinner continues his papers on Mexican birds with an account of *Trogon caligatus*, and Beck describes his experiences in collecting eggs of the Golden Eagle in Santa Clara county, Cal., in an article illustrated with three plates. The more technical papers contain descriptions of five new birds from the Galapagos, Clipperton, and Cocos Islands by Heller and Snodgrass; and two new Yellowthroats from the coast of California by Grinnell. The Yellowthroat of the southern coast district is described as *Geothlypis trichas scirpacala*, while that from the vicinity of San Francisco Bay is named *Geothlypis trichas sinuosa*. There is the usual array of valuable field notes, among which should be mentioned the record of a Floresi's Hummingbird taken at Haywards Feb. 20, 1901, by W. O. Emerson. This is the third known specimen of this rare bird and the second one collected in California.

The compilation of a State List, including an index to the literature pertaining to California birds, has been undertaken by Grinnell, who issues a call for information and especially for notes on water birds. Ornithologists throughout the country will welcome such a work, and with the active support of the Cooper club there is every reason to hope that it will prove more successful than previous attempts of this kind.

Exceptional opportunities for systematic bird study during the summer vacation are offered in the mountains and on the coast. Two courses are announced: one by W. W. Price, at his camp in the Sierras near Lake Tahoe, June 15-Sept. 15, and the other by Joseph Grinnell, in connection with the summer school of the Hopkins Seaside Laboratory at Pacific Grove on Monterey Bay, June 10-July 20. The localities selected are ideal for work of this kind, and the inauguration of such courses deserves the highest commendation.—T. S. P.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

We had in mind an editorial on the tenth Supplement to the American Ornithologists' Union's 'Check-List,' which presents the results of the deliberations of the Union's Committee on Classification and Nomenclature, at its session held in Washington, in April last ('The Auk,' July, 1901, pp. 295-320), but our surroundings are so little in harmony with the technicalities of ornithology that we may well leave our proposed remarks until it is our misfortune to return to the editorial desk and in the meantime hope that all BIRD-LORE's readers are as near the heart of the bird world as this 3d of July finds us.

The days are long in this latitude. For birds they begin at half after three in the morning and eighteen hours have passed before the last bird's voice is hushed. One wonders whether the greater amount of food received per day does not here increase the rapidity of nestlings' growth and shorten their time in the nest.

There is no marked sultry noonday period, but from morning until night birds can be seen and heard in numbers.

To the eastern bird student doubtless one of the most striking sights in the bird-life of this region is furnished by the Prairie Gulls and Terns.

Experience has so taught us to associate these birds with bays and sandy beaches, where alone their food is to be found, that it is not a little surprising to look from your tent door in the early morning and find the prairie round about dotted with Franklin's Gulls, looking more like chickens at first sight than members of the genus *Larus*.

Nor does one soon tire of the novelty of seeing these same beautiful birds or active Black Terns hovering thick over the ploughman in eager quest of grubs in the lengthening furrow. These Terns resemble Swallows in habit as much as anything. They appear to feed exclusively on insects, and it is only when high winds set the prairie grasses rolling in long billows, over which they glide lightly, hovering here and there to pick an insect from a grassy crest, that one is reminded of their relationship.

It was not, however, prairie birds that brought us to this region, but the feathered inhabitants of Shoal Lake itself with its often mile wide fringe of reeds and marshes. Here are to be found breeding, Grebes of at least three species—Western, Halboell's, and Pied-billed—White-winged Scoters, Mallards, Blue-winged Teal, Shoveller's, Scaups, and other Ducks; Sora, Virginia, and probably the Yellow Rail; Coots, or Waterhens, as they are much better called, in great abundance, Yellow-headed Blackbirds beyond calculation, Red-winged Blackbirds and Long-billed Marsh Wrens.

In the immediately surrounding prairies are Wilson's Phalaropes and Nelson's Sharp-tailed Finches, and on little rocky islets, or reefs, as they are locally known, Common Terns, Herring Gulls, Double-crested Cormorants and White Pelicans find secure nesting places.

But it is the life of the reeds which holds the strongest interest for the bird student at Shoal Lake. In the endless reed forests anything is possible, and from them as I write (at 10 P. M.) there issues a chorus of weird groans, whines and calls comparable to nothing known to man and which it requires little imagination to believe are uttered by creatures themselves unknown to man.

Shoal Lake, Manitoba, July 3, 1901.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Encouraging Signs

Bird protection is daily receiving fresh impetus and that of the most valuable kind. It seems to be thoroughly understood that feather wearing is a custom to be condemned, and one only to be stamped out by good laws and practical education in the matter of the value of bird-life and its connection with general natural history, so that we hear less of the millinery side of the question, and the Audubon movement is reaching a higher plane. At the present time all the Atlantic states from Maine to Florida are linked by the A. O. U. law or its equivalent, and the experiment of sending out traveling lecture libraries of birds and nature books has been so successful in Connecticut that other states are following suit.

The future would be rosy, indeed, but for one cloud on the horizon, and that is

the difficulty of enforcing these laws that are our battle flags.

The proper local enforcement of bird laws is indeed a difficult task, requiring moral courage, tact, and a clear head; also the reporting of offenders should be made by a legalized official, who can act without the stigma of personality that must always be felt when we complain of the law breaking of our neighbors. If the deputy sheriffs of each county could be appointed as bird wardens, warning could be administered and the incorrigible prosecuted in a purely impersonal manner.

It has also been suggested that in order to make the laws effective in many places they should be posted in Hungarian and Italian, for the latter race come to us with particularly lax ideas about bird killing.

Undoubtedly the country is thoroughly aroused; the task now before us is to hold

the ground we have gained, and this can only be done by the most conservative and at the same time unflinching enactment of the laws. If our new laws become dead letters, then must the birds also die.

M. O. W.

THE Pennsylvania Society has a plan for organizing a series of traveling libraries to circulate throughout the state in order to awaken a wider interest in bird and nature study. A list of carefully selected books has been prepared and the libraries will be started as soon as the necessary funds are at hand. Having no dues, this Society is entirely dependent on voluntary contributions.

Reports of Societies

FIRST ANNUAL REPORT OF THE AUDUBON SOCIETY OF KENTUCKY

The Audubon Society of Kentucky regrets that during the past year more has not been accomplished in the furtherance of bird study and bird protection in the state. But it believes that good has been done in the schools, where bird days are observed; and among the people at large where, a better sentiment prevails with regard to the aims of the Society.

In specific work the Society has provided, for use in the schools, a handsome bird-chart that exhibits in colors many of our native song birds.

It has caused posters to be prominently displayed on the principal roads, setting forth the penalty for violation of the statutes relating to birds.

It has issued the following circular letter, together with other reading matter:

Dear Sir:—From observation and trustworthy statistics we learn that our wild birds are decreasing in numbers every year.

Believing that it is only necessary to call your attention to this in order to have your cooperation, we appeal to you to aid the Society in its efforts for bird protection.

We believe this may be done—

First—By making clear the practical value of birds as destroyers of insects harmful to crops.

Second—By preventing, as much as possible, the destruction of the eggs of wild birds.

Third—By reporting to the Society the

names of the violators of the law protecting birds.

We would particularly call your attention to the reports of the Department of Agriculture as to the usefulness of Robins and Field Larks to the farmer; and as these birds are often the especial marks of boys and irresponsible negroes and whites from the towns, we ask that you do all you reasonably can to protect them.

A postal card or a letter, addressed "Audubon Society," Henderson, Ky., will receive prompt attention.

Very truly yours,

AUDUBON SOCIETY OF KENTUCKY.

It has purchased a circulating library of the best bird books, including such authors as Burroughs, Chapman, Wright, Torrey and Coues.

The Society gratefully acknowledges the interest taken in its work by the Societies of the Falls cities and the substantial aid rendered it in the gift of a number of "Perry" pictures.

The Society would most earnestly ask the coöperation of all bird lovers, especially in the formation of branch societies throughout the state.

To this end it would like to hear from all interested in birds.

The Society has no membership fees, depending entirely upon contributions for support, and any respectable person may become a member.

In closing, the Society would call attention to some fundamental principles of bird laws.

(Here follows a digest of Federal and State laws.)

During the last fifty years, the sentiment in favor of bird protection has developed rapidly. Many laws have been enacted, amended and sustained by the courts. That these laws are still imperfect is partly the result of carelessness and partly of strong opposition due to ignorance or selfishness. Our game laws, unlike those of Europe, are maintained for the good of the people as a whole, not for the benefit of any one class, and their enforcement depends very largely on a general appreciation of the principles upon which they are based.

INGRAM CROCKETT, *Secretary.*

Henderson, Ky.

THE AUDUBON SOCIETY OF THE STATE
OF WYOMING

Pursuant to a call published in the morning and evening papers, quite a crowd of enthusiastic ladies and gentlemen assembled in the parlors of the Inter Ocean hotel, Cheyenne, April 29. Mr. Frank Bond was called to the chair and briefly stated the object of the meeting and the work which had already been done in the direction of securing pledges of support in the public schools and elsewhere. It being agreed that a society for the protection of birds and the enforcement of the state law was desirable, the meeting decided that four officers were necessary, viz.: A president, vice-president, secretary and treasurer. Officers to fill these positions were duly elected as follows: President, Frank Bond; vice-president, Mrs. John A. Riner; secretary, Mrs. N. R. Davis; treasurer, Prof. J. O. Churchill.

It was ordered that all cards of promise to protect birds, their nests and eggs, after being signed should be handed to the secretary, Mrs. Davis, who will make a record of the name, residence and date in a book to be kept for that purpose. These cards are to be returned to the signer, who will also be supplied with an Audubon button as soon as they arrive, or as soon thereafter as possible.

It was found that public sentiment was overwhelmingly with the bird-protection movement, and that the new Audubon Society would soon embrace in its membership more than a thousand persons, in fact, two thousand members in Cheyenne, alone, did not appear an extravagant figure to those who met at the Inter Ocean hotel last evening. Because of the showing made, the treasurer was instructed to order the printing of a second thousand of pledge cards, the first thousand being already nearly exhausted. The question of ordering another thousand buttons was also favorably discussed and the matter left to the officers of the Society, who will act promptly as soon as it becomes evident the buttons will be needed.

Bird lovers, a term which will soon include all of the farmers and agriculturists

of the country, if it does not do so already, will be gratified to learn that the Audubon Society started out with a membership of 900, the result of a few days' work only.

ILLINOIS SOCIETY

In all work the thoughts of a secretary or treasurer are apt to play around the dry details of statistics and figures, and so it is to be expected that in this report of the work of the Illinois Audubon Society for its fourth year they must form a part.

The exact membership of the Society is difficult to state, for members move away or die and the secretary does not know it. Without, therefore, claiming accuracy as to the figures, our present membership counts 870 adults and 7,904 juniors—a total of 8,774. We have sent out during the year nearly 5,000 leaflets; part being purchased from other societies and part being our own publications.

In connection with our efficient game commissioner, Mr. Loveday, we have placed "Warnings" in every one of the 2,700 post offices in the state. These warnings gave an outline of the laws regarding birds and referred for information to the game commissioner and the secretary of the Audubon Society.

Another joint work of the game commissioner and this Society is the practical suppression of the sale of living wild birds in the Chicago bird stores. Several test cases have been brought and the decision given in favor of the birds. This is a long step in the right direction and leads us to hope that the time may come when our law, which forbids the sale and purchase of birds alive or dead, may also be enforced as regards the dead birds.

During this last year we have adopted the little paper *By-the-Wayside*, which is the paper used by the Wisconsin Society in its junior work, for the Illinois juniors also. It has recently been moved from Milwaukee to Madison and makes its monthly visits to the children from that place. There has been a large increase in the number of meetings held by Womens' Clubs, Teachers and Farmers' Institutes, etc., and a promise of greater increase in the future.

We had greatly hoped that Bird Day would be established by law at the session of the State Legislature just closed, but it has been placed in the hands of a most excellent commission, with the state superintendent of schools and one of our Audubon directors — county superintendent of Schools of Cook county — among its members; so its prospects are bright. Some of our local branches — particularly those in Chicago Heights, Alton, Galena, Lake Forest, Streator and La Grange — are doing excellent work, but the finding of interested and efficient officers for local societies is our most difficult problem.

We have increased our classes of memberships by two, making our present memberships five: Sustaining-paying \$25; associate, \$1; regular, 25 cents; active, \$1 a year, and juniors paying no fees. We have also made several changes in our constitution, and have formed from our fourteen directors six committees, thus dividing the work and responsibility more evenly. The old nursery song of the London bells is frequently in our minds:

“When I grow rich
Say the bells of Shoreditch,
When will that be?
Rang the bells of Stepney.”

Like the “great bell of Bow” we are “sure we don’t know,” but when the good time comes we have visions of a lending library and an illustrated lecture and other such helpful delights like those of some of our sister Societies. Till those good times come we must make our cents (or sense!) do the work of dollars and do what we *can* till we can do what we *would*.

MARY DRUMMOND, *Secretary*.

DELAWARE SOCIETY

The annual meeting of the Delaware Audubon Society was held on Saturday afternoon, May 25, in the Friends’ Meeting House, Fourth and West streets, Wilmington. The reports of the secretary and treasurer were read. Mrs. W. S. Hilles’ report showed a membership of 512. The Society has been in existence thirteen months. The law passed by the recent Legislature to protect birds was read and comments made

concerning it. It was decided to have a number of cards containing the law printed, distributed in the city and state and hung in the parks and other public places. A reward will be offered by the association for information leading to the arrest and conviction of any one violating the law.

A vote of thanks was offered to William Dutcher, treasurer of the American Ornithologists’ Union, of New York; Dr. T. S. Palmer, of the Department of Agriculture; Professor Witmer Stone, of Philadelphia, president of the American Ornithologists’ Union of Pennsylvania; and Walter D. Bush and Alfred D. Poole, who assisted in getting the law through the Legislature. A prize of five or ten dollars is to be offered for the best essay on the subject of birds to be written by a boy or girl under the age of nineteen years.

The defeat of the pigeon bill was brought up for discussion and congratulations exchanged. In speaking of the bill, it was said that there are only three species of birds that are not protected by law; viz., the English Sparrow, the Red-winged Blackbird, and the Crow Blackbird, which are regarded as injurious to crops.

The Society hopes to extend its course of lectures to the people in the state outside of the city, but for the present, on account of lack of funds, it is unable to do so. The membership is free and therefore, in order to continue the work, a contribution list is to be started.

After the business had been transacted a public meeting was held. No officers were elected because a quorum of directors could not be secured.

A. R. Spaid, President of the Society, gave a talk. Fifty colored views of birds were shown, most of which had been made by Mr. Spaid during the winter months. The lecture was entitled “Birding With a Camera.”

WISCONSIN SOCIETY

(*Fourth Annual Report*)

During the past year the work of the Society has been carried on with vigor. Large numbers of leaflets on bird protection have been distributed, an especial effort

being made to spread a knowledge of the usefulness of birds among the farmers of the state. The wearing of feathers for ornament is almost a thing of the past, and unquestionably an impression has been made upon women, but we realize that as soon as the Parisian law-givers announce that aigrettes and wings are again fashionable, we shall have everything to do over again, unless we carry on educational work with all possible earnestness in this little breathing space that is granted us.

One of the primary objects of Audubon Societies, all over the country, has been to secure better legislation for the protection of birds. Wisconsin, following the example of several eastern states, has recently enacted a law which forbids the killing of our wild birds, and makes it illegal to deal in their plumage. This applies not only to resident birds, but to all that visit the state during migration.

As it was thought desirable that some one should speak for the work of the Audubon Societies of the United States at the meeting of the National Federation of Women's Clubs, held in Milwaukee last June, the Wisconsin Society, aided by the societies of Rhode Island, Massachusetts, Pennsylvania, Illinois, Connecticut, New Hampshire, New York and Ohio, secured Miss Mira Lloyd Dock, of Harrisburg, whose earnest and moving address on "The Quality of Mercy" will be long remembered by those who heard it.

On April 13, Prof. O. G. Libby, of the University of Wisconsin, gave an illustrated lecture on "Our Native Birds" for the teachers and school children of Milwaukee. This lecture took the place of the customary annual meeting.

The main line of work in the Society has been to develop an interest in bird protection and bird study among young people, and in this it has achieved remarkable success, having brought 13,441 enthusiastic teachers and children into its ranks. A monthly paper, costing twenty cents a year, with a course of bird-study, is issued, prizes and honor badges are awarded for the best reports and observations, and our little wren button is furnished at a nominal

price, while the Gordon Library of bird books, and the collection of colored bird slides, owned by the Madison Branch, are sent all over the state. This work has been repeatedly commended by the eastern societies, and it is certainly uncommon for so much to be accomplished with so small a sum of money as is at the disposal of the Executive Board.

ELIZABETH G. PECKHAM,
Secretary.

A Good Example

Many attempts have been made to compound a "white list" of milliners who, if they could not wholly dispense with bird plumage in their trimmings, owing to the insistence of customers, would at least make it easy for those wishing *Audobonnets* to obtain them. This attempt has, we regret to say, met with no general response, so that it is surprising as well as gratifying to hear that the Shepard Company, of Providence, R. I., held a successful exhibition and sale of these hats and bonnets on the 15th and 16th of May. The circular announcing the exhibit, after a summary of bird destruction for millinery purposes and the work done for bird protection, says:

"THE SHEPARD COMPANY, sympathizing with this great and beneficent work and believing that most women, if conscious of the extent of this slaughter of the innocents, as well as of the beautiful and fashionable effects in millinery which are possible without their use, has decided to hold a special exhibition of hats and bonnets in which none of the articles listed "contraband" by the Audubon Society shall appear.

"This exhibition is intended to demonstrate that hats and bonnets can be fully in keeping with prevailing styles and will show exceptional beauty in design and color without the use of the plumage of wild birds.

"Carefully selected specimens of the latest foreign and domestic styles will be on view.

"We invite the inspection of the public, and especially of such women as are interested, to assist in influencing popular opinion along humanitarian lines.



THE NEW GROUP REPRESENTING A SECTION OF BIRD ROCK, GULF OF ST. LAWRENCE, IN THE AMERICAN MUSEUM OF NATURAL HISTORY
The birds included are Common and Brünnich's Murres, Razor-billed Auks, Puffins, Gannets, Kittiwake Gulls, and Leach's Petrels

Bird = Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. III

SEPTEMBER — OCTOBER, 1901

No. 5

First Impressions of Hawaiian Birds

BY H. W. HENSHAW

(Concluded from page 125)

I HAVE dissected many of these Hawks, and in the stomach of only one have I discovered the traces of birds. This individual had by some means caught two Akakanis. Nearly all the specimens examined had mice and small rats in the stomach. Large spiders, also, of an introduced species, are fast becoming a popular food with Io, and I have found the stomach of several individuals crammed with these insects.

Whether in former times the natives entertained a superstitious regard for Io I do not know. It may well have been so, for today Io has not the slightest fear of man. He will sit upon a limb and dodge stone after stone with apparent unconcern, lazily flapping to another perch if the missiles come too close for comfort. As a result of his confiding disposition, poor Io is fast becoming rare, where formerly he used to be common. Under the mistaken impression that he means mischief to the chickens, Io is shot whenever seen. It would be unsafe to say that Io never molests poultry, but much inquiry among farmers and much observation of the habits of this Hawk justify me in stating that the damage to poultry from Io's claws is exceedingly small. If it ever kills poultry, as doubtless it occasionally does, the damage is compensated a hundred times over in the immense numbers of mice and rats destroyed. It will be greatly for Hawaii's interest if this Hawk is carefully protected.

I have purposely left to the last the bird which I consider to be the most interesting of all Hawaiian birds, as it is the most numerous and most widely spread. This is Elepaio, a Flycatcher by birth and lineage, a Wren, Creeper and Flycatcher by habit and education.

Most Hawaiian birds live in the deep forest or frequent the high trees. Thus the bird-lover who would make their acquaintance must pay a price.

He must seek them out and follow them, where wayfaring is hard and laborious, and not wholly unattended by danger. Not so with Elepaio. This little bird ranges from near sea-level far up on the mountain side, and everywhere he is common. He wears no coat of many and bright colors to make his feathers desirable in the eyes of royalty, but his sober tints of black, white and chestnut are so tastefully contrasted and so strikingly displayed that among his green surroundings he presents a most charming picture.

The first crunching step into the thicket elicits a sharp note of challenge, and presently you are aware of a little bunch of chestnut, brown and white feathers swaying sidewise on an upright twig like a Marsh Wren, with his tail cocked at right angles with the body—this is Elepaio. Now Elepaio is very curious, and after calling out "*elepaio*" once or twice in no uncertain tones that you may be sure of his identity, the little busybody proceeds to investigate you and your business. The birds, for by this time there are several gathered about you, will not hesitate to approach within two or three feet, and rest assured that before they leave they will be well informed as to your intentions. Once satisfied that you are to be trusted, they proceed to their own business as though unconscious of a strange presence.

In the art of hunting insects of all kinds, Elepaio is past master, and in following his craft he unites the methods of several birds. He climbs the old tree-trunks, clinging to the sides like a Wren; now he seizes a twig with his strong claws, and for convenience of inspection hangs head downward like a Chickadee; now he creeps into the lichens out of sight, finally emerging many feet beyond to sweep up a flying insect with a snap of his bill, as if to assert his right to be called Flycatcher. As a matter of fact, Elepaio, despite his bristle-guarded bill and other flycatcher-like characters, is decidedly more of a Wren than a Flycatcher in habits, disposition and motions.

Elepaio is of friendly disposition, and is never found save in pairs or several together, and more often than not in company with other species. Their hunting excursions extend from the topmost branches of the highest forest trees to the low shrubbery, and occasionally even to the very ground, where I have seen them hopping about like sparrows. Nine-tenths of their insect food are gleaned wren-like from the branches, so little of a catcher of flies is Elepaio.

Elepaio shares with Omao that curious habit of lowering the wings by the side and tremulously shaking them as young birds are wont to do.

Elepaio has a number of notes. A Song Sparrow-like chirp is its alarm note, as when it hears a strange noise. In addition, it has a sharp Flycatcher-like whiff which is its call-note proper, as any one may prove to his satisfaction by imitating it.

Its name, "Elepaio," is the native interpretation of what the bird itself no doubt regards as its song. It is a loud, clear and insistent call, special emphasis being laid upon the second syllable. Heard from the forest depths it is pleasing, though we may call it a song only by courtesy and because the bird has nothing better to offer in the way of music. Elepaio's nest is a beautiful structure of grass, mosses and lichens placed in the fork of a shrub, usually within twenty feet of the ground. It is the only Hawaiian woodland bird, the nest and eggs of which are well known.



From Wilson's 'Aves Hawaiensis'

OU (*Puffinacrostra puffedacea*). See page 123

In the life history of Hawaiian birds there is at present a great gap. Next to nothing is known of their nests, nesting habits and eggs. The reasons are not far to seek: The forests are high and so dense is the undergrowth that, however bright the sun, its rays penetrate but feebly into the deep forest recesses, which, in consequence, are but feebly lighted. Moreover, the lower levels are cold and damp as compared with the upper heights, and hence are not at all suitable for nesting sites. Except Elepaio, probably no Hawaiian woodland bird builds its nest low down save in very exceptional cases.

When nests are visible, as they often are, they are far up in the trees

and on the outer extremities of the branches, where they are inaccessible to all save creatures with wings. Moreover, a dense covering of mosses, lichens, ferns and shrubs envelops all the limbs, and in them a multitude of nests may be hidden and no one be any the wiser. More than once I have seen birds whose nests are yet unknown, with nest material in bill; but, as it happens, they have each time been on their way to distant trees, and one must possess wings to follow a bird through such a tangle where the sight is restricted to a few square yards. It will be long, therefore, ere much is known of the inner life of Hawaiian birds.

There is one characteristic of the woodland birds of Hawaii which is so unique as to deserve brief mention. I allude to the powerful musk-like, but not unpleasant, odor which attaches to the feathers of most of them. Perhaps this odor is more marked in *Ou* than in any other species. It is so strong in this species that I am sure I have detected it from living birds when near by on low trees, although my sense of smell is anything but acute. In a freshly killed specimen this odor is simply overpowering, and is much stronger in the early morning than later in the day. At first I thought it probable that the scent was connected with the oil with which the birds dress their feathers, which, in a climate so wet as this, must be used often and in unusual quantities. However, I have been able to detect only a slight odor from this oil when freshly squeezed from the oil-gland.

If this characteristic odor originated after the ancestors of the present species reached the islands, and if it is in any way beneficial to its possessors, it seems singular that it should not be shared by all the woodland species whose habits are analogous. Several species are, however, wholly without it. It is possible, as I believe Mr. Perkins has suggested, that what at first seems to be of trivial significance may be found to have a deeper meaning, and that this odor may point to the ancestry and to the ancestral home of some of the island birds. As the American *Cœrebidæ*, according to Dr. Gadow, are the most likely group from which the Island *Drepanididæ* are derived, it would be most interesting to discover if the plumage of any of the former have the same characteristic scent. In this connection it is interesting to note that the *Oo*, *Omao* and *Elepaio* are believed by Dr. Gadow to have a non-American origin and not to be *Drepanine*. It is significant that the feathers of these species, together with *Io*, do not possess the peculiar odor which is shared, I believe, by all the Island *Drepanine* forms, certainly by all of them resident upon the Island of Hawaii.

I have alluded above to the songs of Hawaiian birds. In common with a widespread belief, I had expected to find little music in Hawaiian woods, and I was greatly surprised. Certain species of Hawaiian birds, it is true, sing rarely. Thus, though I have seen perhaps a hundred individuals of *Akialoa* (*Hem. obscurus*), I have yet to hear its song, and the same is true

of the *Oreomyza mana*. The songs of certain other species, as the Amikihi (*Himatione virens*), are short and feeble. Though pleasant to the ear, they cannot take high rank in the scale of bird music. There are other species whose songs are both sweet and melodious, like the Ou. Then there are others again, like the Iiwi and the Akakani, which sing the year through, and at certain seasons are the most persistent singers I have ever heard. The latter, especially, is notable for singing when it is through



From Wilson's 'Aves Hawaiianensis'

IWI (*Hemignathus procerus*)

feeding, and it has assembled in small colonies in the tree-tops for its midday siesta. At such times most species are silent. But the Akakani sings itself to sleep with a soft, delightful lullaby to which the gentle rustle of the tree-tops forms a fitting accompaniment. The Iiwi has a variety of notes, most of which are sweet and pleasing. But where birds give so freely of their songs as do the Iiwi and the Akakani, surely we may delight in their spontaneousness and not be over-critical as to the quality.

In conclusion, a word may be added as to the future of the Hawaiian

birds. As is well known, several island birds are already extinct, especially upon Oahu, which has been extensively deforested. Upon Hawaii the Noho (*Pennula ecaudata*) has been extinct for years, having been exterminated by the domestic cat run wild. Had any of the wingless Rails been fortunate enough to survive the inroads of Tabby, it would only have been to meet their fate from the mongoose, which spares no living thing it can reach.

The Namo has been exterminated for its feathers, and the Oo must soon share the same fate. The native Duck (*Anas wyvilliana*) and the Gallinule upon the Island of Hawaii are rapidly diminishing under the never-ceasing attacks of the mongoose. The Puffin and the Petrel are sharing the same fate, and the native Goose is in danger, though likely to maintain itself for some time to come.

The above birds have become, or are becoming, extinct from known causes, but some species have died out for no assignable reason. The *Chaetoptila angustipluma* is a case in point. Though said to be rare in the time of Peale and Pickering, both naturalists saw it, and we may be sure that for many years subsequent to the visits of these men no change whatever occurred in the forests. Yet from their day till now the bird has never been seen, and the natives do not know it even by name. The cause of its extinction will probably ever remain one of Nature's own secrets.

In connection with the future of Hawaiian birds, it is not to be overlooked that upon all the islands the forest is diminishing, owing to the devastations of cattle and the ax of the settler, and the birds living in the deforested tracks must either die or be forced into the untouched areas, where soon a sharp struggle for existence must begin.

Some species, like the Alala (*Corvus tropicus*), are restricted to certain areas beyond which they seem never to attempt to pass. In the case of the Crow, the sole reason appears to be that, having first attained a foothold in a comparatively dry district, the birds are unwilling or unable to encounter a moister climate, even though the windward forests adjoin their own and abound with suitable food.

Viridonia furnishes a still more remarkable instance of restricted habitat. This, one of the rarest of Hawaiian birds, is confined to a forest area a few miles square, and is absolutely unknown outside its own little kingdom.

That extensive deforestation should have a marked effect upon Hawaiian birds, wholly unused as they are to competition of any kind, is what we might expect; but there remains to be recorded a still more remarkable fact indicative of the singular sensitiveness of Hawaiian birds to change. Large sections of forest land on Hawaii that have been but slightly interfered with by man, and that are nearly as dense and impenetrable as they ever were, have been almost wholly abandoned by birds within the last ten years. For this abandonment no reasonable explanation suggests itself.

The natural presumption would be that the birds, disliking even the semblance of interference, have simply moved into adjoining tracts. Such may be the explanation here. But bearing in mind the unaccountable extinction of some Hawaiian species and of the intense habit of localization of nearly all surviving species, it is not wholly improbable that large numbers of the dwellers in such tracts have succumbed to changes so slight that hardier mainland birds would scarcely have noticed them at all, or would have readily adjusted themselves to them.

For species like the liwi and the Akakani there is much hope. These nectar-loving birds are accustomed to follow the flowering of the ohias from tract to tract and from lower to higher levels, and so long as considerable areas of this tree remain it is probable that these beautiful and interesting birds will survive.

The Ou, too, seems to be something of a wanderer, owing, no doubt, to the wide distribution of the ieie vine and its irregular time of flowering and seeding. This fine bird also may be expected long to survive. But there is no such favorable outlook for the bulk of the Hawaiian birds. Developed under conditions the most unusual and peculiar, each within its own chosen and restricted sphere, changes of any sort, and competition, however weak, are likely to find them unprepared and, in the light of their past history, are almost sure to prove disastrous. Like the Hawaiian race, they will probably disappear rapidly, leaving behind as tokens of their existence a few dried skins in museums and some meager pages of life histories.



A FAMILY OF YOUNG SCREECH OWLS

Natives of Bronx Park, New York City. Photographed by C. William Beebe.

A Chebec's Second Brood

BY RALPH HOFFMANN

WHEN we reached Alstead, on July 3, 1901, a pair of Chebecs, or Least Flycatchers, were busy in some apple trees in front of a piazza where we spent much of the day. The pair made quiet but constant journeys through the branches, and the trips ended so often in one particular crotch that it did not take long to "mark down" the nest. The four young birds already showed as a bunch of gray down above the rim. Three days later they had left the nest, and for over a week they sat close together in one or another of the half-dozen trees which constituted their parents' hunting ground. The empty nest was now taken down and given a place in our collection. When the young had been out two days, and were being fed constantly by the male, I saw the female fly to the empty crotch, where the old nest had been. In a moment she repeated her visit, and when I walked to the tree, I saw the skeleton of a new nest already completed. Two days later the nest was finished. It was interesting to note that the beginning of the new series of instinctive acts involved in raising a second brood did not destroy the force of the last series, for when the nest was finished the female returned to help the male feed the first brood.

While the little Chebec was brooding on the three eggs which constituted her second clutch, we had been experimenting with Professor Herrick's new method of bird study, taking Cedarbirds for our first subject. We had cut from a maple the twig on which a nest containing young was placed, and had fixed it on some upright posts about four feet from the ground, and very near the piazza. For ten days the progress of the young Cedarbirds, and the actions of the parents, the feeding by regurgitation, and the cleaning of the nest, had been a source of hourly interest to a large number of observers, and we had at last the satisfaction of standing by when all four young ones were encouraged by their parents into the shelter of the neighboring trees.

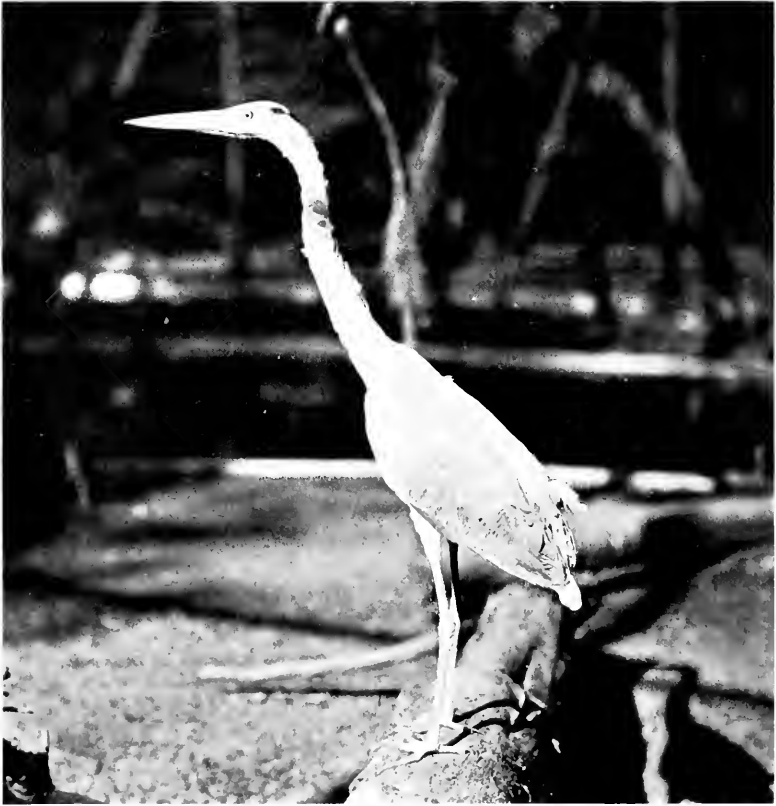
On August 6, the three young Chebecs were about a week old; they were well covered with down and their feather tubes were beginning to burst. I ventured, therefore, to repeat with them the experiment which had been so successful in the case of the Cedarbirds. As the limbs on which the nest rested were too large to cut down, I spliced another crotch to a long pole and after fixing the nest into the new crotch, leaned the pole against the branches of the tree, so that the nest with the young came just below the old site. In a few moments, the old bird was feeding the young in the new site. Then, by cutting off successive pieces from the lower end of the pole, I lowered the nest to

the desired height. I am thus explicit because, in this case, I did what Professor Herrick did not do, i. e., alter the immediate surroundings of the nest, and this alteration may have affected the result. All the morning an interested group watched the little Chebec, and marveled at her activity. For it soon became evident that the female alone was bringing up the second brood. The male may have strayed off with the first brood; at any rate only one bird busied herself with these three young ones. She was not able to economize time as the Cedarbirds had done, by bringing a square meal for all at one trip; she brought each separate insect as fast as she caught it. Often she was back again within half a minute, and in one period of fifteen minutes, she made twelve trips to the nest.

When night came, I was disturbed to find that the little bird was apparently not intending to brood the young. Even when it was quite dark, I found that they were not covered by her. Whether this was because of the new crotch, I do not know. I am now convinced that the proper way to meet such a contingency would be to return the nest at once to the old site. This I have since done in cases where the old birds either could not find the new site or did not choose to come to it. That evening, however, thinking that the old bird knew what she was about, I left the nest in its new site. In the night a violent thunderstorm came up, and before I could get the birds into shelter one had already died. I kept the others warm, and the next morning fed them with flies, learning incidentally some interesting facts about the available stimuli for making young birds open their mouths. When the storm passed, I replaced the nest and had the satisfaction of seeing the old bird return to feed the survivors. If the nest had been a mile from my house, as it easily might have been, I could not have reached it in time to save any of the birds.

I have been led to give the above details, partly because several of the circumstances connected with the rearing of this second brood are interesting. My particular object in telling the story, however, is to warn any one who thinks of trying Professor Herrick's method against a danger, of which he, I believe, does not speak. The danger to young birds from violent thunderstorms must, under any circumstances, be great, but the birds should certainly have the benefit of as much shelter as possible, and the old site will, from the nature of things, be more leafy than the new one which we choose. I have, in another instance, nailed a Vireo's nest into the tree again, when a storm threatened, and I suggest that this plan should be promptly resorted to whenever the old birds are slow to take to the new site. Professor Herrick's warning against keeping the old birds too long from the nest gains strength when we remember how often the young Chebecs were fed. A long fast probably lessens their power of resistance more than that of other species.

The advantages which Professor Herrick's method of bird study offers are obvious. It would have been almost impossible for a class of students to become as intimate with Cedarbirds as we became by any other method; every characteristic action, every posture, almost, is impressed on our minds. My experience with the Chebec, however, forces me to the conviction that the method of controlling the nesting-site, of moving it, in other words, for the purpose of study and of photography from the position which the bird has selected, is one which may, in careless hands, be productive of a great amount of injury. I believe that only a trained naturalist should use the method. Even he will probably have to buy a little costly experience, but if he is animated by genuine love for the individual bird, he will learn to guard against the dangers from heat, rain, and desertion. It is emphatically not a method to be recommended to the general public.



A MUCH TRAVELED HERON

An immature European Heron (*Ardea cinerea*) which flew aboard the steamship Glencartney about 205 miles southwest of Cape Cormorin, at the southern extremity of India, and was brought to the New York Zoölogical Society. Photographed by C. William Beebe

For Teachers and Students

Birds and Seasons

SIXTH SERIES

WITH this issue of BIRD-LORE the series of papers on 'Birds and Seasons' is concluded. That it has been of assistance to field students their numerous and cordial expressions of appreciation assure us. The idea of a definite plan of study has also found favor and the editor is encouraged to follow these papers on 'Birds and Seasons' by a series of articles on the families of Passerine birds. The chief aim of these articles, which will be fully illustrated, will be to aid the student in identifying birds in nature, but information will be given for those who desire to know at least the main points of structure on which families are based.

F. M. C.

OCTOBER AND NOVEMBER BIRD-LIFE NEAR BOSTON

BY RALPH HOFFMANN

The first of October is the height of the fall migration. The woods and dry country lanes are now full of restless bands, which seem to any one who has become familiar with the order of arrival which birds keep in spring, to be made up of strange companions. The Yellow Palm and the Blackpoll Warblers, birds which in May could only accidentally overlap, are now encountered day after day together. In the grassy swamps, Sparrows, chiefly Song and Swamp, are swarming by the hundreds. A trained eye may detect among them on some fortunate day the more elegant form and markings of a Lincoln's Finch.

About the twentieth of the month the last regular migrants arrive, the Fox Sparrow, the Tree Sparrow and the Shrike. About the same time all but the hardiest of the summer birds, and the earlier migrants take their departure. The Sparrows in the weedy fields, the Yellow-rumps in the now leafless thickets, a White-throat or a few lingering Blackbirds, how one treasures the sight of these familiar birds! We follow the last Bluebird as we did the first, knowing that a weary interval may divide us from another sight of his warm blue. Even in November, the warm sunshine occasionally tempts these birds to linger on till some severe storm covers the earth with the first snow, and we come down to winter fare.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE for Dec., 1900, p. 183.

Departures of Summer Residents in October and November.—October 10, Maryland Yellow-throat, Pine Warbler, Black-throated Green Warbler, Indigo bird, House Wren; October 15, Carolina Rail, Virginia Rail; October 20, Chewink, Brown Thrasher, Cat-bird, Vesper Sparrow, Phœbe, Meadow Lark; October 31, Bluebird; November 5, Chipping Sparrow, Field Sparrow, Savanna Sparrow, Cowbird, Bronzed Grackle; November 10, Cedarbird; November 15, Song Sparrow, Swamp Sparrow; November 20, Sharp-shinned Hawk, Cooper's Hawk, Marsh Hawk, Kingfisher.

Arrivals and Departures of Migrants in October and November.—October 1-20, White-crowned Sparrow; October 1-November 5, Hermit Thrush; October 21-December 1, Fox Sparrow; October 21, Tree Sparrow, Northern Shrike; October-November, Pine Finch, Ipswich Sparrow; November, Snow Bunting, Red Crossbills, White-winged Crossbill,* Pine Grosbeak,* Redpoll Linnæ.*

*Very irregular and commonly absent.

OCTOBER AND NOVEMBER BIRD-LIFE NEAR NEW YORK CITY

BY FRANK M. CHAPMAN

October is a month of falling leaves and departing birds. Some time during the month the first "hard" frost may be expected, and doubtless during the entire year no other one event exercises so marked an influence on the character of our bird-life. In a night, as it were, the season passes from ripe maturity to old age, and the limp, sodden foliage of the less hardy plants is no less evident to the flower lover than is the absence of previously abundant birds to the ornithologist. The reason is obvious. The low temperature has not only robbed most insectivorous birds of their food but has deprived the arboreal species of the protection of leaf-hung branches.

This marks the end of the Warbler migration, and for the rest of the season Sparrows will be the common birds, frequenting weed and stubble fields. The length of their stay is largely dependent on the character of the weather, many species, as we have seen, lingering, under favorable conditions, until December.

October shows a further development of the second song period. Song, White-throated and Fox Sparrows, Phœbes, and Ruby-crowned Kinglets may always be heard singing fairly full-voiced performances during the month.

One may now also look for the diurnal migrations of Hawks and Crows, which, here, fly from northeast to southwest, and, a little later, the gathering of Grackles in enormous flocks, is characteristic of the season.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE for Dec., 1900, p. 184.

Summer Residents Leaving for the South.—October 1-10, Black-crowned Night

Heron, Yellow-billed Cuckoo, Black-billed Cuckoo, Chimney Swift, Least Flycatcher, Bobolink, Grasshopper Sparrow, Indigo Bunting, Scarlet Tanager, Barn Swallow, Cliff Swallow, Bank Swallow, White-eyed Vireo, Black-and-White Warbler, Redstart, Ovenbird, Wood Thrush; 10-20, Spotted Sandpiper, Whippoorwill, Nighthawk, Red-eyed Vireo, Maryland Yellow-throat, Long-billed Marsh Wren, Short-billed Marsh Wren, House Wren, Brown Thrasher, Catbird; 20-31, Phoebe, Towhee, Tree Swallow; November 1-15, Wood Duck, Great Blue Heron, American Bittern, Woodcock, Mourning Dove, Kingfisher, Red-winged Blackbird, Purple Grackle, Cowbird, Vesper Sparrow, Field Sparrow, Chipping Sparrow, Swamp Sparrow.

Migrants Arriving from the North.—October 1-15, Loon, Pintail, Mallard, Canada Goose, Bronzed Grackle, Rusty Blackbird, American Pipit, Hermit Thrush, Fox Sparrow; 15-31, Horned Lark, Pine Finch, Tree Sparrow, Snowflake, Redpoll, Northern Shrike

OCTOBER AND NOVEMBER BIRD-LIFE NEAR PHILADELPHIA

BY WITMER STONE

October and November cover the close of the autumnal migration and the return of bird-life to the period of winter quiescence. In the early days of October we frequently see a large number of the species which characterize the migratory waves of the preceding month, but these are for the most part stragglers, and it is the more hardy species which are most conspicuous in the crisp days of autumn, particularly the great flocks of White-throated Sparrows, Purple Finches, Goldfinches, Blackbirds and Robins; and their frequent call-notes and chirpings form quite a contrast to the languid silent days of late summer.

By November 1 bird-life is reduced almost to its winter level and the few migrants that linger with us are those which may be looked for even in midwinter in favorable seasons.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE for Dec., 1900, p. 185.

Departure of Summer Residents.—October 1-15, Green Heron, Yellow-billed Cuckoo, Black-billed Cuckoo, Whippoorwill, Nighthawk, Indigobird, Rose-breasted Grosbeak, Yellow-winged Sparrow, Scarlet Tanager, White-eyed Vireo, Red-eyed Vireo, Black-and-White Warbler, Redstart, Ovenbird, Wood Thrush; October 16-31, Phoebe, Towhee, Maryland Yellow-throat, Tree Swallow, Marsh Wren, House Wren, Thrasher, Catbird; November 1-15, Field Sparrow,* Chipping Sparrow, Vesper Sparrow, Cowbird, Kingfisher, Purple Grackle, Red-winged Blackbird.

*Usually.

OCTOBER AND NOVEMBER BIRD-LIFE NEAR OBERLIN, OHIO

BY LYNDY JONES

However capricious and inclement September weather may be, October may be counted upon to furnish a fair share of bright, warm days. The

month may open frosty for the purpose of making excuse to close like August, or it may open truly summer-like and close in a flurry of snow. There are not seldom a few days of cold rainy weather near the tenth followed by as fine an Indian summer as heart could desire. Whatever the weather may be, some birds are certain to move southward during the first ten days, and others are as certain to leave us during the last ten days, but the exact time in either case cannot be foretold, because the weather cannot be foretold. During this month, weather is a prime factor in the movements of the birds.

November is pretty certain to bring us the first snow of any consequence. It rarely comes before the last week, or if it does come earlier the month is pretty certain to close in brown apparel because of the rains which follow. We may have snow during the first week, to be sure, but if so it soon disappears, and is a forecast of a warm December. The weather is seldom severe, the temperature rarely falling as low as 20°. Of course the birds are greatly influenced by November weather. The snow storm of the last week drives nearly all of the strictly migratory species south and greatly reduces the numbers of many that remain during the winter, but it is rarely severe enough to bring us many of the more hardy northern birds which spend January with us.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE for Dec., 1900, p. 186.

Arrivals in October.—1-15, Junco, Purple Finch, Rusty Blackbird, Brown Creeper, Mallard; 15-30, Tree Sparrow, Fox Sparrow, American Pipit, Hermit Thrush, Green-winged Teal, Horned Grebe, Loon.

Departures in October.—1-10, Wood Duck, American Coot, American Woodcock, Phoebe, Swamp Sparrow, White-crowned Sparrow, Chipping Sparrow, Palm Warbler, Catbird; 10-20, Green-winged Teal, Green Heron, Sora, Chimney Swift, Greater Yellow-legs, Yellow-legs, Cowbird, Field Sparrow, Towhee; 20-31, Turkey Vulture, Belted Kingfisher (bulk), Bronzed Grackle (bulk), Ruby-crowned Kinglet, Hermit Thrush, Robin (bulk), Bluebird (bulk).

Arrivals in November.—1-10, Northern Shrike, American Scaup Duck, Bufflehead, Hooded Merganser, Ruddy Duck.

Departures in November.—1-10, American Scaup Duck, Bufflehead, Vesper Sparrow, White-throated Sparrow, Myrtle Warbler, Red-breasted Nuthatch; 10-20, Killdeer, Pied-billed Grebe, Fox Sparrow, American Pipit; 20-30, Mallard, Olive-backed Thrush, Junco (bulk), Rusty Blackbird (bulk), Ruddy Duck, Song Sparrow (bulk), Mourning Dove (bulk), Meadowlark (bulk).

AUGUST AND SEPTEMBER BIRD-LIFE AT GLEN ELLYN (NEAR CHICAGO), ILLINOIS*

BY BENJAMIN T. GAULT

The outward manifestations of an August day, with its dry and parched fields, its cicada sounds and worm-eaten foliage—the dog-days

*Owing to the editor's absence this article was omitted from the August issue of BIRD-LORE.

of old, recurring with each successive year — contribute little in their way that is enthusing to one's ardor for a more or less protracted study of the bird-life then surrounding us.

It is in the main a period of disappointments. The molting season, but fairly begun the preceding July, is carried more into completion during this month, with the result that the first two weeks of August find many of our birds in a sadly dilapidated condition; though it is not unusual, even then, to see the Red-eyed Vireo, in rather scant attire, caring for a brood of its own, having been debarred from this obligation, through the several weary weeks just passed, by acting in a similar capacity for that bulky parasite the Cowbird, presenting in the meantime a most pathetic picture.

The last two weeks of this month are much more musical than the first, which are mainly devoid of interest aside from the early arrival of several of our warblers, who pass through almost unheralded at this particular time of the year.

September gives us a taste of May over again; yet, after all, it is like a cake that has been largely deprived of its frosting and sugared plums; though, on the whole, very palatable as it is wholesome.

We miss, however, the sweet vocal strains, and are comforted chiefly by the sight of many birds, which, alternating with the weather, seem to come by fits and starts. The woods may fairly swarm with them from bramble to tree-top tomorrow and be comparatively tenantless the day following. A rapid change in climatic conditions, a fall in temperature, is usually followed shortly afterward by its attendant bird-wave.

The first two weeks of September should be very busy ones for the energetic student of birds, and clever indeed is he who can accurately identify all that he sees. Many of our transient visitors come to us then in a poorly developed, if not greatly modified, dress, and we must rely largely upon certain ineffaceable markings in order to correctly name them. It, too, is the month of Warblers and the smaller Thrushes, which finally gives way, as the season advances, to that of the Sparrow hosts.

BIRDS OF THE SEASON

Late summer and early fall transients and winter visitants, near Glen Ellyn, Illinois, from data collected during the past eight years, earliest dates of arrival being given:

(For permanent winter visitant and summer resident species see BIRD-LORI, Dec. 1900, p. 187, and June, 1901, p. 104.)

July 4, Black Tern; July 16, Solitary Sandpiper; July 28, Orange-crowned Warbler; July 29, Tennessee Warbler; July 30, Yellow-legs; Aug. 3, Great Blue Heron; Aug. 4, Least Sandpiper; Aug. 9, Broad-winged Hawk; Aug. 11, Olive-sided Flycatcher, Blue-headed Vireo and Black-and-White Warbler; Aug. 12, Pectoral Sandpiper, Magnolia and Blackburnian Warblers; Aug. 13, Bay-breasted Warbler; Aug. 14, Connecticut Warbler; Aug. 15, Canadian Warbler; Aug. 16, Golden-winged and

Wilson's Warblers, Red-breasted Nuthatch (?) and Olive-backed Thrush; Aug. 17, Mourning Warbler; Aug. 20, Nashville Warbler; Aug. 21, Philadelphia Vireo; Aug. 22, Black-throated Green Warbler; Aug. 23, Blackpoll Warbler; Aug. 25, Purple Finch, Parula and Black-throated Blue Warblers and Water-Thrush; Aug. 26, Wilson's Willow and Gray-checked Thrushes; Aug. 30, Slate-colored Junco;* Sept. 2, Swamp Sparrow; Sept. 3, Yellow-bellied Flycatcher; Sept. 4, Blue-winged Teal, Sparrow-Hawk (latter recently added to summer resident list) and Palm Warbler; Sept. 6, Horned Grebe (?); Sept. 7, American Coot and Osprey; Sept. 8, Le Conte's Sparrow and Cape May Warbler; Sept. 9, Winter Wren and Ruby-crowned Kinglet;** Sept. 10, American Golden Plover; Sept. 11, Lincoln's Sparrow; Sept. 12, Rusty Blackbird;** Sept. 13, White-throated Sparrow; Sept. 14, Sapsucker and Hermit Thrush; Sept. 15, Brown Creeper;** Sept. 17, Sharp-shinned and Pigeon Hawks, Grinnell's (?) Water Thrush; Sept. 18, Wilson's Snipe and Pine Siskin (?); Sept. 19, Golden-crowned Kinglet; Sept. 20, Greater Yellow-legs; Sept. 22, Fox Sparrow; Sept. 24, Black-bellied Plover and Lapland Longspur (?);* Sept. 25, Mallard, Green-winged Teal and Myrtle Warbler; Sept. 30, American Pipit.

Latest dates of departure, for August and September, of transient and summer-resident species, from data collected near Glen Ellyn, Illinois, during the past eight years:

(For migrant species during February and March, and April and May, see February and April Nos. of BIRD-LORE, pp. 27 and 66, respectively.)

Aug. 13, Chipping Sparrow;† Aug. 16, Yellow-breasted Chat;† Aug. 17, Mourning Warbler; Aug. 19, Least Sandpiper and Cerulean Warbler; Aug. 20, Blue-gray Gnatcatcher; Aug. 27, Acadian Flycatcher; Aug. 30, Green Heron; Sept. 1, Barn Swallow, White-rumped Shrike, and Blue-winged Yellow Warbler; Sept. 3, Yellow-bellied Flycatcher, Bank Swallow and Wilson's Thrush; Sept. 4, Baltimore Oriole; Sept. 5, Black Tern and Dickcissel; Sept. 6, Horned Grebe (?), Great Blue Heron, Kingbird and Yellow Warbler; Sept. 7, Osprey; Sept. 8, Tree Swallow and Cape May Warbler; Sept. 10, Cowbird and Warbling Vireo; Sept. 11, Bartramian Sandpiper; Sept. 12, Sparrow Hawk; Sept. 13, Grasshopper Sparrow; Sept. 15, Olive-sided Flycatcher (?); Sept. 16, King Rail and Eave Swallow; Sept. 17, Grinnell's (?) Water Thrush and Willow Thrush; Sept. 18, American Woodcock, Yellow-legs and Crested Flycatcher; Sept. 19, Traill's Flycatcher; Sept. 20, Greater Yellow-legs, Scarlet Tanager and Yellow-throated Vireo; Sept. 21, Wilson's Warbler; Sept. 22, Ruby-throated Hummingbird, Indigo Bird, Blackburnian, Connecticut and Canadian Warblers and Wood Thrush; Sept. 23, Wood Pewee and Martin (?); Sept. 24, Black-bellied Plover and Least Flycatcher; Sept. 24, Pectoral and Spotted Sandpipers; Cedarbird** and Golden-winged Warbler; Sept. 26, Henslow's Sparrow and Chestnut-sided Warbler; Sept. 27, Blue-winged Teal; Rose-breasted Grosbeak; Philadelphia Vireo, Black-and-White and Blackpoll Warblers; Sept. 28, Sharp-shinned Hawk; Sept. 29, Yellow-billed Cuckoo and Chimney Swift; Sept. 30, Ovenbird.

*Regular winter visitant.

**Irregular winter visitant.

†Doubtless occurred later.

OCTOBER AND NOVEMBER BIRD-LIFE AT GLEN ELLYN (NEAR CHICAGO), ILLINOIS

BY BENJAMIN T. GAULT

The opening days of October are perhaps easily characterized by the marked disappearance of many of our strictly insectivorous birds. A few may linger still, or until some time after the first fall frosts have set in, yet it is equally apparent to us then that they fail to lend much character

to our bird-life, or such as the seed eaters, or Sparrows, are now doing, during these and the succeeding Indian summer days, so shortly to follow.

From a few, at first, the Tree Sparrows gradually become more numerous, and, as the bracing days of late October finally give way to the sharper nights and mornings of cooler November, it is found they are not lacking in suitable places. Yet, as a species, they cannot be regarded as common until the wintry days of December have actually come to stay; though their exact status in this one particular does seem to vary with the seasons.

The first week in October, with us, usually finds the Juncos and Peabodies plentiful, and associated with them is a fair sprinkling of Fox Sparrows, the whole constituting a jolly lot.

Our mixed hazel and blackberry, cornel and wild crab thickets are then the much-frequented resorts of the Sparrow kind, and if one finds music in the constant scratching among the rustling leaves and the almost incessant clatter of vocal sounds emanating from such surroundings he should not fail to visit them at this most opportune time of the year.

The Ambrosia, or ragweed, thickets, too, also afford them capital retreats, as one is almost sure of finding there a mixed assemblage of the species just mentioned.

There are years when the Pine Siskins first visit us in one immense flock, with little bands from the main body scouring the country here and there; and it is then that the heavily seed-laden tops of the ragweed offer them the greatest of attractions.

A few notes pertaining to the fields and the foraging habits of the Rough-legged Hawks might be as readily appended here, but, with these, we doubtless are rather convinced by this time that our seasonal cycle of bird-life experiences has practically and happily approached its completion.

BIRDS OF THE SEASON

For permanent residents, see BIRD-LORE for Dec., 1900, p. 187.

Late fall and early winter arrivals at Glen Ellyn, showing earliest recorded dates:

October 2, Nelson's and White-crowned Sparrows; Oct. 4, Tree Sparrow;* Oct. 12, Ring-necked Duck and American Rough-legged Hawk;* Oct. 17, Canada Goose;** Oct. 23, Lesser Scaup Duck; Oct. 24, Northern Shrike;* Oct. 31, American Crossbill; Nov. 6, Shoveller Duck and Redpoll Linnet;** Nov. 19, Tufted Titmouse; Dec. 11, Short-eared Owl.*†

Late fall and early winter departures at Glen Ellyn, showing latest recorded dates, from data collected during the past eight years:

October 1, Black-crowned Night Heron, Parula Warbler and Water Thrush; Oct. 2, Nelson's Sparrow and Maryland Yellow-throat; Oct. 4, American Coot, Broad-winged Hawk, Field Sparrow and Bay-breasted Warbler; Oct. 5, Red-eyed Vireo and Amer-

* Regular winter visitant.

** Irregular winter visitant

† Doubtless occurred earlier.

ican Redstart; Oct. 6, Solitary Sandpiper, LeConte's Sparrow, Phoebe, Catbird, Brown Thrasher and Alice's Thrush; Oct. 7, Orange-crowned Warbler; Oct. 9, Marsh Hawk, Bobolink, Lincoln's Sparrow, Solitary Vireo, House Wren, Nashville (?), Tennessee and Magnolia Warblers; Oct. 10, Long-billed Marsh Wren and Black-throated Blue Warbler; Oct. 12, Sapsucker and Black-throated Green Warbler; Oct. 14, Nighthawk; Oct. 16, Pigeon Hawk and Hermit Thrush; Oct. 17, Carolina Rail and Short-billed Marsh Wren; Oct. 18, Golden Plover, American Pipit and Palm Warbler; Oct. 19, Green-winged Teal and American Bittern; Oct. 20, Savanna Sparrow; Oct. 21, Mourning Dove, Black-billed Cuckoo and White-crowned Sparrow; Oct. 22, Killdeer Plover; Oct. 24, Swamp Sparrow and Olive-backed Thrush; Oct. 25, Grass Finch; Oct. 27, Ruby-crowned Kinglet** and Myrtle Warbler; Oct. 31, Brown Creeper** and Red-breasted Nuthatch; Nov. 1, Chewink; Nov. 2, Purple Finch and Song Sparrow; Nov. 4, Pied-billed Grebe, Lesser Scaup Duck and Wilson's Snipe; Nov. 6, Shoveller Duck and Red-headed Woodpecker;*** Nov. 7, White-throated and Fox Sparrows and Winter Wren; Nov. 13, American Crossbill; Nov. 15, Meadowlark,** Rusty Blackbird,** Bronzed Grackle and Redpoll Linnet;*** Nov. 18, Bluebird; Nov. 19, Belted Kingfisher, Red-winged Blackbird, Tufted Titmouse and American Robin;*** Nov. 26, Mallard; Nov. 29, Ring-necked Duck and Pine Siskin; Dec. 11, Golden-crowned Kinglet;*** Dec. 12, Canada Goose;*** Dec. 17, Flicker.***

** Irregular winter visitant.

SUGGESTIONS FOR THE SEASON'S STUDY

Migration.—Note the relation between temperature and the dates of departure of birds for the south. What summer residents remain until November? Are the individuals of these species probably those that were with us during the summer or birds from farther north? Compare the birds of November with those of March. What is the reason for the similarity in the bird-life of the two months? When possible, note the age, whether immature or adult, of the migrants observed. What evidences of migration by day are now observed? Do any birds regularly resort to winter roosts in your vicinity? When are these roosts formed?

Food.—Note the change in the food of many species at this season. What usually insectivorous birds now feed upon berries? Observe the relation between and the nature of a migrant bird's food and the date of its departure. Note especially whether any birds store food. Does it follow that the same individual which stores food will remain to devour it later in the year?

Song.—What species sing at this season? Are the individuals heard singing believed to be adults or birds reared the preceding summer? What birds have call-notes largely restricted to this season? What are the probable reasons for such restriction?

SUGGESTIONS FOR THE SEASON'S READING

Thoreau: 'Autumn,' 'Autumnal Fints' in 'Excursions,' Burroughs: 'Autumn Tides' and 'An October Abroad' in 'Winter Sunshine,' Torrey: 'A November Chronicle' in 'A Rambler's Lease,' Flagg: 'October' and 'November' in 'A Year With the Birds,' Bolles: 'At the North of Bearcamp Water,' Wright: 'The Loom of Autumn' in 'The Friendship of Nature,' Crocket: 'October' and 'November' in 'A Yearbook of Kentucky Woods and Fields,' Ingersoll: 'Nature's Calendar,' Parkhurst: 'The Birds' Calendar.'



What Bird Is This?

Field Description.—Length, 5.50 in. Crown dark brown, a grayish line through its center, a buffy streak over the eye; back streaked with black, whitish and brownish; tail-feathers pointed; throat whitish; breast and sides buffy; abdomen white.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some widely-distributed, but, in the eastern United States, at least, comparatively little-known bird, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with its picture.

The species figured in August is the female Black-throated Blue Warbler, a fall specimen with the white spot at the base of the primaries not visible beyond the coverts. Few Warbler plumages are more difficult to identify.

The June Bird Census

While we have received a number of responses to the suggestion of a June bird census, very few of the lists sent are based upon the detailed observation required to make them of value in this connection. A mere enumeration of the species seen even when accompanied by the statements of "Common," "Abundant," etc., does not aid us in learning with comparative exactness the number of individual birds occupying a given area.

Only those who have tried to make a bird census are aware of the time, care, and patience it of necessity requires. It is not surprising, therefore, that so few of the returns are available for publication.—ED.

A JUNE BIRD CENSUS AT NORTH FREEDOM, WIS.

BY ALICE WEEMORE AND JAMES SEELY

The country taken consisted of corn and oat fields, sloping meadows, heavily wooded bottoms, thick bushy tracts, a wild plum orchard and a marsh. Time, June 3 to June 30:

Green Heron, 1; Virginia Rail, 1; Sora, 1; Spotted Sandpiper, 5; Bob-white, 10; Mourning Dove, 12; Cooper's Hawk, 2; Red-shouldered Hawk, 1; Pigeon Hawk, 1; American Sparrow Hawk, 5; Yellow-billed Cuckoo, 2; Belted Kingfisher, 5; Downy Woodpecker, 3; Yellow-Bellied Woodpecker, 1; Red-headed Woodpecker, 5; Flicker, 8; Night-hawk, 2; Chimney Swift, 5; Ruby-throated Hummingbird, 1; Kingbird, 4; Phebe, 1; Wood Pewee, 3; Least Flycatcher, 1; Prairie Horned Lark, 3; Bluejay, 3; Crow, 1; Bobolink, 8; Cowbird, 7; Red-winged Blackbird, 23; Meadowlark, 10; Baltimore Oriole, 3; House Sparrow, 3; American Goldfinch, 7; Vesper Sparrow, 6; Chipping Sparrow, 2; Field Sparrow, 1; Song Sparrow, 21; Rose-breasted Grosbeak, 4; Indigo Bunting, 4; Dickcissel, 4; Scarlet Tanager, 2; Purple Martin, 2; Cliff Swallow, 3; Barn Swallow, 4; Bank Swallow, 10; Cedar Waxwing, 5; Red-eyed Vireo, 5; Warbling Vireo, 5; Yellow-throated Vireo, 1; Yellow Warbler, 5; Maryland Yellowthroat, 2; American Redstart, 2; Catbird, 9; Brown Thrasher, 2; White-breasted Nuthatch, 3; Chickadee, 7; American Robin, 12; Bluebird, 2. Total, 58 species, 268 individuals.

A JUNE BIRD CENSUS AT HUNTINGTON, LONG ISLAND

BY CHARLOTTE E. LEE

The area selected is bounded on one side by an elm-shaded village street, lined with cottages having lawns and gardens, back of which lie orchards and hay fields. The street ascends a hill whose opposite slope is partly covered with a growth of cedar, locust, oak and chestnut trees, and at the foot of which lies a group of small ponds with banks heavily shaded with willow, alder, elder, and other bushes.

Bob-white, 1; Yellow or Black-billed Cuckoo, 1; Downy Woodpecker, 2; Flicker, 3; Swift, 12-15; Ruby-throated Hummingbird, 1; Kingbird, 4; Great Crested Flycatcher, 2; Wood Pewee, 4; Chebec, 2; Blue Jay, 2; Crow, 1; Cowbird, 3; Meadowlark, 2; Orchard Oriole, 2; Baltimore Oriole, 6 adult, 1 young; Purple Finch, 2; English Sparrow, 17; Goldfinch (American), 10; Grasshopper Sparrow, 4; Chipping Sparrow, 15; Field Sparrow, 5; Song Sparrow, 17; Chewink, 2; Scarlet Tanager, 1; Purple Martin, 6; Cedarbird, 6; Red-eyed Vireo, 5; Yellow-throated Vireo, 1; White-eyed Vireo, 2 and 1 young in nest; Black and White Warbler, 4; Yellow Warbler, 6; Prairie Warbler, 3; Ovenbird, 2; Louisiana Waterthrush, 2; Maryland Yellow-throat, 5; American Redstart, 6; Catbird, 10; Brown Thrasher, 2; House Wren, 3; Wood Thrush, 9; Robin, 25. Total, 42 species, about 223 individuals.

For Young Observers

A Bittern at Close Range

BY A. V. KIDDER (Aged 15)

ON May 16, 1901, I was walking alone by the edge of a large marsh near the Waverley Oaks, in Belmont, Mass. It was about 3 o'clock on a hot sunny afternoon, and I was therefore much surprised to hear the pumping of a Bittern from the long grass. I had made it my rule always to look for a Bittern that I heard pumping, but had never yet been lucky enough to see the operation. I looked carefully over the broad expanse of marsh grass and water, and soon struck something that looked suspicious. From behind a small clump of dead bullrushes there protruded a brown object, that, even with the glasses, could scarcely be proved animate. All my doubt of its identity was removed when the top of the stick suddenly bent down, was jerked up and pulled down again, while the well-known guttural, bubbling grunt came to my ears. The neck immediately became stiff and straight again, and the bird stood motionless for several minutes.

This Bittern only pumped from three to four times running and then stood quietly for two to three minutes before repeating his performance. I have never heard a Bittern pump more than eight consecutive times, nor less than twice.

The bird was about a hundred yards distant, with only his neck and head in sight. His neck was protruding straight from the grass and his head pointed upward and outward. The process of pumping was as follows: When ready, he lowered his beak, so that it pointed about parallel to the grass. After a few preliminary nods his head jerked violently down and his throat swelled and puffed as if a large ball were being brought up from the stomach, then his head was thrown up to a perpendicular, and whipped down a trifle lower than in the first nods. These movements made up one "pump" consisting of three syllables that sounded to me like "glump-te-glough." The next pump is started without the preparatory nods. The actions are so lightning-like that it is impossible to say in what part of the gyrations of his head the separate notes come. He was too far distant for me to hear the snapping of the bill heard by Mr. Bolles, less than two miles from the same place. One note of three syllables took a little over one second, and during the interval, which was longer than in the night performance, he stood gazing steadfastly toward the sky. I suppose the dipping of his bill, like that of a bird drinking, before beginning the song, gave rise to the very natural idea that water was used in the process.

Notes from Field and Study

A Talking Rose-breasted Grosbeak

Early last summer while standing on my back steps, I heard a cheerful voice say, "You're a pretty bird. Where are you?" I supposed it to be the voice of a Parrot, but wondered how any Parrot could talk loud enough to be heard at that distance, for the houses on the street back of us are quite a way off.

Almost before I had done laughing, the voice came again, clear, musical, and strong—"You're a pretty bird. Where are you?"

For several days I endured the suspense of waiting for time to investigate. Then I chased him up. There he was in the top of a walnut tree, his gorgeous attire telling me immediately that he was a Rose-breasted Grosbeak.

At the end of a week he varied his compliment to, "Pretty, pretty bird, where are you? Where are you?" With a kind of impatient jerk on the last "you."

He and his mate stayed near us all last summer, and though I heard him talk a hundred times, yet he always brought a feeling of gladness and a laugh.

Our friend has come back again this spring. About May 1, I heard the same endearing compliment as before.

Several of my friends whom I have told about him have asked, "Does he say the words plainly? Do you mean that he really talks?" My reply is, "He says them just as plainly as a bird ever says anything, so plainly, that even now I laugh whenever I hear him."

He is not very easily frightened and sometimes talks quite a while when I am standing under the tree where he is.—
EMILY B. PELLET, *Worcester, Mass.*

Swallow Manœuvres

On October 3, 1899, my attention was called to a huge flock of Tree Swallows about a quarter of a mile from my home.

These birds are abundant here from July to October, but on this occasion at least 2,000—estimating from photographs and from the counting of the live birds—were collected on the telegraph wires and in the adjoining fields, and not a single specimen of any other species could be found in the flock.

On the wires were hundreds at a time, crowded together between three poles; they seemed to have lost their usual fear of man, remaining even when carriages went under them, and not always starting up when the wires were struck by a stone—a temptation to throw which the passing small boys found it impossible to resist.

Beside the road is a small brook with two or three exposed pools, and here was a great oval whirl of birds, all going in the same direction, each in passing dipping for a drink, then rising to re-take its place in the line. Now and then some returned to the wires or others joined the drinkers, but the numbers were so great that a collision seemed unavoidable.

A large part of the flock had settled in a pasture some distance away, in so close a group that they made a spot of blue on the short grass. Crossing over to these I found them quietly enjoying the sunlight, and as I approached from the southwest all had their backs toward me, showing to perfection the beautiful steel-blue of the feathers. Most of the time they were still, though now and then one undertook to walk a few inches, if, indeed, such a ridiculous hobble could be called a walk. But forty feet was near enough for a person—then those nearest me rose and passing over the others, alighted in front of them, and so they moved regularly on before me.

Some of this portion of the flock were on a wire fence near at hand, a very small proportion, though over 100 were on a single wire between five posts, and these were so fearless that when the last one flew I was but two steps away.

Four or five times during an hour and a half the birds on the telegraph wires rose in a body, with those drinking at the brook, while the flock from the pasture hurriedly crossed the intervening fields to join them. For a moment the very air seemed full of Swallows, then rising higher, they separated into smaller flocks, turning back and forth, meeting again, describing curious figures as smoothly and easily as if going through a long-practiced drill. After a few minutes, they either returned, a few at a time, to their former perches, or gradually scattered over the fields and woods and in a little while came streaming back, a long river of Swallows, to alight once more.

As the morning advanced their numbers gradually diminished, and at 3 P. M. about thirty remained. For three or four days after that these Swallows were present in great numbers, continuing their drill, after which I noticed no more than usual.—ISABELLA McC. LEMMON, *Englewood, N. J.*

An Aerial Battle

On September 24, 1898, I witnessed a most vigorous and spirited fight between a Sparrow Hawk and a female Sharp-shinned Hawk. Each seemed equally the aggressor and fought after its own peculiar method of hunting, the Sparrow Hawk always endeavoring to rise high above the other and then dash down falcon-like on the back of its antagonist, a maneuver which the other usually forestalled by turning on its back and striking upwards viciously, though once or twice I fancied that the Sparrow Hawk struck her pretty severely before she was able to turn.

The Sharp-shinned Hawk attacked with a horizontal flight, sometimes with a side movement, but oftener straight ahead, and, to my surprise, appeared to have the advantage when flying against the wind, in spite of its opponent's more compact build and stiffer wing feathers. The two fought back and forth over the same ground for ten minutes or more, each endeavoring to gain the advantage by keeping to the windward, but continually beaten back by the gale. The Sparrow Hawk fought in

silence, while the other uttered sharp, petulant shrieks from time to time.—W. E. CRAM, *Hampton Falls, N. H.*

Note on the Warbling Vireo

An early morning visit to Rock Island, in the Mississippi river at Moline, Illinois, for the purpose of becoming more familiar with the Warbling Vireo—the bird, its song, its nest, its habits—revealed a very pretty bit of bird-ways.

Seated on the ground, in a convenient place for watching the Vireo, which was on the nest, we were soon attracted by a Vireo's song. Search for the singer failed to find it, until we noted that the bird on the nest seemed to be singing. Then, as we watched, over and over again the bird was seen to lift up its head and pour out the long, rich warble—a most delicious sight and sound.

Are such ways usual amongst birds, or did we chance to see and hear an unusual thing?—AMANDA ELLIOTT, *Moline, Illinois.*

The Bird Rock Group

(See *Frontispiece*)

One of the objects of the writer's trip to Bird Rock in July, 1898, was to secure material to be used in the representation of the interesting phase of bird-life the Rock so well typifies, in the American Museum of Natural History. This object has now been happily accomplished through the skill and talents of Mr. H. C. Denslow, of the Museum's taxidermic staff, and the Bird Rock group is considered to be one of the most successful, as well as most ambitious attempts, to reproduce the haunts of birds.—F. M. C.

The Eighteenth Congress of the American Ornithologists' Union

The public sessions of the A. O. U. will be held November 12-14 in the American Museum of Natural History, New York city. The Second Annual Audubon Conference will also occur at the same place during the same week.

Book News and Reviews

EVERYDAY BIRDS. Elementary Studies by BRADFORD TORREY. With 12 illustrations in colors after Audubon and 2 from Photographs. Boston and New York: Houghton, Mifflin & Co. 1901. 12mo. 106 pages. Price, \$1.

Mr. Torrey here writes for young people of two dozen or more common birds and of some phases of bird-life in a manner, it seems to us, well adapted to claim the youthful observer's attention and to make him call for "more." At the best there is such a vast difference between the bird in the bush and the bird in the book that there is often danger too much of the latter may rob the child of his interest in the former, and one is thankful, therefore, when the birds find an interpreter as well equipped as Mr. Torrey.

The illustrations, reproduced by the three-color process from Audubon's plates, are interesting and, as far as we can judge without direct comparison with the originals, most of them seem to be surprisingly successful.—F. M. C.

HADDON HALL LIBRARY. BIRD WATCHING. By EDMUND SELOUS. London: J. M. Dent & Co. 1901. [New York: The Macmillan Co. Price, \$3.00.] 12mo. xi + 347 pages; 6 full-page photogravures; numerous text cuts.

The ideal student of birds in nature, or "bird watcher," as Mr. Selous terms him, must be a patient, conscientious, unprejudiced and skilled observer, with a training which will tell him what are the essential things to be looked for and what is the significance of things seen, and, most important of all, since without it science gains nothing from his labors, he must have the power to record his observations in such a manner that they become available to others—a contribution to the store of human knowledge.

To the ornithologist who aspires to reach this high standard we commend Mr. Selous' volume. Its author's methods of work, mode of reasoning and rare gift of descrip-

tion make his book an addition to the literature of ornithology, as well as to that of general ecology, of unusual merit. While the range of his observations covers many phases of bird-life, he appears—and with good reason—to have been especially attracted by the often remarkable actions of birds during the pairing season, and his observations on the subject of sexual selections are of peculiar value.

Although Mr. Selous writes only of British birds, many of the water birds treated are found in this country; but the matter of species is here a secondary consideration, and we call the attention of American readers to this book because we believe its perusal will be of real assistance to them in studying the habits of wild birds.—F. M. C.

THE BIRDS OF SPRINGFIELD AND VICINITY. By ROBERT O. MORRIS. Henry R. Johnson, Springfield, Mass. 1901. 8vo. 54 pages. 1 map.

This list enumerates 254 species as known to occur within a radius of 25 miles of Springfield, exclusive of five species, which have been introduced. Only one of the latter (the House Sparrow, it is almost needless to say) continues to exist, European Quail, Prairie Hens, Prairie Sharp-tailed Grouse and European Starlings having disappeared after their release. Of the latter it is said that about 100 were liberated in the spring of 1897. "Three of these were alive and well early the following spring, but since then I have not seen or heard of any of them" (p. 42); a rather surprising failure in view of the success which has attended the introduction of this species in New York city.

The annotations duly credit the observations of former observers, and the list is a welcome contribution to faunal literature. It is attractively printed, and we are particularly glad to see that it is issued as a special publication, and is thus accessible to any one desiring to secure it.—F. M. C.

THE BIRDS OF ANDOVER. Prepared by HOWARD I. FORD. Published by the School Department. THE ANDOVER [Mass.] Press. 1900. 12mo. 19 pages.

This little pamphlet was prepared for the use of the "teachers and pupils in the Andover schools," and, the prefatory note further states, its "chief aim is to give information of local value which cannot be found in other handbooks." Having so clearly in mind the principal office of a local list, we are not surprised to find that the author has succeeded in presenting his facts in a definite, detailed, and still condensed manner.

The form adopted, a ruled page with the bird's name at the left and annotations in succeeding columns and with blanks for subsequent records, admits of the presentation of a large amount of information in a small space and consequently at a small cost, and we commend it, with the substance of the list itself, to every one having in mind the preparation of local lists for students.—F. M. C.

BIRDS I HAVE SEEN. New York: Dodd, Mead & Co. 1901. 16mo. 169 pages. Price, 50 cts.

This little book has been issued with the admirable object of encouraging the making of notes in the field. Under the headings of "Dates," "Where Seen," "Appearance," "Habits," "The Female," "Its Note," etc., spaces are left to be filled by the student. The book is of convenient size and attractive appearance, but it does not seem to us to have been prepared by a person who has had actual field experience in using a note-book of this character.—F. M. C.

DIGEST OF GAME LAWS FOR 1901. Bulletin No. 16, U. S. Department of Agriculture, Division of Biological Survey. By T. S. PALMER and H. W. OLDS. Washington, Government Printing Office. 1901. 8vo. 150 pages. 8 plates.

This "is practically a complete digest of existing federal, state and provincial laws relating to the capture, shipments and sale of game" (preface), and its publication by the government as an official document

gives to it an authoritativeness second only to the laws themselves.

The game laws of the land are thus made so readily accessible that ignorance of their provisions is inexcusable on the part of either sportsmen, game dealers, or transportation companies. Of the latter, especially, it may be said with truth that 'the game is not worth the candle' and once informed of the requirements of the law they will make no attempt to evade them. This bulletin, therefore, will be welcomed by every one interested in preserving our rapidly decreasing game birds and mammals.—F. M. C.

The Ornithological Magazines

THE AUK.—'The Auk' for July is without an illustration for the first time in many a day, containing, however, its usual array of papers, reviews and notes. There is a list of 91 summer 'Birds of the Black Hills,' by Merritt Cary, and another of 42 'Winter Birds of Pea Island, N. C.,' by Louis B. Bishop, both being of the familiar annotated type. Some 'Unpublished Letters of Wm. MacGillivray to John James Audubon,' by Ruthven Deane, will be read with interest. Herbert Brown writes on 'Bendire's Thrasher,' dealing almost wholly with statistics of nests and eggs, and several new races of birds are described by various authors. 'The Resident Land Birds of Bermuda' are discussed by Outram Bangs and Thomas S. Bradlee, who conclude that four of the seven indigenous birds are sufficiently distinct from their continental brethren to be described as new species. Lack of specimens for comparison of the other three species seems to have saved Bermuda from being furnished with a complete new local avifauna.

A score of pages is devoted to a tenth supplement to the A. O. U. check-list with a fresh stirring about of names, the tenth since 1886. The question suggests itself. Might not more stability of nomenclature be attained by less frequent rulings of the committee?—quinquennial reports, for instance. Newly described forms, like wine, ought to improve or spoil by keeping and other questions are not so pressing. Up-to-

date nomenclature is not needed in editions like a daily newspaper, and if 'Supplements' are to appear every few months, bird students will finally come to regard them, right or wrong, only as a sort of nomenclatural yellow journalism.—J. D., Jr.

THE OSPREY.—Three numbers (May, June, and July) of 'The Osprey' recently have appeared, and, as usual, contain matter of considerable interest. The illustrated paper on the 'Osprey or Fish Hawk,' which Doctor Gill commenced in the initial number of the current volume, is still continued, and Paul Bartsch concludes his article on 'The Dismal Swamp.' To his list of fifty-three summer residents, we can add the following species: Night Heron, Spotted Sandpiper, Bob-white, Dove, Bald Eagle, Red-tailed and Broad-winged Hawks, Phoebe, Fish Crow, Red-winged Blackbird, Meadowlark, Goldfinch, Field Sparrow, Barn Swallow, Brown Thrasher, Long-billed Marsh Wren, and Bluebird. Among the other original articles may be mentioned 'William Swainson and His Times' (part ix), by Doctor Gill; 'A Canoe Trip Up the San Juan River, Mexico,' by Percy Shufeldt; 'My Story of a Sharp-shinned Hawk,' by P. M. Silloway; 'Stephens' Whippoorwill,' by J. H. Riley; 'Blue Grosbeak in Eastern Kansas,' by W. S. Colvin; 'Blue-Gray Gnatcatcher,' and 'The Malar Stripe of Young Flickers,' by Wm. Palmer; 'Tenants of Uncle Sam,' and 'Camping on the Old Camp Grounds,' by Paul Bartsch, and 'Notes on the Birds of the Bermudas, with Descriptions of Two New Subspecies (*Cardinalis cardinalis somersii* and *Sialia sialis bermudensis*),' by A. H. Verrill. Mr. Verrill is unfortunate in losing both these subspecies, for in the case of the Bluebird he overlooked the fact that Linnaeus based his descriptions on the Bermuda bird, and a description of the Cardinal by Bangs and Bradlee appeared in 'The Auk' fully two weeks before his paper was issued.

In the review of Doctor Dwight's paper 'On Sequence of Plumages and Moults' there seems to have been some careless proofreading, as 'nuptial,' both in its in-

dependent and combined forms, is uniformly misspelled.

The shorter notes are to be found under the headings of 'Comments and Notes.'—A. K. F.

WILSON BULLETIN No. 35.—This number of the Bulletin contains the following articles: 'On the Occurrence of Two Southern Birds in Virginia,' and 'Spring Horizon, near Lynchburg, Va.,' by J. W. Daniel, Jr.; '*Helminthophila pinus* in Wisconsin,' by N. Hollister; 'The Redpoll in South Carolina,' by W. J. Hoxie; 'Cardinal,' by T. D. Keim, and a number of interesting shorter communications under the heading of 'General Notes.'

Two articles by Professor Lynds Jones and the editor, on 'A Suggestion for Work,' and 'Further Suggestions for Taking a Bird Census,' contain valuable hints which should assist the student in learning more of the life histories of birds.—A. K. F.

Book News.

All nature-lovers will learn with pleasure of the promised early publication, by Charles Scribner's Sons, of a new work by Ernest Seton-Thompson to be entitled 'The Lives of the Hunted.'

McClure, Phillips & Co., announce for early publication 'Songs of Nature,' a selection by John Burroughs, of over two hundred and twenty poems relating to birds, flowers, the seasons, and nature. Mr. Burroughs's fine judgment as a critic and knowledge as naturalist will doubtless make this collection one of unusual charm and value.

'The Birds of Princeton, New Jersey,' by William Arthur Babson, a brochure of some eighty pages, will soon be issued by the Princeton Bird Club, under the editorship of W. E. D. Scott, as its first Bulletin.

We take pleasure in calling especial attention to 'Nature Study,' a journal published with commendable regularity each month by the Manchester (N. H.) Institute of Arts and Sciences. Its articles are all original and, what does not always follow, they are both readable and valuable.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

THE recent action of the Committee on Classification of the American Ornithologists' Union in rejecting as unworthy of recognition by name no less than twenty subspecies of North American birds, which have been described during the past two years, is a significant comment on the feather-splitting tendency of some present-day systematic ornithologists, and an eloquent illustration of the Union's services to the science of ornithology.

While the committee thus saves us from an additional burden of 'bridged difficulties,' it unfortunately cannot save systematic zoölogy from the stigma of this excessive and unwarranted describing of alleged "new" subspecies, and in his retiring address as vice-president of the Section of Zoölogy of the American Association for the Advancement of Science, delivered at Denver in August last, we find Prof. C. B. Davenport saying: "There is only one class of zoölogists that I would wish to blot out, and that is the class whose reckless naming of new 'species' and 'varieties' serves only to extend the work and the tables of the conscientious synonymy-hunter!"

To the A. O. U. we must also render thanks for the continued admirable work of

its Committee on the Protection of North American Birds, by whose labors in securing the enactment of suitable bird protective laws and, what is of far more importance, seeing that they were enforced, the sea-birds of our Atlantic coast have enjoyed a peace during the past nesting season such as they have not known for many years.

Indeed, the Union is deserving of far greater support from the public than it has thus far received, and now that the probable amendment of its constitution will open its ranks to bird-lovers of all classes, it is greatly to be hoped that its membership may be largely increased.

THE Eighteenth Congress of the Union soon to be held (Nov. 12-14) at the American Museum of Natural History, New York city, will doubtless be no less interesting than its seventeen predecessors. A number of fully illustrated papers is assured, including the report of the Committee on the Protection of North American Birds.

MR. HOFFMANN's article on the Least Flycatcher, in this number of BIRD-LORE, contains some interesting comments on the method of bird-study which advocates the removal of the branch with the nest and young to a convenient position near a tent, from the concealment of which the student may readily observe, and, if he be a photographer, graphically record the life of the nest.

To the bird-photographer who has conscientiously photographed his nests *in situ*, often risking life and limb in his effort to picture the nest just where the bird placed it, this summary manner of settling the difficulties so frequently imposed by site are, at first thought, not a little shocking, while the possible dangers to the young which may follow deprivation, for a time, of food, and exposure to sun, storm and earthly enemies also suggest themselves.

Under the direction of such a skilled, careful and humane student as Professor Herrick, the originator of this method, has proven himself to be, these dangers are minimized, but this fact should not lead us to overlook their importance.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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The New Bird Laws

The fact that the Department of Agriculture announces the publication of a digest of the game laws of the United States calls attention to the radical changes made in these laws during the past three years.

We believe that the long day of promiscuous slaughter for any and all purposes is drawing to a close. Whether there is yet time to reestablish the larger game birds in their haunts remains to be proved, but already we hear in many directions of the increase of song-birds, and the pleasant interview of Garret Newkirk with a Missouri farmer that we publish this month is significant.

During the past year an almost similar code has been adopted by California, Connecticut, Indiana, Michigan, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, Florida and Arizona Territory.

All the state legislatures have given more or less attention to game protection, the length of the open season has been in many cases curtailed and the majority have some form of non-export law, while in many states non-residents are not allowed to hunt without taking out a license, for which they must pay.

Of the eastern coast states Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey and Florida are practically under the uniform A. O. U. law variously modified or expanded, the Carolinas, Virginia and Georgia being, unfortunately, gaps in the chain.

Connecticut has seemingly gone more thoroughly into the matter than any other state, and is the only one, so far, we believe, to check pot-hunting, not only by forbidding the export of game, but also by forbidding its sale for two years. The law reads, "Shipments of all game out of

the state are prohibited. The sale of these birds is prohibited at all times."

That these laws are the outcome of a popular reaction there is no doubt any more than that the reaction was started by the various protective associations, both Federal and State, chief among which stand the protective committee of the A. O. U., the League of American Sportsmen and the State Audubon Societies. To gain an adequate idea of the number and scope of the various state and local societies formed for bird and game protection, we wish every one would read the list, p. 664-671, in the "Year Book" of the U. S. Department of Agriculture for 1900.

Everywhere in these laws is the strength of coöperation visible, a coöperation that should be also applied to the work of the Audubon Societies more especially in relation to their published material than in their individual methods, which must necessarily be local and specialized.—M. O. W.

SECOND ANNUAL AUDUBON CONFERENCE

The Second Annual Conference of the Audubon Societies will convene at the American Museum of Natural History, New York City, November 14, 1901, under the auspices of the Audubon Society of New York State, which extends to the members of all Audubon Societies a cordial invitation to attend the public meeting of the Societies on the afternoon of the day above named.

REPORT OF CONNECTICUT SOCIETY

(Presented at the Fourth Annual Meeting, held at Stamford, May 25, 1901)

During the past year the Executive Committee has held nine meetings to transact the business of the Society.

Part of our work has been the purchase of more books for our traveling libraries, to which we have added four sets of eleven books each. We are much encouraged by the reports of the educational work these libraries are doing in the schools and villages where they are circulated.

We have also purchased from the Massachusetts Audubon Society sets of colored bird charts, which show the common birds

of New England. These charts we send to our local secretaries for their use in schools or bird classes, or to the schools themselves. We have felt much encouraged by the special interest which our State Board of Education has shown in our work through its secretary, Mr. C. D. Hine. It now has charge of our lecture outfits, our traveling libraries and most of our charts, and our desire is to purchase more of these materials which they utilize so well, as we think the Board of Education can extend this branch of work better than we can.

Our membership this year has been increased by 4 sustaining members, 45 regular members, 46 teachers, 828 junior members and 642 associate members, making a total of 1,565 new members. I have had most interesting reports from twenty-three of our local secretaries, showing what excellent work they are doing in the towns of Norwalk, Stamford, South Woodstock, Middletown, Norwich, North Woodbury, Watertown, Granby, Scotland, New Canaan, Enfield, Bristol, Stratford, Bridgeport, Wethersfield, New Milford, Redding, Haddam, Madison, Willimantic, Hartford, Westport and Woodbridge.

The local secretaries form bird classes, or speak to the children in the schools and interest them in bird protection, and, as one wrote to me, "call the children's attention to the birds," as often people live all their lives among birds and hardly see them or hear them, because no one has "called their attention" to them, and the children continue thoughtlessly to stone birds and rob their nests, because no one has spoken a few simple words that will touch their hearts.

Another one writes: The children have had their eyes opened at last, and they are alive to the fact that it pays to protect the birds. In another school the children made a chart of their own from sets of colored birds sent out by some insurance company as an advertisement, and being their own work, this chart is particularly enjoyable to them.

One town, Madison, had six sets of our bird charts at one time. In some towns a bird calendar is kept, giving the date of seeing the bird, its name, name of observer and place.

From Stamford we hear that many birds have been kept around all winter by teaching the children and others to feed the birds, placing pieces of suet and seed boxes on the trees.

In Hartford our local secretary has, by her bird talks in the public schools, fascinated the children and gained us 395 new junior members. On Bird Day she spoke in seven schools.

In Westport the local secretary held bird talks around the cages of the village store, where a Barrel Owl, two Screech Owls and a Chicken Hawk, a Coon and two flying squirrels were on exhibition and well cared for.

The Bird Day program which the Executive Committee arranged this year was printed and sent out by the Board of Education. The Society has sent \$20 to the Thayer fund for the keeping of wardens on the shore to protect our Gulls and Terns, a much-needed work.

We feel sure that the Audubon Societies, having made themselves a power, are now accomplishing the desired results. But our work is not done, only begun. It must be continued, or our past work will be lost in a few years. We must keep our sentinels on the watch, or the milliners will think we are sleeping and plumage come into vogue again.

This year we ask for an increased interest among the school children. Quoting from another one of our workers: "The good resulting from the work of the Society among children will not end merely in the protection of our feathered friends, nor in the pleasure their presence gives to admirers of fleeting grace and beauty and to lovers of bird song, nor even with the practical side, the benefit to the farmer in saving his crops from the devastation of insects. The effect upon the children themselves will be salutary. Who will question the truth of the statement that the perceptions will be quickened by studying and enjoying this form of outdoor life? The rousing of the finer sensibilities of the children by teaching them to guard the welfare of those innocent, and, in a way, defenseless creatures, formed by the same wisdom and love that

endowed us, His highest creation, with life, can but have a refining tendency upon the characters of those we are striving to train to noble manhood and womanhood."

HELEN W. GLOVER, *Secretary*.

Library Report.—A special feature of the Connecticut Audubon Society during this last year, and one to which we attach much importance, has been the distribution of its libraries through the Connecticut Public Library Committee.

Beginning this work a little more than a year ago, with about one hundred books as a nucleus, their constant circulation, and the appreciation with which they have been received, are evidences of their popularity.

When it is known that the libraries are sent out to schools where the children and often the teachers have no other opportunity of obtaining books, it will be readily understood how gladly they are welcomed.

The children not only acquire a love for reading but they learn the names of the "green and growing" things in their woods and gardens, to know the interesting habits of animals, and to care for and protect our birds.

One teacher writes of going to the woods with the children and sends a list of uncommon wild flowers they have found with the aid of Mrs. Dana's "How to Know the Wild Flowers." Another tells of the interest with which her scholars have listened to Seton-Thompson's "Wild Animals I Have Known," and to Mrs. Wright's "Four-footed Americans," as she has read and re-read them to her classes. One writes of Library No. 7, The Olive Thorne Miller Library:

"After reading these books I noticed that the children grew very fond of watching the birds and their nests. Every noon they would take their dinners and go off into the woods near by to see the birds. When they returned they were eager to tell the many interesting things they had noticed. They found a number of new nests and visited them every day, watching anxiously for the time when the young birds should be hatched."

We learn by the receipts that the libraries are not so much in use during the fall and winter as in the spring, when outdoor observation can be carried on in connection with the reading, which proves that a practical use is made of the books.

Pictures always appeal to children, and to satisfy a demand for "more pictures," four new libraries of eleven books each, profusely illustrated, have been added this spring.

We feel that there can be no more satisfactory way of reaching the children than through the medium of these good books, for to them not only the children, but the older ones in the community, will owe an influence in their lives which can hardly be overestimated.

GRACE R. MOODY, *Librarian*.

FLORIDA SOCIETY

It may be of interest to some of your readers to know that Florida, the land of sunshine, flowers and balmy breezes, has at last awakened to the fact that these combined are not *all* that make their state so attractive and so different. They find (even the most unconcerned) that their rivers, lakes and woods are strangely silent, and that some of the old-time charm and beauty has gone. The tourist misses the picturesque Heron, the White Crane with his wise look of intentness, as with one leg poised he waits by some quiet sheet of water for his daily meal. The woods are no longer alive with birds darting hither and thither and filling the air with their cheerful songs, the *cheer-up, cheer-up* that delighted our fancy. The birds whom we were sure some years ago said *Dezvey, Dezvey, Dezvey*, and even the harsh note of the pretty Blue Jay are in some parts of the state things of the past. A visitor from Porto Rico told me there were *no* birds there and added, "to this you will soon come unless you protect your few remaining birds." So some to whom these feathered songsters are real friends, and who grieved to see them so wantonly destroyed, met together and the Florida Audubon sprang into existence. Hardly had its work begun when it suffered a great loss in the death of its

founder, Mrs. L. F. Dommerich. But those who are still members will try and carry on the work so wisely planned by her. At the first annual meeting, March 8, great interest was shown. Bishop Whipple* is still its honored president, and many persons of influence are enlisted in our ranks, and the work is again going on. Letters from all over the state are daily received by the secretary and new members are being added. In West Palm Beach and Daytona, very active interest is shown and strong measures taken to protect bird life. Literature and leaflets are being distributed throughout the state, and we trust in a few years our eyes and ears will be gladdened as of old. Sunshine, flowers and the happy song of our thousands of native birds, and Florida is Paradise indeed.

MRS. I. VANDERPOOL, *Secretary*.

For Our Encouragement

"Birds are ten times as numerous as they were five years ago," said a farmer to me, as we were driving along a country road in North Missouri, in July, 1901.

"How do you account for it?" I asked.

"Well," he replied, "there are several reasons. Principally, because they are left alone. The boys have stopped killing them. There is no more demand for them for women's hats. The farmers learned, too, that their orchards and grain crops were suffering from insects, and they were informed by writers in the newspapers and magazines that the remedy was in saving the birds. So their children were told not to disturb them nor their nests.

"I have seen a number of articles written by women, in such papers as the *New York Tribune* and *St. Louis Globe-Democrat*, pleading for the birds, and remonstrating against the wicked custom of wearing them on hats. Such articles are quoted and talked about in the country, and have a great influence. Another thing;—we farmers have made a fight against the English Sparrow. We will not let him stay about our barns or houses. The children are

*While this report is on the press we learn with deep regret of Bishop Whipple's death. — E D

instructed to exterminate him and his nests wherever found. My little boy, 8 years old, discovered that the English Sparrows were trying to drive the Martins out of the boxes we had placed for them. They had possession of one box and were closing up the hole so that the Martins could not enter, but leaving it just wide enough for themselves. He climbed up and tore away their obstructions several times, till they got tired and left. We have not had any since, and the Martins stay with us."

On this ride of eight miles, all the way between farms and orchards with trees and bushes along the roadside, I saw Kingbirds, Field Sparrows, Vesper Sparrows, Yellow Warblers, Goldfinches, Nuthatches, Robins, Wrens, Doves, Quail with their young, Jays, Brown Thrashers, Flickers, Red-headed Woodpeckers, hundreds upon hundreds of Meadowlarks, and others I could not name.

The remarks of my farmer friend, corroborated by my own observations, seemed to me to be very encouraging to all of us who have been trying to speak a word in season as opportunity presented, on behalf of "our feathered friends."—GARRETT NEWKIRK, *Los Angeles, Cal.*

Visible Results

Twenty years ago no birds were more conspicuous along the coast of Maine than the Common and Wilson's Terns. They were to be seen wheeling, splashing, floating about every cove and headland, and their sharp ki-yi-ing was heard in every direction. But during the eighties they diminished steadily and during the nineties they became scarce. Many a time of late years I have sailed the whole distance up the Penobscot to the head of tide-water without seeing a Tern, and during two full years that I was resident in Eastport, Maine, I never either saw or heard one. This is the more remarkable because, for some months, one summer, I was living within a hundred yards of a natural fishing station for them, and even had I failed to see the birds I must have heard them had any come near.

This year, however, I have been agree-

ably surprised to find the Terns once more on the coast. In each of four trips up and down the river I have seen them in considerable numbers. In one flock I counted over forty birds, and it seemed good to hear their sharp, wild cry again.

Judging from their former scarcity and this sudden reappearance, it would seem that the efforts to protect their breeding grounds must have met with some success, and that continued protection would restore the Terns in their old numbers.

I have seen no Bonaparte's Gulls this season, nor any Herons, nor Loons. Herring Gulls have been present in about their usual numbers and Fish Hawks in small numbers. The latter is a bird well worth protecting, if merely for the interest it adds to a trip along the coast. A large bird is interesting merely because of its size; if, like the Osprey, it is not inclined to be shy, is not too particular about its nesting places, and does no harm, it should be encouraged whenever possible. We have but four large land birds that can be called characteristic of the Maine coast—the Bald Eagle, the Raven, the Heron and the Fish Hawk. All of the first three are wary birds; the Heron is so particular about its nesting sites as to be rather necessarily a local bird, and the Eagle and the Raven are so destructive to the island sheep as to be legitimately hunted. But the Osprey, or Fish Hawk, is very properly entitled to all the protection that may be afforded by individuals or societies, and deserves a good word.—FANNIE HARDY ECKSTORM, *Brewer, Me.*

Proposed New English Law

The English Humanitarian League has prepared a bill, which will soon be introduced in Parliament, making it a finable offense for any person to sell or wear any article of dress to which there is attached, securely or otherwise, the plumage, skin, body or any part of the birds named in the bill; the list provided particularly includes the Aigrette, Bird of Paradise, Tern, Kitiwake, Kingfisher, Hummingbird, and Impeyan Pheasant.—*Fur Trade Review* for August, 1901.



A. SILLING. PTARMIGAN. (See page 209)

In view of the size of the bird, and of the sharpness of the picture, this is a remarkable photograph, illustrative of protective coloration.

Bird = Lore

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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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No. 6

Recognition Marks of Birds

BY ERNEST SETON-THOMPSON

Illustrated by the Author

IN general the markings of animals are believed to be either *protective* or *directive*; that is, designed either to *bide* the animal, or else to *distinguish* it and make it conspicuous or ornamental.

In the bird world we have many illustrations of both kinds of coloration in the same individual, for many species are *protectively* colored while *sitting* and *directively* while *flying*. Or, to put it in another way, the colors of the *upper parts* show chiefly when the bird is perching, and these are *protective*; the colors of the *lower parts* and expanded wings are *directive*, and are seen chiefly in flying. All birds with ample wings and habits of displaying them, bear on them distinctive markings; for example: Hawks, Owls, Plovers, Gulls, etc. All bird students will recall the pretty way in which most of the Plovers let the world know who they are. As soon as they alight, they stand for a moment with both wings raised straight up to display the beautiful pattern on the wing linings; a pattern that is quite different in each kind and that is like the national flag of the species, for it lets friend and foe alike know what species is displaying it.

On the other hand, birds like the Hummingbird, whose wings move too rapidly for observation, are without color pattern on the under side. These markings, no matter which category they belong to, are put on the bird first of all to be of service to its own kind. That is certain, as certain as the main truth of evolution; for, as Darwin long ago stated, if it can be shown that any species has acquired anything that is of use only to some other species, then the theory of evolution by natural selection must fall to the ground.

But this does not say that an acquired characteristic may not also be of use to another species. Thus the directive and recognition marks of the Hawks and Owls as illustrated on my plate are, of course, first to

enable the birds of each species to recognize their friends, just as soldiers are uniformed so that each may know his own party. But the uniform also enables the enemy to distinguish him, so these recognition marks enable us to distinguish the birds at an otherwise impossible distance.

The directive marks of the common northern birds of prey are those selected for illustration. The size, shape and general color of the birds, as well as the spots, all enter into the plan. Those shown are adults; the young in many cases are different, but have nevertheless a recognized natural uniform which usually agrees in important features with that of its parents. Thus the white rump-spot is a constant and distinctive feature of the Harrier in any plumage. So is the white collar of the Horned Owls. The mustaches of Peregrine and Broadwing, and the wrist-spot, i. e., the dark splotch on the bend of the wing in the Buteo's and in the tufted Owls, also the breast-band on Swainson's Hawk and the body-band on the Rough-leg (see plate).

Late one evening as I walked through a marsh a large hawk-like bird rose before me. In the dim light I barely made out that it was a bird of prey, but as it went off I saw the *white spot* on the rump and that settled it beyond question as a Marsh Hawk or Harrier.

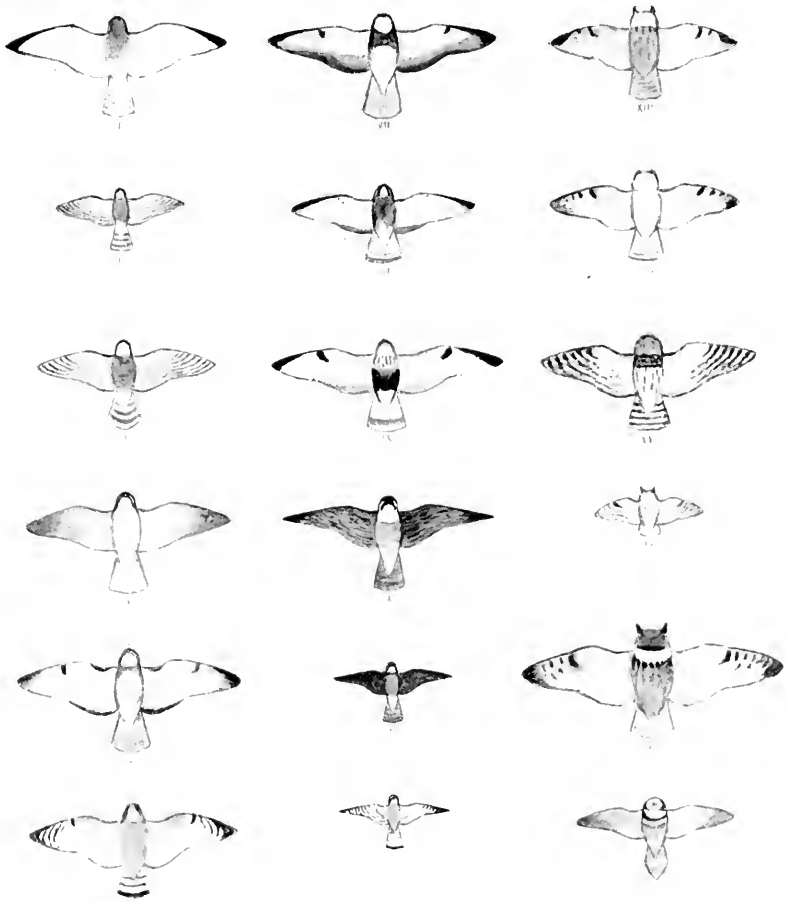
On another occasion I saw a bird in a tree. Its size and upright pose said 'Hawk.' On coming nearer its mustache marks said either Peregrine or Broadwing. But when it flew, the pointed wing and swift flight made certain that it was a Peregrine. Again a young Redtail sailed over my head in an opening of the trees. I took it for a young Goshawk, but before I tried to 'collect' him I saw the wrist-spot that labeled him 'Buteo,' and so let him go.

The usefulness of the color-spots is increased by another well-known law, namely, that the peculiar feature of a species is its most variable feature. Thus the greatly developed bill of the long-billed Curlew, the beak-horn of the Pelican, the neck of the Swan, the collar of the Loon, are much more variable than features that they have in common with others of their group.

So, also, these markings are never twice alike. They keep the same general style but differ in detail with each individual, so that the birds can recognize each other personally, just as we do our friends by peculiarity of feature.

Of course color-spots are not the only things to be considered; pose, flight, voice, locality, probabilities and tricks of attitude all come in to help.

A long reddish bird darted past me to alight in a tree that almost concealed him. I thought it a Thrasher, but the deliberate pumping of his tail (another recognition mark), taken with his size and color, told me at once that it was a Sparrowhawk.



By permission, from 'The Auk'

DIRECTIVE MARKS OF HAWKS AND OWLS

- | | | |
|--------------------------|--------------------------|-----------------------|
| I. Marsh Hawk | VII. Swainson's Hawk. | XIII. Long-eared Owl. |
| II. Sharp-shinned Hawk. | VIII. Broad-winged Hawk. | XIV. Short-eared Owl. |
| III. Cooper's Hawk. | IX. Rough-legged Hawk. | XV. Barred Owl. |
| IV. Goshawk. | X. Duck Hawk. | XVI. Screech Owl. |
| V. Red-tailed Hawk. | XI. Pigeon Hawk. | XVII. Horned Owl. |
| VI. Red-shouldered Hawk. | XII. Sparrow Hawk. | XVIII. Hawk Owl. |

A long-tailed Hawk, too far away to make certain of, I supposed was a Cooper's, but he alighted on the ground and then I knew it must be a Marsh Hawk.

Each species has its own habits and sounds as well as colors, that help in its recognition, but the most useful all-around label-marks are those of color-pattern or uniform.

A Bird of the Season

BY C. WILLIAM BEEBE, Assistant Curator of Birds, New York Zoölogical Society

Illustrated by the author

ONE of the finest and rarest bird exhibits in the New York Zoölogical Park is in the dense thicket of trees and tangled undergrowth in which the flock of Wild Turkeys find a perfectly congenial home. The three hens and the pompous and iris-plumaged old gobbler are as much at home as if in the depths of their native forests in Virginia. They are more easily observed in winter than in summer, on account of the thick growth of sumach, sassafras and grape-vines which has been allowed to



MALE WILD TURKEY AT THE NEW YORK ZOÖLOGICAL PARK

grow up in their enclosure, but any time one or more of the Turkeys may be seen scratching among the dead leaves or roosting on some high limb.

All of the hens have nested and laid eggs, but two factors have made the raising of the young birds a matter of great difficulty, up to the present. One of these is a liver disease which has killed a number, and for which no treatment has thus far been successful. Wet weather is the second enemy from which the newly-hatched chicks have suffered, the slightest wetting during the first two or three weeks after hatching proving fatal.

Last year a raccoon climbed into the inclosure and killed seventeen young chicks in a single night, but was captured later, and as a penalty suffers imprisonment for life. This year, perhaps, as a result of the knowledge obtained from costly experience, better success has attended the efforts at

rearing these delicate chicks and fewer have been lost through disease. Two of the Turkey hens are not good mothers, neglecting the chicks, so that it has been found necessary to take the eggs from these Turkeys and hatch them under hens, and when the young Turkeys have grown as large as their foster-mother, it is amusing to see these large, clumsy fowls rush at her when she has found a titbit, often buffeting her roughly between them. If at this age they should ever attempt to get under her wings she would certainly be lifted off her feet.

The marvelous way which young Quail and Partridges have of disappearing and making themselves indistinguishable among the dead leaves has often been related, but I hardly thought it possible that these larger cousins of the Grouse could be successful in this ruse. On June 14, of this year, a



MALE WILD TURKEY AT THE NEW YORK ZOOLOGICAL PARK

Turkey mother brought off eight chicks from her nest of leaves near the center of the range, and they were allowed to remain in the enclosure a day before being removed to the pheasant-breeding coops away from rats and other vermin. In catching the young birds no precautions were taken, except to drive the hen Turkey and chicks to an opening in the undergrowth and then separate the mother from her brood. Two of the young birds were picked up, but ten minutes' search failed to discover a trace of the remaining six, although it was certain that they were within a radius of five feet. It was necessary to allow the two captured chicks to go, and then drive the mother to the spot, whereupon, at her low cluck, the entire six appeared as if by magic. She was then driven against a perpendicular cliff of rock and with the help of a third man and about five minutes' search, all eight birds were secured. This year one of the Turkeys nested a second

time and began incubating on July 7, another proof of how perfectly the environment of the birds is suited to their habits.

When in the mornings, the old monarch of the flock struts back and forth on the fallen tree near the entrance of the enclosure, pompously swelling out his breast, and with trailing wings utters his mellow, "gobble-gobble-gobble," he makes a beautiful picture, the sun reflecting iridescent hues from each copper- and bronze-tinted feather. No ordinary barnyard Thanksgiving reminder, this, but a true native of American forests, who with wolves and panthers has been driven or exterminated from all except the more inaccessible corners of the country. May his descendants increase and live long to enjoy the security and admiration which their quarters in the New York Zoölogical Park assures them.

Mockingbird Notes

BY MRS. LUCY GOULD BALDWIN

Illustrated by A. RADCLYFFE DUGMORE

A PAIR of Mockingbirds passed last winter in my flower garden, at Baldwin, Louisiana. They were fed daily on the porch and became so tame that they would pick up crumbs when we were only a few feet from them.

Earlier than usual, as the weather was warm and pleasant, they began preparations for housekeeping. A low trellis with a tangle of vines was chosen as the site of their loosely constructed nest of sticks lined with hair, and on March 25 it contained four eggs. April 5 three of the eggs had hatched, the remaining one proving unfertile, and ten days later the three young birds left the nest.

About May 1 we missed the female, and the male alone fed the fledglings. However, he frequently pecked them and soon drove them viciously out of the garden.

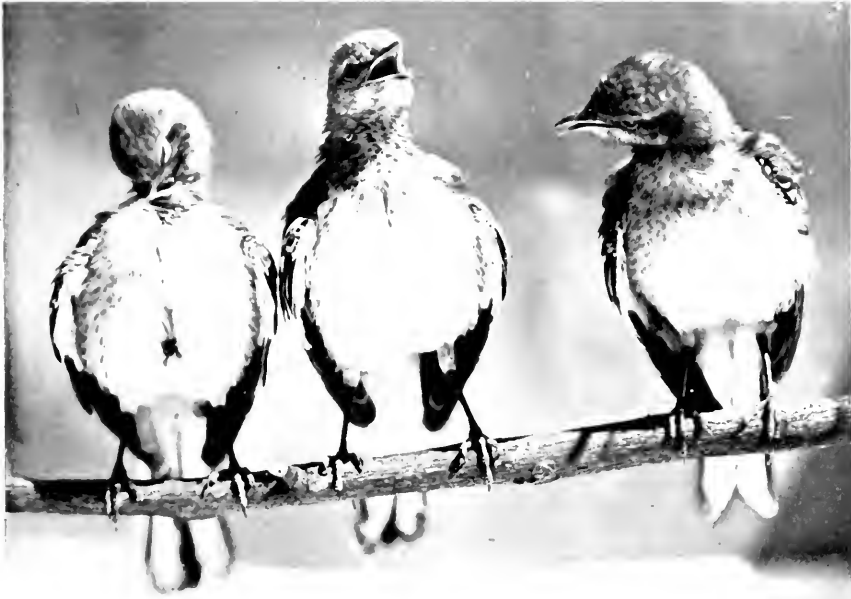
May 5 the same nest contained five eggs, which were evidently the property of the birds that had already raised one brood in it, and on May 17 four of the eggs hatched, the period of incubation, therefore, being about twelve days. On May 29, or, when 12 days old, two of the young left the nest, having been in it two days longer than the first brood. One of the four fell a victim to some enemy in the early morning.

On June 7 and 8 the female was seen occasionally, but was indifferent to her young, who were fed by the male early and late. On June 10 and 11 these observations were repeated. By the 16th they required less active care and on the 19th came to pick up crumbs from the 'side-board' we had placed on the piazza for the old birds. June 20 the young disappeared and the old birds were seen carrying sticks and Spanish 'moss' into a 'sweet

olive' shrub about one and a half feet from the ground, where they constructed a new nest which on the 23d contained one egg, on the 24th two, and on the 26th four, this completing the set.

The male, who for weeks had uttered only the harsh, unmusical call characteristic of the species, now sang beautifully in the early morning.

The fate of the last nest we unfortunately do not know, as on June 28 we left for the season, but the observations already made show that at least three families were started by this pair of Mockingbirds in a season.



Copyright by A. Radclyffe Dugmore

YOUNG MOCKINGBIRDS

Photographed from life

A Christmas Bird Census

The interest aroused by BIRD-LORE'S Christmas Bird Census last year (see BIRD-LORE for December, 1900, and February, 1901) suggests a repetition of this modern development of the 'Side Hunt,' on December 25, 1901, when we hope those of our readers who have the opportunity will take to the field and send us, the same day, the results of their observations. Such reports should be headed by a brief statement of the character of the weather, the force and direction of the wind, hour of starting, with the temperature, and of returning. Then should follow, in the order of the A. O. U. 'Check-List,' a list of the species of birds seen, with exactly or approximately the *number of individuals* of each species recorded.

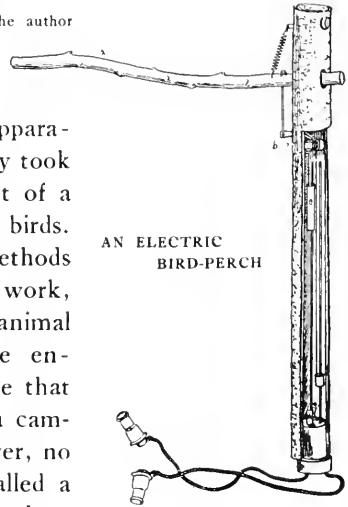
A New Device for Securing Birds' Pictures

BY FRANK M. CHAPMAN

With photographs from nature by the author

THE success of Mr. George A. Shiras, of Pittsburg, in securing photographs of deer by means of an automatic apparatus whereby the animal photographed virtually took its own picture has suggested the employment of a not dissimilar plan in procuring photographs of birds.

Though not familiar with Mr. Shiras' methods and with no experience in his special field of work, it nevertheless seems evident that with an animal as strong as a deer no difficulty would be encountered in so arranging a string or trip-line that the deer in striking it would readily spring a camera shutter. In the case of small birds, however, no success was had in making what might be called a 'camera trap' until electricity was employed; then with the assistance of Messrs. Rowley and Schneider, at the American Museum of National History, a design was evolved, which, in practice, seems to possess some merit.



BLUEBIRD ON ELECTRIC PERCH

It was soon found that if the circuit was completed and the picture made the moment the bird alighted on what may be called the 'trigger' of the trap, the picture would represent a bird in motion with wings flap-

ping or folding almost in the face of the camera, and it was therefore found necessary to devise some means by which the exposure could be deferred until the bird was in repose. The result is shown in the accompanying figures. When the bird alights upon the perch *a*, the check resting on the wheel *b* is removed and as the wheel revolves the heavier of two weights *c*, sliding on rods, descends and enters *d* and *e*, the negative and positive poles of a dry battery. The circuit is thus closed and by means of a small electro-magnet on the camera the shutter is released and exposure made.

How the bird is to be induced to alight on the perch is a problem which each user of this modern development of a bird trap must solve for himself.

The accompanying pictures of Bluebirds were obtained by placing the perch near their nest; the camera was then focused on it and the whole



BLUEBIRD ON ELECTRIC PERCH

affair left until, on returning, the shutter was found to have been sprung, when the exposed plate—representing, potentially, the trapped bird—was removed, a new one introduced and the 'trap' set for another capture.

No other trial has as yet been made, but in addition to its use near nests, the apparatus could doubtless be employed with success in large fields or meadows frequented by Hawks, or, carrying the comparison with a trap still further, it might be baited with meat, seeds, or fruit which would induce birds to alight on the perch and unconsciously leave their image.

Bird-Life in the Klondike

BY TAPPAN ADNEY

Author of 'The Klondike Stampede,' etc.

IT is less from the point of view of the naturalist than of the miner that I know the birds of Klondike—we were all 'miners,' in a sense, who went to Klondike in the midst of that unparalleled excitement. So strenuous were the exertions required to keep body and soul together that there was small time to think of anything which did not supply one with food or raiment. We were somewhat like the savage who names only conspicuous and useful birds, and throws aside the rest as unworthy of notice. In summer many birds might escape observation; in winter, in the dead silence of arctic winter, it would seem, surely, that no stir of any kind would fail to be noticed. Yet a trained observer, the author of one of the best books relating to the human affairs of that country, who used to pass my cabin on Bonanza creek almost daily, has written: 'The Raven and the little Starling are the only birds, except the game birds, that one ever sees or hears for eight long, dreary months.' 'Game birds' doubtless means Ptarmigan; 'Starling,' I cannot guess. Surely a short list.

In the Raven, however, he has pointed out what I should call 'the bird of the Klondike.' In winter and in summer this great *Corvus* is everywhere seen and its hollow, metallic '*klonk*' is the most characteristic sound. Conspicuous its black flapping against the white snows, its uncanny croak falling upon the ear; to the traveler along the dreary wastes of the frozen Yukon, it seems so fitting a part of the somber landscape that the impression is not readily effaced. Partaking of the cautious disposition of its relative of the cornfield, nevertheless in winter it visits the cabin yards of the miners in search of the few waste morsels of food and it follows the hunters and the roving bands of wolves, feeding on the offal of moose and reindeer which they kill. But it ever remains a mystery how life is sustained during those long, dreary months. In summer they build their nests and rear their young upon the tall inaccessible cliffs which line the Upper Yukon.

Had I known my friend was about to write, virtually, 'there are *no* birds in Klondike,' I could have taken him, almost any day in winter, to the door of my cabin and this is what he might have seen and heard. First let me describe the spot:

Bonanza creek, coursing through a V-shaped cleft in the almost barren hills, reaches the broad alluvial valley of the Klondike river. This flat is covered with tall spruce, many being a foot in diameter, and growing as thickly together as anywhere in the world. Among the evergreens are thickets of small white birches, nowhere whiter or more

beautiful. The creek, reaching this wooded flat, winds from side to side, its bed only a few feet below the level and fringed with alders, which are here trees rather than bushes. The trail cut through the woods for the dog teams from Dawson to the mines, strikes the creek half a mile from the river and thence follows the frozen creek-bed. Where trail and creek meet stands our cabin, surrounded by evergreens and birches. The branches of the evergreens sag beneath the weight of snow which there is not a breath of air to dislodge. Red squirrels have left their trails from tree to tree on the snow, exactly as in a forest in Canada. As we open the door and step out into the sharp, keen air, a soft '*took, took*' is heard and a Quaker-gray body which has been hopping about the door-yard flies to a limb near by, and is answered by other soft sounds. Presently another gray breast is seen approaching by short flights through the spruces. The miner calls them 'camp robbers.' We know them as Moosebirds, or Canada Jays, and recognize here in the wilds of Klondike the same confiding, impudent fellow as in the woods of Maine. They are fairly plentiful, and in their silent travels they frequently visit the cabins of the miners. There was one which used to peck regularly at the single pane of glass which served for the window of a miner's cabin on Eldorado. Regularly three times a day he came, and I was told that he never varied from his time by more than ten minutes. It was starvation time; pork, flour, dried apples and a few beans were about all the two men had who lived in that cabin, but the little fellow in gray never went away without something.

Ere the 'robbers' have departed, there is a snapping sound overhead, and bits of cone come tumbling down upon the cabin roof. It is a flock of White-winged Crossbills, gathering their daily provender. A little way off is heard the familiar '*dee, dee, dee*' of the common Chickadee. A Raven flying up creek gives voice at intervals to his '*klonk*.'

These were the sounds that I had always about my camp. As the days grew lighter flocks of Redpolls, with pink breasts and crimson caps, came about, feeding in the trees. During the winter I wandered much over the country, one time with a roving band of Indian hunters on the far reaches of Klondike, and never at any time by day was I out of sight or sound of birds; while as the spring sun rose higher above the southern horizon the woods at times seemed alive with birds. Nowhere have I seen Crossbills and Redpolls so plentiful and noisy. One Blue Grouse, the only one I saw or heard of, as well as a few Canada Grouse, I added to my scant larder. One day about the last of April, I heard a drumming near the camp, and a few days later, when the snow was thawing in patches, I saw, upon stepping outside, standing upon a log in a bare spot under a tree a drummer (Ruffed Grouse). Several days later I found another, also a drummer, on the same spot, showing that I had built my house by a favorite drumming-log. Of

the Grouse family, however, the only species really plentiful is the Ptarmigan. Upon the bald, wind-swept tops of the highest hills alone they are found (never, as I am aware, in the sheltered valleys) in flocks of thirty or more, feeding upon a small red berry with which the ground is covered. In winter their tracks, like those of chickens in a barn-yard, may be seen running hither and thither over the snow. Their pure white color at this season makes them inconspicuous objects, a fact which they seem to realize, as they often permit an approach to within a few yards.

Seasons change rapidly in the far north, and at the approach of March (the pleasantest month of the year) the earth springs suddenly into life. The snow fades from the southern hillsides at the magic touch of the sun. The snow falls from the trees. Day by day the stream of water on the frozen watercourses grows in volume, and the ground is bare in many places in the woods. By the 10th of April, Crossbills are mated, and their sweet, melodious love songs are heard from the upper twigs of the young spruces. Every tree along the wooded bottoms seems to pour forth some sound of gladness. The Redpolls, still in large flocks, sing as they work among the birch buds a song that resembles that of the American Goldfinch. Snow-buntings from southward are seen scurrying over the snow in the opens. By the first of May the creeks are torrents, the rivers ready to burst their bonds of ice, and Ducks and Geese are seen on their bosom. The first week in May, the migration is on. In the woods now about my camp what a medley of sound! No birdshop, no spot in Central Park at the height of migration shows more bird-life and sound than this bit of woods of a warm spring morning. Overhead the ubiquitous Raven. The familiar '*tsill-up*' of the Red-shafted Flicker resounds from afar. The *cheery, cheery, cheer-up* of the Robin, the murmuring tremulous note of the rare Bohemian Waxwing, resembling so much our well-known Cedarbird in both appearance and notes as to mislead the unwary; the jangling notes of scores of handsome Rusty Grackles walking along the margins of the water. From the undergrowth the chipper of White-crowned Sparrows and Juncos; the lisping *tsip* of Yellow-rumped Warblers; the slender wiry notes of an unknown Thrush—all these mingled with the melody of Crossbills and Linnets in one grand chorus!



On Hearing a Winter Wren Sing in Winter

By LYNN TEW SPRAGUE

When wintry winds through woodlands blow
And naked tree-tops shake and shiver ;
While all the paths were bound in snow,
And thick ice chains the merry river,
 One little feathered denizen,
 A plump and nut-brown winter wren,
 Sings of spring-time even there —
 "Tsip-twis-ch-e-e-e cheerily-cheerily-dare"—
 Who could listen and despair ?

Charmed with the sweetness of his strain,
My heart found cheer in winter's bluster ;
The leafless wood was fair again,
Its ice-gems sparkled with new luster,
 The tiny, trembling, tinkling throat
 Poured forth despair's sure antidote,
 No leafy June hears sweeter note —
 "Tsip-twis-ch-e-e-e cheerily-cheerily-dare"
 The essence of unspoken prayer.



"CAUGHT IN THE ACT"

Yellow-bellied Sapsucker feeding on sap of mountain oak. Photographed from nature by Dr. Thos. S. Roberts at Minneapolis, Minn., June 20, 1901

For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

FIRST PAPER

DURING the past year BIRD-LORE has published a series of articles on "Birds and Seasons" * which, with "Suggestions for the Season's Study" and "Suggestions for the Season's Reading," were designed to tell the student what birds he might expect to find during each month in the year and to call his attention, in due time, to the more characteristic phases of bird-life as they were developed. It is now proposed to supplement these articles with a series of papers on identification.

It may well be questioned whether, in view of the numerous text-books which have been especially prepared to assist beginners in naming birds, anything can be written which will further simplify the problem of identification, but the receipt, almost daily, of descriptions of birds which the observer is unable to find in any manual encourages a further attempt to lighten the labors of the student of 'birds through an opera-glass.'

The Importance of a Comprehensive Grasp of the Subject.—If the student can only be induced to survey the ornithological field, at least superficially, before entering it he will find his way wonderfully simplified. The path to a knowledge of birds is by no means so tortuous as those who tread it in the dark believe. Our birds are not unlimited in number—they are all included in our text-books; no new species, in the United States at least, remain to be discovered, and if instead of attempting to identify a bird by aimlessly turning the pages of a book with a hope that something like your rather vague mental image may be seen in the illustrations, the student will devote a few hours to memorizing the characters on which the families of birds are based, he will find the knowledge gained of service to him every time he essays to name a bird.

The Families of Land-birds.—Omitting, for the present, all reference to water-birds, few of which come within the range of the average bird student's glasses, we have left in North America, east of the Mississippi, the following eight orders and thirty-two families of birds:

Order I. Chicken-like Birds. GALLINÆ

FAMILY 1. GROUSE, PARTRIDGES, etc. *Tetraonidæ*. 9 species.

FAMILY 2. TURKEYS, etc. *Phasianidæ*. 1 species.

* "Bird-life near Boston," by Ralph Hoffmann; "Bird-life near New York City," by Frank M. Chapman; "Bird-life near Philadelphia," by Witmer Stone; "Bird-life near Oberlin, Ohio," by Lynds Jones; "Bird-life near Chicago," by Benjamin T. Gault; "Bird-life in California," by C. A. Keeler and Lyman Belding.

Order II. Pigeons. COLUMBÆ

FAMILY 3. PIGEONS. *Columbidae*. 8 species.

Order III. Hawks and Owls. RAPTORES

- FAMILY 4. AMERICAN VULTURES. *Cathartidae*. 2 species.
 FAMILY 5. FALCONS, HAWKS and EAGLES. *Falconidae*. 26 species.
 FAMILY 6. BARN OWLS. *Strigidae*. 1 species.
 FAMILY 7. HORNED OWLS, HOOT OWLS, etc. *Bubonidae*. 11 species.

Order IV. Macaws, Parrots, Paroquets, etc. PSITTACE

FAMILY 8. PARROTS and PAROQUETS. *Psittacidae*. 1 species.

Order V. Cuckoos, Kingfishers, etc. COCCYGES

- FAMILY 9. CUCKOOS. *Cuculidae*. 3 species.
 FAMILY 10. KINGFISHERS. *Alcedinidae*. 1 species.

Order VI. Woodpeckers. PICI

FAMILY 11. WOODPECKERS. *Picidae*. 11 species.

Order VII. Goatsuckers, Swifts, and Hummingbirds. MACROCHIRES

- FAMILY 12. GOATSUCKERS. *Caprimulgidae*. 3 species.
 FAMILY 13. SWIFTS. *Micropodidae*. 1 species.
 FAMILY 14. HUMMINGBIRDS. *Trochilidae*. 1 species.

Order VIII. Perching Birds. PASSERES

- FAMILY 15. FLYCATCHERS. *Tyrannidae*. 10 species.
 FAMILY 16. LARKS. *Alaudidae*. 1 species.
 FAMILY 17. CROWS and JAYS. *Corvidae*. 6 species.
 FAMILY 18. STARLINGS. *Sturnidae*. 1 species.
 FAMILY 19. BLACKBIRDS, ORIOLES, etc. *Icteridae*. 10 species.
 FAMILY 20. SPARROWS, FINCHES, etc. *Fringillidae*. 44 species.
 FAMILY 21. TANAGERS. *Tanagridae*. 2 species.
 FAMILY 22. SWALLOWS. *Hirundinidae*. 7 species.
 FAMILY 23. WAXWINGS. *Ampelidae*. 2 species.
 FAMILY 24. SHRIKES. *Laniidae*. 2 species.
 FAMILY 25. VIREOS. *Vireonidae*. 8 species.
 FAMILY 26. WARBLERS. *Mniotiltidae*. 39 species.
 FAMILY 27. PIPITS and WAGTAILS. *Motacillidae*. 1 species.
 FAMILY 28. WRENS, THRASHERS, etc. *Troglodytidae*. 9 species.
 FAMILY 29. CREEPERS. *Certhiidae*. 1 species.
 FAMILY 30. TITMICE and NUTHATCHES. *Paridae*. 7 species.
 FAMILY 31. KINGLETS and GNATCATCHERS. *Sylviidae*. 3 species.
 FAMILY 32. THRUSHES, BLUEBIRDS, etc. *Turdidae*. 8 species.

Now, without attempting to make a key to these thirty-two families, let us eliminate those which are known to every one and those which in practice may be recognized at sight.

For example, no difficulty will be experienced in at once referring to its proper family a Partridge, Bob-white, Turkey, Dove or Pigeon, Hawk

or Owl, Parrot, Kingfisher, Woodpecker, Nighthawk or Whippoorwill, Hummingbird or Chimney Swift. Exclusive of the Perching Birds, then, there are left only the Cuckoos. The two Cuckoos found north of Florida are long, slender birds with long tails tipped with white, slightly curved bills, two toes directed forward and two backward, and may be easily distinguished from the birds of other families.



LEAST FLYCATCHER

Life size, to show details of external structure

Nine of the ten orders and fourteen of the thirty-two families of land-birds are thus disposed of, leaving us only with the order, Passeres or Perching Birds, and its eighteen families.

Before outlining, however, the principal characteristics of these families a word should be said on the

Necessity of Careful, Definite Observation.—It may, perhaps, be considered unnecessary to insist on seeing a bird before attempting to name it, but when one receives such descriptions as "a small rather brownish

bird," or even "a little bird that said '*dee, dee,*'" it is evident that, at least, some bird students do not appreciate the need of observation! Comparison of a man's description of a bride's costume, as "some sort of white stuff," with a woman's detailed analysis of its satin, tulle and lace will illustrate very well the difference between the right and wrong way of recording a bird's appearance..

There are a few birds, it is true, that possess some striking characteristic mark by which alone they may be known, but in most instances a careful statement of a bird's size, shape of its bill, and its color is an essential to its certain identification. Descriptions of this kind can be made, as a rule, only by the aid of an opera- or field-glass, and only when the bird is before you. Both as a convenience and as a means of directing your attention to the points on which information is desired, it is advisable to have in the field description blank books in which a page may be devoted to each strange bird, somewhat as follows:

Locality.....	Date.....
Haunt	
Length (tip of bill to end of tail).....	
Size and shape of bill	
Length and shape of tail.....	
Color	Forehead
	Crown
	Cheeks.....
	Nape
	Back.....
	Rump.....
	Upper-tail coverts.....
	Tail
	Wings
	Throat.....
Breast	
Abdomen	
Voice	
Movements, etc.	
Remarks	

It is not, of course, always possible to see a bird with sufficient exactness to enable one to fill out a blank of this nature, but until you can answer the questions this outline calls for *you have not clearly seen the bird*, and must not be surprised, therefore, if both your own efforts and those of some ornithological friend fail to make known its identity. On the other hand, a blank of this kind, properly filled, will usually furnish an

BIRD LORE has prepared for the use of students a 32-page covered "Field Identification Blank," based on the above outline. It contains a chart of a bird, giving the names of its external parts, and, for ready reference, a printed 6 inch rule. This booklet may be obtained from BIRD LORE'S printers, the J. Horace McFarland Co., Box 655, Harrisburg, Pa., for ten cents, postage paid



1, Least Flycatcher; 2, Acadian Flycatcher; 3, Wood Pewee; 4, Olive-sided Flycatcher; 5, Crested Flycatcher; 6, Phoebe; 7, Kingbird.
All one-third natural size. From specimens in the American Museum of Natural History

unfailing means of ascertaining the identity of its subject. But as a preliminary to the attempt to name one of the species of passerine land-birds of eastern North America let us, as suggested above, try to learn something of the eighteen families they represent.

ORDER PASSERES

FAMILY 1. FLYCATCHERS. *Tyrannidae*. 10 species.

Range.—A distinctively American family numbering nearly 400 species, which, during the summer, are distributed from Alaska and Labrador to Patagonia, one species being resident in the Galapagos. Of the ten species found east of the Mississippi only one, the Phœbe, occurs during the winter, when it ranges from the Carolinas southward.

Season North of Virginia.—The Phœbe, which has just been spoken of as the only Flycatcher to winter in the eastern United States, reaches the vicinity of New York city the latter part of March and remains until the latter part of October. It is followed in the spring by the Least Flycatcher, which comes the latter part of April, and is preceded in the fall by the Wood Pewee, which remains until October 1. With the exception of the Phœbe, then, Flycatchers are present in the latitude of New York city only from about April 26 to October 1.

Color.—The prevailing color of Flycatchers is olive-green or gray above, whitish or olivaceous below, the sexes usually being alike. There are numerous marked exceptions to this style of coloration among tropical forms, but our ten species conform to the general rule in being olive-green or gray above, white or olivaceous, or in some instances strongly suffused with yellowish below. These colors are distributed in large masses, there being no streaks or spots, the white terminal band on the Kingbird's tail and its concealed orange-red crest being the most striking markings.

Size.—Flycatchers vary in length from about 3 to 16 inches in the Scissor-tail; our species fall between these extremes, the smallest, the Least Flycatcher, averaging slightly less than $5\frac{1}{2}$ inches in length; the largest, the Crested Flycatcher, averaging 9 inches in length. Though half an inch shorter, the Kingbird is probably heavier than the Crested Flycatcher.

External Structure.—The most noticeable and characteristic external feature of Flycatchers is a broad, flat bill, hooked at the tip, and wider than high at the base, where it is more or less thickly beset with outward projecting bristles. The tail is square or slightly notched, the wings rather pointed, the second to the fourth primaries being the longest; the feathers of the crown are somewhat lengthened, forming, when raised, a small crest; the tarsus is rounded behind as well as in front.

Appearance and Habits.—Flycatchers in life sit erect, often with the crest slightly raised, giving to them a certain look of big-headedness which

is eminently characteristic. Their food of insects is captured on the wing by a sudden dart from a perch, to which they usually return. While waiting for their prey the wings are often drooped, and in some species the tail is frequently wagged.

Song.— By the systematist the Flycatchers are spoken of as "songless Passeres." That is, while agreeing in structure with other perching birds in most respects, they differ from them in possessing a less highly developed syrinx or lower larynx—the voice-making organ. Naturally, the birds with the best instrument can and do produce the sweetest, most intricate music, but it does not follow that those which are not so well provided are silent. Song, therefore, in proportion to the development of the musical apparatus is as much a possession of the Flycatchers as it is of the Thrushes. They sing, but they do not sing so well as their talented distant relatives. Indeed, the songs of Flycatchers, reflecting their imperfect instruments, are primitive in character.



What Bird is This?

Field Description.—Length, 5.90 in. Crown streaked chestnut and black, with an ashy medium line; nape grayish; back streaked with rufous, buff, and black; wings and tail more or less rufous; under parts whitish, ashy on the breast, brownish on the sides; abdomen whitish.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or little-known plumage, the name of which will be withheld until the succeeding number of the magazine.

The species figured in October is Nelson's Sparrow.

For Young Observers

My Bird Restaurant

BY EDMUND W. SINNOTT (Aged 13), Bridgewater, Mass.

ONE of the best ways to study birds in winter is to attract them around your home. I did this very successfully last winter by tying bits of suet to the trees near our house and by scattering crumbs upon the ground. I put out a few pieces of meat one morning, and the next day this was discovered by a Downy Woodpecker, and soon the news spread all over birddom that a great free lunch had come to town.

One of my regular guests is the Chickadee. He is around early, and stays near by all day. He is the merriest bird I ever saw, and is always singing—rain, snow or fair weather. He seems to be content with the few pieces that he can find on the ground, if a larger bird is at the piece in the tree. He also delights in the little boxful of tidbits that I have placed among the branches of the tree. He very seldom comes alone, but generally has several of his companions with him.

Another regular guest is the White-breasted Nuthatch. It is very interesting to watch him eat. He will stand with his head downward, bending his body far back, and delivering two or three hard blows. If he breaks a piece off, he will put it in a crevice of the bark where it can be properly supported as he eats it. He has a very harsh, nasal call—*quank*, *quank*—by which he may be recognized when he arrives.

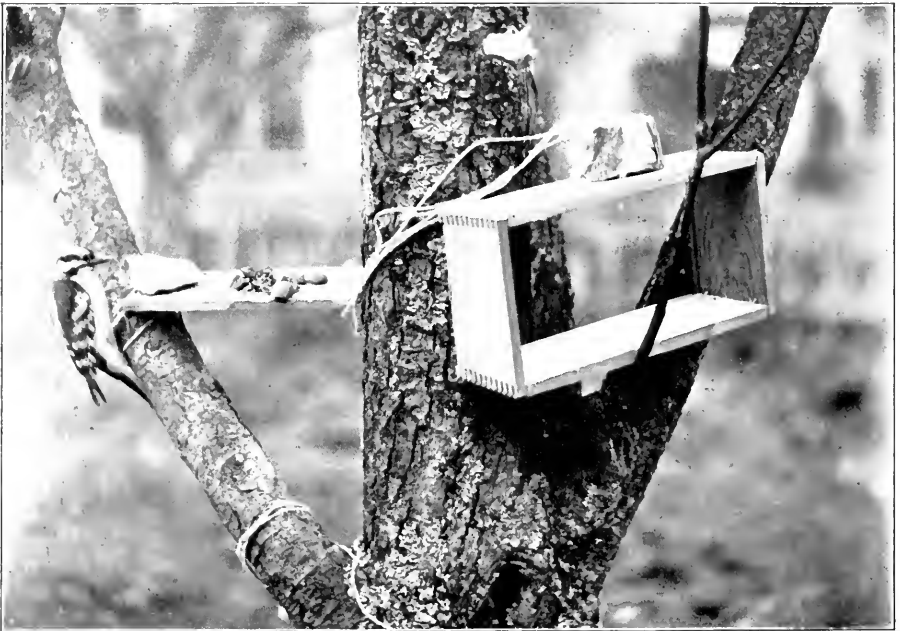
Almost any time when I look from my window, I can see a Downy Woodpecker at some of the meat. There are four of them, two males and two females. I fear that Mr. Woodpecker, in each case, is a hen-pecked husband; for whenever he is at the meat and Mrs. Woodpecker arrives, he always gets out of the way as fast as he can. Both Mr. and Mrs. are very selfish, and will not let any of the other birds come near while they are eating. They can be told apart quite easily, for Mr. Downy has a bright scarlet patch on the back of his head, while in Mrs. it is lacking.

Another guest, who is not quite so regular in his coming, is the Brown Creeper. He is a very dainty little bird, and does not stop and gorge himself as the Woodpeckers do, but takes a delicate mouthful of suet and then goes on, hitching up the trunk in little jerks, investigating every nook and cranny of the bark in his search for insects' eggs and larvae. He is never still, even when eating some choice tidbit he has found, but is always restless.

These four come almost every day, but besides these I sometimes see English and Tree Sparrows after the crumbs upon the ground. With them sometimes come the beautiful little Juncos, with their slaty gray vests and white shirt-fronts.

I have not yet induced a Hairy Woodpecker or a Flicker, who are both cousins of the Downy, to come to my restaurant, and I do not as yet number among my guests the Bluejay or the Crow. All of these are among our common winter birds, but I suspect that the last two would be unwelcome at the lunch counter: they are so large and domineering that they would be likely to crowd out many of the smaller birds.

I shall probably remain in the hotel business another season, and hope to have other guests, like the Goldfinch in his winter coat, the Red-breasted Nuthatch, Purple Finch, and others of the rarer winter birds.



A WOODPECKER PATRON

A Prize Offered

BIRD-LORE proposes to offer a series of prizes to Young Observers of fourteen years or younger, who send the best accounts of the habits of certain common birds. The first bird will be the crow. For the best article of between 700 and 800 words on the crow we will give a copy of Seton-Thompson's 'Lives of the Hunted,' or some other book of equal value. The manuscript should be in our hands not later than January 1, 1902.

Notes from Field and Study

Taming a Nuthatch

In my daily walks through Central Park, New York city, last winter I saw two, and sometimes three White-breasted Nuthatches together, presumably always the same individuals. They first drew my attention by flying to the ground for nuts that might be thrown to them. Later I noticed that somewhere in my walk I always met them, one or both making their presence known by the familiar call best expressed in words by



TAMING A NUTHATCH
Photographed from nature

yank-yank-yank. Finally I got the impression that they must know me, perhaps because of my invariable custom of having food with me to throw to the birds. I found that not only would they fly to the ground for the nut but, what was still more clever, catch it on the wing, thereby, perhaps, turning a complete somersault in the endeavor. After a week if I came near enough for the female to reach the nut from the trunk of the tree where she would cling, she would take it from my hand and fly quickly away. At last she gained confidence enough to alight on my hand and after that whenever I went

to the park that bird, and its mate also, for I think they share the feast, found and greeted me. I am quite sure she enjoyed the performance as much as I did, for she no longer seemed in such a hurry to get away, but stayed for a moment. Then she would fly to some tree to deposit the nut in a crevice of the bark either to eat immediately or to conceal it, as do the squirrels, for future use. I suspect the Downy Woodpeckers knew the secret, for I have frequently seen two, and sometimes three, following the Nuthatches, searching the trees where the food had been hidden. I have wished so many times I could know the bird at sight as quickly as she does me, for I was always the one to be called and when she saw me coming toward her she would come to the nearest tree and run down the trunk head foremost ready to fly to my hand as soon as I held it out to her.—E. M. MEAD, *New York City*.

A Ptarmigan's Nest

(See Frontispiece)

The photograph of the sitting White-tailed Ptarmigan shown in the frontispiece of this number of BIRD-LORE was taken June 19, 1901, just above timber line on a spur of Mt. Evans, in Clear Creek county, Colorado.

The nest was discovered by accident after searching for one for a month at a time every year for nine years, although I frequently found nests after the young were hatched and many broods of young birds were seen. This nest was marked and then located three steps and one foot from a given spot, but when I returned with my camera I took the three steps and looked a number of minutes for the bird without seeing it. I was then on the point of stepping over it, when the eye of the bird was seen. The bird made no attempt to leave the nest but relied entirely on her wonderfully protective colors to escape observation, and nine exposures were made without her leaving the nest.—EVAN LEWIS, *Idaho Springs, Colorado*.

Nesting of Crossbills

[Sir James M. Le Moine, of Quebec, well known for his works on Canadian birds, sends us the following interesting note by a personal friend on the breeding of Crossbills in March.—ED.]

"Quebec, 25th March, 1901.

"DEAR SIR JAMES: About ten days ago I happened to be with a friend in the woods, in the vicinity of the Grand Lac, Bastonnais. In the course of one trip we had to visit several lumber camps and were told by choppers that they had during the winter, in February and March, cut down many spruce and fir trees containing nests full of young birds. We refused to believe the story unless we saw the 'young birds' with our own eyes.

"At one of the camps we found a man who told us that he would endeavor to find a nest that he had thrown aside a few days before which contained three young birds. He was away for a short time and returned with one of the young. It was only partially fledged and had been hatched. I should say, about ten days previously. The young bird was not a Pine Grosbeak, but a Crossbill, of which there were thousands all over that section of the country. The cock birds were in their courting dress—little balls of scarlet—and singing all day as in early June. The nests are made of moss, about the size of a football, walls about two inches thick and a small hole for the happy pair to enter their snug little home.

Sincerely yours,

"E. JOLY DE LOTBINIERE."

Nineteenth Annual Congress of the American Ornithologists' Union

The Nineteenth Annual Congress of the A. O. U. was held at the American Museum of Natural History November 11-14, 1901. The attendance was large, the program, which will be found on the following page of BIRD-LORE, was interesting, and the meeting, like all A. O. U. meetings, was thoroughly enjoyable.

At the business meeting of Active Members, held on the evening of November 11, the following officers were reelected:

President, C. Hart Merriam; Vice-Pres-

idents, Charles B. Cory, C. F. Batchelder; Secretary, John H. Sage; Treasurer, William Dutcher. Members of the Council: Frank M. Chapman, Ruthven Deane, Jonathan Dwight, Jr., A. K. Fisher, E. W. Nelson, Thomas G. Roberts, Witmer Stone.

The by-laws of the Union were so amended that the class heretofore known as Active Members, the number of which is restricted to fifty, became Fellows, and a new class of membership, known as Members, intermediate between Fellows and Associates, and restricted to seventy-five in number, was established. The classes of memberships composing the Union are now, therefore, as follows: Fellows, who must be residents of America, restricted to fifty in number; Honorary Fellows, usually residents of a foreign country, restricted to twenty-five in number; Corresponding Fellows, restricted to one hundred in number; Members, restricted to seventy-five in number; Associates, membership unlimited in number.

The following Fellows were elected: Outram Bangs, Boston, Mass.; F. E. L. Beal, Washington, D. C.; L. B. Bishop, New Haven, Conn.; Joseph Grinnell, Palo Alto, Cal.; T. S. Palmer, Washington, D. C., leaving only one vacancy, there being now forty-nine Fellows.

Fifty-five Members were elected, leaving twenty vacancies in this new class. Their names and addresses are as follows:

Francis H. Allen, Boston, Mass.; H. P. Attwater, Houston, Texas; Mrs. Florence Merriam Bailey, Washington, D. C.; Vernon Bailey, Washington, D. C.; William L. Baily, Philadelphia, Pa.; Chester Barlow, Santa Clara, Cal.; Prof. George E. Beyer, New Orleans, La.; Frank Bond, Cheyenne, Wyoming; Clement S. Brimley, Raleigh, N. C.; Herbert Brown, Yuma, Arizona; Prof. Lawrence Bruner, Lincoln, Neb.; William Alanson Bryan, Honolulu, H. Is.; Frank L. Burns, Berwyn, Pa.; Amos W. Butler, Indianapolis, Indiana; George K. Cherric, Brooklyn, N. Y.; John N. Clark, Saybrook, Conn.; Frank S. Daggett, Pasadena, Cal.; Walter Deane, Cambridge, Mass.; Prof. Barton W. Everman, Washington, D. C.; John Fannin,

Victoria, B. C.; Walter Kenrick Fisher, Stanford University, Cal.; James H. Fleming, Toronto, Can.; Louis Agassiz Fuertes, Ithaca, N. Y.; Manly Hardy, Brewer, Maine; Ralph Hoffmann, Belmont, Mass.; William Augustus Jeffries, Boston, Mass.; Rev. Herbert K. Job, Kent, Connecticut; Lynds Jones, Oberlin, Ohio; Prof. David Starr Jordan, Stanford University, Cal.; Sylvester D. Judd, Washington, D. C.; George H. Mackay, Nantucket, Mass.; John W. Mailliard, San Francisco, Cal.; Joseph Mailliard, San Geronimo, Cal.; Richard C. McGregor, Palo Alto, Cal.; Gerrit Smith Miller, Jr., Washington, D. C.; Mrs. Olive Thorne Miller, Brooklyn, N. Y.; John Murdoch, Roxbury, Mass.; Harry C. Oberholser, Washington, D. C.; Wilfred Hudson Osgood, Washington, D. C.; Charles J. Pennock, Kennett Square, Pa.; Edward A. Preble, Washington, D. C.; William W. Price, Alta, Cal.; Dr. William L. Ralph, Washington, D. C.; Samuel N. Rhoads, Audubon, N. J.; Dr. William C. Rives, Washington, D. C.; Capt. Wirt Robinson, U. S. A., West Point, N. Y.; Jewell D. Sornborger, Cambridge, Mass.; Frank Stephens, San Diego, Cal.; Abbott H. Thayer, Scarborough, N. Y.; Ernest Thompson Seton, New York city; W. E. Clyde Todd, Beaver, Pa.; Bradford Torrey, Wellesley Hills, Mass.; Charles H. Townsend, Washington, D. C.; Dr. Spencer Trotter, Swarthmore, Pa.; Mrs. Mabel Osgood Wright, Fairfield, Conn. Eighty-three Associates were elected.

Program of the Nineteenth Congress of the American Ornithologists' Union

A list of the papers presented before the Nineteenth Congress of the American Ornithologists' Union is appended. The reports of the committee on bird protection and of the expenditure of the Thayer Fund, the number and excellence of the lantern slides exhibited, particularly those shown by Mr. Job, were among the features of the program.

The Present Outlook for Stability in Nomenclature. J. A. Allen. (15 min.)

The Plumages of the American Goldfinch (*Spinus tristis*). Jonathan Dwight, Jr. (20 min.)

Routes of Bird Migration across the Gulf of Mexico. W. W. Cooke.

On Methods in Museum Bird Exhibits. Frank M. Chapman. (15 min.)

Ornithological Notes from Northern New Hampshire. John N. Clark. (20 min.)

Some Impressions of Texas Birds. Louis Agassiz Fuertes and H. C. Oberholser. (50 min.)

The White-winged Crossbill in Captivity. James H. Hill. (10 min.)

The American and European Herring Gulls. J. A. Allen. (10 min.)

Auduboniana. Ruthven Deane. (15 min.)

The Molts and Plumages of the North American Ducks (*Anatida*). Jonathan Dwight, Jr. (30 min.)

Seven New Birds from the United States. E. A. Mearns. (20 min.)

A Naturalist in Yucatan. Illustrated by lantern slides. E. W. Nelson. (45 min.)

Photography in North Dakota Bird Colonies, *et cetera*. Illustrated by lantern slides. Herbert K. Job. (45 min.)

A Reconnaissance in Manitoba and the Northwest. Illustrated by lantern slides. Frank M. Chapman. (45 min.)

Are Hummingbirds Cypseloid or Caprimulgoid? Hubert Lyman Clark. (5 min.)

List of Birds of Wequetonsing, Mich. Otto Widmann. (10 min.)

Notes on the Ornithological Observations of Peter Kalm. Spencer Trotter. (15 min.)

Report of the Committee of the Protection of North American Birds. Witmer Stone. (15 min.)

Results Obtained Under the Thayer Fund. William Dutcher. (20 min.)

National Bird Protection—Its Opportunities and Limitations. T. S. Palmer. (25 min.)

Gulls of the Maine Coast, and Miscellaneous Notes. Illustrated by lantern slides. Wm. Dutcher and Wm. L. Bailly. (60 min.)

Some Results of Bird Protection. Illustrated by lantern slides. Frank M. Chapman. (15 min.)

Book News and Reviews

BIRDS OF PRINCETON, NEW JERSEY AND VICINITY. By WILLIAM ARTHUR BABSON. Bull. Bird Club Princeton University. Vol. 1, No. 1. Sept., 1901. 8vo. 82 pages. Price, paper, \$1; cloth, \$1.25.

This list is based mainly on the author's observations from 1897-1900, while a student at Princeton University, and on the notes of W. E. D. Scott and A. H. Phillips, both well known for their ornithological work about Princeton. It enumerates 230 species, which are classified according to the manner of their occurrence as follows: Permanent Residents, 34; Summer Residents, 70; Summer Visitants, 7; Winter Residents, 15; Winter Visitants, 16; Regular Transients, 65; Irregular, 17; Accidental Visitants, 12.

The annotations abound in interesting records, and include what is highly desirable, but too often omitted from local lists, definite migration and nesting dates. These make the list of practical value to all working ornithologists in the eastern United States.

The strong Carolinian element in the Princeton avifauna is attested by the regular occurrence of the Turkey Buzzard, Barn Owl, Acadian Flycatcher, Fish Crow, Cardinal, Tufted Titmouse, Carolina Chickadee, and Blue-gray Gnatcatcher, and it is therefore somewhat surprising to learn that other Carolinian birds (e.g., Kentucky Warbler and Hooded Warbler) which are common in the lower Hudson Valley as far north, at least, as Sing Sing, are exceedingly rare and not known to breed at Princeton. Possibly local conditions may account for the absence of these birds from a point well within their range, and the case illustrates very clearly the need of a large number of observations from even a limited area in determining exactly the distribution of birds.

The list is well printed, and the Princeton Bird Club is to be congratulated on the attractiveness and worth of this its first publication, which at once takes its place among standard faunal literature.—F. M. C.

THE RELATION OF SPARROWS TO AGRICULTURE. By SYLVESTER D. JUDD. Bull. No. 15, Division of Biological Survey, U. S. Dept. of Agriculture. 98 pages, 4 plates, 19 text cuts.

This bulletin presents not only the known facts in regard to the food habits of Sparrows, but may also be taken as an admirable illustration of the most advanced methods of research in economic ornithology, in which a study of the bird's food in nature is quite as important as the examination of its stomach contents in the laboratory. As Dr. Judd well says: "Although the examination of a bird's stomach shows just what the bird has eaten, yet if this alone be depended upon, information is still wanting as to what has been refused or what preferences exist, since the different elements of the food supply in the locality where the stomach was collected are not taken into account. If, however, this lacking information be obtained by means of field observation, and used in connection with stomach examination, the examiner will be able to make his analysis with the fullest degree of accuracy.

The economic value of Sparrows lies chiefly in their destructiveness to weed seeds. Dr. Judd remarks: "In a garden, within two months, they will sometimes destroy 90 per cent of such weeds as pigeon-grass and ragweed. . . . Weed seed forms more than half of their food for the entire year, and during the colder half of the year it constitutes about four-fifths of the food of many species." This statement is supported by the statistics of stomach examination and field study, and our belief in the importance of Sparrows to our agricultural interests is thus placed on sound scientific basis.—F. M. C.

CALIFORNIA WATER BIRDS.—No. V. VICINITY OF MONTEREY IN MAY AND EARLY JUNE. By LEVERETT M. LOOMIS. Proc. Calif. Acad. Sciences, Third Series, II, No. 5, Dec. 24, 1900. Pages 349-363.

Mr. Loomis here gives us his fifth paper on the migration of California water-birds.

As before, his treatment is both objective and subjective, his notes on the birds observed being accompanied by a discussion of 'Bird Waves,' 'Pauses in Migration,' 'Retrograde Migration,' 'Overflow from Southern Breeding Grounds,' 'Cause of Return Migration.'

We have before commented on Mr. Loomis' theories in regard to the underlying causes of migration* and will here only add that as the expressions of an ornithologist of wide field experience his views are worthy of consideration by all students of migration.—F. M. C.

A LIST OF THE LAND BIRDS OF SANTA CRUZ COUNTY, CALIFORNIA. By RICHARD MCGREGOR. Pacific Coast Avifauna No. 2. Cooper Ornithological Club, Santa Clara, Calif. May 15, 1901. Royal 8vo. 22 pages. Price, 25 cents.

This list includes all the previously published information in regard to the manner of occurrence of the birds of the region treated and as well as some additional material, and while the author trusts that it is "a fairly complete list of the land birds of Santa Cruz county," of which 139 species and subspecies are included, he hopes that it may "form a foundation for a future and more complete exposition of the Santa Cruz avifauna." Apparently much remains to be learned of the times of migration and nesting of Santa Cruz birds, and the list, therefore, of this kind, lacks that definiteness so desirable in publications. It, however, is of evident value in determining the complex faunal characteristics of the region, which are well outlined in an introduction by Walter K. Fisher.—F. M. C.

The Ornithological Magazines

THE AUK.—'An Ornithological Mystery' from the pen of Wm. Brewster, opens the October number. Occasionally since 1889, a bird voice, for a season, has haunted certain marshes of eastern Massachusetts and mocked all efforts of Mr. Brewster and Mr. Faxon to run to earth the owner;—*vox et praterea nihil*. His notes have brought upon him the suggestive name of

'Kicker,' but evidently he does not court the publicity that other 'kickers' seek. Several lists follow: 'A Preliminary List of the Summer Birds of Mt. Mansfield, Vermont,' by A. H. Howell; 'On a Collection of Birds made * * * at * * * Chiriqui,' by O. Bangs, several of them new, and 'A List of Hawaiian Birds * * *.' Will somebody instance a case where a preliminary list was ever followed by a final one from the same author, and is there no escape from the tiresome, initial 'On' that still mars so many titles? A. C. Bent describes the 'Nesting Habits of the Anatidae of North Dakota,' illustrating his paper with several good half-tones, and J. A. Farley presents a study of the Alder Flycatcher in eastern Massachusetts; F. J. Birtwell throws light on 'The Nesting Habits of the Evening Grosbeak,' having discovered and photographed in New Mexico two nests of this species. 'A New Classification of Birds,' based on pterylosis, is attempted by H. L. Clark. Considering how imperfect is the present knowledge of the pterylosis of even the most familiar species, the attempt is somewhat ambitious, although a step forward in a direction now much neglected. Various notes and reviews complete the number. The statement by Mrs. Bates under 'Maine Bird Notes,' that she heard Martins at night should be corroborated, for it is easy to be mistaken in the calls that come from the overhead armies of migrants that move as a whole so silently and so swiftly to other climes.—J. D., Jr.

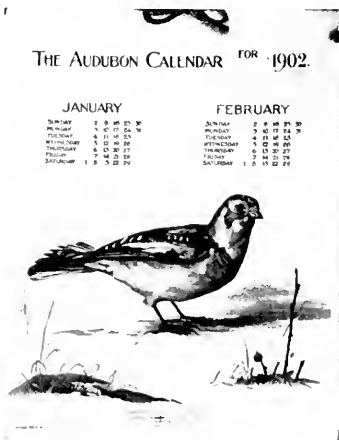
THE CONDOR.—'The Condor' for September and October contains as usual numerous field observations made by members of the Cooper Ornithological Club. Barlow contributes an interesting account of the Mountain Chickadee, and Cohen recounts his experience with Barn Owls in captivity. Under the title of 'Summer Observations in the Sierras,' Daggett mentions the more conspicuous birds observed during a trip from Pasadena, California, by way of Fort Tejon and Visalia, to the North Fork of the Kaweah, King's River Cañon and Kearsarge Pass near Mt. Brewer. The paper shows very clearly the great diversity

*BIRD-LORE II, 1900, 92.

of bird life found in passing from the hot plains of southern California to the alpine conditions of the High Sierra at an altitude of 11,000 feet. The nesting habits of the Desert Sparrow Hawk are described by Rising, and those of the Western Yellowthroat by Leland. An annotated list of 168 species of birds found at Paicines, California, is given by J. and J. W. Mailliard, and short notes on the occurrence and habits of interesting species observed in various parts of the state are published by other contributors. The Cooper Club now has 160 members—probably a larger list of active workers than is enrolled in any other state. The combined labors of so many observers should result in a considerable addition to our knowledge of California birds in the near future.—T. S. P.

Book News

The Audubon Calendar for 1902, just issued by the Massachusetts Audubon Society, a miniature cut of one page of which is here reproduced, contains admirably colored life-sized figures of the Snowflake, Fox Sparrow, Baltimore Oriole, Wood Thrush, Meadowlark, and male and female



Red Crossbills, with descriptive text from Minot's 'Land-Birds and Game-Birds of New England.' It may be procured of MISS HARRIET E. RICHARDS, *Secretary, care Boston Society of Natural History, Boston, Mass.* Price, 50 cents.

In 'Science' for Oct. 4, 1901, Mr. W. E. D. Scott makes an important contribution to the subject of the heredity of song in birds in an interesting account of his study of several Baltimore Orioles. He shows that two birds of this species "isolated from their own kind and from all birds, but with a strong inherited tendency to sing," originated a song of their own quite unlike the normal Baltimore Oriole's song; and, further, that four more Baltimore Orioles "isolated from wild representatives of their own kind, and associated with the two who had invented the new song, learned it from them and never sang in any other way."

The bird photographer who palms off pictures of mounted birds placed amid natural surroundings as "photographs from life" still thrives and, to our surprise, occasionally succeeds in disposing of his wares to the editors of ornithological journals.

'By the Wayside,' the bright little monthly published by the Wisconsin and Illinois Audubon Societies at 635 State Street, Madison, Wisconsin, at the small subscription price of twenty cents per annum, reflects the activity of these societies in educational matters and should receive the support of every one interested in this, the most important phase of Audubon work.

That a book on nature would outsell the most popular novel of the season, would certainly not have been predicted by the most sanguine nature-lover, and still we find the publishers of Mr. Seton-Thompson's 'Lives of the Hunted' announcing the seventieth thousand copy of this work within the first month after its publication.

We may add, that while the author of this book has recently resumed his legal name of Seton, he will continue to use Seton-Thompson as a pen name.

BIRD-LORE has pleasure in stating that the reviews of ornithological magazines, which have been so interesting a feature of the volume just closing, will be continued in 1902, Dr. Dwight reviewing 'The Auk,' Dr. Fisher, 'The Osprey' and 'Wilson Bulletin,' and Dr. Palmer, 'The Condor.'

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

No small part of the pleasure found in the management of BIRD-LORE comes through the large number of letters received from the magazine's readers. Many of the letters are written solely to express their writers' approval of BIRD-LORE, and they are very welcome. Others contain requests for information or advice, and, indicating an active interest in bird study, are equally welcome. It is always a privilege to render assistance where it is desired. Greatly to our regret, however, the margin of time left from days fully occupied with professional duties is far too small to enable us to answer promptly and adequately the communications of our correspondents, and we, therefore, beg their kind indulgence when our replies to their queries seem unexcusably brief. We sincerely wish it were possible to give each letter the attention it deserves.

1901

THE past year has witnessed a continuance of the steadily increasing interest in the study of birds and, as heretofore, we may mention briefly the more important published results of the year's work relating to American birds.

Among scientific and technical publica-

tions of first importance is the first of the eight volumes of Mr. Ridgway's great work on the birds of North America north of the Isthmus of Panama. This volume treats of the Finches and will be reviewed in a subsequent issue of BIRD-LORE. The third volume of Bowler Sharpe's 'Hand List of the Birds of the World' will be of service to working ornithologists of all countries; and of especial interest to American students is the Tenth Supplement of the A. O. U. Check List, with its welcome antidote for the disease of feather splitting, from which American ornithology has suffered of late. Dr. R. M. Strong's 'Quantitative Study of Variation' might also be administered in large doses with the hope that due consideration of his careful discriminative methods would save the pages of our scientific publications from much undigested material.

In the line of original investigation Hubert Lyman Clark's Studies in Pterylography and Dr. J. Dwight's continued work on the molt of birds should be noticed, and although of a very different nature, Professor Herrick's 'Home Life of Birds' with its close observations of the life of the nest, should be here included.

A feature of the year's publications is the number and excellence of local bird lists which has appeared, not based on a few months' observation, but adequately representing the character of the bird-life of the region of which they treat. Among them we may note Babson's 'Birds of Princeton,' Eaton's 'Birds of Western New York,' Embody's 'Birds of Madison County, N. Y.,' Morris' 'Birds of Springfield, Mass.,' Howe and Allen's 'Birds of Massachusetts,' McGregor's 'Birds of Santa Cruz County, Calif.,' and Grinnell's 'Birds of the Kotzebue Sound Region,' the latter containing much new information.

Economic ornithology is represented by Judd's 'Sparrows in Relation to Agriculture' and for the teacher and general reader there are Mrs. Eckstorm's 'The Bird Book' and 'The Woodpeckers,' Mrs. Miller's 'Second Book of Birds,' Babcock's 'Bird-Day and How to Prepare for It,' Torrey's 'Everyday Birds,' Hoffmann's 'Bird Por-

traits,' Pearson's 'Stories from Bird-Life,' and a new cheap colored edition of 'Bird-Life.'

Unexampled activity has been shown by the Protection Committee of the A. O. U. and by the Audubon Societies in securing desirable legislation for the better protection of birds, new laws being passed, or old laws amended, in Maine, New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Delaware, District of Columbia, Florida, Wisconsin and Wyoming. Mr. Dutcher, in expending the Thayer Fund, has extended the field covered by wardens and it may be said with certainty that at no time since they were first subjected to the attack of millinery collectors, have the birds of our coast been so well protected.

Four new Audubon Societies have been organized, bringing the total number up to twenty-five, and the influence of these societies is constantly increasing, as, through the use of circulating lectures, libraries and other means, they become important factors in educating the people to realize the beauty and value of bird-life.

In the schools bird study continues to claim increasing attention and all along the line, therefore, where one be systematist, ecologist, economist, protectionist, or educator, there is every reason to be more than satisfied with the year's progress and promise.

Bird-Lore for 1902

The following outline of BIRD-LORE's plans for the coming year is submitted as an evidence of our continued desire not only to interest and instruct students of birds, but to arouse in them a desire for original investigation by suggesting lines of work and by keeping them in touch with the results of the work of others.

In the death of Elliott Coues ornithology lost a leader whose place will never be filled but the story of whose achievements will ever prove a stimulus to all earnest workers. In the next number of BIRD-LORE D. G. Elliot and Capt. C. A. Curtis, the first a life-long friend, the second a messmate of Dr. Coues at Fort Whipple, Arizona,

his first post in the west, will write of their recollections of Dr. Coues at the time when, as a young man of twenty-one, he entered the army, and their accounts will be accompanied by a before unpublished photograph of Dr. Coues taken at this period and by extracts from the journal of his western trip.

The general reader will also be interested in Richard Kearton's 'The English Sparrow in England,' F. A. Lucas' 'Weapons of Birds,' Fannie Hardy Eckstorm's 'In the Maine Woods,' and William Brewster's 'Bird Voices of New England Swamps and Marshes.'

The last named paper will be of practical value to field students, to whom Dr. J. Dwight's 'The Molt of Birds,' Ernest Seton-Thompson's 'The Art of Journal Keeping,' and a series of papers on the families of Passerine birds will appeal.

Students will also be helped, it is hoped, by a series of papers on 'Bird Clubs in America,' telling of their organization and methods with the object of encouraging the formation of similar societies elsewhere. F. H. Allen will write of the Nuttall Club in the next issue of BIRD-LORE, and his article will be followed by papers on the Delaware Valley Club by S. N. Rhoads, 'The Princeton Club,' by W. E. D. Scott, 'The Spencer F. Baird Club,' by Mrs. Julia Stockton Robins, and these by others to be announced later.

The bird photographer will find that Francis H. Herrick's 'The Chebec's First Brood' contains practical suggestions on the study of nest-life from a tent, while A. Radclyffe Dugmore will describe his method of becoming intimately acquainted with wild birds, and there will be some truly remarkable moonlight pictures of roosting Crows by C. D. Kellogg.

In concluding this outline, we may add that BIRD-LORE is offered at least ten times as much material as it can publish. Many desirable contributions are rejected solely for lack of space, and we sincerely hope that circumstances over which our subscribers have control will so adjust themselves that 1902 will witness a further increase in the magazine's size.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries

New Hampshire.....	MRS. F. W. BATCHELDER, Manchester.
Vermont.....	MRS. FLETCHER K. BARROWS, Brattleboro.
Massachusetts.....	MISS HARRIET E. RICHARDS, care Boston Society of Natural History, Boston.
Rhode Island.....	MRS. H. T. GRANT, JR., 157 Bowen street, Providence.
Connecticut.....	MRS. WILLIAM BROWN GLOVER, Fairfield.
New York.....	MISS EMMA H. LOCKWOOD, 243 West Seventy-fifth street, New York City.
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South Carolina.....	MISS S. A. SMYTH, Legare street, Charleston.
Florida.....	MRS. I. VANDERPOOL, Maitland.
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Wisconsin.....	MRS. REUBEN G. THWAITES, 260 Langdon street, Milwaukee.
Minnesota.....	MISS SARAH L. PUTNAM, 125 Ingelhart street, St. Paul.
Wyoming.....	MRS. N. R. DAVIS, Cheyenne.
Kentucky.....	INGRAM CROCKETT, Henderson.
Tennessee.....	MRS. C. C. CONNER, Ripley.
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Concerning the Conference

The Audubon Conferences up to date may be compared to peach trees, which, though they may be of vigorous constitution and full of promise, do not give fruit for several years after their planting.

The second conference, held on the morning of the 14th of November, was well attended, and the luncheon which followed gave the delegates an opportunity for an hour of charming social intercourse with the leading lights of ornithology, but the main end of the meeting, the discussion of methods and the interchange of experiences, was not attained, the single session having been absorbed in discussing the technicalities of the organization of a National or Advisory Committee of the Audubon Societies.

Not that there was needless discussion upon this subject, for every link tending to

bind the state societies must be most deliberately forged and tested, simply the annual conference of bodies of the importance to which the Audubon Societies have grown cannot be scrambled over in a couple of hours, with the warning "lack of time" staring would-be questioners in the face.

Two sessions, with the time systematically allotted, might produce the desired results,— the single session was merely an aggravation.

Dr. Palmer alluded to the educational side of bird protection, and could an experience meeting on these lines have followed, it would have been both interesting and instructive. As it was, not so much was learned of the workings of any one society as can be found any month in the columns of BIRD-LORE.

In this connection the editor would like to emphasize the fact that, with proper coöperation, the Audubon Department of this

magazine may easily become of more value to the work than any National Committee or Advisory Council can hope to be, and for two reasons:

1. Questions and answers put upon paper are not forgotten as they may be in the heat of debate.

2. In a country of the size of ours it is easier to travel on paper than in person.

If, during the coming year, not only the secretaries but any member of the executive committees of the societies will write freely of their needs and experiences to this department, always remembering to send their communications during the months of December, February, April, June, August or October, so that the material could be properly digested for the next issue, great results can be obtained.

This material need not be in the form of set reports for actual publication, but in letters or tabulated lists of questions and a dozen other ways which will tell of needs and stimulate the interchange of ideas.

The Societies contributing their reports, or, in fact, any news to BIRD-LORE, are in the minority, some will not even answer if asked a direct question by mail. If this is the case how much better will an Advisory Committee fare?

Wake up, fellow workers: say your say all in good time and season, keeping it well in mind that it takes time to print an illustrated magazine and that all material must be had thirty days before the publishing of each issue.

Many of our secretaries keep in touch by private correspondence, but the same information made public reaches far and wide. Only by such intercourse as this can the general trend of the Societies be gauged and the vital topics stimulated to fruiting, so that the next convention may be something besides preliminary leaves.—M. O. W.

Results of the Conference

At the first Audubon Conference, held in Cambridge, Mass., in November, 1900, it was moved that a committee be appointed, to report at the next Conference, on the desirability of some form of coöperation

between the various Societies when, for any reason, it seemed desirable for them to join hands in promoting the cause of bird protection. The report of this committee as amended and unanimously adopted at the second conference is as follows:

REPORT OF THE AUDUBON CONFERENCE COMMITTEE

1. That the several societies retain their individuality, that is, that they be not merged into a national organization.

2. But in view of the increased efficiency that would always result from some form of union, which would admit of concerted action, it is recommended that

3. The several societies shall each appoint one member of a committee to be known as the National Committee of the Audubon Societies of America.

4. That the members of this committee may be empowered to represent the societies whenever concerted action on the part of the societies be deemed by the Committee expedient.

5. That an Annual Conference of the Societies be held, and that this Committee be authorized to arrange for the time and place of the Conference.

6. That this Committee draft its own rules and regulations.

(Signed) H. C. BUMPUS,
FRANK M. CHAPMAN,
RALPH HOFFMANN.

A list of the delegates present, with the societies they represented, is appended:

Vermont, Elizabeth B. Davenport, Anna B. Phelps; Massachusetts, William Brewster, Harriet E. Richards, Reginald C. Robbins; Rhode Island, H. C. Bumpus, Annie M. Grant; Connecticut, Mabel Osgood Wright, Helen W. Glover, Delia T. Audubon Tyler, Katharine A. Wilcox, Dora R. Wheeler, Grace R. Moody, Mrs. Walter Smith, Willard G. Van Name; New York, Emma H. Lockwood, Lilian G. Cook, Olive Thorne Miller, May Riley Smith, W. T. Hornaday, William Dutcher, J. A. Allen, Frank M. Chapman; New Jersey, Julia J. Noll, D. W. Miller; Pennsylvania, Julia Stockton Robins, E. L.

Tweedy, Witmer Stone, W. L. Baily; Maryland, Anne Weston Whitney; District of Columbia, H. C. Oberholser, T. S. Palmer; Florida, Mrs. Kingsmill Marrs, W. Wilson - Barker; Illinois, Ruthven Deane.

Mr. Frank M. Chapman was chosen as chairman, Mrs. H. T. Grant, as secretary. The details of the formation of the National Committee were left in the hands of the secretary.

Reports of Societies

NEW SOCIETIES

We take great pleasure in calling attention to the three new societies added to the list in this issue.

The Audubon Society of Glencarlyn, Virginia, was organized on June 3, 1901, with John B. Henderson, Jr., as president and Mrs. Frederick E. Town as secretary; the Society of the state of Missouri was organized on June 14, with Wm. J. Blakely as president and August Reese as secretary, and was duly incorporated on August 14, while the Society of the state of Vermont followed on September 2, with Mrs. Wm. C. Horton, of Brattleboro, as president and Mrs. Fletcher K. Barrows and Miss Emma Gregg as secretaries.

The Missouri Society has issued a concise pamphlet of twenty pages giving its list of officers, by-laws, articles of incorporation and a presentation of facts and motives, that is well worthy of imitation by other societies, so satisfactorily does it answer the questions asked of societies concerning their scope and practical workings.

THE MASSACHUSETTS SOCIETY

The Junior Prize Committee of the Massachusetts Audubon Society set a difficult task for the children when they offered prizes for the best original drawing of a Bobolink in full summer plumage, "drawings to be made from stuffed birds or life." All over the state the children were early on the lookout for Bobolinks, but as the bird is rather locally distributed many had to report that they "had never seen a Bobo-

link and could not find one in their meadows." Others were far distant from any museum possessing the coveted bird, so of necessity some of the would-be competitors were debarred from the contest. Twelve drawings were received, in some cases accompanied by charming little letters telling the story of the drawing. The committee finally awarded the prizes as follows: The first, twenty dollars, to Doris A. Hatfield, of Canton Junction; second, fifteen dollars, to Howard M. Turner, of Cambridge; third, ten dollars, to William H. Foster, of Andover; fourth, five dollars, to Abby Christenson, of Brookline.

In the early summer the Society sent out copies of a "List of Massachusetts Birds," requesting their return with the names checked of the birds the observer had seen during the year. It is not time for returns, but quite an interest is reported in the lists; additional copies for use, beginning any time, may be had of the secretary.

The calendar for 1902, with six new original drawings in color and descriptive text, is for sale at the bookstores and by the secretary. Price 50 cents.

A "List of Bird Books" is ready for free distribution.

A second traveling lecture with lantern slides is in preparation, also, a number of traveling libraries; the latter will probably be circulated by the Woman's Educational Association and loaned to schools and libraries on request.

The Society has recently presented to the Library Art Club two sets of the Audubon Bird Charts and the Bird Plates for circulation by the Club.

The sale of the charts is very good and the Society is growing. There are now 4,151 members, but it is still the fashion to wear feathers, and violators of the bird laws still tread the forest path.

HARRIET E. RICHARDS, *Secretary*.

AUDUBON SOCIETY OF GLENCARLYN, VIRGINIA

The Audubon Society of Glencarlyn, Virginia, which has the honor to be the pioneer Society of the state, was organized June 3, 1901, with the following officers:

President, Mr. John B. Henderson, Jr., Washington, D. C.; secretary, Mrs. Frederick E. Town, Glencarlyn, Virginia.

At a subsequent meeting the following honorary vice-presidents were elected:

Gen. S. S. Burdett, Glencarlyn, Virginia; Maj. Wm. M. King, Glencarlyn, Virginia; Mr. Paul Bartsch, Washington, D. C.; Dr. T. S. Palmer, Washington, D. C.

Also, an executive committee was formed consisting of Mr. Wm. C. Pennwitt, Chairman, Dr. Wm. M. Backus, Mr. Charles H. Lane, Miss Mary L. King, Mrs. James Plant and Miss E. V. Pennwitt, all of Glencarlyn, Virginia. Miss Pennwitt was appointed librarian.

In addition a committee has been appointed to investigate the present status of the laws of Virginia relating to the protection of birds.

The Glencarlyn Society may be said to be the outgrowth of a meeting of the Washington Society, held in the village by invitation of the citizens, and is indebted to the parent Society for a number of valuable donations to its library.

The new Society, it is hoped, will be a thriving one, as the members are most enthusiastic, and the environment of the village very favorable to bird-life.

One field meeting was held under the leadership of Mr. Bartsch.

JULIET B. G. TOWN, *Secretary*.

Florida Audubon Society

Owing to the fact that many of the officers and members of the Executive Committee of the Florida Audubon Society are winter residents of the state, meetings are not held during the summer months, but the secretary takes charge of the business in correspondence with members of the Executive Committee at the north. In Orange county the School Committee have agreed that once a week during the school term half-hour bird-talks shall be given in the schools, the Audubon Society giving one hundred "Hints to Bird Study," published by the Massachusetts Society as a text-book for teachers. They also have Bulletin 54, sent

by Dr. Palmer, while the Superintendent of Schools is to aid us by giving talks on birds. A bird chart of distinctly southern birds would be of the greatest help and inspire interest in the children. The American Ornithologists' Union sent us two hundred printed posters of the laws of 1901 for bird protection; many of these were posted in the various towns near Maitland, while some were sent to Audubon members at West Palm Beach. Many more will be distributed by our various officers throughout the state early in December, before the tide of travel begins. A parcel was sent to the west coast this autumn, for in spite of all warnings in September the rookery at Bird Key was destroyed. Two hundred posters have been sent to the Superintendents of the Southern Express Company, who have been instructed by President O'Brien to have them in the most conspicuous places in the express offices.

The Society, since its organization in 1900, has been dependent for all its leaflets on the New York Society, but I take much pleasure in reporting that in December the Florida Audubon Society will send out seven leaflets of its own, the manuscripts being generously contributed by members of the Society, the printing of the first edition being a gift from a member. We have in these a letter to members of the Audubon Society by our beloved president, the late Rt. Rev. H. B. Whipple, Bishop of Minnesota; a letter to the boys and girls of the Audubon Society, by Mrs. Whipple; Florida Birds Worth their Weight in Gold, by Mr. Kirk Munroe, our honorary vice-president; A Sudden Friendship, by Mrs. Annie Trumbull Slosson, a vice-president; reprinted from BIRD-LORE by permission of Mrs. Slosson and Mr. Chapman; The Rights of the Man Versus the Bird, by Miss Rose E. Cleveland, also a vice-president of the Society; John James Audubon, by Mrs. Kingsmill Marrs, of the Executive Committee, and also from her a leaflet for little children, called Katie's Pledge. We hope by these to arouse great interest in our work during the coming winter.—
MRS. KINGSMILL MARRS, *for Executive Committee*.

Bird-Lore

*AN ILLUSTRATED BI-MONTHLY MAGAZINE DEVOTED TO
THE STUDY AND PROTECTION OF BIRDS*

EDITED BY

FRANK M. CHAPMAN

Official Organ of the Audubon Societies

AUDUBON DEPARTMENT EDITED BY

MABEL OSGOOD WRIGHT



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A CROW ROOST

From a photograph made by moonlight near Salem, N. J., January, 1904, by C. D. Kellogg. (Plate exposed from 10.30 P. M. to 11.10 P. M.)

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Bird = Lore

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No. 1

Recollections of Elliott Coues

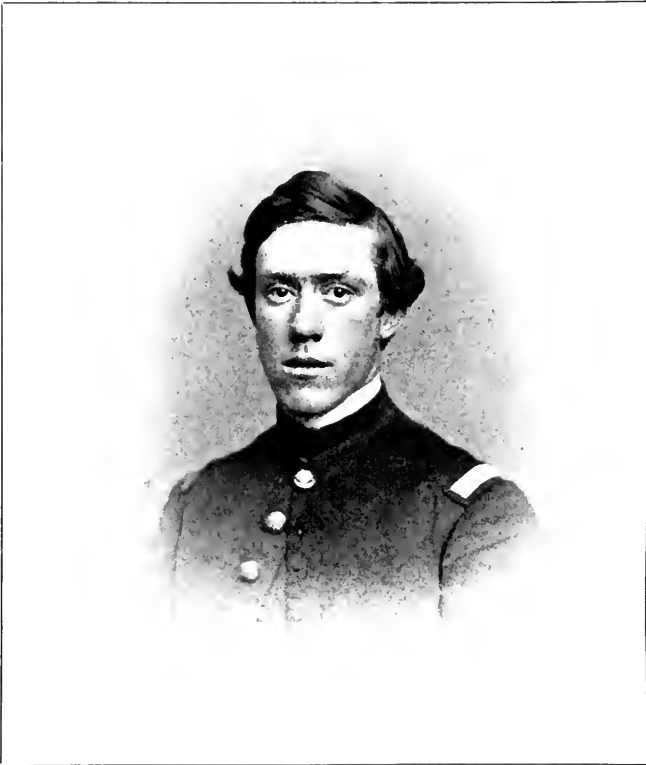
Coues as ^{8 4 21}a Young Man

BY D. G. ELLIOT

THE youth of most persons who, in later life, may have attained a prominent position in the career—whether scientific or not—that may have been selected, possesses, doubtless to many, a particular interest, even though perhaps no personal acquaintance with the individual may have been formed. Those who have gained a creditable reputation, whether as facile writers, or independent investigators in science, or as actors in stirring deeds of bravery, or hardships overcome, excite the admiration and serve as a stimulant to others to go and do likewise.

It was probably impelled by some such thought as that just expressed that induced the editor of BIRD-LORE to request me to give to its readers a brief account of my recollections of Elliott Coues as a youth, before the ability that was in him had been generally recognized; and of necessity I may write only of that which is faintly reminiscent, for the mist of years partly hides from memory the days when Coues and the writer were boys together, and the great majority of the letters received from him during his youth, and from which much that would have illustrated his early methods of expression and energetic temperament, have long since been destroyed. Those who knew Coues, even in later life, must have been impressed by the intensity of the interest exhibited by him when speaking upon some subject that was congenial, and which was a matter of daily thought. How the bright eye grew brighter and more penetrating, the attention fixed and earnest, while the well-phrased sentences fell from his lips with a facile flow that was admirable. This faculty, that was noticeable to everyone who listened to him in his prime, was eminently characteristic of him even in his college days, and his letters at that time were remarkable for the keenness of the reasoning exhibited and the ingenuity of the various arguments employed. Good temper in

discussion was an attribute of his youthful days, and the courtesy shown in his intercourse with others in his maturer years was by no means lacking in his youth. Always high-spirited, the consciousness of overability to do seemed to be innate with him; and, both in my correspondence and conversations with him in those early days, I more than once had the impression that he was feeling his way, so to speak, as if not quite certain exactly



ELLIOTT COUES AT TWENTY-ONE

From a photograph in the possession of D. G. Elliot

how far he could trust himself in the line of argument he had for the moment adopted, or was himself seeking its weak points. Always a courteous debater, and equally so in his youth as in his more experienced manhood, he was very attractive in his student days, with his bright face, pleasant manners, and love of fun such as appealed to those of his age, but even in his college days or earlier the keen mind was as quick to seize upon a vulnerable place in an argument and turn to profit a point thus gained as in aftertimes when his large experience and ample knowledge made him so formidable an antagonist. And yet, the boy showed

no exultation over his victory beyond a bright smile and a clap on one shoulder, with the friendly question, "Am I not right?" or "Is that not so?" Although Coues gained a prominent position in various branches of natural science, and in literature as well, he was, above all, an ornithologist. From his earliest youth he loved birds, and delighted to talk about them and argue the various questions that a discussion of them gave rise to. His mind was always dwelling upon them, and he never lost an opportunity to speak of his favorite subject. I remember once when, arriving in Washington during his student days and seeking him at his residence, I was directed to a certain hall where a dancing class to which he belonged usually met and, on sending up my name, he came bounding down the stairs two steps at a time with a cheery "Hello, D. G. ! Glad to see you!" and almost immediately took up a certain subject on birds that we had had a discussion about in our correspondence a short time before. It was the absorbing passion, always foremost in his thoughts. Personally attractive in his mature years, Coues was no less so in his youth, and although our mutual interest in the one common absorbing pursuit of our lives may have brought us more closely together, yet even those who were without the special love of nature's works to afford a breadth of sympathy with him, and who knew him in his youth, could not fail to recognize the traits I, on another occasion, have attributed to him in his boyhood, of being "frank, simple, honest and confiding, with a boy's generous impulses and the glorious enthusiasm of the ornithologist manifest in speech and action."

Coues at His First Army Post

BY CAPT C. A. CURTIS, U. S. A. (Retired)

On the 12th day of June, 1864, I reported for duty as acting quartermaster of a mixed column of infantry and cavalry, which had been ordered to rendezvous at the town of Los Pinos, New Mexico, in preparation for a march to Prescott, Arizona.

This command was composed of one company of regular infantry, a troop each of California and New Mexican cavalry, and was intended to act as an escort to a supply train going to provision a new fort near the Arizona town above mentioned.

This march was to be for fully five hundred miles through a hostile Indian region, where the Navaho and Apache ranged, and we were cautioned from departmental headquarters to hold ourselves in constant readiness to repel attack.

To be more explicit and show what a prize our train would have proved to a successful Indian foray, I will mention that the supply train

consisted of eighty wagons laden with commissary, quartermaster and ordnance stores, and twelve luggage wagons which carried the company and troop property, a herd of three hundred beef cattle and eight hundred head of sheep. To draw these ninety-two wagons, and furnish mounts for wagon masters, herders and other train men, took five hundred and sixty mules. Add to these the one hundred and sixty-three horses of the cavalry and officers, and it will be seen what constant vigilance against surprise was required through an almost unknown region, over desert and fertile plains, through barren and forest-clad defiles, or along the cottonwood fringed banks of running streams.

On the evening of the 15th day of June, at the mess table of the officers of the expedition, I first saw Doctor Elliott Coues. He was at that time still some months short of being twenty-two years old, and had but recently been commissioned an assistant surgeon in the army. He was a man of good features and figure, a little above medium height, with light brown hair and no beard or moustache, and of a complexion bronzed in his calling of field ornithologist. In his conversation throughout the meal we gathered that he had served as a medical cadet in the "Army of the Potomac" for some time before he was advanced to his present rank, and that he had hunted and collected birds in Labrador. He also remarked, with pardonable pride, that he had been sent as surgeon in charge of our column at the request of the Smithsonian Institution, that he might "shoot up the country between the Rio Grande and the Rio Colorado," and that as soon as he should report he had done so he was to be relieved and ordered to Washington. He also showed the commanding officer and myself an order from the quartermaster-general, requiring us to furnish free transportation at all times to the collections he should make.

Ornithology was the Doctor's special cult, but he was also prepared to make collections in other branches of natural history. For creeping, crawling and wriggling things he had brought along a five-gallon keg of alcohol. But the reptilian branch of his researches failed utterly in the early stage of the march, for the soldiers, in unloading and loading the wagon, had caught the scent of the preservative fluid, and, although it already contained a considerable number of snakes, lizards, horned toads, etc., the stuff, diluted from their canteens, did not prove objectionable to the chronic bibulants. Some of them, however, did look decidedly pale about the gills when the head of the empty keg was smashed in and the pickled contents exposed to view. They had really supposed they had been drinking chemically pure alcohol.

From the beginning of the march on the 16th day of June until its close, on the 29th day of July, Doctor Coues never ceased, except for a brief interval, making excursions along the flanks of the column and

arriving in camp with many specimens. Clad in a corduroy suit of many pockets and having numerous sacks and pouches attached to his saddle, he regularly rode out of column every morning astride of his buckskin-colored mule, which he had named Jenny Lind on account of her musical bray. Rarely did we see him again until we had been some hours in the following camp, but we sometimes heard the discharge of his double-barreled shotgun far off the line of march. He usually brought in all his pockets and pouches filled with the trophies of his search, and when he sat upon the ground and proceeded to skin, stuff and label his specimens he was never without an interested group of officers and men about him. To any one interested to learn the art of preparing the specimens he became an earnest and painstaking instructor. In time pretty much every person in the command was contributing something to the Doctor's packing cases.

When we reached the most dangerous part of our march and frequent attempts to stampede our grazing flock and herds were made by the lurking red man, the Doctor was cautioned to remain near the escort, but the flitting of rare plumage or the utterance of a strange note would often tempt him away and give us great anxiety until he returned. In three collisions with the Indians he showed us he was possessed of true soldierly spirit.

At one point the danger became so great that the discharge of fire-arms by any member of our party was strictly forbidden and all were told that should a shot be heard we were all to rally in its direction. One day we rallied in hot haste to the rear, only to meet the ornithologist holding up a beautiful and rare specimen, saying: "I really could not allow this bird to escape without causing a serious loss to science."

"Well," replied the commanding officer, "I shall deprive science of any further collections for a week by placing you in arrest and taking possession of your gun and ammunition."

The arrest, however, did not last until next morning, when the colonel, having slept off his vexation, delivered Doctor Coues a lecture on military science, with particular reference to service in an Indian country, and told him what he might expect if he did not remain near the escort and refrain from firing until we were out of that region.

Professionally, the Doctor was a good surgeon, and never neglected his duty. In Arizona for a year he continued his collecting throughout a large portion of the territory, and, when he was relieved from duty and ordered to Washington in November of 1865, he told me he should take with him over two hundred and fifty distinct species of birds and six hitherto unknown to science.

Extract from Journal of Elliott Coues' First Journey to the West*

"July 8, 1864.—We read of the delightful and equable climate of New Mexico; but we live and learn. Last night we shivered under blankets, and blew our numb fingers this morning. By ten o'clock it was hot; at eleven, hotter; twelve, it was as hot as—it could be. The cold nights stiffen our bones, and the hot days blister our noses, crack our lips and bring our eye-balls to a stand-still. Today we have traversed a sandy desert; no water last night for our worn-out animals, and very little grass. The 'sand-storms' are hard to bear, for the fine particles cut like ground glass; but want of water is hardest of all. For some time it has been a long day's march from one spring or pool to another; and occasionally more; and then the liquid we find is nauseating, charged with alkali, tepid, and so muddy that we cannot see the bottom of a tin cup through it. Here at our noon-day halt there is not a tree—scarcely a bush—in sight, and the sun is doing his perpendicular best. In the Sibley tent the heat is simply insupportable, and we are lying curled up like rabbits in the slight shade we can find in the rain-washed crevices of the 'Well.' Jacob's Well is an undisguised blessing, and, as such, a curiosity. It is an enormous hole in the ground, right in the midst of a bare, flat plain; one might pass within a hundred yards and never suspect anything about it. The margin is nearly circular, and abruptly defined; the sides very steep—almost perpendicular in most places; but a path, evidently worn by men and animals, descends spirally, winding nearly half way around before reaching the bottom. It is, in fact, a great funnel, a hundred yards wide at the brim, and about half as deep; and at the bottom there is a puddle of green, slimy water. Tradition goes, of course, that this is a 'bottomless pit;' and as the water had not perceptibly diminished after all our party and five hundred mules and cattle had had their fill, the story may go for what it is worth. The water is bad enough—warm, and probably muddy, though the mud is not visible, owing to the rich green color of the dubious liquid. It contains, however, some suspicious looking creatures, 'four-legged fishes,' said the man who caught several with hook and line. They suck the bait like catfish, and look something like them, barring the legs and long, fringe-like gills.†

"It is a scene of utter desolation; our bodily discomfort begets vague

*In connection with the preceding account by Captain Curtis the following extract from Coues' journal made on the march described, is of especial interest. It is reprinted from the 'American Naturalist' for June, 1871.

†They are the *Amblystoma nebulosum*, a kind of batrachian related to the salamanders and tritons of our brooks. The body is shining green above, with a few indistinct black spots, and silvery white below; eyes and gills black; a yellow tint about the legs. They can live a long time out of water, as their skin seems to exude a sort of perspiration that keeps them cool and moist. One that was quite dry and seemed dead, revived on being placed in a bucket of water.

fears, and a sense of oppression weighs us down. The leaden minutes creep on wearily and noiselessly, unbroken even by the hum of an insect; two or three blackbirds, hopping listlessly about as if they wished they were somewhere else but had not energy enough to go there, are the only signs of life that greet our faithful animals and ourselves."

The Western Evening Grosbeak

BY WM. ROGERS LORD

With photographs from nature

THE Evening Grosbeak is not generally well known upon the Atlantic coast. Whether it is a more familiar bird in the Central West I cannot say; but upon the Pacific coast, at all events in the states of Oregon and Washington, a variety of this beautiful creature is, at least, every two years — from February to May — very abundant and most wonderfully tame.

The western species is a little darker in shade than is the eastern bird, but otherwise very much the same in appearance and habit. The color is, for the most part, 'old gold,' darker about the head, with large white patches upon the wings. Of course, as the name indicates, these birds have a large bill, showing the use to which they put it in cracking pine-cones and other tough coverings of the seeds which furnish them food.



They come into the cities and towns of the Willamette valley, Oregon, and around Puget Sound, Washington, about every other year in large numbers. Though the usual flock is not above fifty or sixty birds, it is sometimes much larger and sometimes considerably smaller. They draw very near to the homes and the persons of men,

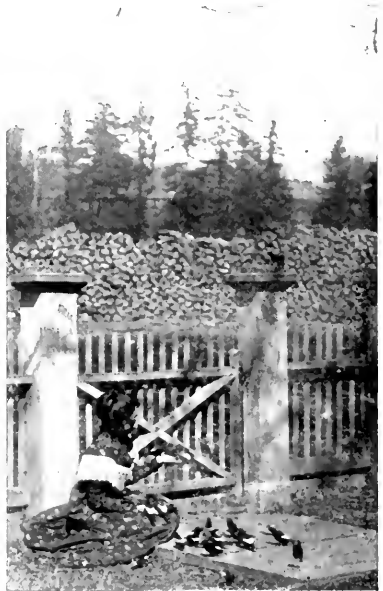


showing little fear. So easy are these little creatures to tame that having been fed frequently in several places,—particularly in and about Portland, Oregon,—after a day or two they have eaten out of the hand.

Only one person, however, so far as known, has succeeded in winning their confidence sufficiently to bring them to alight upon the person. A winsome lady of Oregon City, Oregon, has, during the periods of their last two visits, induced such familiarity that a number of them would rest upon her arms, hands and lap.

The three pictures in this issue of BIRD-LORE indicate what was the habit of these birds in the spring of 1899. In the spring of 1901 some of the same birds returned to their friend, their identity being established by a blind eye in one and a misshapen leg in another. Such general friendliness toward human beings on the part of this particular species of bird is no doubt due to the fact that it lives, for the most part, so far from human habitations, and does not know our stone-throwing and shot-gun attitude toward the angels of beauty and song which our birds are to the world.

The Western Evening Grosbeak nests far off in the solitudes of the Coast Range and Cascade Mountains in these Pacific states, and visits the confines of human society for only a short time once in two years. Only two or three nests of the species have ever been found, although, within a year, Mr. A. W. Anthony, of ornithological fame, and three or four



other persons, have discovered what seem to be some of the Grosbeak summer homes in the Cascade and Coast Range Mountains.

What these birds, unafraid, do in their familiar relations with human beings is at the same time a sad revelation of our wrong attitude toward bird-life in general and a beautiful realization, in a small way, of the prophetic words of the poet Shelley, —

“No longer now the winged habitants,
That in the woods their sweet lives sing away,
Flee from the form of man; but gather round,
And preen their sunny feathers on the hands
Which little children stretch in friendly sport
Toward these dreadless partners of their play.
 . . . Happiness
And science dawn, though late, upon the earth.”



Copyright by C. D. Kellogg

A CROW ROOST

Photographed by moonlight near Salem, N. J., January, 1901, by C. D. Kellogg. Plate exposed from 4 A. M. to 5 A. M. The birds in the foreground had fallen from their roosts during the night. (See frontispiece, and also article on this Crow roost, by Witmer Stone, in *BIRD LORE* for December, 1899)

Bird Clubs in America

I. THE NUTTALL CLUB

BY FRANCIS H. ALLEN

THE Nuttall Ornithological Club of Cambridge is, I believe, the oldest organization of its kind in the country, and, therefore, in spite of the modesty which befits its age and experience, may very properly be the subject of the first of a series of articles on bird clubs. The beginnings of this Club date back to 1871, when a few of the young men of Cambridge, Mass., met weekly in an informal way to compare notes and read ornithological literature. It was not until 1873, however, that the Club was organized, taking its name from the famous ornithologist of the early nineteenth century, who lived in Cambridge for many years. The original membership was nine, and the majority of these are still well known as ornithologists, though only two, Mr. Brewster and Mr. Purdie, are now resident members of the Club. The list was as follows: Francis P. Atkinson, Harry B. Bailey, William Brewster, Ruthven Deane, Henry W. Henshaw, Ernest Ingersoll, Henry A. Purdie, William E. D. Scott, and Dr. Walter Woodman.

This little Club was destined to make itself felt in the scientific world. Its most important service to ornithology was doubtless the publication of its 'Bulletin,' an interesting account of the starting of which, as well as of the early history of the Club itself, was given by Dr. J. A. Allen in an early number of that journal. 'The Bulletin of the Nuttall Ornithological Club' first made its appearance May 6, 1876. It was not without much preliminary discussion that so important a step was taken, and the question of issuing a journal of its own for the publication of scientific papers and notes had been agitated two years earlier, when the Club was hardly a year old. 'The American Sportsman' had at that time been adopted as a temporary medium, but the main question had only been postponed till the time was ripe for such an undertaking. 'The Bulletin,' as every ornithologist knows, was immediately recognized as the leading ornithological journal of the United States, and it won the instant support of scientific men all over the country. Its publication was continued until 1884, when it was succeeded by 'The Auk,' virtually the same journal, and with the same editor, Dr. J. A. Allen.

As 'The Auk' was the successor of 'The Bulletin,' so the American Ornithologists' Union itself was, in a great measure, an outgrowth of the Nuttall Club. On retiring from the presidency of the Union in 1890, Dr. J. A. Allen said in an historical address on the A. O. U.:

"The American Ornithologists' Union is the worthy offspring of the Nuttall Ornithological Club of Cambridge, Mass. . . . [The Nuttall

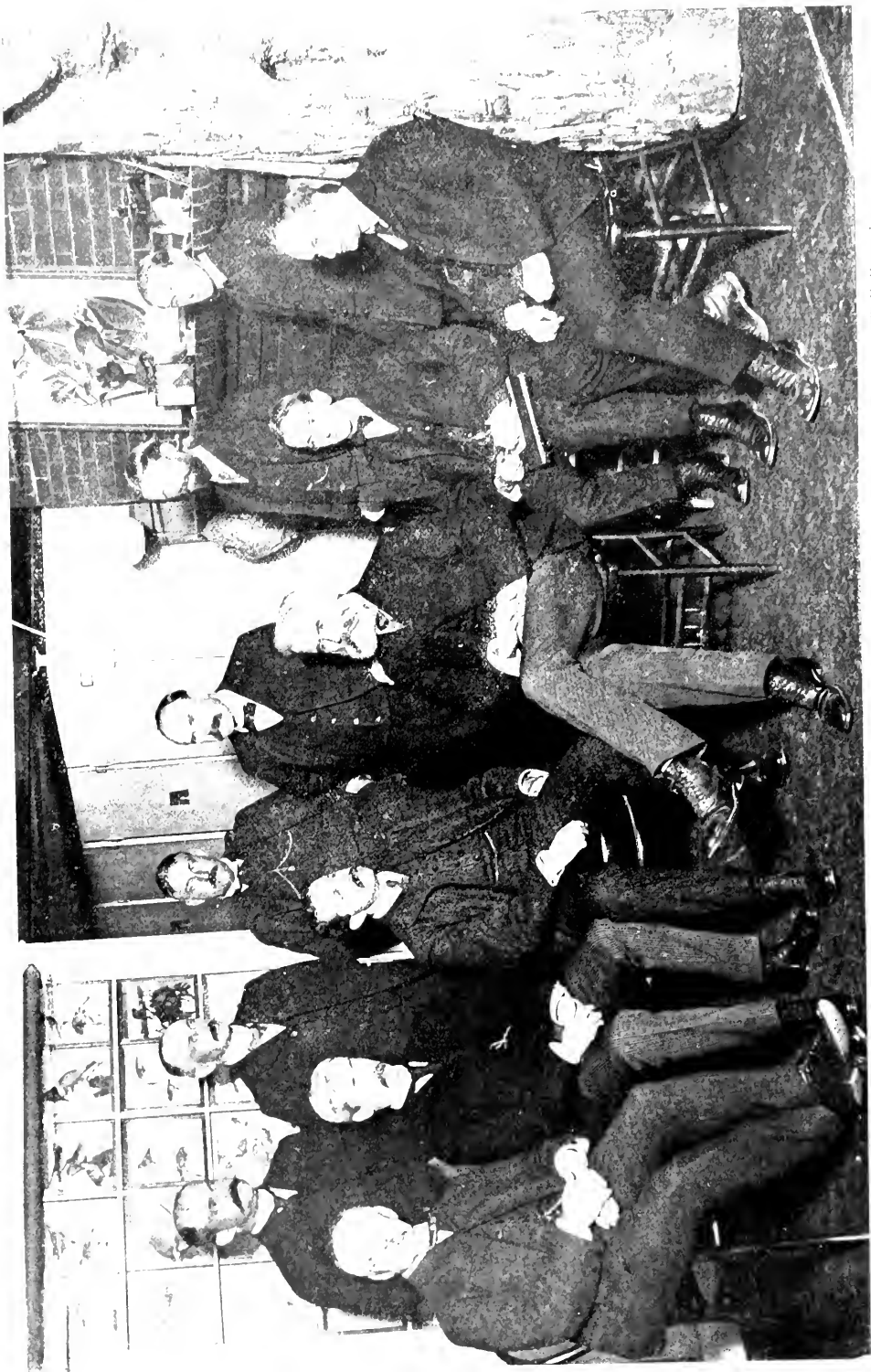
Club's] meetings were at first informal, but as years passed the Club became a well-organized publishing society, wielding, through its quarterly 'Bulletin,' a more than national influence. While its active membership numbered somewhat less than a score, its corresponding membership included all American ornithologists of note. Through their hearty coöperation the Club was able to concentrate the ornithological interests of the whole country, its journal proving not only a strong bond of union, but an indispensable medium of communication.

"In 1883 the time seemed ripe for a more direct and intimate union of American ornithologists, and early in the year the matter began to receive serious thought on the part of several members of the Club, resulting in the call issued in July of that year for a congress of ornithologists to meet in New York the following autumn. The project met with favor, a large proportion of those invited responding to the call, which resulted in 'The American Ornithologists' Union, founded in New York, September 26, 1883.' In effect the Nuttall Ornithological Club was thus transformed into a national, or rather an international organization, to which it magnanimously transferred its quarterly journal, and with it much of its prestige and influence."

Before the launching of the 'Bulletin' many of the younger ornithologists in other parts of the country had been elected as corresponding members of the Club, but professional ornithologists had been excluded out of modesty. Now, however, with a dignified journal on its hands to vouch for its scientific standing and to bring new responsibilities, the Club took courage to invite the leading ornithologists to join as either resident or corresponding members, and, somewhat to the surprise of these young men, their elders seemed very glad to identify themselves with them. Dr. J. A. Allen, who was at that time in charge of the birds at the Museum of Comparative Zoölogy, at Cambridge, became a resident member in April, 1876, and soon after the issue of the first number of the 'Bulletin' was made its editor-in-chief.

The success of the Nuttall Club as a scientific body now seemed assured, and, though it has been less prominently before the ornithological world since the A. O. U. took the 'Bulletin' off its hands, it still publishes, in its occasional 'Memoirs,' papers of importance which are too long for the pages of 'The Auk.'

Of late years, however—and perhaps at all times—the chief usefulness of the Club has been for its members. Its meetings—at first held weekly, now coming semi-monthly—have always had a delightfully informal character, and sociability and good fellowship have helped along the interchange of ornithological news and ideas. The early meetings were occupied largely with the reading of published papers, and for some time the



R. H. Howes, Jr.
E. D. Southborough

V. C. Ront
G. M. Allen, Secy.

G. C. Deane
William Brewster, Pres.

Owen Durrice
C. E. Batchelder, Treas.

H. M. Spelman
Walter Deane

N. A. Francis
F. H. Allen, Vice Pres.

A MEETING OF THE NUTTALL CLUB

president gave out at each meeting a particular species to form a subject of discussion at the next. Special work of one kind or another has from time to time been undertaken by the Club. About the last of 1887, for instance, a continuous discussion began of the distribution of birds in eastern Massachusetts, groups of species being taken up at each meeting in systematic order. Some years later the desiderata in our knowledge of the life histories of New England birds were discussed systematically in a long series of meetings. These plans for regular work have served good purposes in their day, but the genius of the Club seems to demand as a rule a less formal method of expression, and at most of the meetings the programme consists of a paper or talk by one of the members on some subject that has occupied his attention, followed by a general discussion of the subject, the evening ending with miscellaneous notes from the recent observations of the various members.

I have spoken of the informality of the Club's meeting, but I will say a word more on that point because I think it is a characteristic feature. There is, of course, some semblance of parliamentary procedure, but members generally feel free to talk directly to one another without the fiction of addressing the chair. One result of this informality is the frank questioning that greets the member who chances for any reason to make a statement which seems to the others at all open to question. It very naturally happens occasionally that an eager young observer may allow his enthusiasm to get the better of his sober judgment, and at such times he must expect to be pinned down to his facts and cross-questioned shrewdly. Only the other day a member of many years' standing spoke of this habit of the Club's, and of an experience of his own in his younger days, when a certain rash statement was met by a fusillade of questions and remarks that was disconcerting, to say the least. He never forgot it, he said, and had ever since been more careful of his ground when addressing the Club. This wholesome custom of friendly catechization is not infrequently spoken of as one of the Club's real services to its members.

For many years, by the courtesy of its president, Mr. William Brewster, the meetings of the club have been held in his private museum, where, amid surroundings which are ideal for ornithologists and where smoking is allowed—and encouraged—the members have come to feel very much at home. The accompanying flashlight picture, taken at a recent regular meeting and without previous announcement, shows a corner of the museum. As some of the most distinguished members were not included, the picture cannot be regarded as one of the Nuttall Club, but only as of a representative meeting of it.

In the examination which I have been permitted to make of the minutes of the Club, I have noted a few matters of record which for one reason

or another may be of interest to the readers of this article. One is recorded under date of April 1, 1876—the same evening, by the way, when young Henry D. Minot, then a boy of sixteen, was elected a resident member. "Mr. Brewster spoke of the nesting of *P. [=Pyrgita] domestica* [now called *Passer domesticus*] in a box on his grounds. The nest at date was apparently finished, but the eggs not laid."

This was in the early days of the Sparrow invasion! Two years later, January 28, 1878, a memorable discussion of the "so-called English Sparrow question" was held, in which Messrs. J. A. Allen, Minot, Roosevelt, Ruthven Deane, Brewster, Frazar, and others took part; the evidence was decidedly against the bird, and no advocates appeared. The Mr. Roosevelt just mentioned was the same Theodore Roosevelt who is now President of the United States. He had become a member of the Club in the preceding November, and the records show him to have taken an active part in its meetings for some time. Other active members in the early days were Messrs. Allen, Brewster, Deane, and Purdie.

There are no special requisites for membership in the Nuttall Club beyond a good moral character, a genuine interest in the study of birds, a reputation for accuracy, and those qualities of mind and heart which make a man 'clubable.' It is natural that many of the new members should be recruited from that other Cambridge institution, Harvard College, and the freshman age forms practically the lower age limit for admission. There is no limit at the other end of the scale on this side of senility, but naturally most of the new members are young men of limited experience in ornithological work. On the other hand a number of the older members have achieved distinction in the scientific world, and thus it comes about that there are really two elements in the Club, though of course no hard and fast line can be drawn between them, and nothing but the best of feeling exists. The very best results come to the individual members from this association of youth and enthusiasm on the one hand and age and experience on the other, but it is easy to see that but little organized work can be accomplished.

Just how far, therefore, the Nuttall Ornithological Club can be taken as a safe and profitable guide in the formation and management of new bird clubs, it is rather difficult to say. It is obvious that the needs of most such new bodies must be very different from those of an old club composed of men of all ages and of every grade of attainment in scientific study, numbering among its Resident Members seven Fellows, one Corresponding Fellow, six Members, and many Associates of the American Ornithologists' Union, and occupying a territory which has been more closely examined ornithologically than any other in this country. The beginnings of the Nuttall Club, too, were at a very different period of ornithological history from the present. The earlier meet-

ings occupied themselves largely with the more technical branches of the study. Most new clubs, I take it, will devote themselves more to observation than to the examination of skins and will be especially interested in the brand-new art of bird-photography. They will wish, too, to systematize their work much more than has been possible for the Nuttall Club in recent years, and in this way they can accomplish much not only for their members but for the science which they are cultivating.

One of the first things a new club in a comparatively unworked region should do is to map out the fauna of its locality, and to compile migration data. This sort of thing can be done to much better advantage by co-operative work, of course, than by unorganized individual effort. Then there are countless other branches of study that may be taken up in the same systematic manner. Members should be encouraged, however, in investigation on independent lines, and some time should be made at each meeting for general notes of interest from observations in the field. Ornithological science has nearly as many branches as there are individual tastes and temperaments, and it is easy to conceive of a club of almost any size, each member of which should have his own particular specialty, while interested too in what every other member is doing—making it his ambition to know something of everything in ornithology, and everything of something. Perhaps such an organization would, after all, be the ideal bird club.



A WINTER VISITOR

Pine Grosbeak, photographed from life, by Martha W. Brooks, at Petersham, Mass., March 17, 1900

For Teachers and Students

'Bird-Lore's' Advisory Council

WITH some slight alterations and additions we reprint below the names and addresses of the ornithologists forming BIRD-LORE'S 'Advisory Council,' which were first published in BIRD-LORE for February, 1900.

To those of our readers who are not familiar with objects of the Council, we may state that it was formed for the purpose of placing students in direct communication with an authority on the bird-life of the region in which they live, to whom they might appeal for information and advice in the many difficulties which beset the isolated worker.

The success of the plan during the two years which it has been in operation fully equals our expectations, and from both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

It is requested that all letters of inquiry sent to members of the Council be accompanied by a stamped and addressed envelope for use in replying.

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, Biological Survey, Dept. of Agr., Washington, D. C.
ARIZONA, Northern.—Dr. E. A. Mearns, Fort Adams, Newport, R. I.
ARIZONA, Southern.—Herbert Brown, Yuma, Ariz.
CALIFORNIA.—Charles A. Keeler, Calif. Acad. Sciences, San Francisco, Calif.
COLORADO.—Prof. W. W. Cooke, Biological Survey, Dept. of Agr., Washington, D. C.
CONNECTICUT.—J. H. Sage, Portland, Conn.
DELAWARE.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l Mus., Washington, D. C.
FLORIDA.—Frank M. Chapman, American Museum National History, New York City.
FLORIDA, Western.—R. W. Williams, Jr., Tallahassee, Fla.
GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.
IDAHO.—Dr. J. C. Merrill, Army Medical Museum, Washington, D. C.
ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.
ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.
INDIANA.—A. W. Butler, State House, Indianapolis, Ind.
INDIAN TERRITORY.—Prof. W. W. Cooke, Biological Survey, Dept. of Agr., Washington, D. C.
IOWA.—Paul Bartsch, U. S. National Museum, Washington, D. C.
KANSAS.—Prof. D. E. Lantz, Chapman, Kan.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.

- MAINE.—O. W. Knight, Bangor, Me.
 MARYLAND.—F. C. Kirkwood, Box 364, Baltimore, Md.
 MASSACHUSETTS.—William Brewster, Cambridge, Mass.
 MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
 MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth avenue south, Minneapolis, Minn.
 MISSOURI.—O. Widmann, Old Orchard, Mo.
 MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
 NEBRASKA.—Prof. E. H. Barbour, University of Nebraska, Lincoln, Neb.
 NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW HAMPSHIRE.—Prof. C. M. Weed, State Agricultural College, Durham, N. H.
 NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Northern.—Egbert Bagg, 191 Genesee street, Utica, N. Y.
 NEW YORK, Western.—E. H. Eaton, Canandaigua, N. Y.
 NEW YORK, Long Island.—William Dutcher, 525 Manhattan ave., New York City.
 NORTH CAROLINA.—Prof. T. G. Pearson, Greensboro, N. C.
 OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.
 OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 OREGON.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburg, Pa.
 RHODE ISLAND.—J. M. Southwick, Museum Natural History, Roger Williams Park, Providence, R. I.
 SOUTH CAROLINA.—Dr. Eugene Murphy, Augusta, Ga.
 TEXAS, Northern.—J. J. Carroll, Waco, Tex.
 TEXAS, Southeastern.—H. P. Attwater, Houston, Tex.
 TEXAS, Western.—Dr. E. A. Mearns, Fort Adams, Newport, R. I.
 UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.
 VERMONT.—Dr. F. H. Knowlton, U. S. National Museum, Washington, D. C.
 VIRGINIA.—Dr. W. C. Rives, 1723 I street, Washington, D. C.
 WASHINGTON.—Samuel F. Rathbun, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I street, Washington, D. C.
 WISCONSIN.—H. Nehrling, Public Museum, Milwaukee, Wis.
 WYOMING.—Dr. Mortimer Jesurun, Douglas, Wyo.

CANADA

- BRITISH COLUMBIA.—John Fannin, Provincial Museum, Victoria, B. C.
 MANITOBA.—Ernest Thompson Seton, 80 W. 40th street, New York City.
 NEW BRUNSWICK.—Montague Chamberlain, Boston, Mass.
 NOVA SCOTIA.—Harry Peters, 'Stanyan,' Northwest Arm, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—T. McIlwraith, Hamilton, Ont.
 QUEBEC.—E. D. Wintle, 189 St. James street, Montreal, Can.

MEXICO

- F. W. Nelson, Biological Survey, Department of Agriculture, Washington, D. C.

WEST INDIES

- C. B. Corv, 160 Bowdoin street, Boston, Mass.

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

SECOND PAPER

FAMILY 4. STARLINGS. *Sturnidae*. 1 species.

Range.—This family contains some species distributed throughout the eastern hemisphere, including New Zealand and most of the islands of the Pacific, except Australia. It is represented in America only by the Starling, which has been recorded as accidental in Greenland, and is now naturalized and common in the region about New York city, where it was introduced by Mr. Eugene Schieffelin (who also is responsible for the introduction of English Sparrows into New York city, in 1864) in 1890 and 1891. The first year named, 80 birds were released in Central Park;



STARLING. Family *Sturnidae*
One-third natural size

in 1891, 40 birds were given their freedom in the same locality. The species is now common in the upper parts of New York city, and has become established from Staten Island and Bayonne, N. J., on the south to Sing Sing on the north, and the west end of Long Island and Norwalk, Conn., on the east. It has been observed at New Haven, Conn., and Englewood, N. J., and is evidently rapidly increasing in numbers and adding to its range.

Season.—With us, the Starling is a permanent resident.

Color.—The Starling, in common with many members of its family, is

glossy black, the plumage being sprinkled with whitish dots, which are larger and more numerous in winter.

External Structure.—The Starling has a rather long, slender, flattened bill, which, in summer, is yellow, with the outer primary about half an inch long, long pointed wings, a short square tail, and strong, stout feet.

Appearance and Habits.—The Starling's long, pointed wings and short tail give it, in the air, the appearance of a flying spear-head. The wings move rapidly, but before alighting it sails for some distance. On the



HORNED LARK. Family *Alandide*
One-third natural size

ground, its habit of walking and short tail readily identify it. In the fall Starlings gather in flocks, which, near New York city, sometimes contain over 100 individuals.

Song.—When in flocks Starlings utter a singular cackling, metallic chorus. They have also a long-drawn, clear, high, two-noted whistle, the second note being slightly lower than the first.

FAMILY 2. LARKS. *Alandide*. 1 species, 1 subspecies.

Range.—The Larks, numbering about 100 species, are, with the exception of the Horned Larks (genus *Otocorys*), confined to the Old World. The Horned Larks are represented in the Old World by three or more species, and in this country by one species and some twelve races, or subspecies, two of which, the true Horned Lark and its small race, the Prairie Horned Lark, are found east of the Mississippi. The former breeds in Labrador and the Hudson Bay region, and ranges southward in winter to Virginia and Illinois; the latter breeds in the upper Mississippi valley from southern Illinois northward and eastward through western

Pennsylvania, central and northern New York, and Ontario, to western Massachusetts, Vermont and New Hampshire, and appears to be yearly extending its range eastward. In winter it ranges southward to South Carolina and Texas.

Season.—The Horned Lark is found in the middle-eastern states as a winter visitant between October and May. The Prairie Horned Lark is resident throughout the larger part of its breeding range, but wanders southward between October and April.

Color.—Larks are almost invariably colored dull brownish, gray, or sandy above and, with few exceptions, are whitish streaked or blotched with black below.

Size.—The average size of Larks is from 7 to 8 inches, few species being much smaller than these dimensions.

External Structure.—An unusually long hind toe-nail is the common characteristic of almost all Larks; the back of the tarsus is rounded; the outer primary is usually short or rudimentary, the bill, in our species, is rounded and rather slender, and in the genus *Otocorys* a pair of feather-tufts or "horns" appears on the sides of the head.

Appearance and Habits.—Larks are terrestrial and consequently are walkers, not hoppers. They inhabit open tracts of country, where, after the nesting season, they usually are found in flocks. The Horned Larks have the outer tail feathers marked with white, which shows when the bird takes flight—an excellent field-mark, which, however, is also possessed by the Vesper Sparrow.

Song.—Great variability is exhibited in the songs of Larks, the Sky Lark having vocal powers which have made it famous, while some species are comparatively unmusical. As a rule, however, they all agree in singing on the wing, as is customary among terrestrial species which do not mount to a perch when uttering their song.

FAMILY 3. CROWS AND JAYS. *Corvidæ.* 6 species, 3 subspecies.

Range.—The nearly 200 Crows and Jays known to science are found in all parts of the world except New Zealand. They are more common in the northern than in the southern hemisphere, and in America no Crows, and comparatively few Jays, are found south of the Isthmus of Panama.

Season.—Changing the nature of their food as circumstances require, Crows and Jays are usually resident wherever found. Our Crows and Blue Jays, however, migrate and are less common, or wanting, at the northern limit of their range in winter than in summer.

Color.—Crows and their near allies are, as a rule, entirely or largely black; Jays are usually more or less brightly colored, blue being varied with black and white, being a common type of coloration. In both groups the sexes are essentially alike in color.

External Structure.—Crows and Jays, with few exceptions, have a stout, rather long blunt bill, the nostrils are covered by projecting stiff, hair-like feathers; the feet are strong, the scales on the tarsi being clearly marked. The outer tail-feathers are usually the shortest, this being especially true of the Jays.

Appearance and Habits.—Our species are too well known to require

Family *Corvidae*

AMERICAN CROW

BLUE JAY

One-third natural size

description. It is to be noted, however, that Crows are more terrestrial than Jays and are *walkers*, the latter being arboreal, and, consequently, *boppers*. Crows, in the winter, gather in great flocks and frequent a common roost, while Jays at this season are usually found in small companies. Both our Crows and Blue Jay migrate by day.

Song.—While neither our Crows nor Jays may be said to sing, in the commonly accepted sense of the word, both have marked vocal ability and an extended vocabulary of call-notes which evidently are possessed of a definite significance.



What Bird is This?

Field Description.—Length, 5.00 in. Crown black, with a pale central stripe; back rufous-brown, the feathers with small black streaks and ashy margins; bend of the wing pale yellow; under parts white, more or less washed with buff, breast and sides streaked with black; tail feathers narrow and pointed.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in December is the Swamp Sparrow in winter plumage.

The Christmas Bird Census

The unpleasant weather so prevalent on Christmas day doubtless prevented many observers from taking the field, and explains the number of notes made on December 26. Compared with the results of the census made last year the present record also shows a marked absence of such northern birds as Pine Grosbeaks, Crossbills, and Redpolls. Northern Shrikes are apparently less common this year, and several species, notably the Robin, appear to be wintering further north than usual.

BOSTON, MASS. (ARNOLD ARBORETUM)

December 23, 9.15 to 3.15. Cloudy; wind, southwest, light; temp., 34 to 38°.

Bob White, 33; Sharp-shinned Hawk, 1; Downy Woodpecker, 1; Flicker, 3; Blue Jay, 19; Crow, 15; Goldfinch, 2; White-throated Sparrow, 2; Tree Sparrow, 14; Junco, 17; Song Sparrow, 8; Northern Shrike, 1; Myrtle Warbler, 2; Brown Creeper, 3; Golden-crowned Kinglet, 5; Chickadee, 4. Total, 16 species, 130 individuals. (On December 9, a female Red-winged Blackbird was seen upon the snow among tall grasses bordering a water-course feeding upon the seeds.)—HORACE W. WRIGHT.

CAMBRIDGE, ARLINGTON, AND BELMONT, MASS.

December 26, 8.45 to 4.45. Clear; wind, westerly, very light; temp., 35.

Herring Gull, 450 (Fresh Pond, Cambridge, 300; still coming in at 9.30 A. M.); Ruffed Grouse, 1; Marsh Hawk, 1; small Hawk (probably Sparrow Hawk), 1; Downy Woodpecker, 1; Flicker, 6; Blue Jay, 4-5; Crow, 18-20; Purple Finch, 1; Goldfinch, 3-4; Tree Sparrow, 20-25; Junco, 19; Song Sparrow, 10-12; Winter Wren, 1; Brown Creeper, 3; Red-breasted Nuthatch, 1; Chickadee, 20; Golden-crowned Kinglet, 13. Total, 17 species, 563 individuals.

On December 17 one of us saw a Hermit Thrush in the Harvard Botanical Gardens, Cambridge, and on December 18, 4 Red-winged Blackbirds, 14 Meadowlarks, and 1 Rusty Blackbird in the marshes around Fresh Pond, Cambridge.—HOWARD M. TURNER and RICHARD T. EUSTIS.

FRESH POND MARSHES, WREN ORCHARD, BELMONT SPRINGS, AND ARLINGTON HEIGHTS, MASS.

December 26, 8.15 to 3.45.

Black-back Gull, 1; Herring Gull, 150; Downy Woodpecker, 2; Flicker, 6; Blue Jay, 5; Crow, 19; Cowbird, or Red-winged Blackbird, 2; Purple Finch, 2; Goldfinch, 74; Tree Sparrow, 58; Junco, 47; Song Sparrow, 17; Swamp Sparrow, 2; Long-billed Marsh Wren, 1; Brown Creeper, 3; Chickadee, 12; Golden-crowned Kinglet, 6; Robin, 32. Total, 19 species, 441 individuals.—ARTHUR C. COMEY.

WORCESTER, MASS.

Time, 10 A. M. to 3 P. M. Cloudy, drizzling rain part the time; wind, almost none, northeast; temp., 34°.

Ruffed Grouse, 3; Blue Jay, 15; Crow, 6; Goldfinch, 1; Tree Sparrow, about 50; Junco, about 25; Brown Creeper, 2; Red-breasted Nuthatch, 3; Chickadee, 17; Golden-crowned Kinglet, 5. Total, 10 species, about 127 individuals.—W. P. PARKER.

PROVIDENCE, RHODE ISLAND

December 26, 11 A. M. to 2 P. M. Clear, later overcast; wind, west, light. temp., 42°.

Flicker, 1; Crow, 1; Blue Jay, 4; Goldfinch, 3; Tree Sparrow, 20 to 40; Junco, 12 to 20; Song Sparrow, 1; Chickadee, 4; Bluebird, 4 (one singing); Swamp Sparrow, 5; Cedarbird, 1. Total, 11 species, about 84 individuals.—ANNA E. COBB.

GLOUCESTER TOWNSHIP, PROVIDENCE CO., R. I.

Time, 7.30 A. M. to 11 A. M. Thick, cloudy, with sprinkle of rain about 10.45; wind, southwest, light; temp., 33°.

Ruffed Grouse, 1; Hairy Woodpecker, 5; Blue Jay, 10; Crow, 5; Goldfinch, 4; Tree Sparrow, 12; Junco, 4; Myrtle Warbler, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 10; Golden-crowned Kinglet, 3. Total, 12 species, 58 individuals. (December 26, saw 4 Robins.)—J. IRVING HILL.

EDGEWOOD PARK, NEW HAVEN, CONN.

December 24, 2.35 P. M. to 4.45 P. M. Clear; light wind, west; temp., 43°.

Flicker, 1; Blue Jay, 1; Tree Sparrow, 2; Song Sparrow, 8; Junco, 2; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 7; Golden-crowned Kinglet, 2; Robin, 3. Total, 10 species, 29 individuals.—A. A. SAUNDERS.

BRISTOL, CONN.

Time, 8.20 A. M. to 1 P. M. Dark, cloudy weather, light shower at 10 o'clock; wind, southwest, very light; temp., 33°.

Downy Woodpecker, 1; Blue Jay, 5; Crow, 4; Goldfinch (flock), 50; Tree Sparrow, 12; Junco, 8; Song Sparrow, 3; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 8; Golden-crowned Kinglet, 8. Total, 11 species, 102 individuals.—ROYAL M. FORD, FULLER BARNES and FRANK BRUEN.

AUBURN TO OWASCO LAKE, N. Y.

Time, 10 A. M. to 3 P. M. Sky obscured by heavy clouds, snow falling greater part of day and during preceding night, heavy mantle of snow covering ground and trees; wind, moderate northeasterly; temp., 32°.

Horned Grebe, 3; Loon, 13; Herring Gull, 10; American Golden-eye Duck, 157; White-winged Scoter, 3; American Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 3; American Crow, 2; Tree Sparrow, 5; Song Sparrow, 1; White-breasted Nuthatch, 3; Chickadee, 3. Total, 13 species, 223 individuals.—FREDERICK J. STUPP*.

VILLAGE OF CANANDAIGUA AND ALONG THE "OUTLET" TO CANANDAIGUA LAKE

Time, 11.30 to 2 o'clock. Also a moonlight excursion to the Crow-roost three miles north of town. Time, 5.40 to 7.20 P. M. Clear in the evening and freezing slightly, during the day misty, a damp snow clinging to the trees, part of the time a rainy snow falling; temp., 35°.

Herring Gull, 7; Black Duck, 15; Mallard, 2; American Golden-eye, 11; Bob White (tracks), 3; Red-tailed Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 1; Short-eared Owl, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-headed Woodpecker, 1; American Crow, at least 3,000; Meadowlark, 1; Snowflake, 20; Tree Sparrow, 95; Song Sparrow, 2; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 5; Ring-necked Pheasant, 11. Total, 23 species, 3,189 individuals.—ELON HOWARD EATON.

RHINEBECK, N. Y.

Time, 9.30 A. M. to 5 P. M.; cloudy, no wind.

Red-tailed Hawk, 1; Crow, 20; Blue Jay, 2; Hairy Woodpecker, 1; Downy Wood-

pecker, 3; Flicker, 1; Song Sparrow, 6; Junco, 25; Goldfinch, 2; White-breasted Nuthatch, 3; Chickadee, 10; Bluebird, 1. Total, 12 species, about 75 individuals.

On December 27 I also saw here 1 Red-Shouldered Hawk, 11 Meadowlarks, 30 Tree Sparrows, 3 Golden-Crowned Kinglets and 1 Robin.—M. S. CROSBY.

SETAUKET, LONG ISLAND

Time, 9.45 A. M. to 12.10 P. M. Cloudy and threatening, with sprinkle of rain; wind, southwest, fresh; temp., 43°.

Red-shouldered Hawk, 1; Flicker, 1; Horned Lark, 10; Meadowlark, 12; Goldfinch, 20; Chickadee, 1; Robin, 16. Total, 7 species, 61 individuals (Shore-birds not included).—S. B. STORV.

HUNTINGTON, LONG ISLAND

December 26, 10.30 A. M. to 12.30 P. M. Wind, southwest, light; temp., 36°.

Downy Woodpecker, 3; Flicker, 2; Blue Jay, 4; American Crow, 21; American Goldfinch, 5; Junco, 17; Song Sparrow, 1; Myrtle Warbler, 2; White-breasted Nuthatch, 1; Chickadee, 5; Robin, 2. Total, 11 species, 62 individuals.—CHARLOTTE E. LEE.

NEW ROCHELLE, N. Y.

Time, 8.30 A. M. to 11.45 A. M. Cloudy; wind, very light easterly breezes and slight showers; temp., 41°.

Downy Woodpecker, 1; Red-headed Woodpecker, 1; American Crow, 26; Purple Grackle, 6; Song Sparrow, 3; American Goldfinch, 10; Junco, 16; Tree Sparrow, 19; White-throated Sparrow, 3; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 10; Bluebird, 5; Total, 13 species, 105 individuals.—EDWARD KEMBLE.

NEW ROCHELLE, N. Y.

Time, 9.30 A. M. to 11.30 A. M. Cloudy; wind, south, light; temp., 40°.

Downy Woodpecker, 1; Red-headed Woodpecker, 1; Crow, 6; Starling, 3; Goldfinch, 3; White-throated Sparrow, 7; Tree Sparrow, 1; Junco, 20; Song Sparrow, 4; Swamp Sparrow, 2; Fox Sparrow, 2; Brown Creeper, 2; Bluebird, 15. Total, 14 species, 69 individuals.—PERRY ENIGH.

CENTRAL PARK, NEW YORK CITY

Time, 9.30 A. M. to 11.30 A. M. Cloudy, damp, and at times slightly rainy; wind, southeast to southwest, moderate; temp., 38°.

American Herring Gull, about 1,000; Starling, 20; White-throated Sparrow, about 100; Song Sparrow, 3; Golden-crowned Kinglet, about 3. Total, 5 species, about 1,126 individuals. Three Bluebirds were seen on December 15, and Cardinals, Robins, Downy Woodpeckers and Brown Creepers are frequently seen.—CHARLES H. ROGERS.

CENTRAL PARK, NEW YORK CITY

Time, 10.45 A. M. to 1 P. M. Light rain most of the time; wind, southerly, light; temp., 43°.

American Herring Gull (estimated), 550; Downy Woodpecker, 1; Starling, 48 (one flock, singing); White-throated Sparrow, at least 75; Song Sparrow, 4; Fox Sparrow, 3; Cardinal, 2; Brown Creeper, 1; Robin, 1. Total, 10 species, about 685 individuals.—CLINTON G. ABBOTT.

CENTRAL PARK, NEW YORK CITY

Time, 8.45 A. M. to 10.15 P. M. Cloudy; wind, brisk, southeast; temp., 44°.

Herring Gull, 1,000; Starling, 51; White-throated Sparrow, 20; Song Sparrow, 5. Total, 4 species, about 1,076 individuals.—GEORGE E. HIX.

PRINCETON, N. J.

Time, 11 A. M. to 12.47 P. M. Cloudy, slight haze and almost no wind; slight rain at noon; temp., 39°.

Flicker, 1; Crow, about 400; Junco, 6; Song Sparrow, 1; Cardinal, 1; Northern Shrike, 1; Tufted Titmouse, 1; Golden-crested Kinglet, 5; Robin, 1. Total, 9 species, about 417 individuals.—JACK FINE and RANDOLPH WEST.

LAKEWOOD, N. J.

Time, 11 A. M. to 1 P. M. Clear; wind, southeast, light; temp., 48°.

Hairy Woodpecker, 2; Downy Woodpecker, 3; Crow, 5; Blue Jay, 5; Goldfinch (singing), 9; Junco, 42; Song Sparrow, 1; White-throated Sparrow, 2; Brown Creeper, 1; White-breasted Nuthatch, 7; Chickadee, 10; Golden-crowned Kinglet, 8; Robin, 1; Bluebird (singing), 14. Total, 14 species, 110 individuals.

December 9, a Ruby-crowned Kinglet was seen.—MRS. C. J. HUNT.

MOORESTOWN, N. J.

Time, 7.40 A. M. to 5.50 P. M. Cloudiness, 50 per cent, at 12 M. sky uniform gray; at 2.45 P. M., showers; wind, light southwesterly; temp., 37½°.

Red-tailed Hawk, 2; Red-shouldered Hawk, 2; Sparrow Hawk, 3; Downy Woodpecker, 10; Flicker, 3; Horned Lark, 35; Blue Jay, 8; Crow, many hundred; Meadowlark, 30; Purple Grackle, 8; Purple Finch, 7; Goldfinch, 40; White-throated Sparrow (sings), 40; Tree Sparrow, 63; Junco, 81; Song Sparrow (four in song), 48; Cardinal, 11; Winter Wren, 7; Brown Creeper, 4; Tufted Titmouse, 1; Chickadee, 9; Golden-crowned Kinglet, 10; Robin, 1; Bluebird, 5. Total, 24 species, 428 individuals (excluding Crows).—WM. B. EVANS.

DELAWARE RIVER MEADOWS, BRIDESBURG, PHILADELPHIA, PA.

Time, 8 A. M. to 9.30 A. M. Clear; wind, southwest, light; temp., 39°.

American Herring Gull, 3; Marsh Hawk, 3; Sparrow Hawk, 1; Crow, about 400; Field Sparrow, 3; Song Sparrow, 40. Total, 6 species, about 450 individuals.

On December 14, a flock of about 30 Snowflakes was seen, and on December 23 3 Red-winged Blackbirds were seen.—RICHARD F. MILLER.

FRANKFORD, PHILADELPHIA, PA.

Time, 12 M. to 4 P. M. Cloudy; wind, southwest, light; temp., 48°.

Red-shouldered Hawk, 1; Screech Owl, 1; Crow, 3; Goldfinch, 20; White-throated Sparrow, 5; Junco, about 200; Song Sparrow, 6; Cardinal, 1; Chickadee, heard. Total, 9 species, about 218 individuals.—RICHARD F. MILLER.

GERMANTOWN, PA.

Time, 11.15 A. M. to 12.45 P. M. Cloudy, damp; wind, none; temp., 40°.

Red-tailed Hawk, 1; Downy Woodpecker, 1; Flicker, 2; Crow, 5; Goldfinch, 16

(one singing); Cardinal, 2; Junco, 35; White-throated Sparrow, 20 (one singing); Song Sparrow, 18; Carolina Wren, 1 (singing); Golden-crowned Kinglet, 2. Total, 11 species, 103 individuals.

December 15, 2 Robins were seen.—CAROLINE B. THOMPSON and HILDA JUSTICE.

NEAR COATESVILLE, PA., TO THREE MILES SOUTHWEST OF WEST CHESTER, PA.

Time, 8 A. M. to 5 P. M. Partly cloudy to cloudy, light rain during part of afternoon; wind, none or light west or southwest; temp., 32°.

Red-tailed Hawk, 3; Sparrow Hawk, 3; Kingfisher, 1; Downy Woodpecker, 1; Hairy Woodpecker, 1; Flicker, 2; Phoebe*, 1; Horned Lark, 48; Crow, 75; Blue Jay, 1; Meadowlark, 35; Rusty Grackle*, 1; Goldfinch, 1; Tree Sparrow, 30; Song Sparrow, 40; Junco, 150; Cardinal, 2; Brown Creeper, 3; Winter Wren, 1; White-breasted Nuthatch, 4; Chickadee, 1; Golden-crowned Kinglet, 5. Total, 22 species, about 414 individuals.—JOHN D. CARTER.

CHELTENHAM, MD.

Time, 8.45 A. M. to 10 A. M. Overcast; temp., 43°.

Turkey Vulture Buzzard, 1; Sparrow Hawk, 1; Downy Woodpecker, 2; Flicker, 4; Crow, 3; Meadowlark, 1; Purple Grackle, 300 or 400 (this large flock was too far away to be seen distinctly; I had to rely upon the sound); Goldfinch, 40; White-throated Sparrow, 2; Tree Sparrow, 40; Field Sparrow, 6; Junco, 20; Song Sparrow, 15; Cardinal, 1; Tufted Titmouse, 10; Carolina Chickadee, 2; Golden-crowned Kinglet, 1; Bluebird, 2. Total, 18 species, about 500 individuals.—W. G. CADY.

WASHINGTON, D. C., NATIONAL ZOOLOGICAL PARK AND VICINITY

Time, 12 M. to 2.15 P. M. Damp, cloudy and threatening; drizzling at times; wind, southwest, light; temp., 40° to 50°.

Turkey Vulture, 3; Flicker, 3; Downy Woodpecker, 6; American Crow, 40; Cardinal, 10; Song Sparrow, 15; Junco, 30; White-throated Sparrow, 35; Goldfinch, 8; American Crossbill, 7; Winter Wren, 12; Carolina Wren, 10; Brown Creeper, 12; Carolina Chickadee, 15; Tufted Titmouse, 20; Red-breasted Nuthatch, 8; White-breasted Nuthatch, 10; Golden-crowned Kinglet, 40. Total, 18 species, 294 individuals.—HENRY WARNER MAYNARD.

CADIZ, OHIO

Time, 2 to 4 P. M. Cloudy; wind, light, southwest; temp., 38°.

Bob White, 50; Red-tailed Hawk, 1; Downy Woodpecker, 7; Cardinal, 3; Song Sparrow, 11; Tree Sparrow, 40; White-breasted Nuthatch, 8; Chickadee, 2; Tufted Titmouse, 1; Golden-crowned Kinglet, 3; Carolina Wren, 3. Total, 11 species, 129 individuals.—HARRY B. MCCONNELL.

GARRETTSVILLE, PORTAGE COUNTY, OHIO

Time, 2 to 4 P. M. Cloudy; wind, west, light; temp., 36°.

Ruffed Grouse, 6; Sparrow Hawk, 1; Downy Woodpecker, 4; Red-bellied Wood-

* I took special pains to be absolutely sure of the Phoebe and Rusty Blackbird. They were both seen at close range through good field glasses, and also fulfilled all the conditions in respect to voice.

pecker, 1; Flicker, 1; Blue Jay, 2; Tree Sparrow, 50; White-breasted Nuthatch, 8; Red-breasted Nuthatch, 2; Chickadee, 10. Total, 10 species, 85 individuals.—ROSCOE J. WEBB and J. H. TINAN.

RUSSELLVILLE, PUTNAM COUNTY, IND.

Time, 9 to 12 A. M. and 3 to 5 P. M. Cloudy; wind, southwest, light; temp., 37°.

Bob White, 10; Mourning Dove, 10; Red-tailed Hawk, 3; Downy Woodpecker, 6; Red-bellied Woodpecker, 2; Flicker, 1; Blue Jay, 1; Crow, 15; Tree Sparrow, 15; Junco, 25; Song Sparrow, 1; Cardinal, 5; Carolina Wren, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 3; Chickadee, 1. Total, 16 species, 104 individuals.—PHILIP BAKER and RALPH BLATCHLEY.

LA CROSSE, WIS.

Cloudy, with moderate temperature, ranging from 26° to 30°, and light to fresh southerly wind.

Hairy Woodpecker, 1; Bohemian Waxwing, 25; Brown Creeper, 5; White-breasted Nuthatch, 1; Chickadee, 1. Total, 5 species, 33 individuals.—R. H. DEAN.

NORTH FREEDOM, WIS.

Time, 8.38 to 12.40. Cloudy, but about 10 o'clock the clouds cleared away; wind, southwest; temp., 32°+ to 38°+.

Bob White, 12; Ruffed Grouse, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Blue Jay, 12; Crow, 12; Pine Grosbeak, 1; Redpoll, 1; Tree Sparrow, 40; Brown Creeper, 2; White-breasted Nuthatch, 11; Chickadee, 15. Total, 12 species, 115 individuals.—ALICK WETMORE and ART. RUDY.

LA GRANGE, MO.

Time, 9 to 11.30 A. M. and 2 to 4 P. M. Cloudy; wind, little or none; temp., 35°.

Bob White, 1; Red-shouldered Hawk, 2; Pigeon Hawk (?) 1; Hairy Woodpecker, 4; Downy Woodpecker, 13; Red-bellied Woodpecker, 6; Blue Jay, 10; Crow, 4; Purple Finch, 2; Goldfinch, 50; Tree Sparrow, 45; Junco, 35; Cardinals, 5; Northern Shrike, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 8; Chickadee, 35. Total, 17 species, 225 individuals.—SUSAN M. JOHNSON.

BALDWIN, LA.

Time, 9.30 A. M. Clear; wind, west; temp., 70°.

Killdeer, 1; Turkey Buzzard, 8; Cardinal Grosbeak, 2; Red-winged Blackbird, possibly 500; Grackle, about 125; Blue Jay, 12; Crow, 18; Red-headed Woodpecker, 1; Mockingbird, 3; Wren, 2; Ruby-crowned Kinglet, 1; Tufted Titmouse, about 12.—MRS. L. G. BALDWIN.

For Young Observers

THE PRIZE ESSAY CONTESTS

The prize offered for the best account of the habits of the Crow has been awarded to Master Fred T. Morison, of Montclair, New Jersey, whose article appears below. Among other articles on this subject sent in competition, those by the following are deserving of especial mention: Maurice J. Clausen, Toronto, Ont.; Stewart Mackie Emery, Morristown, N. J.; Edmund W. Sinnott, Bridgewater, Mass., and Abe Tout, York, Nebraska.

The editor's object in offering prizes is to encourage original observation, and, as in writing a general account of the habits of a given species one is apt to draw more or less unconsciously on what has previously been written, it is proposed, in the future, to make the essays more original by having them based wholly on personal observation. The next subject, therefore, will be 'Notes on the Birds of February and March.' The article should be a summary, between 700 and 800 words long, of one's observations during these months, and should be sent to the editor in April. The prize offered for the article displaying the best powers of observation and description is any bird-book or books to the value of two dollars.

The Prize Crow Essay

BY FRED T. MORISON (aged 11).

ONE year ago last February I was suddenly taken very sick, obliging me to leave school and spend many months in the country. The time was spent with relatives in northwestern Pennsylvania, but a short distance from Lake Chautauqua, N. Y. I there found an excellent chance to study birds, which I did, when able, until my vacation was over. I saw birds of many kinds, but once having had a tame Crow I took great interest in the wild Crows, and now try to tell you about them. It did not take me long to find out that the Crows were wiser than the little boy who was studying them.

The Crow when full grown is from 17 to 18 inches long by 37 to 38 inches in extent. His plumage is a glossy black, with violet reflections. On one occasion I saw a Crow with some white on it in a flock. The Crow belongs to the 'Guild of Ground Gleaners,' a walker, three toes in front, one behind. His bill of fare is quite varied, consisting of snakes, frogs, insects and their larvæ, fruit, grains, and, if very hungry, carrion. In the spring he seems fond of following the plow to get cut-worms and other grubs, and later of pulling corn, and still later, sometimes flocks of thousands will swoop down on grain-fields, when wheat and corn are in the shock, place one of their number on guard to warn them in case of danger, and, unless driven away, leave but little threshing necessary. But if the sentinel sees a sign of danger it gives one

"Ka," at which all the Crows rise and fly to the woods. Although the Crows do considerable damage to the farmer in various ways, they do great good in destroying the enemies of his crops.

The Crow is as great a thief as the Bluejay in stealing birds' eggs and young. Though it will ravage any small bird's nest it can get at, the nest of the Robin, Wood Thrush, Catbird and Dove are the ones most often attacked. A curious thing about its egg-sucking is that it can pierce the egg with its bill and carry it away to some secluded spot to eat it.

In Pennsylvania its harsh *Ka*, *Ka*, *Ka-a-a* may be heard nearly all months of the year, but in the early spring it makes an effort to sing, making a noise similar to young Crows that have just left the nest. After the warm days come in April, when nesting, in contrast to their noisy cawings earlier in the season, they are silent and but little seen in the open fields from then until their young are hatched. They fly low, flitting like silent, black shadows among the bare-branched trees. I have watched them carrying the sticks for their nests in their bills; some were very heavy but they did not seem to mind the weight, so busy and happy were they at their work, as they wound around among the trees to mislead the observer as to their nesting place. The beech trees are most often selected for nesting in,—those that are scraggy and crotched with plenty of limbs to hide the nest. Although the nest is usually placed forty to sixty feet above the ground, I have seen them not more than twelve feet. The nest, a bulky structure, composed of about a peck of sticks, twigs, leaves and bark, is lined with horse-hair. The walls are often about five inches thick, one foot high and eight inches across. In this brush-heap the old mother Crow quietly sits from two to three weeks on eggs that vary considerably in size and color. The eggs, three to six in number, are about $1\frac{1}{2}$ inches in length by $1\frac{1}{4}$ inches in diameter. In color they are light greenish spotted with brown, black and purple.

When very young the Crow is anything but pretty, being mostly mouth, legs, and stubby pin feathers, but it is not long before his feathers grow out nice, black and shiny, and he learns to fly.

After the nesting season is over the Crows spend the night in large numbers in thick forests. Such a place is called a Crow roost. As each Crow arrives he is greeted with loud *Ka-ings*.

In the autumn the Crows flock together and fly about the fields, occasionally stopping in some tall trees seemingly to discuss some subject. At last they go to the forest, put a young Crow on guard, then have a lively meeting. They all talk at once until they seem to decide upon some plan, then move on, only to repeat it. In very cold weather the Crow goes southward, but soon returns to his old haunts.

Book News and Reviews

THE BIRDS OF NORTH AND MIDDLE AMERICA. A Descriptive Catalogue of the Higher Groups, Genera, Species and Subspecies of Birds Known to Occur in North America, from the Arctic Lands to the Isthmus of Panama, the West Indies and other Islands of the Caribbean Sea, and the Galapagos Archipelago. By ROBERT RIDGWAY. Part I. Family Fringillidae—The Finches. Bull. U. S. Nat. Mus., No. 50, Washington: Government Printing Office, 1901. 8vo. Pages xxxi + 715; pls. xx.

This is the first in a series which, we are told, will, when completed, contain eight volumes, on the preparation of which Mr. Ridgway has been long engaged. The work treats of the classification of birds in general and presents keys to the families, genera, species and subspecies of the birds inhabiting the region covered by the title. The present volume deals with the Finches, of which 227 species and 162 subspecies are included.

In this, his preliminary volume, Mr. Ridgway dwells at some length on the classification of the higher groups of birds, discusses critically the views of Gadow, Fürbringer, Stejneger and other authorities, and gives numerous references to the literature of the subject. The conclusion is reached that the Finches represent the most highly developed birds, and in explanation of his selection of this, rather than the lowest family as subjects for his first volume, it is explained that lack of storage space in the Smithsonian Institution renders the lower forms of birds unavailable for study.

In his treatment of the Fringillidae Mr. Ridgway has been wholly ungoverned by precedent. He says: "In all cases it has been the author's desire to express exactly the facts as they appear to him in the light of the evidence examined, without any regard whatever to preconceived ideas, either of his own or of others." His results, therefore, differ widely from those of other students of this family both in regard to grouping and in the inclusion, highly desirable to our mind, of certain genera among the Finches which

have formerly been placed among the Tanagers.

In regard to the recognition of species and subspecies, Mr. Ridgway writes: "The only question that can possibly exist in the mind of those who have this matter to deal with is the degree of difference which should be recognized in nomenclature, and in this respect there is more or less excuse for difference of opinion, according to one's ability to discern differences and estimate the degree of their constancy, the extent and character of material studies, and the amount of time which has been devoted to its investigation."

Mr. Ridgway, as those who are familiar with his work well know, has the "ability to discern differences" developed in a high degree. Years of training have so sharpened unusually acute perceptive powers that in studying the material on which the volume under consideration is based, doubtless not one race worthy of recognition by name has escaped his attention. Whether they are all worthy of such recognition is, as Mr. Ridgway says, a matter of opinion, but we should always remember that a name becomes proportionately valueless as it becomes uncertain of application.

On the other hand, in compensation, it may be said with equal truth that few or none of the forms which Mr. Ridgway has rejected are probably deserving of nomenclatural rank.

In execution this work bears evidence of skill and thoroughness in preparation which renders it above criticism. Mr. Ridgway possesses a positive genius for analysis and description which, developed by prolonged experience, places him, in our opinion, first among systematic ornithologists. The synonymy is compiled with rare exactness and an unusual discrimination in selection and annotation which make it not merely a matter of names but a guide to the distribution and biography of the species. Measurements are given with satisfactory exactness, the metric system being employed, and the work will be so indispensable to students of the

birds of North and Middle America that we trust the day is not distant when its author will complete his monumental undertaking. — F. M. C.

PROCEEDINGS OF THE NEBRASKA ORNITHOLOGISTS' UNION AT ITS SECOND ANNUAL MEETING, OMAHA, JAN. 12, 1901. 8vo. Pages 101, plates x.

The Nebraska Ornithologists' Union numbers 4 honorary, 63 active, and 36 associate members. The officers are: President, I. S. Frostler; vice-president, Caroline Stringer; recording secretary, E. H. Barbour; corresponding secretary, R. H. Walcott, Lincoln, Nebr.; treasurer, Lawrence Bruner. The organization contains a number of well-known ornithologists, whose diversified interests in the study of birds resulted in the presentation of the following unusually attractive list of papers at their second annual meeting: Presidents' Address—Ornithology in Nebraska, and State Ornithological Societies, I. S. TROSTLER; Birds in Their Relation to Agriculture, LAWRENCE BRUNER; Injurious Traits of the Blue Jay, E. D. HOWE; Ornithology in the Schools, WILSON TOUT; Birds as Objects of Study in the Grades, CHAS. FORDYCE; Nest of the Ruby-throated Hummingbird (Ills.), F. H. SHOEMAKER; Young Rose-breasted Grosbeaks (Ills.), ELIZABETH VAN SANT; Breeding of the Prothonotary Warbler, and Observations on Traill's Flycatcher, M. A. CARRIKER, Jr.; Breeding Habits of Bells Vireo, MERRITT CARY; Notes Regarding a Chimney Swift Tree (Ills.), I. S. TROSTLER; Birds That Nest in Nebraska, LAWRENCE BRUNER; A Peculiar Disease of Bird's Feet (Ills.), E. H. BARBOUR; Internal Parasites of Nebraska Birds, HENRY B. WARD; Changes in the Bird Fauna of the Prairies, L. SESSIONS; Birds of Northwestern Nebraska, J. M. BATES; Collecting Trip to Sioux County, J. C. CRAWFORD, Jr.; Collecting Trip in Cherry County, J. S. HUNTER; Birds From Western Nebraska, A. R. GRAVES; Migration Records and Nebraska Records, R. H. WOLCOTT; In Memoriam: Martin Luther Eaton, R. H. WOLCOTT; Miscellaneous Notes.—F. M. C.

LIVES OF THE HUNTED. Containing a True Account of the Doings of Five Quadrapeds and Three Birds. By ERNEST SETON-THOMPSON. Charles Scribner's Sons, 1901. Pages 360. Drawings 200. Price \$1.75.

Three of the seven stories contained in this book relate to birds; they are entitled: 'A Street Troubador; Being the Adventures of a Cock Sparrow,' 'The Mother Teal and the Overland Route,' and 'Why the Chickadee Goes Crazy Once a Year.' The last is inserted as an example of the author's early work and is "true only in its underlying facts;" the account of the Blue-winged Teal and her brood is based on personal observation; the history of the House Sparrow is founded on known facts in the life-history of the species. We should, however, question here the alleged change in the bird's nest-building instincts. So far as experiment and observation go a bird inherits its ability to construct a certain kind of nest, and this instinct is not affected by its being reared under artificial conditions.

Mr. Seton's phenomenal success has brought him a host of imitators, few of whom were ever heard of before they entered the field as his emulators. Between him and them, however, there exists a wide difference. Ernest Seton is a born naturalist. With unusually keen powers of observation and a broadly human sympathy with animal life, he has the scientist's longing to know. Twenty-five years before he became known to fame he was studying and recording the ways of birds and beasts. Nearly twenty years before the publication of 'Wild Animals I Have Known' he was contributing to scientific journals. His popularity, therefore, rests on no slight foundation, but it is the natural result of the development of a marked literary ability which has made it possible for him to express in words what he sees and feels — F. M. C.

ELEMENTARY ZOOLOGY. By VERNON KELLOGG, Professor of Entomology, Leland Stanford Junior University. New York. Henry Holt & Co. 1901. 12mo. Pages xv + 492; numerous illustrations.

In the forty-six pages devoted to birds in this book much of interest will be found in regard to methods of study, structure and

general habits, together with a brief review of the Orders of Birds.

Part III of the work, "Animal Ecology," treats of animals in relation to their environment and may be read with profit by all students of birds in nature.—F. M. C.

The Ornithological Magazines

THE CONDOR.—The closing number of the third volume of 'The Condor' is devoted chiefly to articles on geographic distribution. The most important paper is Barlow's 'List of the Land Birds of the Placerville-Lake Tahoe Stage Road.' This paper, occupying thirty-four pages and illustrated by five plates and six figures, contains notes on 130 species of summer birds of the central Sierra Nevada. It is based on observations made during six different trips and is supplemented by the field notes of W. W. Price, who has visited the same region regularly for the past nine years. The list proper is prefaced by a description of the country, an account of the life zones, and a brief review of recent work in the region. It is a distinct contribution to the literature of California ornithology, and one which makers of local lists might well take as a model.

Notes of a different character but always of interest are those recording the occurrence of birds in new or unusual localities. Among the more important 'records' in this number are Thompson's notes on the Pacific Kittiwake near Pass Robles, and the Snowy Owl in Santa Cruz county; Belding's capture of the Saw-whet Owl at Lake Tahoe; Swarth's record of the Magnolia Warbler at Los Angeles; and Emerson's notes on the Black and White Creeper in Monterey county, Calif., and the Redstart in the John Day valley, Oregon. Grinnell separates the Least Vireo of southern California as a distinct subspecies (*Vireo pusillus albatus*) and briefly reviews the distribution of the Cedar Waxwing on the Pacific coast. The latter bird he considers 'a migratory species breeding in the Humid Transition zone of British Columbia, Washington and Oregon, wintering in the Upper and Lower Sonoran zones of Southern and Lower California.'

The illustrations are more numerous than usual, among them being two striking half-tones of Gulls on the wing reproduced from 'Camera Craft.' In this connection may be mentioned the announcement that the plans for the next volume contemplate improved illustrations and a new cover. It should be a matter of satisfaction to the members of the Cooper Club and also to readers of 'The Condor' to learn that the journal is now self-sustaining and its permanence assured.—T. S. P.

THE OSPREY.—The three (August, September, and October) numbers of 'The Osprey' which have appeared since our last notice contain much of interest. Dr. Gill's continued article on 'William Swainson and His Times' has reached the eleventh part, but that on the Fishhawks was concluded in the September issue. William Palmer, in 'Some Birds of Kissimmee Valley, Florida,' gives quite full and interesting annotations on many of the species, and in adopting Maynard's name of *purpurea* reopens the question of the subspecific name of the Ground Dove. The paper by F. Finn, of the Indian Museum, beginning in the August and ending in the October number, gives us a very clear idea of how extensively birds are used as pets in Calcutta. Paul Bartsch concludes his article on 'Camping on Old Camp Grounds;' M. S. Ray gives a paper on 'Birds About Lake Tahoe;' A. J. Prill, one, 'A Visit to Otter Rock, Pacific Ocean,' and John W. Daniels, Jr., two, on the 'Prairie Warbler' and 'Blue Grosbeak.'

We have heard, semi-officially, that many improvements will enter into the coming volume. Besides having better paper and new ten-point type, each number will contain twenty-four full line pages, and the reproduction of illustrations will be in charge of an experienced plate printer, so as to insure the best possible results. It is understood that the next volume will commence a new series. We fail to see the desirability of breaking up publications into series, for it makes quotation more complicated, reference hunting more tedious and the care of individual volumes more difficult, without offering any corresponding advantages.—A. K. F.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

FOR the first time in its history — and BIRD-LORE is now entering on its fourth year — this magazine is not issued on the day set for publication. The Editor offers his apologies for the delay which was caused by circumstances beyond his control.

ON the opening page of the initial volume of his great work on American birds, reviewed in this number of BIRD-LORE, Mr. Ridgway makes what, from a broad, biologic point of view, we believe to be an unfortunate distinction between what he terms "*systematic or scientific* and *popular ornithology*." He says: "There are two essentially different kinds of ornithology: *systematic or scientific*, and *popular*. The former deals with the structure and classification of birds, their synonymies and technical descriptions. The latter treats of their habits, songs, nesting, and other facts pertaining to their life-histories." This is equivalent to a statement that only systematic ornithology is scientific ornithology, while most modern biologists would, we think, agree that the systematic study of a group of animals, its classification, is only the first step in its study, to be followed by an even more scientific investigation of the living creature, in which the relation of function to structure, the economy of habits,

in short, the philosophy of physical and mental growth, are to be considered.

The ornithologist who does not regard as contributions to scientific ornithology certain of the researches of Darwin, Wallace, Romanes or Lloyd Morgan, for example, is far from appreciating the possibilities of his chosen subject. A bird is a marvelously eloquent exponent of the workings of natural laws, and to claim that the study of the living specimen is not as scientific and important as the study of the dead one, is to deny that it is not as scientific and important to ascertain cause as to observe effect.

IN publishing a series of papers on the organization and methods of work of local bird clubs in America the Editor has in mind, primarily, the encouragement of the formation elsewhere of similar societies, which will arouse and develop an interest in the study of local bird-life. The first paper in the series appears in this issue of BIRD-LORE and, wholly aside from its historical value, it contains, we think, many suggestions worthy the attention of allied organizations, chief among them being Mr. Allen's description of the informality of the Nuttall's Club meetings. We have observed that the most enjoyable part of the meetings of natural history societies is before and after the meeting. With the Nuttall Club it is all before and after, the evening being devoted to discussion unmarred by the chilling interposition of forms and usages better befitting debating societies than bird clubs.

FROM many readers of BIRD-LORE we have received, during the past two months, very highly appreciated expressions of satisfaction with the character of this magazine and, in reply, we can only repeat that there is "absolutely no limit to our ambition to add to BIRD-LORE'S value and attractiveness." For the present, however, ambition is restrained by the practical question of space, and space by the even more practical question of circulation. The situation, we think, can be improved if our readers would send on a postal addressed to BIRD-LORE, Box 655, Harrisburg, Pa., names and addresses of persons they believe would desire to see a sample copy of BIRD-LORE.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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A Midwinter Meditation

Within the past dozen years the position of the song bird in the community has undergone a radical change, from being a target for any and every gun, a prisoner for anyone who would cage it, empaled on skewers for pan and hat alike, its eggs the acknowledged perquisite of every biped who chose to collect, it is today accorded a place as a citizen of the commonwealth and laws are being continually enacted that, if carried out, would afford all the protection possible in a country whose material growth is continually absorbing open common, woodland and river front.

With the change of sentiment has come a like change in the methods of bird-study. The work of the analytic ornithologist is justly respected as of old, but the trend is toward the study of the living bird, the

camera supplanting the gun; but just how far this is effective remains to be proved. One would think that this change should rob investigation of well-nigh all its dangers at least as far as concerns the bird, but I am convinced it is oftentimes quite the reverse.

The miscellaneous collecting of eggs and the skins of song-birds in their attractive nesting plumage should of course be prohibited, but not more vehemently than certain methods of gunless bird-study—I refer to the harrying of nesting birds in order to watch, and photograph perhaps, the various processes of incubation and nutrition; also the careless method of interesting children in watching and even handling nestlings to the point of driving parents to leave the nest without giving a thought to the rights of the birds in the matter.

The conscientious student who builds a

bark-covered retreat, or sets up a vine-draped tent from which to observe and photograph birds, sometimes using ingenious devices by which the perching bird literally takes its own picture, is the only one whose observations of the living bird are of serious value, the patient waiter who, having located a nest, or even suspected its location, goes quietly, sits down and waits. Do you remember what that quaint individuality who wrote under the name of "Nessmuck" said about waiting? "There is an art little known and practiced, that invariably succeeds in outflanking wild animals: an art simple in conception and execution, but requiring patience: a species, so to speak, of high art in forestry—the art of sitting on a log." Now, many bird students do not care to sit on logs and wait; their time is limited and they wish to produce certain results with little trouble. Instead of going to the nest, they remove nest, young birds and all, to a place of visual or photographic vantage, trusting to the parental love to follow and tend the young or to hover in an agony of fear until the nest is returned; anything, in short, so that they do not *intentionally* kill the birds; if they die from exposure, long fasting, etc.,—well, it's a pity, but—accidents will happen, you know.

A few years ago a writer in "Recreation" expressed a doubt about the general study of the living bird by the masses, saying (I cannot quote literally) that "if the birds could speak they would say, 'Love us and leave us alone.'" At the time it seemed rather sweeping, but a few year's experience proves it true as far as the nesting season goes. The intimate study of the home-life and habits of wild birds should be done by the individual the same as the study of its anatomy, and not attempted by the mob.

The promiscuous field bird class should be for the identification of the adult bird alone, not the ferreting out of nests. I once inadvertently drove a pair of rare warblers from my own woods. Through thoughtlessness I took two bird lovers to see the nest on the same day, which bred distrust in the parent birds, though they were perfectly accustomed to me, and they abandoned the

nearly hatched eggs. What damage can be done to a park or grove, as a breeding haunt, if a dozen or twenty people are "personally conducted" to examine its various nests and literally addle the unhatched eggs by misplaced enthusiasm!

It is the solitary student capable of sitting on the log, who sees the things and makes the discoveries. Among our women students Mrs. Olive Thorne Miller was, I think, the first to practice this theory. There is little of value to be learned by what a recent nature story calls "A Cook's Tour in Bird-land," the leader of which goes to any length to show a given amount for given pay, irrespective of damage to the birds, or to obtain a marketable photograph at any cost, or an exhibition in a minor degree of the same spirit of commercialism that deprives birds of their plumage to supply the millinery market.

In short, as the wild slowly but surely is becoming subject to the civilized, extreme conservatism must prevail in all branches of nature study if we expect to still have nature to study. Also, the economic effect is the same whether a collector robs a nest, careless observers cause it to be abandoned, or the young die from an overdose of photography.

A story of the study of a living bird is going the rounds of the papers. It concerns experiments recently made at Antwerp regarding the swiftness of a Swallow's flight.

The bird was nesting in the gable of the railway station, and it was sent to a point 140 odd miles away. On being liberated the bird flew back to its nest in one hour and eight minutes, or at the rate of 128 miles per hour. What does this teach,—can that flight under the spur of parental anguish be considered typical?

Once upon a time there was a little boy, a very bright, inquiring lad, who, if he often got into mischief, probably did it because, with boys, mischief and brightness are fitted as closely together as the rind to the orange. This boy joined the Audubon Society, put his popgun away in the garret, and resolved in future only to add spoiled eggs to his cabinet.

He listened to a lecture about the obser-

vation and study of the living bird, and one June day set forth to "observe." He knew the village street well and where the nests of half a dozen birds were located, Robins, Wrens, Song Sparrows, Catbirds, Yellow Warblers, Chippies, and the like. There were young birds in almost every nest; of these he made a collection, one from each, and with the aid of a ladder forced the birds to exchange children — result, pandemonium and a feathered riot.

The boy merely said that he wished to see what the birds would do, and he saw that for dire results he might almost as well have stolen the unhatched eggs. A more mature student would have probably written a paper on "Race Antipathy in the Nesting Season: a Study of the Living Bird."

M. O. W.

Reports of Societies

FIFTH ANNUAL REPORT OF THE PENNSYLVANIA AUDUBON SOCIETY

During the past year the Pennsylvania Audubon Society has conducted its work on practically the same lines as heretofore, with very encouraging success, while the results obtained through the efforts of the American Ornithologists' Union, U. S. Department of Agriculture, and other bodies in the interests of bird protection in America have been of such importance that an outline of them is here given in order that our members may keep in touch with this work.

Through the money subscribed to the "Thayer Fund," wardens have again been employed to guard the breeding Terns and Gulls from Maine to Chesapeake Bay and millinery collectors have been effectually kept from disturbing them. Mr. Baily, of the Pennsylvania Society, has superintended this work in New Jersey. In addition to this, more stringent laws have been passed in many of the states in the interests of the birds.

The nature and provisions of the Lacey Act having been carefully explained to the leading wholesale milliners of the eastern cities, they have almost universally ceased to deal in any native American birds. The apparent increase in the use of birds during

the present season is due largely to the selling off of old retail stock and to the trade in foreign birds.

Investigation by officers of the Pennsylvania Audubon Society shows that most of the quills and fancy tufts of feathers now so largely used in millinery are made from the plumage of foreign wild birds, notably Indian species. The laws of this country do not apply to imported birds, and this trade can only be discouraged by the refusal of members of the Audubon Societies to use *any* feathers for decoration except ostrich plumes and feathers obviously from domestic fowls, such as long black chicken feathers, turkey quills, etc.

The attention of our members is particularly called to this matter, as so many of the alleged quills and feathers of domestic fowls are really from wild birds. In order to stimulate the use of birdless millinery an arrangement has been made with Mr. George Allen, 1214 Chestnut Street, Philadelphia, by which he will devote one case in his store entirely to "Audubon hats."

On January 5, 1901, the annual meeting of the Pennsylvania Audubon Society was held in the lecture hall of the Academy of Natural Sciences. Mr. Stone presided and made the opening address, being followed by Mr. George Spencer Morris and Mr. William L. Baily, who spoke respectively on "Winter Birds" and "Bird Study with the Camera." As usual the hall was crowded and great interest was shown in the meeting.

During the year the membership has increased to 6,700, and requests for circulars and information have been received from many parts of the state not hitherto represented in the Society.

In all, some 8,000 circulars and pamphlets have been distributed, many of which have been placed in village stores, schools and reading-rooms. The number of local secretaries has increased in a most encouraging manner, and we now have representatives in sixty-seven towns, villages, etc., through the state.

During the year a Committee on Traveling Nature-Study Libraries was appointed under the management of Miss Hilda Justice. In response to a circular issued in June,

enough money was received to purchase ten libraries of ten books each mainly devoted to birds. These are now in circulation among the public schools of Pennsylvania, but more than twice the number of books could be used without satisfying the demand, so popular have the libraries become. Each library may be kept three months and the only expense to the school is the freight on the books, an average sum of about 35 cents. The object of the libraries is to interest the children in birds and bird-protection and to arouse a love for all nature study.

The organization in Philadelphia of the Spencer F. Baird Ornithological Club by a number of ladies, is directly due to the influence of the Audubon Society and is an example that can well be followed in other cities and towns to stimulate bird study.

Beginning with 1902 the Society is forced to establish a new class of membership to be known as Sustaining Members, to which we call particular attention. It will include at the outset all those who have aided the Society by contributing to its funds, or by acting as local secretaries, and to these the reports and circulars of the Society will be sent as heretofore. All other members who desire to receive the reports, notices of meetings, etc., may do so by contributing a sum of not less than one dollar to the Society. This is not an annual assessment but simply one payment. We trust that a large number of our members will enroll themselves in this class and so materially aid in the work of the Society. The Society is forced to this action by the increased cost of postage incident to a constantly growing membership.

The annual meeting of the Society was held January 11, 1902, at 3 P. M. in the Lecture Hall of the Academy of Natural Sciences, Nineteenth street below Race.

On Monday evenings, January 6 to February 3, at 8 P. M. a course of free lectures will be delivered in the same hall by Mr. Witmer Stone, Conservator of the Ornithological Section of the Academy, on "Structure and Life Histories of some Common Birds."

To these you and your friends are cordially invited.

In closing, we would again call attention to the fact that our work is limited strictly by the amount of funds at our disposal, and we hope our members will aid us as far as possible in this manner. The purchase of more traveling libraries, the delivery of lectures in more remote parts of the state and the publication of additional literature are especially desired but can only be accomplished by increased funds.

All contributions should be sent to William L. Baily, treasurer, 421 Chestnut St., Philadelphia, or to

JULIA STOCKTON ROBINS, *Secretary*.

MRS. EDW. ROBINS,

114 S. 21st St., Philadelphia.

An Addition to the White List

Miss J. E. Hamand, secretary of the Audubon Society of Shaller, Iowa, sends the name of Mrs. Mary Smith Hayward, of Chaldron, Nebraska, for the Milliner's White List: not only for many years was she the only milliner in the United States who never sold birds, wings or aigrettes, but she has distributed leaflets showing the evil of the decorative uses of feathers among her customers and offered prizes in the local schools for essays upon bird protection.

The Thayer Fund

'The Auk' for January, 1902, contains Mr. William Dutcher's annual report on the 'Results of Special Protection to Gulls and Terns Obtained Through the Thayer Fund.' This report fills twenty pages of 'The Auk,' and is far too interesting and important to be adequately treated in the space at our command. Copies may be obtained of Mr. Dutcher for four cents if application is made before the limited supply is exhausted.

The expenditures of the committee for the year were slightly more than \$1,800, and the surprising results achieved with this comparatively small sum constitute an eloquent argument for the committee in its appeal for funds to continue and extend its operations.

Contributions may be sent to William Dutcher, Treasurer, 525 Manhattan avenue, New York city.



FLORIDA GALLINULE. (See page 50)
One-half natural size.

Bird = Lore

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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. IV

MARCH — APRIL, 1902

No. 2

Voices of a New England Marsh

BY WILLIAM BREWSTER

With illustrations from mounted specimens in the American Museum of Natural History

TO most people a fresh water marsh has little to offer in the way of beauty or attractiveness. Indeed it is quite generally regarded as so much waste land; unsightly from its primitive condition; unprofitable because of the difficulty of harvesting its coarse and unnutritious grasses; even prejudicial to the comfort and health of those who dwell near it by reason of the swarms of venomous mosquitoes and noisy frogs which it harbors and the noxious, malarial vapors which it is popularly supposed to generate.

Such at least appears to be the consensus of opinion respecting the Fresh Pond marshes at Cambridge, although from the time of Nuttall and the Cabots to the present day they have been to a small, but steadily increasing number of nature lovers and sportsmen, an inexhaustible source of interest and enjoyment. During this period they have suffered many and grievous changes, but there yet remains an 'unimproved' area sufficiently large and primitive to attract and shelter innumerable muskrats, a few minks and, at the proper seasons, many species of wading and water birds. The voices of these and other marsh-frequenting-creatures have always had for me an absorbing interest—due largely, no doubt, to the extreme difficulty of disentangling and identifying them; as the editor of BIRD-LORE encourages me to think that they may also interest some of its readers I have attempted, in the present paper, to describe the sounds with which I am more or less familiar, at the same time briefly sketching some of the more characteristic habits of their authors and touching still more lightly on the aspects which their favorite haunts wear at the different seasons.

Through the long New England winter the Fresh Pond marshes are encased in glittering ice or buried deep under a mantle of wind-sculptured snow. Flocks of Snow Buntings occasionally circle over them; Shrikes and Hawks of several kinds perch on the isolated trees to watch for prey;

a few Red-winged Blackbirds and Meadowlarks come in at sunset to spend the night; Tree Sparrows frequent the alder thickets; and the extensive beds of cat-tail flags, bent down and matted together by the snow, afford shelter for numerous Song and Swamp Sparrows as well as for one or two Long-billed Marsh Wrens. On mild, calm mornings the Sparrows may be heard chirping to one another from the different covers and late in February the Song Sparrows sing a little in subdued, broken tones, but during most of the period when winter holds full sway the marshes are as silent as they are desolate.

The awakening comes in March when the deeper pools and channels begin to show open water and the snow and ice everywhere are rapidly wasting under the ever increasing strength of the sun's rays. The Song Sparrows, Tree Sparrows, Red-winged Blackbirds and Rusty Blackbirds that have passed the winter further south arrive in force at this time, and at morning and evening, before the blustering northwest wind has risen and after it has lulled for the night, they fill the marsh with their voices. The Red-wings are scattered about, perched conspicuously on the topmost twigs of isolated shrubs or low trees, their sable forms sharply outlined against the light background of water, snow or sky, each bird flashing his scarlet epaulets in the sunlight for an instant, just as he swells his plumage and half opens his wings to utter his rich, guttural *ô-ka-lée*. The Rusties pass and repass over the open in loose flocks, with undulating flight, or alight in the upper branches of the trees to indulge in one of their rather infrequent outbursts of tinkling medley-singing before descending to feed on the margin of some shallow pool fringed with button bushes or overhung by willows. The Song Sparrows, although less noticeable than the Blackbirds, by reason of their soberer garb and more retiring habits, are also constantly in sight, flitting from bush to bush or perching on some exposed twig to chant their sweet, earnest songs; but the wild, ringing, rapidly delivered notes of the Tree Sparrows issue, as a rule, from the depths of the thickets where the birds keep closely concealed. These voices, with, perhaps, the tender, plaintive warble of some passing Bluebird or at evening, towards the close of the month, the merry peeping of Pickering's hylas are the characteristic March sounds of the Fresh Pond marshes as well as of many similar places in eastern Massachusetts. How they soothe and refresh the senses after the long silence of winter, breathing to every one of refined sensibilities the very essence of early spring! To those who have long known and loved them they are inexpressibly grateful and precious, touching the chords of memory more subtly than do any other sounds, recalling past associations—albeit often saddened ones, and filling the heart with renewed courage and hope for the future.

After the 6th or 7th of April the temperature rarely falls below the freezing point and by the 10th or 12th of the month the marshes are usually

free from frost, although for a week or two later they show scarce any trace of green. Indeed at this time they are even more dreary and barren looking than in late autumn, for the deep and varied tones of russet which they wore at that season have since bleached to a uniform faded brown, and the once erect, graceful reeds and grasses, broken by the wind and crushed under the weight of the winter's snows, cover the sodden ground and shallow surface water with melancholy wreckage. Nevertheless the marshes are by no means unattractive at this time. It is good to breathe the soft, moist air laden with those indescribable and pleasingly suggestive odors peculiar to the place and season; and if vegetation is somewhat backward there is no lack of conspicuous animal life and sound. The birds now sing more or less freely throughout the day and at morning and evening with the utmost spirit and abandon. Besides the Blackbirds and Song Sparrows there are numbers of Tree Sparrows up to the middle of the month (when most of them depart for their summer homes at the north) and Swamp Sparrows in abundance after the close of the first week. From this time until midsummer the song of the Swamp Sparrow is one of the most frequent and characteristic of the voices of the marsh. It is a rapid, resonant trill suggestive of that of the Chippy but much more spirited and musical.

As soon as the frost is well out of the meadows the Wilson's Snipe arrive. During the daytime they remain silent and closely hidden among the grass, but just as twilight is falling one may hear the hoarse, rasping flight-call, *scaipe, scaipe, scaipe*, repeated by several birds rising in quick succession from different parts of the marsh. Some of them alight again after flying a few hundred yards, but if the evening be calm and mild one or two of the males, filled with the ardor of the approaching love season, will be likely to mount high into the air and begin flying in great circles every now and then pitching earthward, sometimes abruptly and almost vertically, again scarce perceptibly, at each descent making a tremulous humming sound not unlike the winnowing of a domestic Pigeon's wings but louder or at least more penetrating for it is audible, under favorable conditions, at a *distance of nearly a mile*. It has at all times a strangely thrilling effect on the listener and when heard directly overhead and without previous warning of the bird's presence it is positively startling in its weird intensity. It is supposed to be produced by the air rushing through the Snipe's wings during his swift descent.

In the springtime Snipe produce another peculiar sound, a low, rolling *kuk-kuk-kuk-kuk-kuk*, evidently vocal and usually given while the bird is standing on the ground although sometimes accompanying a slow, labored and perfectly direct flight at the end of which he alights on a tree or fence post for a few moments. This, as well as the aerial circling and plunging, may be sometimes witnessed in broad daylight when the weather is stormy,

but both performances are ordinarily reserved for the morning and evening twilight or for nights when there is a nearly full moon.

Unlike the Snipe, which pass further north to breed, the Bittern is a summer resident of our marshes. He sometimes arrives in March, but his presence is likely to be overlooked until about the middle of April, when he begins to make it evident to the dullest ears by his stentorian voice—louder and, perhaps, also more remarkable than that of any other wild creature found in eastern Massachusetts. Standing in an open part of the meadow, usually half concealed by the surrounding grasses, he first makes a succession of low clicking or gulping sounds accompanied by quick opening and shutting of the bill and then, with abrupt contortions of the head and neck unpleasantly suggestive of those of a person afflicted by nausea, belches forth in deep, guttural tones, and with tremendous emphasis, a *pump-er-lunk* repeated from two or three to six or seven times in quick succession and suggesting the sound of an old-fashioned wooden pump. All three syllables may be usually heard up to a distance of about 400 yards, beyond which the middle one is lost and the remaining two sound like the words *pump-up* or *plum-pudd'n* while at distances greater than half a mile the terminal syllable alone is audible, and closely resembles the sound produced by an axe stroke on the head of a wooden stake, giving the bird its familiar appellation of "Stake Driver."

At the height of the breeding season the Bittern indulges in this extraordinary performance at all hours of the day, especially when the weather is cloudy, and he may be also heard occasionally in the middle of the darkest nights, but his favorite times for exercising his ponderous voice are just before sunrise and immediately after sunset. Besides the snapping or gulping and the pumping notes the Bittern also utters, usually while flying, a nasal *baink* and a croaking *ok-ok-ok-ok*.

Belonging to the same family as the Bittern but differing widely from it—as well as from each other—in voice and habits, are the Night Heron and the Green Heron. The former species was once very common in the Fresh Pond marshes but is fast deserting them. A few birds remain with us through the winter but the majority arrive early in April and depart before November. As its name implies the Night Heron is inactive by day but in the evening twilight, as well as throughout the darkest nights, we hear over the marshes the deep, hoarse *quawk* which it gives every half minute or so while flying. Besides this call it makes at times a variety of loud, raucous sounds, some of which have been compared to the cries of a person suffering strangulation. The Green Heron rarely appears in our latitude before the 20th of April. It is still a common summer resident of the Fresh Pond marshes and being diurnal in its habits and by no means shy it is oftener seen there than either of the other Herons just mentioned. In addition to the abrupt and rather startling *scow* which is its ordinary call,

especially when on the wing, it sometimes utters a rattling *gc-gc-gc-gc-gc* and more rarely a deep, hollow groan very impressive when heard, as is often the case, in the depths of some heavily shaded swamp.

About the middle of April we begin to hear in our marshes, usually in the early morning, late afternoon or during cloudy weather, and coming



VIRGINIA RAIL. One-half natural size

from some briary thicket or bed of matted reeds, a guttural *cut, cut, cutta-cutta-cutta* repeated at brief intervals, often for hours in succession. This is occasionally interrupted or closely followed by a rapid succession of low yet penetrating grunts not unlike those of a hungry pig. The Virginia Rail is the author of both these sounds, the former appearing to be peculiar to the male and, no doubt, his love song. When heard very near at hand it has a peculiar vibrant quality and seems to issue from the ground directly beneath one's feet. The grunting notes are given by both sexes but, with

rare exceptions, only during the breeding season. The female when anxious about her eggs or young also calls *ki-ki-ki* and sometimes *kiu* like a Flicker.

In the more open, grassy stretches of meadow, as well as among the beds of cat-tail flags but seldom, if ever, in thickets of bushes, we also hear, after the middle of April, mingling with the notes of Virginia Rails and the din of countless frogs, the love song of the Carolina Rail, a sweet, plaintive *ɔ̄r-e* given with a rising inflection and suggesting one of the 'scatter calls' of the Quail. Such, at least, is its general effect at distances of from fifty to two or three hundred yards, but very near at hand it develops a somewhat harsh or strident quality and sounds more like *kà-e*, while at the extreme limits of ear range one of the syllables is lost and the other might be easily mistaken for the peep of a Pickering's hyla. This note, repeated at short, regular intervals, many times in succession, is one of the most frequent as well as pleasing voices of the marsh in the early morning and just after sunset. It is also given intermittently at all hours of the day, especially in cloudy weather, while it is often continued, practically without cessation, through the entire night.

Equally characteristic of this season and even more attractive in quality is what has been termed the 'whinny' of the Carolina Rail. It consists of a dozen or fifteen short whistles as sweet and clear in tone as a silver bell. The first eight or ten are uttered very rapidly in an evenly descending scale, the remaining ones more deliberately and in a uniform key. The whole series is often followed by a varying number of harsher, more drawling notes given at rather wide intervals. Although it is probable that the 'whinny' is made by both sexes I have actually traced it only to the female. She uses it, apparently, chiefly as a call to her mate, but I have also repeatedly heard her give it just after I had left the immediate neighborhood of her nest, seemingly as an expression of triumph or rejoicing at the discovery that her eggs had not been molested. When especially anxious for their safety and circling close about the human intruder she often utters a low whining murmur closely resembling that which the Muskrat makes while pursuing his mate and sometimes a *cut-cut-cutta* not unlike the song of the Virginia Rail, but decidedly less loud and vibrant. In addition to all these notes both sexes have a variety of short, sharp cries which they give when startled by any sudden noise.

Although the hylas and leopard frogs may be occasionally heard before the close of March as well as frequently after the 1st of May they are invariably most numerous—or rather vociferous—in April. The notes of Pickering's hyla are pitched very high in the scale, but they are clear and crisp rather than shrill, and the *peep, peep, pee-e-eeep* of six or eight individuals, coming at evening from different parts of the marsh, is one of the most pleasing and suggestive of all spring voices; when two or

three hundred are calling at once, however, the din is rather overpowering and at times also annoying, for it more or less completely drowns all other sounds.

The notes of the leopard frog have been not inaptly compared to the sound of snoring. In early April they are heard oftenest during the



SORA (One-half natural size)

warmer hours of the day, but after the middle of the month these frogs snore chiefly — as seems, indeed, appropriate — by night. When the weather is calm and the voices of hundreds of individuals are coming from far and near, they fill the air with sound that never ceases for an instant, although ever fluctuating in volume like the rote of distant surf.

The pickerel frog is also very common in our meadows. Mr. Sidney F. Denton tells me that it begins croaking rather later in the season than the leopard frog and that its notes resemble those of that species.

but are nevertheless distinguishable. I have never succeeded in identifying them, but I suspect that they are the sounds which we hear so frequently in the marshes toward the close of April and early in May, and which, although generally similar to those made by the leopard frog, are more disconnected and of a sharper, harder quality, suggesting the slow grating of some gigantic creature's teeth.

Comparatively few of the people who consider themselves familiar with our common garden toad are aware that it is the author of the shrill, prolonged, and not unpleasant trilling sounds which, mingled with the peeping of the hylas and the "snoring" of the leopard frogs, may be heard in April in almost any marsh or shallow pool. This trill is the love song of the male and is peculiar to the mating season, which both sexes spend together in the water. After the eggs are laid the male, at least, continues to frequent the shores of ponds and rivers where, through the latter part of May and most of June, it utters, chiefly by night and at short, regular intervals, an exceedingly loud and discordant *quar-ar-r-r-r*.

Still another batrachian voice which may be heard about the end of April, once or twice in a lifetime, if one is *very* fortunate, is that of the spade-footed toad. This singular creature is said to live at a depth of several feet under ground and to leave its subterranean retreat not oftener than once in every seven years and then but for a single day and night, during which its noisy amours are accomplished and the eggs laid. I have twice found it thus engaged, on both occasions in a hollow filled with stagnant water near my home in Cambridge and not far from the Fresh Pond marshes. Although the second and last experience happened over thirty years ago I can still remember with perfect distinctness the tremendous din which the spade-foots made about this little pond during an entire day and the whole of the following night. Their notes, as I recall them, were all croaking and outrageously loud and raucous, but they varied somewhat in pitch, although all were rather low in the scale.

By the beginning of May the marshes have almost wholly lost their bleached, watery aspect and are everywhere verdant with sprouting rushes and rapidly-growing grass. A week or two later they are perhaps more attractive than at any other period of the year. The grass is now six or eight inches high and the bushes and isolated trees are covered with unfolding leaves or pendulous catkins of the most delicate shades of tender green, golden yellow and pink or salmon, while scattered shad bushes, crowded with creamy white blossoms, stand out in bold relief about the edges of the thickets. Yellow Warblers are singing in the willows, and the *witchery-witchery-witchery* of the Maryland Yellowthroat comes from every briar patch or bed of matted, last year's grass. A few Long-billed Marsh Wrens have also arrived and are performing

their curious antics and uttering their guttural, gurgling songs among the cat-tail flags where, a little later, numbers of their interesting globular nests and chocolate brown eggs may be found by any one provided with a good pair of wading boots. The Short-billed Marsh Wrens no longer inhabit the Fresh Pond marshes, although they were common enough there twenty-five years ago, breeding in an extensive tract of rank but fine grass which, like the birds themselves, has since disappeared. They sing later into the summer than the Long-bills, and their notes, which are radically different, may be roughly imitated by the syllables *chip, chip, shée-shée-shée*, the first two given distinctly and emphatically, the remaining three rapidly and in a low, somewhat hissing tone.

About the middle of May, or a few days earlier in forward seasons, the Florida Gallinules arrive (see frontispiece). Like the Rails they are given to skulking among the grass or flags but at morning and evening we occasionally see them swimming across pools or ditches, their brilliant scarlet bills and frontal shields flashing in the level beams of the rising or declining sun. They are noisy birds at this season and some of their cries are second only to those of the Bittern in strength and grotesqueness. One of their commonest vocal performances is a loud and prolonged outcry consisting of a succession of hen-like *cucks*, given rather slowly and at nearly regular intervals, and frequently ending with a harsh, drawling *ké-ar-r, ké-ar-r*. They have other calls so numerous, complex and variable that it is difficult to describe them briefly and at the same time adequately. Sometimes they give four or five loud, harsh screams very like those of a hen in the clutches of a Hawk, but uttered more slowly and at wider intervals; sometimes a series of sounds closely resembling those made by a brooding hen when disturbed, but louder and sharper, succeeded by a number of lower, more querulous cries intermingled with subdued clucking; occasionally something which sounds like *kr-r-r-r-r, kruc-kruc, krar-r; kb-kb-kb-kb-kea-kea*, delivered rapidly and falling in pitch towards the



LONG-BILLED MARSH WREN
(One-half natural size)



SHORT-BILLED MARSH WREN
(One-half natural size)

occasionally something which sounds like *kr-r-r-r-r, kruc-kruc, krar-r; kb-kb-kb-kb-kea-kea*, delivered rapidly and falling in pitch towards the

end. Shorter and more frequent utterances are a low *kloc-kloc* or *kloc-kloc-kloc* and a single explosive *kup* very like the ejaculation of a startled frog. Nearly all these cries are loud and discordant and most of them are curiously hen-like.

Quite as retiring by nature as the Rails and Gallinules and even less conspicuous, by reason of its habitual silence, the Least Bittern, most diminutive of our Herons, passes almost unnoticed save by the ornithologists, although it is a not uncommon summer resident of the Fresh Pond marshes, arriving about the middle of May and departing late in August. It is one of the most feeble, listless and timid-seeming of all birds and its habits are in perfect keeping with its appearance, for, excepting when flushed from the beds of cat-tail flags where it apparently spends its entire time, and where its frail nest is suspended a foot or more above the water, it is seldom seen on wing even at nightfall when so many other faint-hearted creatures move about with more or less freedom and confidence. Nor do we often hear its voice save during a brief period at the height of the breeding season when the male, concealed among the rank vegetation of his secure retreats, utters a succession of low, cooing sounds varying somewhat in number as well as in form with different birds or even with the same individual at different times. The commoner variations are as follows: *cöö*, *hoo-hoo-höö* (the first and last syllables slightly and about evenly accented), *coo-coo*, *coo-hoo-höö* (with distinct emphasis on the last syllable only), *co-co-co-co*, *co-co-ho-ho* or *co-ho-ho* (all without special emphasis on any particular syllable).

These notes are uttered chiefly in the early morning and late afternoon, usually at rather infrequent intervals but sometimes every four or five seconds for many minutes at a time. When heard at a distance they have a soft, cuckoo-like quality; nearer the bird's voice sounds harder and more like that of the domestic Pigeon, while very close at hand it is almost disagreeably hoarse and raucous as well as hollow and somewhat vibrant in tone. Besides this cooing the Least Bittern occasionally emits, when startled, a loud, cackling *ca-ca-ca-ca*.

The leopard frogs may be heard occasionally, and the hylas not infrequently, early in May, and the bull frog very commonly towards its close, but the batrachian voices most characteristic of this month are the harsh squawk of the garden toad, already described, and the love notes of the tree toad. During the brief period—scarce exceeding a week—which the male of the species last-named spends with the female in the water (where the eggs are laid) before returning to his favorite hollow branch in some old orchard or forest tree, he and his comrades of the same sex fill the marshes in the late afternoon and through the night with the sound of their joyous contralto voices. The rather pleasing, rolling notes which they utter at this time are not essentially different

from those which we occasionally hear in our orchards in summer, especially just before a rain, but they are now given more rapidly and at shorter intervals as well as with much greater spirit.

During the last two weeks of May and the first ten days of June the



LITTLE BLACK RAIL. (One-half natural size)

bird voices of the marshes are at their fullest and best. The Robins and Song Sparrows, it is true, are comparatively silent at this time, but all the other species continue to sing with undiminished fervor, at least during the cooler hours, while several of them may be heard now with greater certainty or to greater advantage than at any other season. The first signs of decadence are usually noted about the middle of June. Before its close the Bitterns, Rails and Gallinules become silent, and the Bobolinks nearly so, while the songs of the Marsh Wrens, Yellow Warblers, Maryland Yellowthroats and Red-wings steadily decline in vigor and frequency.

There is a voice, evidently that of a bird, and almost without question belonging to some kind of Rail, but not as yet definitely identified, which has been heard in the Fresh Pond marshes during one season only; viz., in June, 1889. It has since been noted at one or two other similar localities in Eastern Massachusetts, never earlier than May 18 nor later than June 25. As I have already published* a detailed account of my experience and impressions relating to it, as well as my reasons for believing that it is the

* Auk, xviii, No. 4, Oct., 1901, pp. 321-328.

voice of the Little Black Rail,* it seems unnecessary to give, in this connection, anything more than the briefest description of its notes.

They vary considerably in number, as well as somewhat in form and quality. The commonest forms are as follows:

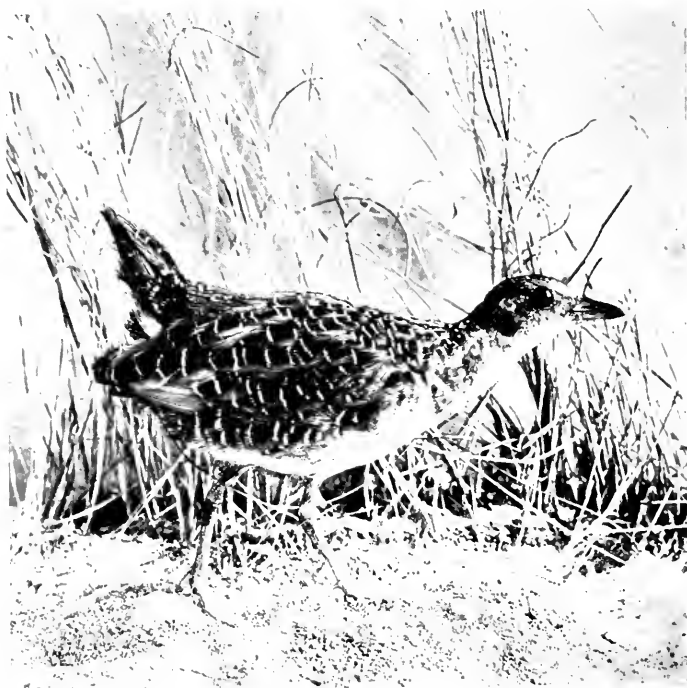
Kik-kik-kik, quècab,

Kik-kik-kik, ki-quècab.

Kik-ki-ki-ki, ki-quècab.

Kic-kic, kic-kic, kic-kic, kic-kic, ki-quècab.

The *kic-kic* notes are similar to those uttered by the Virginia Rail when calling to her young, but much louder. Although usually delivered in rather rapid succession, they are divided by distinct if short intervals into groups of twos or threes, giving them the effect of being uttered with a



YELLOW RAIL. (One-half natural size)

certain degree of hesitancy. The terminal *quècab* or *ki-quècab* is shrill and slightly tremulous, reminding one by turns of the rolling chirrup which a chipmunk makes just as he darts into his hole or of the squealing crow of a young rooster. All the notes, although not apparently very loud when

* It has been since attributed, on what appears to me to be inconclusive evidence, to the Yellow Rail. *Auk*, xix, No. 1, Jan., 1902, pp. 94, 95.

one is near the spot where they are uttered, may be heard, under favorable conditions, at a distance of fully half a mile.

Another equally mysterious bird which we hear occasionally in May or June (but by no means every season) in the Fresh Pond marshes, and which we have some reasons for believing may be the King Rail, utters a grunting *umpb, umpb, umpb, umpb*, usually deep and guttural, but sometimes rather harsh and vibrant, and not unlike the quacking of a hoarse-voiced Duck. These notes are all on the same key and separated by rather wide but approximately regular intervals.

About the beginning of July the Robins, Song Sparrows and Swamp Sparrows enter on a second song period which lasts for several weeks. During the latter part of this month and most of August the marshes are enlivened by the presence of great flocks of young Red-wings and Bobolinks, which assemble to feed on the seeds of the wild rice and of various other semi-aquatic sedges or grasses, as well as by swarms of Swallows, most of which have come down from the north. The Red-wings utter now a chattering *cha-cha* cry, the Bobolinks a liquid, resonant *pink*. The latter sound is especially characteristic of this season, as is also the rapid, musical whistle of the Upland Plover which we occasionally hear about sunrise towards the end of August.

Early in summer the bull frogs and green frogs hold high revels in the marshes, especially at night. Every one, of course, is familiar with the deep, heavy bass of the bull frog, although it oftener provokes ridicule than inspires the admiration which its fine sonorous quality really merits. The green frog utters an abrupt, incisive *tung, tung-tung-tung*, the last three notes being lower in the scale than the first and the general effect very like that produced by "strumming" slowly on the strings of a bass viol. Both of these frogs may be heard as early as the latter part of May and as late as September, but they are most vociferous in June and July.

Late in August or early in September the rank, fully-matured vegetation of the marshes begins to show traces of russet, but the prevailing color is still green of various shades blended with delicate tints of lavender and purple. The tall, graceful reeds which fringe the pools and ditches are now alive with Rails and Sparrows of several species. These birds vary greatly in numbers from day to day as the successive flights arrive from the north and pass on still further southward. The Sparrows are conspicuous enough, for they are constantly calling to one another and flying back and forth across the open spaces, but the presence of the Rails is not likely to be discovered, at least during the midday hours, unless they are startled by some sudden sound. If they are at all numerous the report of a gun or the splash of a stone thrown into the shallow water among the reeds will be instantly followed by a chorus of *kck*.

kiks, *ki-kiks*, and various other similarly abrupt, explosive cries, uttered in tones of indignant protest and coming from far and near on every side. Most of these calls are made by young Carolina Rails.

In September and October, and occasionally well into November, we frequently hear, both by day and night, especially when the weather is clear and warm, the autumnal call of Pickering's hyla. It consists of a prolonged series of short, dry or crackling notes, given very deliberately and often haltingly or at irregular intervals, rather feeble or at least not loud, yet audible at a considerable distance, and so very unlike the clear, brisk, spring peeping that no one would suspect that both sounds were uttered by the same creature. The autumnal call, moreover, is heard most frequently in woods or thickets, sometimes on high ground. It often seems to come from the branches of the trees or bushes, but if one is patient and fortunate enough to trace the sound to its little author, he is most likely to be found clinging to some leaf or grass blade only a foot or two above the ground.

In October the prevailing color of the marshes changes to browns and russets of rich and varied shades. Most of the Rails have departed, but there are still plenty of Song and Swamp Sparrows among the reeds and numbers of Savanna Sparrows in the beds of shorter grasses. Where the grass has been cut flocks of Titlarks alight to feed on the exposed, muddy ground, and their feeble, piping calls are heard at frequent intervals. The Rusty Blackbirds have also returned from their summer homes at the north, but they are comparatively silent at this season. At day-break Black Ducks circle low over the marsh, attracting our attention by their loud quacking or perhaps by the light, silvery whistling of their wings—audible at a surprising distance when the air is perfectly still. Towards the close of the month, just as the level beams of the rising sun begin to light up the meadows white with the hoar frost which, during the night, has encrusted every leaf and blade of grass, we hear, faintly but distinctly, coming from high overhead, a tremulous twitter, immediately followed by a single, short, clear whistle. It is the flight call of the Snow Bunting and the first sound of autumn, which unmistakably suggests the near approach of winter.



Bird Clubs in America

II. THE DELAWARE VALLEY CLUB

BY SAMUEL N. RHOADS

IT has been an ever-increasing desire of the founders of the Delaware Valley Ornithological Club to encourage bird study, not only in a scientific, but in a popular sense, both for young and old. It is therefore most gratifying that the editor of BIRD-LORE offers us this opportunity to preach the gospel of song and feathers to so large an audience. Our sermon may well begin with the historic phase of the "D. V. O. C.," as we familiarly name ourselves.

One day in December, 1889, a chance remark about birds in a Philadelphia architect's office caught the ear of a fellow-worker of kindred spirit sketching in the same room. This touch of nature was an all-sufficient introduction and the strangers soon were friends. This was the spark that, kindled in a kindly environment, and glowing into flame, has given zest and enthusiasm to the lives of so many during the past decade. So far as the world of bird lovers was concerned this incident might have resulted, as do most, in nothing more momentous than a bird's-nesting jaunt or a few collecting trips; the result, shells and skins, destined to moth and rust and house-cleaning wrath in the attic den. But between J. Harris Reed* and William L. Baily such an avian fire was burning as called for more fuel, and others soon yielded themselves to the sacred flame. A few checkered postal cards with blank spaces and bird's names did the rest, and order began to resolve out of the ornithic chaos which had enveloped Philadelphia since the death of John Cassin.

On the evening of January 22, 1890, William L. Baily, George S. Morris, J. Harris Reed, Samuel N. Rhoads and Spencer Trotter met at the home of Mr. Baily and decided to organize; this was done and a constitution adopted February 3, of that year. Incidentally Mr. Reed provided cake for the preliminary meeting, but it is significant of the virility of the movement to note that the refreshment feature never after appeared in the regular club meetings and even smoking was prohibited for a few years. At the close of the February meeting the organization had seven members: Witmer Stone and Charles Voelker having meanwhile joined the movement. Baily was chosen president and Rhoads secretary-treasurer. All the founders except Voelker and Stone were members of the Society of Friends.

Baily (architect) was a nephew and namesake of the author of one of the first books intended to popularize the study of "Our Own Birds of the United States." Morris (architect) had ornithological kinship with such

* Reed first proposed organization.

patrons of Audubon as Spencer and Harris. Reed (architect) had been both associate and rival of Rhoads in birds-nesting escapades at boarding school in his early teens. Rhoads (farmer) was, at eight years' stepson and scholar of Morris's aunt, to whose love of nature both owe more than to any other cause the bent of mind which was later shaped by intimate association with each other and with Prof. E. D. Cope, who then lived in Haddonfield, N. J. Trotter (student) was cousin and associate of N. T. Lawrence, an ornithological nephew of George N. Lawrence, and had just left a scholarship at the Academy of Natural Sciences to study medicine. Stone (the naturalist) had recently taken a scholarship at the Academy and was then unknown to any of us save Trotter. His noble rage for bird lore in particular and for animal and vegetable lore in general seems to have been due to spontaneous generation. Voelker had emigrated to the States some years previously from Germany and was a taxidermist of talent, his father being forester on a large German estate.

All of us were young men, Morris being the youngest at 23, and Trotter oldest at 30, when the club was organized.

Several of the members had previously made local observation records for the A. O. U. committee on bird migration, and a more thorough survey of the vicinity of Philadelphia along this line engrossed the Club during the first year. An elaborate summary of this work was prepared by a committee, and Mr. Stone, as editor-in-chief, was delegated to present it to the A. O. U. Congress, soon to be held at Washington, where it was well received and published in 'The Auk.' Previous papers and communications by the members had been published in 'The Auk,' 'American Naturalist,' etc., as well as reports of Club meetings in the local newspapers; in this way not only encouraging the members to do original and careful work, but attracting others to join the Club, or furnish data and specimens which would otherwise have been lost. Applications for membership increasing, an 'associate' class was provided for, unlimited in number, the 'active' membership being restricted to ten persons, who had the sole privilege of voting and holding office. This number has since been raised to fifteen, because of so many associates developing rapidly into first-rate workers. Contrary to the custom of more conservative clubs, our active class is always kept filled by such, it being understood that resignation is in order when any active member lapses into an ornithologically passive state. To insure this elimination of deadwood, the constitution has been so framed as to make it automatic. Associates are restricted to residents in the states of Pennsylvania, New Jersey, Delaware and Maryland, and to any person (age limit not defined) who is proposed by an active member, as one with a taste for bird study. Our object in these selections was primarily to add as much young blood to the organization as possible, and to encourage these fellows

in field work with a view to making verbal reports or reading formal papers at the meetings. Possible publication of these in 'The Auk' was held up as an inducement to greater zeal.

Actives must reside within twenty-five miles of Philadelphia. Meetings are now regularly held in the ornithological room of the Academy of Natural Sciences, at 8 P. M., on the first and third Thursdays of each month, from October to May, inclusive.

Visitors of the *male* sex may attend any of our meetings on invitation of a member. It was at one time debated that a form of honorary lady membership should be instituted, but the establishment of Audubon and other societies about that time seemed to cover the ground so well that no action in this matter is ever likely to be taken.

A corresponding membership was instituted later and has been proved of value to all concerned. At present writing there are 15 actives, 1 honorary (Dr. Samuel W. Woodhouse), 55 associates and 29 correspondents in good standing on the roll. Of these an average of twenty to twenty-five attend meetings with great regularity. Any one versed in the ephemeral or fossilized nature of natural history societies and kindred associations may well inquire what are the secrets of the success of the D. V. O. C. as above indicated. In order of importance these may be listed as follows:

1. An executive and philanthropic member (not necessarily an officer), whose specialty is ornithology and whose whole time is devoted to that pursuit, combining with his business duties in this line the interests of the Club.

2. Official recognition by the Academy of Natural Sciences, which furnishes accommodation for private and public meetings and the Club collections; also the use of specimens illustrative of the exercises of the meetings.

3. The Club collection of life-grouping of birds of the Delaware Valley, taken and prepared by Club members and assigned a separate space for exhibition in the Museum of the Academy.

4. A membership, based primarily on continued accessions of amateurs and so graded as to incite all to effort.

5. A periodical Club publication of proceedings in which all transactions worthy of record not elsewhere published are preserved.

6. Stimulation to original work, among young and old, of such a character as will merit publication in current zoological literature.

7. Publication of an annotated list of the birds of Eastern Pennsylvania and New Jersey, based primarily on field work prosecuted systematically by club members.

8. A programme which announces two or more exercises specially prepared for each stated meeting of the club. These, as a rule, are to

be short, may be interrupted by remarks or queries, and are followed by informal discussion in which the juveniles are led to join freely.

9. Field trips led by experts for the benefit of amateurs.

10. Annual meetings of a more pretentious character illustrative of the year's work, with social and gastronomic attractions.

It may be objected by would-be club promoters that the first two secrets of our success as above given are not attainable by the average club. As to the first, however, it is most essential that in its establishment some one competent person should be able and willing to sacrifice a goodly part of his time to getting the club in a fairly automatic running condition along the lines pursued by the D. V. O. C. enumerated above under sections 3 to 10. As we are now constituted, the untiring and skilful labors of our business manager, Mr. Witmer Stone, have become less arduous, and to a certain extent the machine has acquired a sort of reproductive power that insures its perpetuity.

Undoubtedly good live bird clubs can be organized along the same lines as ours and yet be removed hundreds of miles from any seat of learning like the Academy of Natural Sciences of Philadelphia. Let their aim be to establish, wheresoever they are, nuclei for just such a seat of learning as the Academy is to-day. We cannot have too many of them.

English Starling

BY EDITH M. THOMAS

Here's to the stranger, so lately a ranger,
 Who came from far over seas:—
 Whatever the weather, still in high feather,
 At top of the windy trees!

Here's to the darling,—brave English Starling,—
 Stays the long winter through;
 He would not leave us, would not bereave us,—
 Not he, though our own birds do!

Cold weather pinches—flown are the finches,
 Thrushes and warblers too!
 Here's to the darling, here's to the Starling,—
 English Starling true!

For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

THIRD PAPER

FAMILY 5. BLACKBIRDS, ORIOLES, MEADOWLARKS, BOBOLINKS, ETC. *Icteridæ*

Range.—The 150 or more species contained in this family are confined to the western hemisphere, where they are distributed from Labrador and Alaska southward to Patagonia, including the West Indies.

Nineteen species and 9 subspecies occur in North America (north of Mexico), 10 species and 5 subspecies being found east of [the Mississippi.

Season.—The Oriole and Bobolink are found in the eastern United States only from late April to October; our Blackbirds and Grackles winter from about southern New Jersey southward and are our earliest migrants, coming in late February or early March and remaining until November and occasionally later; while the Meadowlark is a permanent resident from Massachusetts southward.

Color.—With the Orioles orange or yellow and black is the prevailing color, the chestnut of our Orchard Oriole being unusual; the characteristic color of the Blackbirds is indicated by their group name; the colors of the Bobolink, of which there is only one species, and of the Meadowlark, of which there is also only one species, but eight subspecies, are well known.

Size.—The members of this family vary in length from about 7 inches in the small Blackbirds to 24 inches in the Cassiques or giant Orioles of the tropics. Our eastern species range from 7 $\frac{1}{4}$ inches in the Bobolink to 16 inches in the Boat-tailed Grackle.

External Structure.—So widely do the members of this family differ from each other in external appearance that no one general description can be applied to them. The Orioles have a rather long, sharply pointed bill; with the Grackles it is somewhat longer, less pointed and heavier; in the Blackbirds it is decidedly shorter, and with the Cowbird and Bobolink the bill becomes almost like that of a Sparrow. The bill of the Meadowlark resembles that of the Starling in being flattened and broader than high at the end. In no species are the nostrils concealed by bristles, as with the Crows and Jays, from which birds the members of this family also differ in having the first three primaries of equal length. The



1 Cowbird

2 Orchard Oriole

BLACKBIRDS, ORIOLES, ETC. (One-third natural size)

3 Red-winged Blackbird

4 Bobolink, male

5 Bobolink, female

6 Purple Grackle

marked characteristics of color, however, are the best aid to the field identification of the Blackbirds and Orioles.

Appearance and Habits.—There is as wide variation in the actions of Blackbirds and Orioles as there is in their form and color. The Orioles are nervous, arboreal creatures, restlessly moving from limb to limb and tree to tree; the Grackles, Cowbird, and Meadowlark are terrestrial and walkers, the long tail, sometimes "keeled," of the former, short tail and white outer tail-feathers of the latter are good field characters. The Red-winged Blackbird and Bobolink are birds of the open, inhabiting fields or marshes. Orioles (*Icterus*) are sometimes found associated in small numbers. All our other members of this family migrate and winter in close flocks and some species, notably the Grackles, breed in colonies.

Song.—The Orioles, Blackbirds, and Meadowlarks are whistlers of varying ability with voices ranging from the thin, long-drawn pipe of the Cowbird, or harsh, grating notes of certain tropical species, to the rich, sweet notes of the western Meadowlark. The Bobolink is a musical genus with a song which alike defies imitation and description.

FAMILY 6. FINCHES (Sparrows, Grosbeaks, Siskins, Crossbills, Buntings, Towhees, etc.)

Fringillidae

Range.—While more numerous in the northern than in the southern hemisphere, the 550 or more species contained in this family are found in all parts of the world except the Australian region. Of this number 92 species and 84 subspecies are North American.

Season.—Finches are with us at all seasons. A large proportion of our permanent resident and winter visitant Passeres being Finches, and while a number of species are summer residents only, their migrations are less extended than those of insectivorous birds.

Color.—While there is a wide range of color in the plumage of the members of this family, the variations are more or less closely related to the nature of the birds' haunts. Thus the ground-inhabiting Sparrows are largely streaked and lark-like in color, while the bush- or tree-haunting Finches are generally brightly colored.

External Structure.—The possession of a stout, short, cone-shaped bill is the distinguishing characteristic of nearly all Finches, and is evidently related to their seed-eating habits. By this member alone our Finches may always be known from the members of other families of eastern North American birds.

Appearance and Habits.—Finches impress one as being short-necked, thick-set, *chunky* birds. The ground-inhabiting Sparrows, like most ground-feeding birds, are seen either flying as they rise before one, or perching motionless with head well drawn in between the shoulders. The



FINCHES, SPARROWS, ETC. (One-third natural size)

1. Field Sparrow
2. White-throated Sparrow

3. Tree Sparrow
4. Song Sparrow

5. Pine Grosbeak
6. Rose-breasted Grosbeak

7. Towhee
8. Indigo Bunting

tree-feeders—Crossbills, Purple Finches and others live among the branches where they obtain food. All Sparrows are hoppers, a habit which should serve to distinguish certain of the ground-living species, from the Horned Lark or Pipit, both of which are walkers.

Song.—Though varying greatly in vocal ability, most Finches are fine singers.



What Bird is This?

Field Description.—Length, 5 in. Crown yellow; back gray; belly white, tinged with yellow; wing-bars yellow; tail feathers with white blotches.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in February is Henslow's Sparrow.

The Young Observers' Prize Contest

Young observers who are competing for the prize announced in February BIRD-LORE should send their 'Notes on the Birds of February and March' to the Editor in April. A similar prize is now offered, that is, books to the value of two dollars, for the best seven or eight hundred word article on 'Notes on the Birds of April and May.'

For Young Observers

My Bluebirds

BY LAWRENCE F. LOVE, Cleveland, O. (Aged 12 years.)

ONE day in February, I put up three bird-boxes, two large ones and one small one, hoping that a Wren would take the small box.

Soon I saw some Bluebirds. Of course I began to watch them to find where they were going to nest. First they began to build in a hole in an old apple tree, but the Sparrows seemed to think it belonged to them and they gathered in great numbers to drive the Bluebirds away. A kind Robin helped them to defend it, but in the end the Sparrows conquered, and my bluecoats began to look around for a new nesting place. They tried one of the houses, but did not seem satisfied with it. Finally, one Sunday morning near the middle of April, I saw the dull-bluish female carrying straw to the box nearest the house. Even there the Sparrows troubled them, but the Bluebirds drove them off. One day when the eggs were laid the Juncos joined with the Sparrows in an attack. It is impossible to say which side was defeated, but the Sparrows bothered the Bluebirds but little afterward. On May 14 the young ones came out of the nest. There were five. Three were brownish on the back, with a little blue on the tail. Their breasts were grayish, spotted with brown. The other two had more blue about the head and back; I think these two were males. One of these was the first to fly, and he flew to the ground besides a porch, where a dog stood looking down on him. I put him into the nest, but he flew out again, and got into the lower branches of a tree. One of the others flew into another tree, and the others soon followed. Then a venturesome one flew, but was stopped by a house. After resting on a window sill for a moment, his mother coaxed him into a tree. In the meanwhile, the rest had flown, and for a while the old birds were busy teaching them to fly well. Then the little ones roosted in the top of a high apple tree. The next morning the parents were engaged in feeding them, and such appetites! The one that first flew was the weakling, and did not learn to fly well for several days. Then I missed them for some days, and thought they had learned to care for themselves. But one afternoon I heard the familiar call, and looking up into a tree, found them. Now they acted like fly catchers, flying into the air like fly catchers, and returning to their original perch. They were strong in flight, and it was difficult to tell them from the old ones. They were beginning to care for themselves and were developing a voice of sweetness.

Book News and Reviews

STORIES OF BIRD LIFE. BY T. GILBERT PEARSON. With illustrations by and under the supervision of John L. Ridgway. Richmond, B. F. Johnson Publishing Company, 1901. 16mo, 236 pages, numerous ills.

Professor Pearson has drawn on a life-long field of experience to furnish the material for this volume which, therefore, unlike many additions to popular ornithology, possesses much of interest and value. A close student and sympathetic recorder, he presents us with a series of studies of certain birds in the south which may be read with both pleasure and profit by beginners as well as past-masters in the study of birds. It is, however, to the former that he especially addresses himself, and his experience in teaching gives him a point of view which many popular nature writers lack. Having told his story he calls attention to the significance of the facts observed in a series of what he has well named 'thought questions,' which should lead the reader to make independent observations. The book is thus admirably adapted for school work, and we wish for it the wide circulation it deserves.—F. M. C.

A FIRST BOOK UPON THE BIRDS OF OREGON AND WASHINGTON. BY WILLIAM ROGERS LORD. 1902. J. K. Gill Company, Portland, Oregon. 16mo, 304+iv pages, numerous ills.

This is a revised, enlarged, and greatly improved edition of the first edition of this book which was issued in the summer of 1901. Attracted by West Coast birds Mr. Lord found, on coming to this region, that there were no popular guides to a knowledge of western birds and he has prepared this book to meet in part what is evidently a widely felt want.

The combined experience of a student and teacher of birds make the needs of both a practical matter, and Mr. Lord writes as one who addresses an audience with whose wants he is familiar. Thus there are chapters on 'How to Know the Birds,'

'How to Name the Birds,' 'How to Domesticate and Tame Birds,' and 'A Course of Study upon Birds for Schools and Bird Students.' The latter is here of especial importance, since the book has been selected for supplementary reading in the public schools of Oregon.

The publication of the first edition of this work brought to its author much additional information "both for new knowledge and for correction," and the present edition may be accepted as accurate and authoritative. It should exert a very important influence on the study of the birds of Washington and Oregon.—F. M. C.

WILD BIRDS IN CITY PARKS. BY HERBERT EUGENE WALTER AND ALICE HALL WALTER. Revised Edition. Chicago, 1902. 16mo, 45 pages. For sale by F. C. Baker, Chicago. Academy of Sciences, Lincoln Park, Chicago.

Students of the bird-life of city parks, which often offer unusual advantages for observing the migration, will be interested in this booklet which is based on a study of the spring migration of birds during the past six years in Lincoln Park, Chicago, and is designed especially for the use of bird students in that locality. It contains some admirable 'General Hints' on bird study, descriptions of 100 species of birds arranged in the order of their average first appearance, 'A Table of Arrival,' 'a Table of Occurrence,' 'a chart showing the number of different kinds of birds seen in Lincoln Park during the height of migration,' a 'Supplementary List' of birds which may be reasonably looked for, and a blank for recording observations. All this is excellent, but we should imagine that the book would be more helpful to students of the birds of Lincoln Park if the space devoted to descriptions of plumages had been given to fuller information concerning the manner of a bird's occurrence, than can be presented in tables or by diagrams.—F. M. C.

The Ornithological Magazines

THE AUK.—The January 'Auk' has for a frontispiece a fine photogravure, taken of a Herring Gull on its nest. A price has been set upon the heads (and other parts) of these birds by milliners, so that they and their allies need rigid protection to save them from extermination. How much has been afforded them in their breeding colonies through the Thayer fund is told in Mr. Dutcher's report, which occupies many pages with this and other bird protection work. Mr. Stone also contributes a report.

Mr. Bent continues his paper on the 'Nesting Habits of the Anatidae of North Dakota,' with some further illustrations. Two annotated lists appear, one on 'Summer Birds of the Great Dismal Swamp,' by John W. Daniel, Jr., and another on 'Birds of the Northeastern Coast of Labrador,' by Henry W. Bigelow. A desirable item is omitted in the latter list; viz., the actual time spent in Labrador by the Brown-Harvard Expedition of 1900. Jas. H. Hill tells pleasantly of 'The White-winged Crossbill in Captivity,' captured in Connecticut. Wm. H. Kobbe writes on 'The Status of Certain Supposed Species of the Genus *Larus*,' maintaining that *L. vegæ* is identical with *L. argentatus*. There is also a brief account of the Nineteenth Congress of the A. O. U., held in New York, and those interested in new forms of birds will find several described by R. Ridgway and E. A. Mearns. The latter also describes a hybrid between the Barn and Cliff Swallows, which makes a second specimen of this kind on record.

General Notes and Reviews are too extensive to be entered into, although the recording of no less than six Cory's Bitterns at Toronto, by J. H. Fleming and the review of R. Ridgway's 'Birds of North and Middle America' seem of particular interest. The 'Solution of the Ornithological Mystery' of Mr. Brewster is by no means conclusive.—J. D. JR.

Book News

The pronounced success of 'Country Life in America' must be gratifying alike to lovers of the country as well as those who

delight in beautiful typography. The illustrations are not only unusually artistic but strikingly illustrative and, so far as the straight half-tone process at present permits, they are evidently reproduced with justice to the originals. The March number, the fifth thus far issued, is especially attractive and seasonable. Under the head of 'The Coming of Spring' a calendar of 'Work,' 'Recreation,' and 'Nature Study' for the month is given. While in the main excellent, the author shows the danger of trying to cover too wide a field by advocating as a "novel sport" the killing of Hawks! After virtually admitting the economic value of the birds by saying that at this season they "congregate on the meadows where food is plentiful" (he does not add that the "food" consists of meadow mice) he proceeds to give suggestions for the best way to shoot these "feathered sharks," and this, be it further noted, in the mating and breeding season! One wonders that so obvious a slip escaped the editorial eye.

In 'The Flight of the Osprey' Alfred J. Meyer shows a number of very interesting photographs of Ospreys on the wing.

HOUGHTON, MIFFLIN & Co., will publish shortly 'A Handbook of Birds of the Western United States,' by Mrs. Florence Merriam Bailey. This greatly needed book will include the birds west of the 100th meridian and contain over 500 illustrations, the principal ones by Louis Agassiz Fuertes.

THE BIOLOGICAL SURVEY of the U. S. Dept. of Agriculture has recently issued a revised edition of its Bulletin No. 12, 'Legislation for the Protection of Birds other than Game Birds,' by Dr. T. S. Palmer. This admirable and useful publication not only presents the federal and state laws relating to non-game birds, but treats of such allied matters as 'Birds in Captivity,' 'Birds used for Millinery Purposes,' 'Bird Study in the Schools,' 'Bird and Arbor Day Laws,' etc., and is therefore indispensable to every one actively interested in bird protection.

'OUR BIRD FRIENDS,' a game of bird cards, seems unusually well designed to arouse in children an intelligent interest in birds.

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Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

BIRD-LORE has published no more helpful articles for field students than Mr. Brewster's 'Voices of a New England Marsh,' to which we gladly devote a large part of this number, postponing to a subsequent issue other articles announced for April.

The Cat Question

The most important problem confronting bird protectors to-day is the devising of a proper means for the disposition of the surplus cat population of this country. By surplus population we mean that very large proportion of cats which do not receive the care due a domesticated or pet animal and which are, therefore, practically dependent on their own efforts for food.

We are not prepared at present to give this subject the attention it deserves, but the introduction of a bill in the Massachusetts legislature to require the licensing of cats impels us to say a word in favor of a measure which we have long thought would go far toward solving the cat problem.

In the absence of data showing the number of cats in this country, common knowledge of Tabby's favored place on every hearth-stone, together with her well-known talent for the reproduction of her kind, permits us to form some conception of her

abundance; and a further knowledge of her widespread distribution in field and forest would add largely to our most conservative estimate of her numbers. In our own opinion there are not less than twenty-five million cats in the United States and there may be double that number.

How many of these cats are domesticated, in the true sense of the word, and how many gain their living by the strength of their claws we cannot say, but, in any event, it should be remembered that oceans of cream and miles of blue ribbon have not subdued Pussy's instincts for the chase nor destroyed her skill as a hunter. A house-cat has been actually known to kill fifty birds in a season and a naturalist, than whom none is better qualified to judge, believes that five hundred thousand birds are annually killed by cats in New England alone! Apply these figures to the cats and the country at large and the result is appalling.

We would not, however, urge the extermination of cats. Wholly aside from the pleasure they give to lovers of pets, cats are the natural enemies of those other introduced evils, rats and mice. The cat is an automatic, self-setting mouse-trap and as such she commends herself to housekeepers who perhaps may not be otherwise favorably impressed by her peculiar personality.

But we do strongly advocate such a reduction of the cat population as would follow the passage of this proposed Massachusetts law with its required annual licensing of cats, its fine imposed on cat owners who do not comply with its provisions, and its instructions to the proper authorities to kill all non-licensed cats.

Such a law should be supported not only by bird lovers but by cat lovers. By the former because the restriction of the cat population to the well-fed Tabby of the fireside would not only greatly reduce the cat population, but would, or should, do away with its worst element, the cats who hunt for a living. It should be supported by the latter because its enforcement would put an end to the existence of the many starving, homeless felines of our cities whose happiest fate is sudden death.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

After Legal Protection, What?

It is recognized that giving the bird legal protection against unnecessary death is the first step toward establishing its citizenship in the commonwealth, and it is equally well understood that the judicious reading and enforcement of the law is not to be merely the work of a few years but the duty of successive generations. Moreover, if legal protection was a deed accomplished, instead of an uneven and local "declaration of intentions," so to speak, it would not be sufficient to give the freedom of the land; the opportunity for establishing the home and earning a living must be offered as it would be to human colonists coming to a region of questionable hospitality.

The liberty to come and starve in a treeless, arid region of destroyed forests and dwindling watercourses is of little avail in restoring birds to haunts so entirely transformed; protection, food and shelter must be the invitation.

I put shelter first, for given proper, *i. e.*, natural shelter of tree, bush, hayrick, the bird will seldom fail of eking out a living, except in the four or five months that ice locks the storehouses and granaries of bark and seedling weeds and wild grass lands. In many cases the very means of shelter in themselves offer a food supply, like the red cedars by their berries, the spruces by their cones, and the heavily matted compositae, by roadsides and field corners, by their seeds. The feast that seeded sunflowers, zinnias, asters and marigolds set for the birds of the garden in autumn and winter is spread freely along the highways of the migrants, it only the purblind farmer can be made to withhold his stub-scythe from the autumnal massacre of the beautiful.

Shelter is the bird's first necessity at all periods of his life. Before birth shelter for the nest and unhatched egg, then protective feather colors to shield the bird until its pinions can bear it to safety. Next woodland shelter for the period of the molt, then shelter of night, foliage or dusky traveling cloak for the southern migration.

In a state of nature, when the succession of growth and decay marched in the simple path of purposeful evolution, when the crumbling tree offered its sheltering hollow, the mature tree its stalwart branches, and the sapling its close, low-growing verdure all went well, but now man must work out the penalty for man's stupidity, and if he would restore the birds not only plant trees, but see to it that he plants the trees of the birds' choice, not his own.

In the forestry now being practiced in this country, as well as in the somewhat scattering Arbor Day planting, the matter of variety and individual fitness should have more attention. When cleared woodland is to be replanted, or a naked watercourse to be recovered, it is always best to replace the former inhabitants as far as possible, but where the planting is of a bare and newly surveyed suburban town, the difficulties are great and the choice of trees will be in a measure an index to the future bird population. If one may not expect grapes of thorns, or figs of thistles, neither can one have Baltimore Orioles in stiff young maples, Catbirds in elms, or Bluebirds, Nuthatches and Chickadees nesting in new apple trees with awful whitewashed trunks.

If you would consider tree-planting from the bird standpoint, make a list of a dozen or fifteen of the birds that were once the common inhabitants of your village, or garden and its neighboring byway, and study

out the varieties of trees that attracted them and the causes that have driven them away. The winter-killing of hemlock hedge, thick as a wall, the replacing of a tangle of old spires and weigelas by trim individual shrubs, the death, from the approach of tillage, of a crown of cedars that made a blue-green spot above the snow in a waste pasture, the formalizing of a cat-tail and bush fringed spring to be a cement-edged duck-pond—all have their tale to tell. The former of the slothfulness of man, who does not replace, as nature, inexorable, does, the latter the taint of commercialism where it is so often unnecessary, the trade spirit that insists upon a material yield instead of the richer one of beauty.

Any one can buy good fat ducks at so much per pound in the market, but money alone cannot create the pool that sends out the hylas' greeting in March and from its sheltering trees and bushes the music of Red-wing, Marsh Wren, Water Thrush, and Veery echoes through the spring dawns and twilights. I am very glad that I shall not be alive when the world's water is all utilized, the marshes drained, the weeds subdued, a universal insecticide invented, all waste-land reclaimed. What a horrible, lonely, selfish world it will be.

If you replant from the bird standpoint, beside trees you must have bushes and vines in a four to one proportion.

The bird may sing in a lofty tree top and a few species nest there, but it is either close to the ground in the small tree, or impenetrable bush or hedge that is the nesting place, the waiting room where it rests between excursions for food and during rainy weather.

As a part of our families are winter residents there should be evergreens with the lower branches left to trail on the ground, as well as other thick underbrush for shelter.

Neatness, cutting up, and relentless pruning and shaping of shrubs and trees are doubtless very moral processes in their way and may be sometimes necessary when insects and blight gain mastery in a garden, just as disinfecting fluids are in an epidemic, but they are quite as offensive to birds as pop-guns.

The taller deciduous trees, elms, maples, birches, etc., offer in summer the shelter of shade and the food always to be found in the greenery and bark covering of branches, but during family life it is in the lower fruit trees full of convenient nesting places of knot-hole and crotch where the majority of birds congregate. And after a storm the birds may always be seen flying from the low evergreens and wild hedges.

"But," you say, "we cannot plant old orchards." No, but every village should cherish the few that remain as public aviaries. For nowhere else can those familiar birds, so dear to us all, be sheltered, and if the orchard is inclosed by a stone wall or snake fence in whose protection a hedge of aspens, sumachs, red cedar, hackberry, elder and wild roses, barberries and tall blackberries has sprung up, with all the branches trimmed and draped by clinging vines, fox, and frost grapes, waxwork, Virginia creeper, clematis.

Such a place is a birds' paradise, and in planting to please the birds keep it in mind. Small places can easily be fenced by either arborvitae, hemlock, or privet hedges; stone walls concealed and beautified by berry-bearing bushes, and by vines that not only offer shelter but food as well. Lacking wild vines, plant nursery stock; half a hundred plants of Concord grapes may be cheaply had and scattered liberally about the fences and outbuildings of every modest home.

Then there is the cheerful Chinese honeysuckle that is sturdy and stout of limb. I would have you plant it everywhere, as I have, until it riots and flourishes over porch, trellis, walls, bushes and in masses on the ground, like the veriest weed.

A clean vine is this honeysuckle, and one that never injures the painted Eouse wall against which it may be trained; its flowers, beginning in June, give a tropic quality to the night air, offer a feast alike to the Humming-birds by day and the night-flying hawk moths. The leaves of dark rich green give shelter from heat and cold and cling on bravely until past midwinter, March even finding some still clinging to the south porch. As for the glistening blackberries, many a breakfast do they give

to the winter birds that roost in the impenetrable lattice. And as for the vine as a breeding haunt I have found in various seasons the Robin, Catbird, Yellow Warbler, Song Sparrow, Rosebreast, Chippy, Wood Thrush, Maryland Yellow-Throat, Thrasher, Towhee, Indigo Bird and Field Sparrow nesting in my honeysuckles, some of which are near the house or in the garden, while that chosen by Rosebreast and Thrasher was an old resident that had appropriated a tangle of briars and pea brush. By all means plant hedges and vines, especially honeysuckles. Many people dislike evergreens of all kinds, considering them gloomy in appearance and shuts out of air. That they are wind-breaks is certain, hence their value. What promises warmer shelter from a storm of sleet and snow than an arborvitæ hedge? What offers a better retreat to the Grosbeak, Crossbill, Pine Siskin, Brown Creeper and other winter birds than a finely-grown group of white spruces? Here are shelter and food at once, the sweetest of meat tucked away between the scales of the spruce cones. Of a snowy morning what more cheery sight than these same spruces standing green and brave above the whiteness, while the Crossbills shell the cones with that peculiar rustling sound and call and whisper over the breakfast?

By all means plant evergreens in hedges and groups, and do not trim them into the shape of those top-heavy trees found in the Noah's Ark of your youth unless you yourself are willing to wear the costume the toy maker gave Shem, Ham and Japhet, to keep them company. The question of planting wild fruits to divert the birds' appetite from cultivated crops, as well as the matter of the various foods to be issued as rations in time of need, have brought out many interesting and instructive papers, though some of them are rather misleading and complicated.

The difficulty about the general use of wild fruits as a counter attraction to the garden is that the garden varieties of a species come into bearing first, though in a succession the tame may overlap the wild. A robin will hardly leave a tree of

luscious garden cherries for the less attractive thimbleberries of the wild hedge. Then, too, there are several wild fruits of an undoubted attraction in luring birds that have in themselves bad qualities for neighbors. The black wild cherry, *Prunus virginiana*, that is found in bearing in Southern New England in all sizes from a bush to a sizable tree, is sure to be the gathering point for the fruit-eating flocks of midsummer and early autumn, and I harbor a tree of this species in full view of my garden house. The tree was there first and I respect its priority, and many interesting scenes of bird life have been enacted in it, but I would never advise the planting of the species for two reasons: It is a chosen breeding-place of the tent caterpillar, and this scourge may be seen traveling over the country and spreading from orchard to orchard via the wild cherry; and, secondly, the tree branches in a withered state are in the ranks of "plants poisonous to cattle." And if for the sake of the birds these cherries are miscellaneously planted along byways and pasture fences and cattle nibble the windbroken branches, the drying up of milk and often death is the result of this cherry's toxic qualities. As for bird rations, bones, suet, bread, seeds, nuts, etc., all have their place, but I have found a universal food for all seasons and for both seed- and insect-eating birds, Spratt's dog and puppy biscuits! I say that I found it? No, the birds found it for themselves and three years ago first drew my attention by the way in which they flocked about the kennels where the bits and crumbs were swept out and trodden into the gravel. The biscuits are compounded of meat scraps, coarse grain and beet fibre, and each bird selects what it needs.

In spring I have seen Redstarts, Myrtle and Chestnut-sided Warblers picking up this kennel dust close by my window, half biscuits tied to trees attract Woodpeckers, Nuthatches, Chickadees and Creepers. The finely-powdered fragments spread on a shed and in the crevices of some flat rocks in the old pasture are eaten freely by Meadowlarks, and only yesterday I saw a Blue Jay carrying small bits from a puppy's

dish to the shed corner where he first beat, and then devoured them much as he would beech mast.

M. O. W.

FIFTH ANNUAL REPORT OF THE AUDUBON SOCIETY OF THE DISTRICT OF COLUMBIA

The Audubon Society of the District of Columbia, the eighth on the list of societies now represented in twenty-five states, was organized in May, 1897. The society has grown steadily in number, interest, and income until the membership has reached 252, of whom 90 are contributing members.

The objects of the society, the study and the protection of birds, have been lived up to thoroughly. For the study of birds during this last year good work has been done in the schools. Before the Normal School one informal talk was given by Dr. T. S. Palmer and one by Dr. Sylvester D. Judd. A class of teachers was organized in the spring and conducted by Miss Elizabeth V. Brown. Six weeks' study was given to song birds. The society's collection of specimens was used by this class and was also loaned to the Cathedral School for Girls.

During the year 1901 seven meetings were held, including the Annual Meeting, at which illustrated addresses were given by Mr. Frank M. Chapman on the 'Colors of Birds,' and by Dr. T. S. Palmer on 'Recent Progress in Bird Protection,' three members' meetings in March, April and December, and three Field meetings in May, the last one at Glencarlyn, Virginia. This beautiful and romantic region was explored during the afternoon and in the evening, in the town hall, an enthusiastic meeting was held which resulted in the organization of the Audubon Society of Glencarlyn, the first in the state of Virginia.

In May Miss Cady, of New York, gave a piano recital in aid of the society.

The work in legislation has been unusually active. Through the coöperation of the Fish and Game Association, the committee on legislation secured the enactment of a new bird law which protects, throughout the year, all wild birds except game birds and five injurious species. Through the Superintendent of Police formal notice

was served on nearly all local milliners calling their attention to the fact that the new law prohibits the sale of plumage of native birds and advising them to return such stock to the wholesale houses with explanations that its sale has become unlawful in the District. Assistance was rendered the Glencarlyn Society in its organization and in framing a bill for the protection of birds, which was introduced at the opening of the Virginia legislature in December, 1901.

Publications for the past year have been 'Laws for the Protection of Birds and Eggs in the District of Columbia,' and a short 'Sketch of the Life of John James Audubon.'

The fifth Annual Meeting was held on January 27, 1902. After the election of officers, Mr. Harry C. Oberholser spoke on the 'Pleasures and Advantages of Bird Study.' He illustrated his remarks with numerous views of young birds, nests and eggs and emphasized the fact that the poetry in birds cannot be appreciated without familiarity with them and their habits. After the lecture Mr. Olds explained the objects of the society and advantages of membership.

The meetings outlined for the season include a public lecture in March by Dr. Francis Herrick, members' meetings in February and April, followed by field excursions in May.

JEANIE MARY PATTEN, *Secretary*.

Meeting of the Audubon National Committee

A meeting of the National Committee of the Audubon Societies will be held at the American Museum of Natural History, New York City, at 10 o'clock on the morning of April 4.

A New Audubon Society

Prof. T. Gilbert Pearson, of the State Normal and Industrial College, at Greensboro, North Carolina, writes that a North Carolina Audubon Society was formed at that place on March 11, with a charter membership of 140. Details of the Society's organization will be announced later.



NEST AND EGGS OF CHINESE SIDED WABLER

From nature, by A. Radclyffe Dugmore

Bird = Lore

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The Increase of the Chestnut-sided Warbler

BY A. RADCLYFFE DUGMORE

With photographs from Nature by the Author

ANY one who observes the birds of a locality for many years in succession will notice that certain birds become more abundant, and others less so, as years go by, and that while one bird will be very common for several years, there will perhaps be a year when this particular species will be comparatively scarce. In the region about South Orange, New Jersey, particularly the part known as the 'Mountain,' the Field and Song Sparrows are usually very abundant during the breeding season, but last year (1901) they were scarcely as common as the Blue-winged Warblers and Maryland Yellow-throats. Brown Thrashers, also, were less common than they have been during my stay in South Orange; while Indigo Birds, Ovenbirds, and several other species were remarkably common. But what has been most noticeable about the bird-life of this particular locality is the rapid and steady increase of the Chestnut-sided Warblers. It has been interesting to watch the increasing number of these delightful birds. In the summer of 1897, the first year that I did any systematic bird work in this locality, these birds were so little in evidence that I did not observe a single specimen. That they might have been there is, of course, more than probable, but they must have been extremely scarce, for during the breeding season I spent a good deal of time in likely places and yet never even heard their song, which is quite conspicuous whenever the bird is nesting.

The following year, in a certain large clearing (about a quarter of a mile square) that is well covered with thick underbrush and a young second growth of chestnut and oak, I noticed one pair on May 1. The male bird was then in full song, and three weeks later the birds had commenced building. During this same summer I saw one pair in another clearing that was situated within half a mile of the place in which I had

seen the first pair. In 1899 the larger clearing already referred to contained three pairs, all of which nested and two of the broods were hatched, and, I believe, left their nests at the proper time, but the third nest was destroyed. In other clearings, within a distance of a mile or so, there were a few Chestnut-sided Warblers, but they were by no means common. Each of the several clearings, except one, had a pair of the birds that I knew of, perhaps they had more; but I doubt it, as I spent the entire time from May till August in the vicinity and visited each locality several times every week.

In 1900 the Warblers were comparatively common, every clearing



CHESTNUT-SIDED WARBLER AND YOUNG

containing several pairs, and last summer they were still more abundant, four pairs occupying a clearing of only a few acres, while in the large clearing there were more than could be counted with accuracy; probably not less than seven or eight pairs.

What has influenced the rapid increase of these birds in this particular locality is difficult to discover. Apparently there have been no great changes so far as vegetation is concerned: the scrub is a little more dense, and the second growth somewhat higher, but to the eye it would be difficult to find any marked changes other than these. While we are unable to account for the increase of the Chestnut-sided Warblers, we find it

equally difficult to give any reason for the marked decrease in the number of the Brown Thrashers and apparent decrease in the Song Sparrows during the breeding season. The Thrashers used to be very common, but during the past two years they have been, as already stated, noticeably scarce.

All the Chestnut-sided Warbler's nests that I have found in this region in question, were placed in azalea and huckleberry bushes, mostly the former, and always within three and a half feet of the ground, usually very much lower. The situation chosen was in most instances near a fair-sized tree, not one being found in the more open part of the clearing. About



CHESTNUT-SIDED WARBLER FEEDING HER YOUNG ON THE AUTHOR'S HAND

the last week in April the birds arrive and their nests are built between May 20 and the middle of June. The nest, which requires from two to four days to build, is composed of light-colored plant-fiber and bark, with a lining of very fine grass and roots.

Notwithstanding all that has been said about the extreme tameness of these birds, those that I have seen were very much less confiding than the Blue-winged and Worm-eating Warblers. In trying to secure photographs of them with their young I met with most scanty success, in spite of the many hours spent in the attempts. Once the young had left the nest the old birds seemed to lose some of their shyness, and in one case I succeeded not only in obtaining photographs of the parent bird with its young perched

on a bush, but also on my hand. But at no time would the male bird come near, and the female showed a strong dislike to both the camera and me.

Perhaps I judge these birds too harshly; if so, it is because of the good luck I have had with such birds as the Blue-winged Warblers. In every instance I have found the latter extremely tame, and with one pair in particular. Scarcely an hour after finding a nest the parent bird perched on my hand, and several times have I had both of the old birds on my hand and shoulder. After experiences of this sort one does not consider a bird tame unless it shows an utter lack of fear for both man and the camera.



CHESTNUT-SIDED WARBLER FEEDING HER YOUNG ON THE AUTHOR'S HAND

The Chebec's First Brood

BY FRANCIS H. HERRICK (Author of 'The Home Life of Wild Birds')

With Photographs from Nature by the Author

WHEN we reached Tilton and Northfield, in New Hampshire, early last summer, the little Chebecs were nesting in the apple trees about our house. In looking over my notes for that period I find records of six of their nests. The eggs and young found in five of them during the month of June presumably represented first broods, while there could be as little doubt that the five eggs which a single nest contained on July 10 were a second batch.

One of the nests was moved, with its branch, to a good light and position where the simple home life of these little Flycatchers could be watched and registered with ease. I was, therefore, interested in comparing my experience, a brief account of which is soon to follow, with that of Mr. Hoffmann, whose article on 'A Chebec's Second Brood' appeared in BIRD-LORE for October, 1901. His nest, which was first transferred from its

original support to another and afterwards moved to a greater distance, unhappily encountered a thunderstorm which killed one of the young and threatened to destroy the whole brood. Wind and rain, as every student of birds knows, play sad havoc with eggs and nestlings, but the destruction wrought by sudden and violent storms is well-nigh incredible. I have seen a Chebec's nest which had suffered from this cause, and found two of the young lying dead on the ground below, although the supporting bough was unusually firm. Mr. Hoffmann's birds evidently had not fully adopted the new site when the storm came: and in such a case, if one is fortunate in being near the spot, he can do no better than follow his example and return the nest and branch to its original position, or to a convenient place of shelter.

Whatever means we adopt to study birds, we should try to help rather than hamper them in the battle for life, and we deserve little credit if we can only say that we have introduced no greater dangers than already exist. Let us rather aim to lessen the dangers which surround every nest of wild birds whenever possible, and this can usually be accomplished by a simple means to be described later.

The nest, which was watched for nearly a month and is shown in the photographs, had slightly incubated eggs on June 9. The female would sometimes hold her place until your hand was dangerously near, and then go off quietly, or dart at your head with audible snapping of the bill, and give her sharp, protesting *chebec! chebec!* The scenes at a Chebec's nest are never very exciting: their life follows a well-defined routine which possibly seems more mechanical than it really is. Though small in stature, obscure in dress, and possessed of no song, this Flycatcher can at least boast of clean-cut, unmistakable call-notes.

Eleven days later, at 3.15 P. M., a young bird had just hatched and was still wet, the egg-shells having been promptly removed. At least twenty-four hours elapsed before the three others appeared.

This nest was taken down at 2 o'clock in the afternoon of June 29, according to the plan which I have followed for the past three summers, and have fully described in 'The Home Life of Wild Birds.' The weather which followed was the most unfavorable I have ever known at that period of summer, intense heat and sultriness streaked with rain, lasting with scarcely a break well into July. At this time the first bird to hatch was exactly nine days old. Notwithstanding the drawbacks and the somewhat conspicuous position of the nesting bough, which attracted many persons, who came out of curiosity to take a look at the little birds, everything went as well as could be wished. The young took flight on July 5, life at the nest having lasted exactly two weeks, and for at least eleven days longer, true to their custom of cultivating a small plot of ground, they remained close to the original site when not in the old roof-tree itself.

The mother was brooding when I took a look at the displaced bough one hour and a half after its removal from the tree, and next day at about noon the young were being fed on the average of once every two minutes. Inspection and cleaning went on with the utmost regularity, and the male



CHEBEC ABOUT TO BROOD, AFTER HAVING FED AND INSPECTED HER YOUNG
 Photographed with full lens and in 1-25 second, but with other conditions similar to those of following figure

brought food while his mate brooded or stood astride the nest with half-spread, drooping wings to ward off the heat.

The tent was pitched before this nest on July 1, but being engaged in studying other birds at the time, I spent but part of two days in watching the nesting scenes. Notwithstanding the high wind on the first day, which kept the tent flapping like the sails of a vessel at sea, and every leaf and twig in motion, the mother came to the bough promptly, and served the first meal to her young in exactly twenty minutes from the moment the tent was closed. Again they were fed in a very short space, and in the thirty-four minutes which followed, during which I remained continuously in the tent, from 9.16 to 9.50 A. M., the young were fed with small insects twenty-two times. The incisive *chebec* of the male sounded incessantly from a neighboring apple tree, while at this juncture the female did all the work. At each visit the young rose up in the nest, displayed their bright orange-yellow throats, and chirped briskly, producing a kind of rolling chitter or seething chorus of sounds. The four swayed about from side to

side as one bird, until the intensity of their emotion was relieved by a small dragonfly or moth, or by any insect which these expert flycatchers chanced to spy and snap up on the wing. Inspection followed each feeding with the usual precision, and the excreta was often taken and removed to a distance from the nest.

When the feeding and inspection were over, if the heat were excessive, the mother would stand astride, spread her wings over the youngsters and remain in this position with crest erect and often with the mouth agape for five or ten minutes at a time. Then of a sudden she is off; her eye is keen, and her aim is sure; with a snap the mandibles close over the helpless insect, and rapidly describing a graceful loop in the air, this bird is at the nest again with the prey. If you showed yourself outside the tent, both birds would flit about excitedly, erecting crests, pumping tails, turning heads from side to side and sounding their *chebecs* or *chicks* with renewed emphasis, but would return to their accustomed duties the moment you disappeared beneath the screen.

The next day being still hotter, the young were brooded almost constantly until twelve minutes past noon, before they got a morsel of food. The timidity of the male was most marked, for he rarely came to the nest when the tent was before it. Although the parental instincts are commonly stronger in the female, this is not always the case. In a family of Bluebirds which I studied last summer the male was not only fearless but pugnacious to a remarkable degree. Shooting from his lofty perch straight at every intruder, with loud and angry snapping of the bill, he would make the boldest person involuntarily duck his head.

Another brood was successfully reared in a tree at the top of the hill. Incubation began about June 7, the young were hatched by the 20th, and were on the wing by July 5.

During the past summer I have taken special precautions for the safety of the young, and added a number of improvements or refinements to the general method, only one of which can be mentioned here. The nest, with its supports, when removed and set up in a favorable position for study, should be protected by a screen of fine wire netting three or four feet in height and pinned to the ground with wire staples. It is better to allow a strip to hang more or less free from the top. The reader should not trust too confidently the remark in 'The Home Life of Wild Birds' that cats and other predaceous animals look upon the displaced nest as a trap and studiously avoid it, for other animals get accustomed to new conditions as do the birds, and no nest of young is ever absolutely safe. The net may be trusted to debar the cat, the most fatal and persistent of the many enemies of nestlings in the neighborhood of towns; it discourages the squirrel whose pickings and stealings are far from unimportant, and tends to deter the more suspicious Crow and Jay.

There is one advantage which this new method of studying birds affords which has not been adequately set forth—that of learning with precision the kind of food brought to nestlings. A skilled observer can stand in his tent and note every kind of fruit and every species of insect brought to the nest, excepting comparatively rare cases when the prey is mutilated or pulverized before it is served. Hitherto information on this head has been very meager because of the uncertainty of watching nesting birds at a distance. If, on the other hand, a young bird is killed in order to examine the contents of its stomach, the possibility of continued observation, which alone can yield much information of value, is at once destroyed. One can, indeed, take the young from the nest and place them in a cage suspended near the nesting bough, or cage the fledglings, and this is but another way of applying the method which uses parental instinct as a chain between old and young.

The nest with all its surroundings is of less importance to the adult birds than is commonly supposed, especially when the instinct to nourish and protect the young is at its height. During the past three summers I have studied forty nests of wild birds by the method of controlling the site, and using the tent for a blind, while the accidents, which came mainly from inexperience, could be counted on the fingers of one hand. When we think of the thousands of eggs taken each year by the misguided collectors, or the hundreds of birds shot to see what they have in their stomachs, this record seems fairly good, but it does not satisfy me. The death roll which science exacts is already large enough. In our studies of animal behavior it is life and not death which we wish to perpetuate.



FEMALE CHEBEC, OR LEAST FLYCATCHER, STANDING WITH WINGS SPREAD
OVER HER YOUNG TO WARD OFF THE HEAT

Lens, Zeiss Anastigmat, Series iia, 6 $\frac{1}{2}$ inch, speed f/8, stop 32, time 1-5 second, distance about 30 inches in full sun. Northfield, N. H. July 2, 1901

The Wood Thrush and the Whip-poor-will

BY GARRETT NEWKIRK

When the faintest flush of morning
Overtints the distant hill,
 If you waken,
 If you listen,
You may hear the whip-poor-will.
Like an echo from the darkness,—
 Strangely wild across the glen,
Sound the notes of his finale,
 And the woods are still again.



Soon upon the dreamy silence
 There will come a gentle trill,
Like the whisper of an organ,
 Or the murmur
 Of a rill,
And then a burst of music,
 Swelling forth upon the air,
Till the melody of morning
 Seems to come from everywhere.
A thrush, as if awakened by
 The parting voice of night,
Gives forth a joyous welcome to
 The coming of the light.

In early evening twilight
 Again the wood thrush sings,
Like a voice of inspiration
 With the melody of strings;



A song of joy ecstatic,
 And a vesper hymn of praise,
For the glory of the summer
 And the promise of the days.

And when his song is ended,
 And all the world grows still,
As if but just awakened,
 Calls again the whip-poor-will.

A Grebe Colony

BY GERARD A. ABBOTT

LAST spring, while on a collecting trip in North Dakota, the writer was encamped for a month on a narrow neck of land, surrounded on three sides by a chain of lakes. This point was covered with a small growth of timber, mostly poplars, and was an ideal spot for a camp. A strip of wild rice from fifty to one hundred and fifty yards wide bordered the lake at this place, and it is here that one of the largest Grebe colonies in the Devil's Lake region is located. Fifteen hundred birds composed this colony, two-thirds of which were Western Grebes, and the other five hundred consisted chiefly of American Eared Grebes, although there was an occasional Pied Grebe among them.

May 15 Western Grebes commenced laying, and June 1 breeding was at its height. Their nests were huge masses of decayed vegetation, floating among the wild rice (which at this time was eight feet high). Three to six, and occasionally seven and eight eggs were found in a nest.

The little Eared Grebes were breeding on the border of the Western Grebes' colony, and so numerous were they that it was impossible to enter the colony without brushing against some of their nests and disturbing the eggs. The Eared Grebes were about ten days later in laying, but their period of incubation was evidently shorter, for young birds were hatched equally as soon as those of the larger species.

When we slowly made our way into the colony (for the canes were very dense, and the water from two and one-half to four feet deep) the birds splashed on all sides of us, and the sound produced, as the voices of the Eared Grebes mingled with those of the larger species, was almost deafening. The piercing cries of the Eared Grebe were soon drowned by the shrill notes of their larger relatives, who kept up this clamor all night, renewing it at daylight with increased vigor.

Travelers crossing the country often hear strange sounds coming from the lakes a mile or more distant. Listen! it is a multitude of voices, and sounds not unlike the croaking of prairie frogs in some near-by marsh. Those are the notes of the Western Grebe, and when heard, especially at night, produce an effect unlike any other experienced by the ornithologist.

In such a colony more or less confusion always exists. When we approached the nests of the Western Grebe the big birds would sometimes allow us almost to touch them before making any effort to leave their nest. When thus disturbed, Western Grebes usually take to the open water, where they soon become scattered in all directions.

Eared Grebes were seldom seen on their nests, but when disturbed would remain in the vicinity of their eggs, constantly swimming by us in groups of three or four, and sometimes diving almost under our feet, so

that we could feel them hitting our boots as they moved about under the water.

Nests of the Eared Grebe, unlike those of the Western Grebe, are very rude affairs, scarcely large enough to hold the complement of eggs, which is usually from four to six, though seven and eight are frequently laid.

Owing to the high seas which prevail on these small lakes, the eggs are often washed from their nests. The Eared Grebes then deposit their eggs in the nests of the Western Grebe, and this accounts for eggs of both varieties being found in the same nest, which is often the case.

We found dead bodies of both species lying on, or near, their nests. They all bore signs of having been wounded, probably the result of an encounter arising from a dispute as to which was the rightful owner of the premises.

Emerging from the wild rice, we entered the brush and found ourselves on a narrow ridge overlooking a shallow, grassy slough. This is the home of Holbæll's Grebe and the Pied Grebe, whose breeding habits are very similar. These two Grebes, in marked contrast to the preceding species, are quite retiring in their habits, especially Holbæll's Grebe, which is a solitary bird.

When the young are hatched they are carried about on the backs of the old birds. When alarmed the old one disappears under water like a flash, coming to the surface fifty yards away, with the little fellows still clinging on for dear life and apparently none the worse for their ducking.

The Pied Grebe breeds early, laying from five to nine eggs in a small floating nest, composed of weeds, debris and mosses, mixed with mud. Their eggs are badly stained, usually more so than any of the other Grebes. I never saw this bird on its nest, although we frequently disturbed the sitting birds before they had time to take the usual precaution of covering their eggs. When thus disturbed Pied Grebes usually remain in the vicinity of their nest, sometimes venturing quite close to the intruder, their brown eyes sparkling like beads, when suddenly they give an alarming "cluck" and disappear with a splash. The nests of Holbæll's, or the Red-necked Grebe, are loosely constructed of grass and aquatic plants, and usually contain five to eight eggs each. These birds are very shy and I never saw them near their nests, except when the young were hatching. They do not dive like the other members of the family, but seem to sink beneath the water, scarcely causing a ripple.

For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

FOURTH PAPER

FAMILY 7. TANAGERS. *Tanagridæ*.

Range.—Tanagers are characteristic birds of the American tropics. Only four of the some 350 known species regularly reach the United States, and but two of these are found east of the Mississippi.

Season.—Like most of our representatives of tropical families Tanagers are highly migratory; all our species winter south of the United States. The Scarlet Tanager, the only species found regularly north of Maryland, reaches the latitude of New York City about May 5 and remains until October 1.

Color.—Tanagers are remarkable for the brilliancy of their colors, to which, in connection with their abundance, is largely due the popular but



SCARLET TANAGER. Family *Tanagridæ*
One-third natural size

erroneous idea that the majority of tropical birds are brightly colored. As a rule the male is much more conspicuously colored than the female. On acquiring his full plumage—usually in his first spring—his color may not again vary appreciably, as with our Summer Tanager, or it may be changed after

breeding to one resembling that of the female, which is worn until the following spring when, by molt, the brighter plumage is regained, as with our Scarlet Tanager.

External Structure.—The typical Tanager is a Finch with a somewhat swollen bill, arched culmen, 'toothed' upper mandible and straight, not angulated, commissure. To draw a hard and fast line between the Finches and Sparrows, however, is impossible. Some systematists consider certain species Tanagers, while others regard them as Finches, but the members of the genus *Piranga* may readily be known by the characters of the bill above mentioned.

Appearance and Habits.—Tanagers are active, arboreal creatures and the males, at least, are generally conspicuous and easily observed.

Song.—As a family, Tanagers cannot be called musical. Many species have feeble and others sharp, discordant voices. Our Scarlet Tanager takes rather high rank among his kind as a singer, but, in my experience, the best singers of the genus are the members of the genus *Euponia* in which the song, though weak, is very sweet and varied.

FAMILY 8. SWALLOWS. *Hirundinidae*.

Range.—Swallows are found nearly throughout the world, New Zealand alone of the larger land areas being without a representation of the group. Of the 80-odd known species some 32 inhabit the western hemisphere where they range from Greenland and Alaska to Patagonia, and ten of these occur in the United States.

Nine species have been recorded from east of the Mississippi, but two



Purple Martin

SWALLOWS. Family *Hirundinidae*. (One-third natural size)

Cliff Swallow

Tree Swallow

Bank Swallow

of these are West Indian species which have been observed but once and that in the Tortugas at the extreme west end of the Florida Keys.

Season.—Coincident with the wide distribution and insect-eating habits Swallows are highly migratory. Only one species winters in the eastern United States; this, the Tree Swallow, is therefore, as might be expected, the first of its family to appear in the spring, reaching the latitude of New York City about April 5 and remaining until the latter half of October after all other members of its family have departed.

Color.—While varying somewhat widely in color Swallows, as a rule, agree in having their colors distributed in solid masses, and there is an absence of streaks and spots, each feather being usually of one color. The steel blue or green of our Barn or Tree Swallows is characteristic of many species.

External Structure.—Long pointed wings, small feet, short, weak, hooked bills and wide gaps cut back nearly, if not quite to the eyes, with a notched, and sometimes deeply forked tail are the obvious external characters of Swallows.

Appearance and Habits.—Swallows are birds of the air, feeding on the wing and doubtless covering every day more miles than some terrestrial species do in a season. Their power of flight is synonymous with speed and grace, but when on the ground they are correspondingly weak and awkward, the wings apparently having been developed at the expense of the feet.

Song.—While not considered song birds some species of Swallows—notably our Barn Swallow—have bright and cheery call notes or twittering songs which are often quite as pleasing as more ambitious vocal efforts.

FAMILY 9. WAXWINGS. *Ampelidae.*

Range.—This family contains only the Japanese Waxwing of Japan and eastern Siberia, the Bohemian Waxwing, which inhabits the northern parts of both hemispheres, and our Cedar Waxwing, which ranges over the greater part of North America.

Season.—The Cedar Waxwing is a permanent resident from Virginia northward, but of irregular occurrence in the northern portion of its range during the winter. The Bohemian Waxwing is a very rare winter visitant.

Color.—The Waxwings are rich grayish brown, and the adults are distinguished by having sealing-wax-like tips on the secondaries and yellow bands at the end of the tail.

External Structure.—With the Waxwings the wings are rather long and pointed, the bill short and rather stout; the head is crested, and the feathers of the lores are black and velvety.

Appearance and Habits.—Except when nesting, Waxwings are usually found in small flocks the members of which seem to be animated by one

mind. They perch closely together, sitting quietly, but raising and lowering the crest interrogatively. At certain seasons, usually late summer, they are active as Flycatchers, and may then be seen darting out into the air and swinging back to the starting point.

Song.—Our Cedar Waxwing is practically songless. A wheezy whistle, usually uttered as the birds take flight, is its principal note.

FAMILY 10. SHRIKES, *Laniidae*.

Range.—Only two of the some 200 species belonging to this family are found in America, its remaining representatives being distributed over the greater part of the eastern hemisphere.

Season.—Our winter Shrike is the Northern or Butcher Bird which comes in October and remains until spring. In the summer we may look



CEDAR WAXWING Family *Ampelidae*
One third natural size

for the Loggerhead, a bird of peculiar distribution which breeds in the South Atlantic States and the Mississippi Valley and eastward through central and northern New York to northern New England, but is found only as a migrant from southern New England to Virginia.

Color.—Our two Shrikes are much alike in color, being grayish above and

whitish below, but the Butcher Bird has the under parts generally barred with black and the lores grayish.

External Structure.—A strongly hooked, hawklike bill is the chief characteristic of the true Shrikes and is clearly related to their raptorial habits. The feet, however, are more passerine in form and evidently lack sufficient



NORTHERN SHRIKE. Family *Laniidae*
One-third natural size

strength to enable the bird to hold its prey while it is being dissected. Hence the habit of impaling. See BIRD-LORE II, 195, where, in describing the actions of a captive Northern Shrike, Mrs. Webster clearly shows that the bird requires some object on which to impale its food before devouring it.

Appearance and Habits.—Shrikes are solitary and never abundant, but are easily observed because of their habit of taking a conspicuous perch. The flight is direct and generally concluded by an abrupt upward swing as the bird takes its perch. Their prey is generally captured by a flight straight from the perch and is sometimes impaled on a thorn, sharp twig or barbed wire, or hung in a crotch.

Song.—The Butcher Bird has a decidedly sweet, varied song of not great volume; the Loggerhead is an equally ambitious but less successful vocalist.



What Bird is This?

Field Description.—Length 5.50 in. Crown streaked with black and greenish gray and with some partly concealed chestnut; back streaked black and greenish gray; white wing-bars, and white blotches on tail; below buffy white with traces of chestnut chiefly along the sides.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in April is Brewster's Warbler, a supposed hybrid between the Golden-winged and Blue-winged Warblers, of which over one hundred specimens are known.

The Young Observers' Prize Contest

Circumstances prevent a report on the essays which have been received on the birds of February and March, but the prize winner will be announced in our next issue.

In the meantime we will remind those who are competing for the prize offered for the best notes on the birds of April and May that their essays should be sent to the editor by June 15. We also now offer a third prize of a book or books to the value of two dollars for the best seven- or eight- hundred-word article on the birds of June and July.

For Young Observers

A Birds' Bath

LAST summer I dug a little pond, about two feet wide, five feet long and two or three inches deep, back of our house. Into this I let the hose flow very slightly, the surplus water being carried by a little trench which ran from the pond down into the woods where the water sank into the earth. All along the trench and pond weeds sprang up and, bending over, kept the place cool so that it offered a double attraction.

The next day I made the pond about four times as big, and after that it was as great an attraction to me as to the birds, and I would advise any one who likes the birds around them to put out at least a shallow pan of water which is changed four or five times a day.

The elms and lindens in our neighborhood had been eaten terribly by worms, but soon after I made the pond the worms began to decrease, as the Orioles and Grosbeaks would go from the pond right into the trees and there take their meals, making, as Mrs. Wright would say, 'very good Citizen Birds, paying their taxes every day.'—EDMUND B. DIBBLE, St. Paul, Minn.

The Incredulous Veery

Two hunters chanced one day to meet
Near by a thicket wood;
They paused each other there to greet,
Both in a playful mood.
Said one, "I had to wade a stream,
Now, this you must not doubt,
And when I reached the other shore
My boots were full of trout."
Where! cried a Veery perched in view
To hear if what they said were true. *Where!!*
The other's whit was now well whet.
Said he, "Let me narrate:
I bought three hundred traps and set
For fur both small and great;
Now, when next morning came, behold,
Each trap contained a skin;
And other disappointed game
Stood waiting to get in."
The astonished Veery whistled, *Where!*
I hardly think that story true. *Where!!!*

—FLORENCE A. VAN SANT.

Notes from Field and Study

A Home in a Cellar

The Phoebe of which I am about to write was first observed on April 12. Seven or eight days later its supposed mate arrived, and it was amusing to see them as they flew about together peering and examining different places near the house. Two or three times I startled the pair by opening a door which leads from the kitchen to a back room or shed.

In a week's time, after the arrival of the mate, the building site was chosen, a small board projecting from a beam above a window inside the cellar. Day after day they brought grass, moss and mud and an occasional feather until the structure was complete.

We were in the habit of closing and locking the cellar door as night drew near; but now that our feathered friends had constructed their domicile in the cellar, we left it open.

On May 4 there was one pinkish white egg in the nest. The next day another was laid, and so on until, on May 7, there were four eggs. Then the intervention of one day, and on May 9 there were five eggs in the nest to be hatched. Then the female was confined more or less to the nest.

After fourteen days there were two naked birds; a few hours later, three; the next morning four, and later that morning, five. The parents were kept very busy bringing insects and bugs to appease the hunger of the five little ones, which were soon clothed in a suit of feathers resembling their parents', and also were fast filling their nest. I thought that it was nearly time for them to fly, when a catastrophe betell them.

One morning, fourteen days after their birth, I went to make my customary call, and not a young bird was to be seen and the nest was torn to pieces. The poor parents flew about crying piteously. I did not know how to account for the accident unless some cat was the depredator.

Any other bird would not have stayed in the vicinity after such a mishap. But the Phoebe, whose great characteristic is perseverance, did not allow such a calamity to utterly discourage her from rearing a brood.

Two days were taken for mourning, and on June 10 they started with renewed vigor to build over a shelf at a short distance from the old site. They used what was left of the first nest and brought fresh material, until in four days a new one was completed and one egg was deposited therein. By June 18, another set of five eggs had been laid, and incubation began once again.

By this time the mother bird had become acquainted with me, and ate stunned insects which I had placed on the edge of the nest, while I stood near by.

Another two weeks passed, and July 1 found the eggs hatching. They one and all came at their respective time. The parents had much the same duties to perform as with the previous brood.

Two weeks and five days elapsed, during which time the young had grown large and become feathered. Then came an important epoch in their lives, the day for flying.

After stretching and trying its wings, the first-born was ready to leave its home and with the encouraging calls of its parents flew from the nest. It reached a clothes-line a few yards from the door, where it sat balancing itself and jerking its queer short tail. Before nightfall its parents had induced it to fly a little farther to a pear tree. Three more birds had similar experiences.

It took more coaxing and advising to get the youngest away from home. While sitting sleepily on the clothes-line, a fly or some insect chanced to pass near his head. Very suddenly and unexpectedly he leaped into the air, caught the insect, but was unable to regain his alighting place and went fluttering to the ground. Luckily, no cat was near and his parents prompted him to fly into a pear tree. There he sat chatting very contentedly at regaining a perch.

So I watched this family until cooler days told them that it was time to go southward.
—E. MARION WHITTEN, *Bedford, Mass.*

Notes on the Golden-winged Warbler

Books tell us that the Golden-winged Warbler is a rare bird or only locally common. I have been fortunate in lighting upon one of the chosen localities of this little-known bird, for it is really abundant at Rhinebeck, N. Y., where I have been spending the past summer.

On May 12 it was first seen, and soon after the song of the male was learned. It



NEST OF GOLDEN-WINGED WARBLER

is a well-defined song of three or four syllables—*whee-zee-zee-zee* (the first note higher)—and in tone reminds one of the *whe-zee* of the Blue-winged Warbler. This song was heard frequently until about July 1, after which date I heard only the incessant call-notes of the birds—*dzee, dzee, dzee*. I am inclined to believe that these notes may have been mistaken by some writers for the "lazy and unaccented" *song* of the bird.

Though frequently seen elsewhere, these Warblers were especially numerous in a certain patch of woods, in the lower end of which, where the marshy ground attracted

them, they were usually the commonest birds about. I tried to estimate the number of pairs in this wood. Although it was impossible to ascertain whether the same birds were seen more than once, I feel sure that I saw at least five separate adult males, but probably ten would be nearer the correct number of pairs that inhabited the wood. Toward the end of June I resolved to find a nest if possible; but though I searched for several days I was unsuccessful. More than once I hid myself to see if a female would return to her nest. In such cases I usually saw her at last feed a fully-fledged young bird—an operation which was accompanied by much *dzeeing*.

During July the birds wandered about in families. They came even to the house and filled the locust trees round about. From the seventh to the nineteenth of the month (inclusive), the species was seen every day in the course of my ordinary rambles, without once being specially searched for. Indeed it was the commonest of the Warblers at that time.

On July 28, long after I had given up all hope of finding a Golden-winged Warbler's nest, I was walking in the woods mentioned above, when my ear was attracted by an unfamiliar Warbler song. It consisted always of eight notes—*cher-sawee-se-se-se-se-se-chee*, with a fall on the last note; the *se-se-se* notes were uttered very fast and the initial *chee* was hardly audible. The mysterious voice led me to a small open space in the midst of a thicket, where a bird suddenly flew up from my feet, exposing a neat little nest with two eggs. One egg was pyriform with very minute specks, the other oval with a few red blotches at the larger end. It was too late that evening to identify either the nest or the mysterious singer.

The next morning I only had time hurriedly to photograph the nest. I found that the pyriform egg had hatched. The other was clear and bad. I did not get a glimpse of the owner of the nest, but was fortunate in discovering the unknown song of the previous evening to spring from a male Golden-winged Warbler. Thus, I had proof that this Warbler, like some

others, develops a new song late in the season.

On the third day the bird left her nest with the same precipitation as at the other visits, making it entirely impossible to identify her. I therefore hid myself in the thicket within sight of the nest. After about ten minutes a female Golden-winged Warbler came creeping suspiciously toward me through the branches, uttering low scold notes. Perceiving that I was discovered, I rose to change my hiding-place, and, as I passed the nest, was most grieved to find that the young bird was dead—overcome by the heat of the sun, for the nest was very exposed. (I was careful not to cut away a single leaf in photographing, and therefore, do not feel responsible for the young bird's death.) The female soon deserted her bad egg, and thus was cut short an acquaintance which I had hoped would prove most interesting.

Although I never identified the bird actually at the nest—indeed I have never met a bird so timid—I feel justified in calling the nest that of a Golden-winged Warbler, for the male was always close by, I saw the female, and there were no other birds about to which it could possibly have belonged.

Later, I collected the nest and the bad egg. The nest, which is of the usual Warbler style, was in a low bramble about four inches from the ground. It is composed of grasses with a few dead leaves, the finer material being used as a lining.—C. G. ABBOTT, *New York City*.

A Talking Magpie

It is of course well known that quite a number of birds outside of the great group of Parrots can be taught to speak a few words with more or less distinctness. Of the relatively short list of such species the Magpie may, perhaps, be said to stand at the top. It is, for instance, not an uncommon sight in western towns within the range of the Magpie to see caged specimens that can speak a few words quite plainly, but I have never seen one that could compare, in this respect, with one it was my fortune to observe during the past summer. This

Magpie was the property of the station agent of the D. & R. G. Railway, a Mr. Martin, at Mancos, Colorado. The bird occupied a large cage, usually kept on the station platform, and was especially 'talkative' at train time, the cage then being the center of an interested group of people. The bird was appropriately named 'Maggie.' The exhibition would start usually in the following order, each word being uttered with astonishing distinctness, and with perfect human inflection: "Pretty Maggie," "Pretty Maggie;" "Maggie's all right." Then would come the information: "Martin's a crank," "Martin's a crank," followed by the emphatic statement, "Martin's drunk," "Martin's drunk!" After this burst of confidence would come the heartiest, jolliest laugh one could imagine. It was said to be an exact imitation of the laugh of the wife of the agent. And, after the manner of certain traditional Parrots, Maggie had been taught a number of words and short phrases not to be found in polite literature! Altogether it was, it seemed to me, an exhibition of a remarkable character.—F. H. KNOWLTON, *Washington, D. C.*

The Great Auk in Florida

The daily press has already published some notice of the astonishing discovery by Prof. W. S. Blatchley, State Geologist of Indiana, of a Great Auk's humerus in a shell mound at Ormond, on the east coast of Florida. This bone was identified by Prof. O. P. Hay, of the American Museum of Natural History, after comparison with five Great Auk humeri which were collected by Mr. F. A. Lucas on Funk Island and subsequently presented to the American Museum by the U. S. National Museum.

The newspaper accounts above referred to attracted the attention of Prof. C. H. Hitchcock, who chanced to be staying at Ormond, and after communicating with Professor Hay to learn the exact location of the mound Professor Blatchley had visited, Professor Hitchcock made further excavations and succeeded in securing additional Great Auk bones.

The subject will be treated at length by Professor Hay in 'The Auk' for July.—F.M.C.

Book News and Reviews

NATURE STUDY AND LIFE. By CLIFTON F. HODGE, Ph.D. Boston, U. S. A., and London. Ginn & Co., 1902. 12mo. xvi + 514 pages, numerous ills.

Few men are better fitted to produce the ideal book on nature study than the editor of this work. A born nature-lover of wide sympathies and interests, he is at the same time a trained educator and scientist. Add to these an intense desire to lead others to the sources in nature whence he has derived so much pleasure and mental and moral profit and it is evident that circumstances have combined for the production of a book of unusual merit and originality.

Believing that "interest in life forms precedes that in inanimate forms," Professor Hodge has omitted all reference to geological, astronomical and meteorological phenomena and thus has more space to devote to his true subject—life.

Professor Hodge would have the contact between nature and the nature student intimate and personal. Domesticated animals, domesticated plants, pet animals, pet plants, possess, when our associations with them are properly developed, an inestimable influence in our mental and moral growth. "The pet animal," he says, "is thus for the child, as it was for the race, the key to the door into knowledge and dominion over all animal life."

Professor Hodge's methods have stood the test of years of trial in the schools of Worcester and are therefore eminently practical. Insect, plant, and animal life, both wild and in domestication, are treated very fully and in so interesting and original a manner that this book appeals not only to teachers but to every nature-lover.—F. M. C.

HEZEKIAH'S WIVES. By LILLIE HAMILTON FRENCH. Boston and New York. Houghton, Mifflin & Co. 1902. 16mo. xi + 116 pages.

How a Canary won the affections of a person who had railed "against the sin of keeping birds in a house," is here recounted

with a degree of sympathy, close observation, and literary skill which make this little volume readable from cover to cover. The story of Hezekiah's life and of the various mates which were secured for him may well be used to illustrate the truth of Professor Hodge's claims concerning the educational and ethical value of keeping pets, and we should think that no owner of a Canary could read this volume without feeling an increased regard for her charge.—F. M. C.

ANNOTATED LIST OF THE BIRDS OF OREGON. By A. R. WOODCOCK. Bull. No. 68. Oregon Agricultural Experiment Station, Corvallis, Oregon. 1902. 8vo. 117 pages.

While it is admitted that because of insufficient data this list doubtless contains errors and omissions, and while from a strictly scientific point of view it might have been deemed desirable for its author to present only the results of his own studies, we believe that so far as the advancement of a popular interest in bird study in Oregon is concerned he has followed by far the best course in presenting this list of the birds of the entire state. About 325 species are included, and the annotations under each one give its manner of occurrence at several localities. As the first work of the kind this will prove a most convenient working hand list for use in subsequent investigation, and its author should receive the thanks of his fellow-workers for his labors in their behalf.—F. M. C.

SUMMER BIRDS OF FLATHEAD LAKE. By P. M. SULLOWAY. Prepared at the University of Montana Biological Station, 1901. 8vo., pp. 83; pl. 16.

The notes here presented are based on observations made between June 14 and August 30, 1900, and in June and July, 1901. The various localities visited are described, oölogical notes on 24 species are given at some length and are followed by a well-annotated list of some 126 species of birds

observed in the Flathead Lake, Montana region.

Those who are familiar with the author's studies of bird-life know that he is a close observer and an excellent describer of birds' habits, and much of the matter included in this paper forms a most acceptable contribution to our knowledge of the life-histories of the species treated.—F. M. C.

The Ornithological Magazines

THE OSPREY.—Judging from the first three numbers, the current volume of 'The Osprey,' with its new type, full line pages, better paper, more harmonious cover, carefully printed plates, and increased size, is surely a vast improvement over previous ones in mechanical make-up, and a great stride in the direction of satisfactory book-making. We are glad to see that Doctor Gill has commenced the long-promised work on the 'General History of Birds', which was begun as a supplement to the January issue, and which will be continued in that form in subsequent numbers, with independent pagination from the main part of the magazine, so that on completion of the work it may be bound separately. The biographical sketches of Sir John Richardson and John Cassin by the editor, and of Prof. Alfred Newton by Dr. Shuffeldt, are of special interest, and we trust that a goodly number of the earlier ornithologists will receive due attention. D. A. Cohen gives us a good account of the California Jay and W. C. Kendall has two papers in 'Random Maine Bird Notes,' referring mainly to the marked decrease of various birds, and the habits of grouse. The following papers, together with a number of shorter notes, are of interest: William Palmer, 'August Birds of Stony Man Mountain, Virginia;' M. S. Ray, 'Rambles about My Old Home;' F. H. Knowlton, 'The Mockingbird at Home;' W. R. Maxon, 'Notes on some Yellow throated Vireos' Nests;' W. E. Safford, 'Birds of the Marianne Islands;' P. M. Silloway, 'Notes on McCown's Longspur in Montana;' and B. S. Bowdish on the Carib Grassquet. We were a little surprised to see in the review of Professor

Macoun's 'Catalogue of Canadian Birds' a statement by the reviewer that the Glaucous-winged Gull and not the Point Barrow Gull, is abundant about the Pribilof Islands. In the summer of 1899 the only large Gull we positively identified about this group of islands, as well as in the vicinity of St. Matthew and St. Lawrence islands, was the Point Barrow Gull.—A. K. F.

WILSON BULLETIN.—In 'Wilson Bulletin' No. 36, Lynds Jones gives an account of 'All Day with the Birds' in Lorain county, Ohio, where on May 9, 1901, during the interval between 4 A. M. and 2.30 P. M., he and his friend W. L. Dawson identified 109 species—a feat hard to surpass even in the few most favorable localities. On one other occasion (May 8, 1899), they recorded 112 species, which is, as far as the reviewer knows, the largest list for any one day. In the 'Passing of the Bird,' R. W. Smith makes some pertinent remarks on the decrease of birds in the south—a section where game laws are badly needed and where apathy allows even such a bird as the Woodcock to remain unprotected during the breeding season.

F. L. Burns has devoted much time and energy during the past three seasons, at Berwyn, Pa., to making a careful count of the breeding birds occupying a certain diversified piece of ground covering about a square mile. The results are well set forth in 'Wilson Bulletin' No. 37, under the title of 'A Sectional Bird Census,' and even a cursory glance shows that his self-imposed task must have been a time-consuming one. After carefully checking up the work of the three independent seasons, he found that 62 species, representing 1,388 individuals, inhabited the section—a little over a pair of birds to the acre. The Field Sparrows, Red-eyed Vireos, Ovenbirds, Chipping Sparrows, Robins and Catbirds were most abundant, and the Cooper's Hawk and English Sparrows were the only injurious ones. We regret to see that in enumerating the enemies of the birds he failed to call direct attention to the cat, which without doubt destroys as many birds as all other animate agencies combined.

With No. 38—the beginning of a new volume—Lynds Jones again takes the editorship of the 'Bulletin,' which with the new cover, fresh type, and general rearrangement approaches more closely the modern magazine. Besides a number of shorter articles, B. T. Gault gives an interesting account on 'Food Habits of the Wilson Snipe,' and N. Hollister's 'Notes on the Winter Birds of Arkansas.' Very little has he written about the birds of the state and consequently reliable lists are very welcome. We cannot help thinking that the Brewer's Blackbirds mentioned really were Bronze Grackles.—A. K. F.

THE CONDOR.—The January number of 'The Condor' opens with an illustrated article on "A Trip to Morro Lake," by Walter K. Fisher, containing an interesting account of the desert region at the foot of the east slope of the Sierra Nevada, and of birds observed there during the summer of 1901. Williams contributes the first instalment of "A Study of Bird Songs," and Gilman gives an account of the habits of the "Crissal Thrasher in California." Beck's article on "The Wingless Cormorant of the Galapagos," although brief, merits special mention since it contains what purports to be the first published half-tone of the remarkable Cormorant (*Phalacrocorax harrisi*), which has thus far been found only about Narborough Island. Among the important short notes are Stephens' record of the occurrence of Lawrence's Goldfinch in New Mexico just east of the continental divide; Maillard's records of two specimens the Saw-Whet Owl (*Nyctala*), in Marion county, and Ridgway's record of the Elf Owl (*Micropallas whitleyi*) in Kern county, Cal. Grinnell corrects a few errors in identification which have crept into some of his publications on west coast birds—an excellent idea which should commend itself to others, since mistakes in identification are likely to be made by almost any one, and when once published are apt to multiply erroneous records unless properly corrected.

This number, the first of the fourth volume, is printed on heavier paper and presents a greatly improved appearance in its

new cover. There is, however, still room for improvement in the reproduction of illustrations and in certain typographical features. The use of the same bold-faced type for headings and for lists of species gives the final page of the first paper the appearance of an advertisement, and the juxtaposition of single and double column matter produces anything but a pleasing effect. The single column may be necessary to accommodate illustrations in the case of longer articles, but the reason for its use for 'general notes' and not for other departments is not evident.

Three new rules for the preparation of manuscript have been adopted: (1) omission of the possessive form in common names of bird; (2) use of single i in specific names formed from personal names—*Nuttalli*, not *Nuttallii*; (3) use of lower case letters for common names, except in a few cases. The first and last rules are purely matters of taste, but the second involves a modification of Canon XL of the A. O. U. code of nomenclature, which requires the original orthography of a name to be rigidly preserved. Whatever be the advantage of convenience and uniformity, the fact remains that this change is an emendation. The same arguments could be used with still greater force for uniform spelling of such names as *cærulea*, *hiemalis*, *pennsylvanica*, etc., but experience has shown that confusion instead of convenience result from change and that emendation for any purpose in one class of cases is the entering wedge which may lead to trouble in others.

Book News

'EVERYBODY'S MAGAZINE' has published a notable series of articles on water birds by H. K. Job, illustrated by the author's admirable photographs from nature. It is satisfactory to learn that these articles are later to appear in book form from the press of Doubleday, Page & Company.

'AMERICAN ORNITHOLOGY' is presenting colored pictures designed to illustrate the distinguishing color-marks of birds, in which surprisingly satisfactory results are obtained by the use of only one or two colors.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

WE published this month an article by Prof. Francis H. Herrick, whose book 'The Home Life of Wild Birds, A New Method of the Study and Photography of Birds'—now in its second edition—has aroused much interest among bird students.

Professor Herrick's "new method" consists largely in what he has termed "control of the nesting site," that is, when a nest is so situated that it cannot be photographed to advantage, he removes it, with the limb on which it is placed, and erects it within a few feet of a tent designed to conceal himself and his camera. "This sudden displacement of the nesting bough," Professor Herrick remarks, "is of no special importance to either old or young, provided certain precautions are taken." "With some species," he adds, "it is possible to make the necessary change without evil consequences when there are eggs in the nest; with others we must wait until the young are from four to nine days old. . . . If we know little of the habits of the birds in question it is safest to wait until the seventh to the ninth day after the young are hatched." . . . In effect, however, this method of bird study and bird photography appears to be largely limited to the period covering the latter part of the nest-life of the young. At this time

the parental instinct is sufficiently strong to bring the adult bird to the nest in spite of its changed surroundings. "If very shy," Professor Herrick writes, "like most Cat-birds, they will sometimes skirmish about the tent for two hours or more before touching the nest. The ice is usually broken, however, in from twenty minutes to an hour. . . ."

There is clearly much to say both for and against the method thus briefly described. That its practice permits one readily to secure an unlimited number of photographs of young birds and their parents at the nest and to observe their habits at short range, Professor Herrick's illustrations and test prove beyond question; that it may be attended by fatal results to the young is equally undeniable, as Professor Herrick frankly admits.

In cutting the knot of the difficulties imposed by situation, nest-life photography and study is so greatly simplified that little need be said in favor of this manner of controlling the nesting site. We turn, therefore, to its objections. These are: (1) Change in the character of the nest surroundings, producing artificial conditions; (2) possible death of young following; (a) exposure to elements; (b) lack of food while the parents are becoming accustomed to the nest in its new situation; (c) exposure to attack from bird enemies.

Premising that Professor Herrick's method is restricted almost entirely to the habits of young birds and their parents at the nest after the former are several days old, and not to a record of nesting site, nest-building, or incubation, we see no reason to doubt that when the parents become accustomed to their new surroundings the life of the nest progresses as before. It is true that the pictures secured do not possess the charm and interest attached to those made under wholly natural conditions where the skill and ingenuity of the photographer add not a little to the pleasure with which we regard the results of his labors. This, however, is not the scientific point of view, and it should be clearly understood that Professor Herrick's studies are eminently scientific. His aim has not been to secure pleasing

pictures of bird-life, but accurate records of nest-life to illustrate his exact, patient, skilled observations of the habits of old and young.

As for the second objection, the dangers to which the young birds are exposed through the moving of the nest, it is undoubtedly serious. We have never tried Professor Herrick's plan of moving the nest to a tent, but have placed an artificial bower near the nest, and know from experience how quickly birds desert their homes during incubation and, even after the young are born, how loth they are to return to the nest when they are alarmed by some strange object near it. Most young birds require food at frequent intervals, and when they are deprived of it even for a comparatively short period, fatal results may follow. In moving the nest the possibility of death from this cause is increased, and it may become necessary, Professor Herrick states, "to feed the young in the nest and to suspend operations until the next day." This, however, is a matter of less importance than exposure to sun and storm, which follows the taking of the nest and young from the shade. Professor Herrick says, "Young birds from one to five days old cannot, as a rule, stand excessive heat. Even when fed and brooded they will sometimes succumb, and here lies the serious danger to be guarded against;" and adds, "it is better to leave the birds to themselves if it promises to be excessively hot or windy."

As for the danger from bird enemies attendant on removing the nest from the place of concealment and placing it in a conspicuous position, Professor Herrick finds that "predaceous animals of all kinds seem to avoid such nests as if they were new devices to entrap or slay them," and the only depredator whom he fears is "the irresponsible or malicious small boy." That cats and the bird-killing Hawks should not take prey which is apparently at their mercy is certainly surprising, and we await further information on this point before accepting Professor Herrick's experience as conclusive.

In any event, it is clear enough that the removal of the nest to an exposed place is

attended by great danger to its contents, and should be undertaken only with the utmost care by a person competent to take advantage of the resulting opportunity to photograph and study its life, with due regard to the welfare of the young.

That the end justifies the means, no one who realizes the value of Professor Herrick's work will deny, and when he tells us that in studying, forty nests of wild birds, the accidents, "which came mainly from inexperience, could be counted on the fingers of one hand," we are bound to admit that under his control his method has been not only successful but unobjectionable. But, as Mr. Hoffmann remarked, in discussing this subject in *BIRD-LORE* for October last, "it is emphatically not a method to be recommended to the general public."

WE have received a circular announcing that the fourth session of the Alstead School of Natural History will, as heretofore, be held at Alstead Centre, N. H., during five weeks of the coming summer. Mr. Ralph Hoffmann will conduct the class in ornithology. Particulars of enrolment may be learned of W. L. W. Field, Milton, Mass.

We have also received an announcement of a new Nature Study School, organized under the auspices of the Massachusetts Institute of Technology, to be held at Sharon, Mass., during the four weeks following July 9. The school will be under the direction of Dr. G. W. Field, of the Institute of Technology, whose wide experience in nature-study teaching insures the success of this wholly admirable undertaking.

Dr. Field will be assisted by Mr. E. A. Winslow, who acts as secretary of the school, and may be addressed at the Massachusetts Institute of Technology, Prof. G. H. Barton, Mr. J. G. Jack, Mr. H. A. Kirkland, Mr. Wm. Lyman Underwood, and other well-known teachers.

Mr. Underwood's coöperation is an assurance that the subject of animal photography will receive particular attention, and the opportunity for instruction in this branch of work is therefore unusual.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries

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New Hampshire.....	MRS. F. W. BATCHELDER, Manchester.
Vermont	MRS. FLETCHER K. BARROWS, Brattleboro.
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WORK!

And after that more Work

The first meeting of the National Committee of the State Audubon Societies, of which a detailed account is elsewhere given, was practically a two-sessioned conjugation of the verb to work, with many variations not found in orthodox grammars. The imperative mood, being the favorite, was only kept within bounds by the conditional, which insisted upon asking the most withering questions regarding ways and means.

As far as the educational side of bird protection goes, most of the state societies already formed are amply able to hold their own and may be trusted to watch the laws as well as to gradually develop their vari-

ous plans, all of which aim to plant in the rising generation a greater respect for animal life. Unfortunately this is not enough.

The states and territories which have either dormant societies or none and lax laws are in the majority. In these places the birds partially protected elsewhere are destroyed in the migrations or in the breeding season, as in the case of the northwesterly regions, such as Alaska.

While it is to the interest of all societies to have protection extended, it is often out of their power as separate bodies to push the interest beyond state limits or for their secretaries to answer the questions and supply drafts of by-laws for those desiring legislative information, or hints for the formation of new societies. Be it here understood that many of the most active of

these secretaries are women with family cares, who conduct a correspondence that amounts to a business wholly without pay.

The editors of BIRD-LORE cheerfully answer all like requests so far as possible, but there is promotive (I would use the word missionary but that it covers so many indiscretions) work to be done in this wide field both by voice and pen that can only be accomplished by the undivided attention of a discreet man who will not only make it his business to keep informed of all local and general work, but also when possible either attend the meetings of game protective associations, granges, horticultural societies or spur some local representative to do so, who in short must act as the secretary of the National Committee.

So far the imperative mood carried the day—then came the conditional, the payment of this important officer?

This must be done by the joint contributions of the state societies *and their friends*. If each society will pledge itself for one year from July 1 to give a certain sum down or if more convenient in quarterly payments, this most important experiment may, at least, have a fair trial; and its efficiency can be proven in no other way.

Of course many societies are themselves struggling and hampered for funds, but the tonic effect upon the whole cause will in itself be retroactive in no small degree. "There are so many calls for money," is the constant plea of those who are approached, "and surely human needs should be considered before those of animals." Certainly they should, and the protection of what is elevating and wholesomely beautiful is one of the most crying *human needs* of today. What is left for humanity when there is no convenient retreat from where indoors and city and self are fettered together.

In today's push and scramble humanity must everywhere have refuge where Heart of Man may realize that however much he may have changed, the fowls of the air and the flowers of the field are as of old, and that Heart of Nature still lives and is working out the plan made him by Heart of God.

Give! give that we may thus work for the dawn of a new day and banish from this peerless land the lowering of a night wherein no call of migrant birds shall drop from above.—M. O. W.

Minutes of the First Meeting of the National Committee of the Audubon Societies of the United States

Pursuant to a resolution passed at a conference of the Audubon Societies held at the American Museum of Natural History, New York City, on November 14, 1901, Mrs. H. T. Grant, Jr., secretary of the Rhode Island Society, was appointed temporary secretary and was requested to correspond with each Audubon Society then organized or which might be organized prior to April, 1902, and ask them to send one delegate to a meeting of the Committee of the National Audubon Societies, and also to designate the time and place when and where such a meeting could be held, the object of the meeting being for the purpose of organizing a Ways and Means Committee and discussion of the scope of the committee's field of action.

In response to this call the first meeting of the delegates was held in New York City, on Friday morning, April 4, in the small assembly room of the American Museum of Natural History, the use of which had been generously given by the museum authorities.

The meeting was called to order at 10 A. M., delegates from the following state societies being present: Vermont, Massachusetts, Rhode Island, Connecticut, District of Columbia, Virginia, Iowa and New York.

Mr. Frank M. Chapman, the chairman of the conference held in November, 1901, temporarily presided, and welcomed the delegates in behalf of the museum.

Dr. T. S. Palmer, delegate from the District of Columbia, offered the following resolution:

Resolved, That William Dutcher, delegate from New York, be and he is hereby made chairman of the National Committee of the Audubon Societies. This motion being duly seconded was carried.

Dr. Palmer also offered the following resolution, which, on being duly seconded, was also unanimously carried:

Resolved, That five members of the National Committee shall constitute a quorum for the transaction of business.

The chairman called the attention of the delegates present to the fact that the work of the Audubon societies and the opportunities for advancing bird-protection were increasing so rapidly that it was absolutely necessary that the services of some person should be engaged who could devote his entire time to the work, not only in conducting the large correspondence, but also in visiting various sections of the country for the purpose of organizing new Audubon societies and bird clubs, and also to attend meetings of game protective associations, women's clubs, farmers' and horticultural societies, and, in fact, every gathering of people that could be interested in and aid the work of bird-study and protection.

After a discussion of considerable length, Mrs. Wright, delegate from Connecticut, offered the following resolution, which, being duly seconded, was unanimously carried:

Resolved, That the chairman be directed to communicate with the respective delegates of the various state Audubon Societies, who are not present at this meeting, and also with the executive officers of the societies that have not appointed delegates, and inform them that after considerable discussion it was the consensus of opinion of the delegates present that the Audubon movement had attained such force and had broadened to such a degree that it was necessary that the services of some interested and intelligent person should be secured who will devote his time exclusively to and take charge of the work of the National Committee of the Audubon Societies in order that all matters of general national scope may receive proper and immediate attention.

Resolved, further, that the said National Secretary shall be paid such compensation as shall be agreed upon, and also shall be reimbursed for his necessary expenses when traveling in the performance of his official duties.

Resolved, That all of the State Audubon Societies be requested to concur in the above action and to state approximately the sum that they will be able to contribute for the first fiscal year.

These resolutions being seconded were duly and unanimously carried.

Dr. Palmer called the attention of the delegates present to two important bills that had been introduced in the House of Representatives. Both these bills were introduced by Mr. Lacey, the author of the Lacey Act. They have been favorably reported by the committees to which they were referred and are now on the calendar.

The Alaska bill provides not only for the protection of game but also of birds of all kinds and prohibits the export of birds for commercial purposes. It will extend bird protection over a territory twice the size of the state of Texas which now has no laws of the kind.

The Forest Reserve Bill provides for the protection of birds and game on the Forest Reserves in an area equal to the combined area of New York and New England. Under existing laws there is no adequate protection for birds on these reservations.

He therefore offered the following resolution which, in view of his explanation, and on being seconded, was unanimously carried.

Resolved, That the attention of the several Audubon Societies be called to two bills now pending before Congress, namely, the bill "For the protection of Game in Alaska" (H. R. 11,535) and the bill "To transfer certain forest reserves to the control of the Department of Agriculture, to authorize game and fish protection in forest reserves," etc. (H. R. 11,536), and that the societies be urged to take such action as they may deem proper to secure the prompt passage of said bills.

Dr. Palmer also informed the committee that he had ascertained that the fashions for the fall and winter of 1902 would demand an increased use of aigrettes, and in view of the fact that in the past women had almost universally offered as an excuse for wearing aigrettes that they were ignorant of the fact that the grossest cruelty was used in securing these plumes, it was deemed advisable by the delegates present that every means should be taken by the Audubon Societies of the country to make the public acquainted with the methods of obtaining aigrettes; also that the use of them had practically exterminated in the United

States the species of birds which produced the aigrettes, and that every means possible should be taken to educate the public regarding this evil.

Dr. Palmer therefore offered the following resolution, which, being seconded, was unanimously carried.

Resolved, That, in view of the probable increase in the use of aigrettes in the near future, the several Audubon Societies be requested to call the attention of their members to the conditions under which aigrettes are obtained and sold, in order that there may be no misunderstanding on the part of the trade or the general public as to the legal status of the sale of these feathers.

Mrs. Davenport, delegate from Vermont, suggested that often opportunities were lost to advance to the cause of bird protection because no one formally appointed to represent the Audubon Societies was present at educational and other large conventions or gatherings; she therefore offered the following resolution, which, being duly seconded, was unanimously carried:

Resolved, That the chairman of the National Committee be empowered to appoint representatives of the Audubon Societies to attend educational conferences and other meetings, at which it seems desirable to present the objects and work of the Audubon Societies.

Dr. Palmer stated that inasmuch as the annual meeting of the American Ornithologists' Union would be held in Washington, D. C., in November, 1902, and as the efforts of the Audubon Societies for bird protection were along the same lines as those of the American Ornithologists' Union, he thought it desirable that the next meeting of the National Committee of the Audubon Societies should be held at the same time and place as the annual meeting of the American Ornithologists' Union; he also stated that he had been deputized by the Audubon Society of the District of Columbia to extend to the Audubon Societies of the United States a cordial and urgent invitation to hold the second meeting of the National Committee and the annual conference of the Audubon Societies in Washington, D. C., November, 1902.

Miss H. E. Richards offered the following resolutions:

Resolved, That the invitation of the Audubon Society of the District of Columbia, to hold the next meeting of the National Committee and the conference of the Audubon Societies in Washington, D. C., in November, 1902, be accepted, and be it further

Resolved, That each Audubon Society be requested to select a delegate to the National Committee on or before November 1, and to notify the chairman of said appointment in order that the said committee may be organized for the ensuing year, and that if such appointment be not made by any society, then the present delegate of such society, if there be one, shall hold office until a successor be appointed, and shall be entitled to act as delegate at the second meeting of the National Committee.

The Committee was entertained by Mrs. Wright, at the Arts Club, after which the first meeting of the National Committee of the Audubon Societies was declared adjourned.

The United States Department of Agriculture has recently issued a little pamphlet that should prove of great use to all who are working for bird protection. It is entitled Directory of State Officials and Organizations concerned with the Protection of Birds and Game, 1902, being Circular 7035 of the Division of Biological Survey.

This directory has been revised to April 1. The addresses are conveniently grouped under four headings—State Officials, National Organizations, State Organizations and Audubon Societies, and so complete is it that no one in future need hesitate in reporting violation of the law from lack of knowledge of the proper persons to address.

Several interesting reports are held over for lack of space, owing to the necessities of the National Committee,—these being from Missouri, Minnesota and Rhode Island.

This last named society has secured a charming lecture and a set of colored slides, and the outfit is already well patronized. The lecture was written by Miss Annie L. Warner, of Salem, a careful bird student, and should other societies need written lectures for similar work they may be glad to learn of this opportunity for obtaining them.



PIGEONS IN FLIGHT

Note the extension of the alula or thumb, at the 'beak of the wing.' Photographed from life, by E. F. Keller.

Bird = Lore

A BI-MONTHLY MAGAZINE
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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. IV

JULY — AUGUST, 1902

No. 4

Concerning the Bad Repute of Whiskey John

BY FANNIE HARDY ECKSTORM

Author of 'The Bird Book,' 'The Woodpeckers,' Etc.

IN these days every bird has his apologist, but I should rather not be the advocate to defend Whiskey John. He is the worst thief, the greatest scoundrel, the most consummate hypocrite abroad in feathers, with his Quaker clothes, his hoary head, his look of patriarchal saintliness. He is a thief, a thief, a thief!

A friendly bird-lover who would loyally whitewash the character of the arch-fiend provided he were a *feathered* biped, argues that to admit of birds having a glimmering of moral sense would make them accountable for their actions in cherry-time, and that therefore the negative must be sustained. The vicious circle in the proof appears at once when we bring forward Whiskey Jack as a bird indubitably lacking moral sense, and inquire what would happen if all other birds were equally defective in their ethical notions. The sum of all the charges against Whiskey Jack is that he knows nothing and cares nothing about morals. Whether he does or does not know the difference between *meum* and *tuum*, he has a decided preference for what is not his own. He steals from pure love of pilfering, and shows not the slightest compunctions of conscience. He steals not alone to satisfy his own wants, but those of his brothers and sisters and wife's relations, and his third, fourth and fifth cousins, and after that he keeps right on stealing for posterity. He takes not only articles for which he has a use and an appetite, but others which he never saw before, doesn't know the uses of, doesn't like the taste of, and can never learn to enjoy or use. I am willing to share generously my cherries and strawberries with the birds; I am ready to divide my last meal of bread and meat with them, but I draw the line at allowing any bird to eat my *soap*. Soap is soap in the Maine woods, forty miles from a store, and even if it were something else it is debatable

whether half a cake (of soap) is better for birds than no bread. But, as old Jed Prouty said of the dog that wanted the moon, Whiskey Jack is "cov'tous."

If he were a better-known bird his ill-repute would be in everybody's mouth; his isolation saves him. But all fur-hunters and all who travel the great spruce woods, from Atlantic to Pacific, know and revile Whiskey John. He goes by many names, of which this, being only a corruption of the Indian Wis-ka-tjon (but wouldn't one like to know what that means in Indian!) is as complimentary as any. In Maine he is most commonly called the Moose-bird or Meat-bird; in the Adirondacks he is the Camp-robber; in books he is the Canada Jay. If you would know how he looks do not go to the scientific books that tell you every feather on him, but take down your Lorna Doone and turn to those pages where that wily old scoundrel, Counsellor Doone, running away with Lorna's diamond necklace, almost persuades John Ridd that he is a good man cruelly misnamed. Whiskey Jack is the bird counterpart of Counsellor Doone. He looks like him, acts like him and has the same undesirable expertness in acquiring property not his own. Newcomers to the woods dread bears, wolves and snakes. What they fear will never harm them; it is the weak things of the wilderness that are exceeding strong. There is a certain large-winged, tiny-bodied little fly, so feeble and appealing that in pity for his frailty you tenderly brush him aside—and then learn that he is the bloody butcher who is flaying your neck and ears; there is this clear-eyed, mild-mannered, trustful bird, for whose good behavior you would go bonds—until he eats your soap. These two and the mosquito are the real enemies of man in the wilderness.

Suppose that you are paddling along one of the still, thicket-bordered, moose-haunted streams of northern Maine, the "Sis," on Caucomgomoc, for example. There is a whistling and confabulating ashore and down scales a medium-sized gray bird, whitish beneath and with a white forehead which gives him a curiously venerable and bald-headed look. He stretches out his black legs and alights with an uncertain hover on your canoe-bow. "*Ca-ca-ca?* Who are you anyway?" he inquires, looking boldly at you. You are new to this sort of thing and the woods are big and lonely; it seems like getting into a city to go where nobody cares about you, and this confidence man takes you in at once. He flits ashore and tells the others that is So-and-so, of New York. Then back he comes; he never stays still long anywhere. "*Ca-ca-ca?* Got any meat today?" says he, seating himself again upon the bow. Perhaps the guide has given you a hint, and this time you bat at him with the paddle and bid him begone for a thief. That hurts his feelings; he puffs out his waistcoat feathers in ruffled innocence till you forget that it would take

half a dozen such thistle-down birds as he to weigh a pound, and he says: "Look at me, do you imagine that a fellow as old and gray-headed and respectable as I am would steal?" You do look at him—a little, stout, white-headed old gentleman with a clear hazel eye, like a superannuated clergyman who had gone into business too late in life to learn the ways of a wicked world, and you apologize profoundly—that is, if you are a novice in the woods; if you have already paid for your introduction to Mr. Whiskey John, you remark, "Pecksniff, get out!" and resort to the argument of the paddle.

He flits away forgiving you; Whiskey Jack is never above such mean revenges. When he comes back, as he is pretty sure to do, it is with the nonchalant impudence of a private detective, "If you don't mind," says he, "I think I'll just take a look at this outfit; I'm a sort of game-warden and have a right to overhaul your baggage." The next minute you hear the guide's paddle bang the middle bar of the canoe. "That there blame Meat-bird a-stealin' our saddle of deer," he explains briefly.

This time Whiskey John is irritated and he flies off talking jay-talk, a most profane language, threatening to follow you to your camping ground and bring with him every last relative that he has.

He does it, too. When you put your stuff ashore and begin to pitch your tent you know that you have a part of a saddle of deer, a big trout cleaned and split, a Partridge in the leg of one wading boot and a Wood-duck in the other, thrust there hunter-fashion to safe-guard them from accidental loss. You turn your back for a few moments, hear nothing unusual, suspect no mischief; but when you turn again you find the trout is a drabbed rag, rolled in dirt, the roast of venison which was to be the best part of your feast, is riddled above the kidneys (which are the favorite morsel of most meat-eating birds), and both the Duck and the Partridge have been dragged from their concealment and chiseled down the breast till there is nothing left. This is lesson number one. It teaches that the Meat-bird will destroy an incredible amount of meat in a very brief time.

You are now prepared to proceed to lesson number two, which is that if his appetite is limitless yet nothing comes amiss to it. The tent is up; the guide is off to get water from the spring; the fire crackles and the potatoes, boiling in their kettle, are knocking at the cover of it; the bread is baking in the open baker and the nice little collops of venison are lying in a tin plate before the fire all ready for the pan; you lie back on your blanket and dream dreams. Nothing happens till the guide returns, and then you hear a muttered growl about leaving a "sport" to keep a camp. There is the guide, looking at an empty plate, and there on a bush sits a Meat-bird with a very bloody breast. The connection is unmistakable.

Never mind; there is more meat where that came from, and a bird that, in addition to all his other work, has just stolen the dinner for two men cannot be hungry. But he doesn't appear to have lost his interest in your affairs. Instead, he tip-toes around on a limb, with wings and tail half spread, whistling and talking, and no sooner is a fresh supply of meat in the pan than he sweeps down in the smoke and heat and balances a moment on the long handle of the frying-pan, calculating the risks of stealing from the pan. Reluctantly he gives up the project and disappears around the corner of the tent. Presently other things begin to disappear. There is a little hollow in the ground, so that the sides of the tent are not pegged down closely. Entering here, he goes to work within three feet of your elbow, being hidden by a box, and, with the tireless industry which is his only virtue, he applies himself to whatever is nearest. You have some cherished candles, your only light for reading; he drags them off by the wicks. There was a dipper of grease for making pitch; that vanishes. You had pinned a rare bug to a chip; he eats it. You had saved some Duck's wings for the children at home; they are overhauled. The guide left his piece of pork unrolled, and it probably goes off in company with your tobacco, which never turns up after this visitation of Whiskey Jack. When you start to wash up for dinner, there is the rascal eating your soap for dessert! Those who have summered and wintered him say that the only article he has never been seen to steal is kerosene. "Him eat moccasins, fur cap, matches, anythink," says an Indian to one observer. As for the amount that they will devour and carry off, there is no likelihood of any one ever having a patience to equal their—their "cov'tousness," as Jed puts it. There is in this typical account of their actions nothing exaggerated except the probability of its happening in one day.

The Canada Jay is not found everywhere even in Maine. One might camp for years in our woods and never see a Jay, for they are the most local bird that we have in the woods. Roughly speaking, the line of his frontier very nearly coincides with the route of the Canadian Pacific railway where it crosses this state. For example, he is found on the Grand Lakes of St. Croix, but not on Dobsy and Nicatowis, four ranges of townships to the south. In that region, which seems perfectly adapted to him, I have camped eight weeks; and my father, in the course of twenty-five years, has spent as many months; yet, with one exception, we have neither seen nor heard a Canada Jay in all that wilderness. On collating the experiences of four good observers, I find that they can mention but two instances of a Canadian Jay being seen within fifteen miles of Bangor, and one of these was fully thirty years ago and the other not less than sixty years since; yet hardly more than fifty miles away they are a common resident. Why do they

never straggle a short day's journey? Why is it that an omnivorous bird, intelligent, restless, enterprising, fearless, apparently capable of adaptations and certainly attracted by the neighborhood of man, belonging to an order of birds which is eminently civilizable, is so closely restricted in its distribution? There is no climatic barrier; there is no noteworthy difference in the vegetal faunas of places within and without his limits; there is no dietary restriction as in the case of some local birds. Here is a very interesting ornithological puzzle.

The nest and eggs of the Canada Jay I have never seen. A standing offer of two dollars apiece for the eggs, though repeated several years, failed to bring in a single specimen. Woodsmen seem very ignorant of their breeding habits, and the only positive statement that I remember was the remarkable information volunteered by a lumberman that the "Beef-bird" nested and had young every month in the year. It is well known, however, that they nest in March when the snow is still very deep in the woods. The first of June I have seen the young, fully feathered and larger than parents, and with the edges of their bills still yellow. They were a very dark blackish slate, wholly unlike the adult. This plumage seems not to have been generally noticed, though it is worn some time.

On considering the evident reluctance of woodsmen to hunt up the nests of this bird, I have suspected that there may be some superstition connected with the bird similar to that which Mr. L. M. Turner records of the Labrador sub-species. The Indians there believe that "if a person sees the eggs in the nest, and especially if he counts them, some great misfortune will befall him." This is curiously substantiated in Mr. E. W. Nelson's account of the Alaskan sub-species, where he notes that the natives refused large bribes rather than take the risk of angering the bird by stealing its nest. The superstition applies only to the eggs, and is, I suspect, coincident with the distribution of the bird, though I never thought to inquire of our hunters and Indians on the subject. Indeed, unless it were chanced upon, its authenticity as a superstition would be doubtful, as the legend-hunter in Maine has only to state what he wants and he gets all he pays for. The seekers of the marvelous are sure to be satisfied.

How the native hunters always hated Whiskey Jack! They never had a good word for him, and a bullet was their usual greeting. The camper came home to find his hut invaded; the deer-stalker had his carcasses of venison riddled by their sharp bills and unfit for market; the trapper's sable were half-ruined in the traps, and, more provoking yet, his traps were robbed of their bait within five minutes after they had been set. It was hard work to plod all day through the lonesome, snowy wilderness, carrying a heavy bag of bait, and to feel that he was doing

nothing but feed these gray wolves in feathers, who robbed him of his chance to get a fisher, lynx or sable almost before he was out of sight. And there is a side to this enmity between the hunter and the Meat-bird that is gruesome. It is years since, but some of us still recollect the tale, of an old outlaw and murderer—more than once a murderer if reports were true—who after haunting the woods for years, a terror to those who crossed his path, fell finally in his turn, the victim of a man as evil as himself. He was shot by his partner and left alone to starve to death in his camp. And after three weeks of utter abandonment and despair, as he saw his end approaching, with no possibility of escaping it, he crept to the cold fireplace and got a black coal with which he scrawled a message on a shred of birch bark. And they found him later, dead and alone, with a tin basin protecting his face, so that, as the writing said, "the Meat-birds might not pick his face after he was dead."

A dread like that, shadowing the last hours of such a man, directing his last words and last act: what a revelation it is of the character of the bird and of the inveterate enmity with which the hunter regards him!

Nighthawk Notes

BY GEORGE H. SELLECK, Exeter, New Hampshire

With photographs from nature

THE Nighthawk has been a mystery to me since my boyhood, when my grandmother told me of the bird that says "pork" and "beef." Its cries, its nocturnal habits, its erratic but noiseless flight are almost weird. John Burroughs says to get acquainted with a bird you must know not only the bird, but its song and nest. Although I have seen and heard many Nighthawks, and have watched a family of them carefully for a month, have seen both the male and female sitting, and have had the young ones in my hands and pockets, much of the mystery still remains.

Some birds will apparently gain confidence in a careful visitor who comes to them often, but this one does not. It resembles the bark of a tree and the bare gray ground so closely in color that it is very hard to distinguish it from its surroundings. It seems to know this and will sometimes allow you to touch it with a stick or your finger. It shows anger rather than fear when disturbed and must almost be pushed from its eggs. Then it makes a rattling hiss somewhat like that of a goose, and jumps at you perhaps, or it flies to the nearest stump, where it lies hissing with outspread wings.

One day in May I saw a Nighthawk alight on a pine branch, where it went to sleep. The fact that it sat lengthwise of the branch with its head

turned away from the trunk made it look, even through a good pair of field-glasses, like a knot, and I found it hard to persuade my wife that it was not one. I suppose it sat with its tail towards the tree trunk because it was more comfortable to have its head up hill than down.

Soon after this we had a week of almost continuous rain, and I saw no more birds until the weather cleared, when the Nighthawks were everywhere flying in the bright sunshine.



NIGHTHAWK WAITING NEAR NEST

June 10, I saw one sitting. My neighbor's daughter had found the nest two days before. As I am a teacher of mathematics, I was pleased to think that this bird had a mathematical turn of mind, for the eggs were laid almost in the center of an equilateral triangle made of small pine branches that happened to lie across each other. There was no real nest, only a slight depression from which the twigs had been removed.

I am not a 'camera fiend,' but I wanted pictures of the eggs and bird. Two of my friends are successful amateurs, and I induced them to furnish the necessary camera, patience and skill. At first we focused at a distance of twelve or fifteen feet, then gradually worked up to five feet

without disturbing the bird, which was asleep part of the time. Then we changed our position for a different view. To gain this a brier, which grew within twelve inches of the triangle, was cut away. Our next picture was to be of the eggs, so I undertook to frighten the bird off and moved my hand up gently toward it as it sat with wide-open eyes and quivering throat. It walked off with outspread wings when my fingers were about to touch it and sat down just outside its triangular home. Next I went round to the opposite side and put down my hand to make it spread its wings for a snap-shot. It now had three men and



NIGHTHAWK SITTING

a camera within a few feet of it and did not seem daunted, but with ruffled feathers, open mouth, spread wings and tail, backed hissing over the edge of the triangle.

We had worked for an hour or more and had taken five time-exposures and one snap-shot, yet we left the bird at home when we went away. "What a devoted mother!" you say, but it was really the father, whose habit it is to sleep on the nest after his night's outing. Meantime the mother was flying about for insects or resting on a branch near by. She took her place on the eggs at night and watched, I suppose, during the absence of her husband until dawn. At any rate, I have seen her there at seven at night and at half past three in the morning,

while the males occasionally flew by so close as to show their little white throats.

I found the young at noon, June 24, and that night I saw one leave the nest. Next day we went to get their picture, but they were gone. At dawn next morning I made them another call, hoping to find them at home, but they were not where I expected, and I started away disappointed, when the old birds showed their anxiety by flying swiftly about me and calling out rapidly "*pick, pick, pick, pe-uk.*" I returned and soon found the little ones within a few feet of the nest. They looked like



"NOT FRIGHTENED, BUT ANGRY"

little gray and white downy chickens not old enough to run, and were about as large as a newly hatched bantam; but they proclaimed by their cries that they were Nighthawks, just as the young Chickadee sometimes tells his name before he is old enough to leave his hollow stub. To make sure of them there was now only one way: They must take a bicycle ride with me to the village photographer. Their father was waiting for them at half past eight when I took them back, asleep on the nest but faithful still. When they were two weeks old they visited the photographer again. At this time they were five and a half inches long and spread twelve and a half inches. Their legs were nearly three inches long and so strong and muscular that they could run nearly as fast as



NIGHTHAWKS TWO DAYS OLD

About natural size

young Sandpipers, but they did not try to fly and did not make a sound. This time they did not get home so early as before, but their father was waiting when they did come. After that I could not find them again, although the anxiety of the old birds showed plainly that if they were no longer housekeeping, they were camping out in the immediate vicinity.



NIGHTHAWK TWO WEEKS OLD

About one-half natural size

The Veery's Note

BY ERNEST CROSBY

When dear old Pan for good and all
Was driven from the woods he cherished,
How much he took beyond recall!
How many mysteries paled and perished!
The satyrs capered in his train,
While dryads trod a solemn measure,
Casting a backward glance in vain
On every haunt they used to treasure.

And having thus from glade and glen
Drawn by his pipe each sylvan wonder,
Pan, ere he vanished, turned again,
And broke his pipe of reeds asunder.
He broke his pipe and cast away
In heedless wrath and grief behind him
The notes that he alone could play,—
Then fled where we shall never find him.

The breezes tossed the notes about
And dropped them in ravines and hollows,
Many were lost beyond a doubt
In nooks where echo never follows.
But here and there a silent bird,
Dejected with a nameless yearning,
Picked up a trembling note unheard
That set his heart and throat a-burning.

The Nightingale, they say, found one
Beneath a moonlit thicket lying,
The Lark, while soaring near the sun,
Caught his upon the wing a-flying,
And so the Bobolink and Thrush
Found ready-made their strains of magic,
Which make us laugh with glee, or hush
With sympathy for all that's tragic.

But one unearthly minor tone
That told how Pan's great heart was broken,
Exiled and homesick and alone,
With cadences of things unspoken,

The witchery of a wild regret,
 Vibrant, monotonous and weary
 With hopeless longing to forget,
 Fell to your lot, my woodland Veery.

Yon Tanagers are gay and red,
 Indigo blue the Bunting near them,
 A yellow Warbler flits o'erhead;
 Their songs and plumage both endear them.
 The Veery's coat is dull and dun;
 He hides and stills his cry above you
 At the least sound; yet modest one,
 More than all other birds I love you.

I love you, for anew you stir
 The old, inexplicable feeling.
 I love you as interpreter
 Of mysteries upon me stealing.
 I love you, for you give a tongue
 To silence. True, you are not cheery,
 But where has any songster sung
 A note as weird as yours, my Veery?

The Nesting of the Yellow-throated Vireo

BY JOHN HUTCHINS, Litchfield, Conn.

YELLOW-THROATED VIREOS have more than once blessed us by hanging their mossy choir-loft high in the fretwork which overarches our own lower roof, and once the Warbling Vireo came and reared her brood, so that we had antiphonal choirs.

These nests were usually from forty to fifty feet above the ground. We had often watched the building and brooding, both with glass and the naked eye, and always had wished for a closer intimacy. So during the early days of June, 1901, as if they had divined our wish, a pair of Yellow-throats came and began their home-building just outside the second-story hall window. The foundations of the tiny house were laid on the second day of June. Foundations, I need hardly say, in this case, as in that of all pensile or hanging nests, begin at the top, the bird working downward and completing her purse-like hammock as the knitter does the toe of a stocking. We shall have occasion to notice more about this later on.

The discovery of the nest-building was made, as is so often the case, by seeing the bird gathering material. We were passing near the stable, when underneath its rather deep eaves a small bird was seen to be fluttering, and we thought she was caught in a strong spider's web, as before now I have found our Hummingbird; but instead of this the bird was gathering web for her uses, and soon flew away to the front of the house, where we lost sight of her; but on coming up cautiously we had the great joy of seeing her fastening the first sticky threads of her new home to some outstretched twigs of a small low-growing elm branch close by our window. Then my note-book came into requisition, and was so faithfully used until the fledglings left the nest that a fairly accurate account may be given of what followed.

1. The birds began their building on Sunday morning, June 2. By the following Saturday, June 8, the nest was completed, so that they took about one round week of not hurried, but of quite incessant work to complete their home-making.

2. They both worked, she of the somewhat modified yellow and green and he with the deeper-colored throat and more vivid livery. It was pretty to see and hear them about their work. There seemed to be such a considerate and even courtly etiquette about it all. One would come with a bit of material and find the other still engaged upon the nest. Then he or she would perch close by, often with a little subdued chirp, such as birds in their love-making know how to give, and then, when the worker had finished his bit, with another answering twitter he or she would quit the field, as if saying: "Now the way is open for you." At times there would be a halt in their comings and goings, filled in with the deep contralto tones of their answering notes, as they fed among the branches or rested during the midday.

3. The material for the nest was almost all of spider-web. This was a matter of surprise to me. The Red-eye uses such generous bits of thin bark and pieces of paper even. And there were occasional thread-like shreds of some coarser fiber in the Yellow-throats' building, but by far the larger part was of the twisted films of the spider.

4. The manner in which the birds fastened this, part to part, and then stretched the nest into shape, was a most interesting process. I have often wondered, with the longer nest of the Baltimore Oriole, how she manages toward the bottom or lower part of her nest—whether she could reach all the way down from the outside and curve the growing pendant into form? I have had hints, too, in her case, of how largely the work is done from the inside; but with these Vireos and their building right before me it was as if I had been taken into the nest-architects' studio and shown plans and specifications and then allowed to watch the construction itself.

The birds built the rim of their nest stout and strong, twisting the web about the twigs and over and over upon itself where it stretched from twig to twig till I wondered at their ingenuity and patience. Their little beaks reminded me of the needle of the sewing machine with its eye at the pointed end. If some Elias Howe of the earlier times had only watched a Weaver-bird with its thread in the tip of its bill the world would not have waited so long for one piece of its useful mechanism. Inside and outside the little heads would reach, with the prettiest turns and curvetings imaginable, till, as the nest grew deeper, the work was done more and more from the inside. Then it was gathered together at the bottom, with side joined to side. When this part of the work first took place the nest seemed to be strangely lacking in depth and had an unshapely look altogether.

But this was the point where the full revelation came to me of how the deepest part is shaped. I saw the bird at this stage inside the nest raise her wings against the upper rim and the twigs which held it and strain with her wings upward and her feet downward till the nest itself grew so thin that I could see through it in places. Then they began again, for the most part from the inside, weaving in more material to thicken and strengthen sides and bottom where these had become thin and weak through the stretching. This was done many times over until the proper depth and thickness were both secured. The nest after being stretched out in this way would be like the coarse warp of a fabric on a loom, and into this the little weavers wove their silken threads.

5. After this came the embellishing with the bits of lichen. These were brought, and fastened on by means of little filmy threads of the spider drawn from the surface of the nest and fastened down over the moss. There was not nearly so much of the lichen used on this nest as on others which I have seen with the glass. It may be that the birds felt a sense of protection from our presence and less need of hiding their home, for they became very tame and quite undisturbed when we stood at the open window.

6. The brooding time was full of interest to us. So far as we could judge by the birds' actions, there were three eggs. We could not see into the nest. After the sitting proper seemed to have begun it was in about two weeks' time that we saw the first signs of life in the nest. The male bird took his part with the female in the incubating. He would bring food to her as she sat upon the nest and, I am not quite sure, but think that she did the same with him.

The bird sitting would frequently sing while on the nest. This question was asked, through the columns of BIRD-LORE, about the Yellow-throat by some one from a western state, and here is an answer. I sometimes thought that the deep-toned *chirrup* was a signal on the part of

the one keeping vigil that the time for the relief was due. At all events, the call was frequently answered from the branches near and sometimes by the coming of the absent mate. The Warbling Vireo also has this habit of singing while on the nest, as does also the Chebec, or Least Flycatcher, with its unmusical hiccough. My Yellow-throats were very faithful to their young, of which there were three. The male bird fed them as attentively as did the mother.

7. On July 7, nearly a month from the beginning of the brooding, the first young bird left the nest. It seemed to take good care of itself, keeping to the trees, and the next day the other two followed it. One of these found its way to the lawn, and as there was danger about in the shape of cats, I played the Good Samaritan, lifting it up to a twig of the tree. In doing this the little creature caught its feet about my little finger. It seemed as if I should never be able to loosen its hold. I never could have believed such strength of clutch possible in so tiny a subject! But then I was able to understand why they had been able to keep to the nest. The elm tree which had been their home stood close by the northwest corner of the house. Through many thunder storms which came to us in that month of June I have seen that slight branch from the body of the elm whip in the blast as if it would be torn from its setting in the great trunk. The nest would be top-down and driven every way, and yet never a fledgling fell from its place. No wonder there had come a development of clutching power!

The Sapsucker

BY EDITH M. THOMAS

A bacchant for sweets is the Sapsucker free!

"The spring is here, and I'm thirsty!" quoth he;

"There's good drink, and plenty, stored up in this cave;

'Tis ready to broach!" quoth the Sapsucker brave.

A bacchant for sweets! "'Tis nectar I seek!"

And he raps on the tree with his sharp-whetted beak;

And he drinks, in the wild March wind and the sun,

The coveted drops, as they start and run.

He girdles the maple round and round—

'Tis heart-blood he drinks at each sweet wound;

And his bacchanal song is the tap-tap-tap,

That brings from the dark, the clear-flowing sap.

For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

FIFTH PAPER

FAMILY II. VIREOS. *Vireonidae*.

Range.—An exclusively American family containing some fifty species, which are distributed from Hudson Bay to Argentina. Twelve of the number, all members of the genus *Vireo*, reach the United States, and eight of these are found east of the Mississippi.

Season.—North of the sub-tropics Vireos are migratory birds, the White-eyed and Blue-headed Vireos alone, of our eastern species, wintering as far north as Florida. In the Middle States they are first represented by the Blue-headed Vireo, which comes in the latter half of April. The remaining species appear in May, and the Red-eyed and Blue-headed Vireos are with us until the middle of October.

Color.—Olive-green, without streaks or spots, is so characteristic a color among Vireos that they were formerly often spoken of as "Greenlets." This color is confined to the upper surface, the under parts in most species being white or whitish, with often a yellow tinge, or sometimes strong, clear yellow.

External Structure.—Our Vireos are small birds averaging somewhat less than six inches in length, with the bill rather slender, but cylindrical, not tapering to a point, and distinctly *hooked*. The outer primary is usually very small or 'spurious,' and in some cases is apparently absent. The base of the bill is beset with bristles, a fact which, in connection with its hooked tip, might lead to the confusion of Vireos and Flycatchers, but in the latter family the bill is wider than deep at the base, and in the former as deep as or deeper than wide.

Appearance and Habits.—With the exception of the White-eyed and Bell's Vireos, which are thicket-haunters, our Vireos are tree-inhabitants, lawn, garden, orchard and woodland rarely being without some member of this group at the proper season. While, like the Flycatchers and Warblers, the Vireos are insect-eaters, they differ from the members of both these groups in their manner of securing food. They are not wing-feeders like the Flycatchers, nor nervous, active flutterers like the Warblers. Comparatively deliberate in actions, they hop from limb to limb, carefully examining the bark and leaves in search of prey as they progress.

Song.—While not great musicians, the Vireos are pleasing singers. "In the quaint and curious ditty of the White-eye—in the earnest, voluble strains of the Red-eye—in the tender secret that the Warbling Vireo confides in whispers to the passing breeze—he is insensible who does not hear the echo of thoughts he never clothes in words."—COUES.

FAMILY 12. WARBLERS, *Mniotiltidae*.

Range.—Like the Vireos, the Warblers are exclusively American birds, ranging from the fur countries to Argentina. About one hundred species are known, of which sixty reach the United States, thirty-eight of this number being found east of the Mississippi.

Season.—Like all our strictly insectivorous birds, Warblers are highly migratory. Only one species occurs in temperate latitudes during the season of heavy frosts, and this, the Myrtle Warbler, becomes for a time a fruit-eater, subsisting on the berries of the myrtle or bayberry. The migration of Warblers begins in early April with the coming of the Palm Warbler, and in the fall is not concluded until the same species takes its departure, about November 1.

Color.—Olive-green above, whitish or yellow below, with white wing-bars and tail-patches, and conspicuous yellow or black markings, describes the characteristic coloring of most Warblers, but so widely do they vary in color that no one type can be made to stand for the group. As with many

Yellow-throated Vireo



Red-eyed Vireo



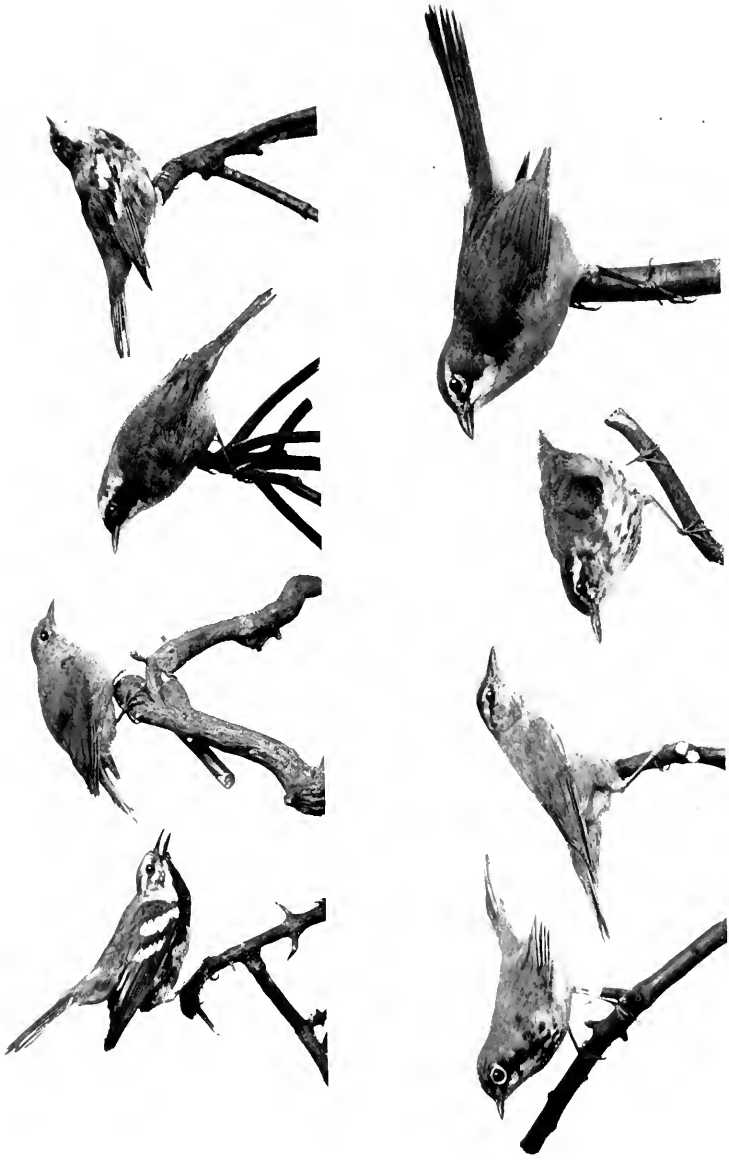
Blue-headed Vireo



Warbling Vireo



VIREOS, Family *Troglodytidae*. (One-third natural size)



WARBLERS. Family *Mniotiltidae*. (One-third natural size)
 Black-throated Green Warbler
 Canadian Flycatcher
 Worm-eating Warbler
 Nashville Warbler
 Louisiana Water-Thrush
 Maryland Yellow-throat
 Yellow-breasted Chat
 Parula Warbler

brightly colored birds, there is marked sexual and seasonal variation among Warblers, the male being the brighter in the spring, but often resembling his mate in the fall, when the young bird of the year may differ from both his parents. Thus, in making a 'key' to our thirty-eight eastern Warblers, the writer found it necessary to represent their different plumages by somewhat over one hundred specimens.

External Structure.—As in the case of color, Warblers vary so in form that no one description can be given of the family as a whole. The slender-billed species, well represented by the members of the genus *Helminthophila* and *Dendroica*, might be confused with the Vireos, but the bill is more acute and is never distinctly hooked. The flat-billed, fly-catching species of the genera *Wilsonia* and *Setophaga* might, if the bill alone is considered, be mistaken for true Flycatchers, from which, however, aside from other reasons, they are to be distinguished by their brighter colors. All Warblers have the back of the tarsus thin, not rounded, as in the Flycatchers, and the three outer primaries of nearly equal length.

Appearance and Habits.—As might be expected, striking differences in form are accompanied by striking differences in habit. Even among the slender-billed Warblers, some haunt the bushes and some the trees, and several may be called terrestrial. The flat-billed species, as has been remarked, are Flycatchers, not, however, of the sedate, automatic, Phœbe type, but of more erratic movement, while the majority are active flutters—the feathered embodiment of perpetual motion.

Song.—With some marked exceptions, notably in the genera *Geothlypis* and *Sciurus*, the songs of Warblers are rather weak and characterless, and bear a resemblance to one another, which renders them of little assistance to the beginner in identifying their owners. Indeed, comparatively few field-students can distinguish at once the notes of certain species. Particularly is this true of migrants, which, present only for a brief period in the spring and songless when returning in the fall, are heard, therefore, at intervals of nearly a year.

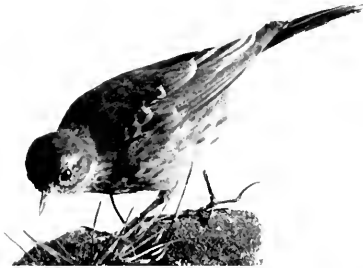
FAMILY 13. PIPITS AND WAGTAILS. *Motacillidae.*

Range.—Of the sixty odd species included in this family, only three are American, two being North, one South American, while the remainder are distributed through the Old World, except in Polynesia and Australia. The only species found regularly east of the Mississippi is the American Pipit or Titlark.

Season.—The Titlark breeds in arctic and subarctic America and southward in the higher parts of the Rocky mountains. It winters from the southern states to Central America, migrating in October and April.

Color.—Many of the Wagtails wear rather striking costumes of black and white or yellow, but Pipits are rather Lark-like in color, dull brownish above; whitish, streaked below.

External Structure.—Like the Larks, the Wagtails and Pipits have the hind toenails much lengthened, but the bill is more slender than that of the Larks, the nostrils are not covered by bristly tufts, and the back of the tarsus is thin, not rounded, as in front.



AMERICAN PIPIT, Family *Motacillidae*
(One third natural size)

Appearance and Habits.—The *Motacillidae* are terrestrial birds, and consequently walkers, a trait which is a field aid in distinguishing the Pipit from certain ground-haunting Sparrows, while from the equally terrestrial Larks, Wagtails and Pipits are to be distinguished by their habit of 'wagging' or 'tetering' their tails.

Song.—The Pipit, like most terrestrial birds, usually sings on the wing, but sometimes delivers its short whistled song from the ground. As a migrant it utters only a faint *dee-dee* when taking wing or passing overhead.

The Young Observers' Prize Essay Contest

We trust that all Young Observers will pardon the delay in reporting on their essays sent in competition for the prizes announced in BIRD-LORE for April and June, when they learn that it is due to the Editor's absence on a bird-study journey in the Bahamas.

Returning, he finds numerous contributions on the birds of February and March, and the birds of April and May, and, as usual in similar cases, finds much difficulty in deciding just which are the best. It was only, therefore, after careful consideration that it was decided to award the prize for the best essay on the Birds of February and March to Master Vincent E. Gorman, of Montclair, New Jersey, while the prize for the best essay on the Birds of April and May goes to Master Archie Walker, of Andrews, North Carolina. Master Walker's essay appears in this number of BIRD-LORE as somewhat more seasonable than that by Master Gorman, which will be published in due time.

Among the essays received we especially commend those by the follow-

ing Young Observers: Maurice J. Clausen, Toronto, Canada; Anna D. White, Lansdowne, Pa.; Edward H. Nichols, Camden, N. J.; Margaret Walker, Andrews, N. C.; W. C. Scott, Dewey, Ohio; Lewis Gannett, Rochester, N. Y.; Edmund W. Sinnott, Bridgewater, Mass.; Ruth Daniels, West Medway, Mass.

Now it is time to send in the essays on the Birds of June and July. These may, as heretofore, contain general notes on the bird-life of these two months or they may describe only the habits of a single species; but in every instance particular care should be taken to be definite and exact, giving *dates* and *periods*. Not, for instance, writing "sometime early in June," or, "the young were in the nest about two weeks."

We now offer a fourth prize of a book or books to the value of two dollars to the Young Observers of fourteen years or under, for the best seven- or eight-hundred-word article on the Birds of August and September.



What Bird is This?

Field Description.—Length, 5.60. Above grayish brown, wings and tail darker. Bill whitish washed with grayish brown. Lower mandible lighter than upper.

NOTE. Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in June is the female Bay-breasted Warbler.

For Young Observers

A PRIZE ESSAY

Bird Notes for April and May

BY ARCHIE WALKER (aged 10 years), Andrews, N. C.

LOUISIANA Water-Thrush came April 1st. Every spring it nests in an old pasture by a branch back of our house.

Rusty Blackbird came on the 5th of April. At first I saw just one, he was walking on the limb of an apple tree, I watched him till he flew to an oak across the road where I saw several others, one sat high up in the tree and kept watch, his song sounded like a wagon squeaking.

A Vireo was in our orchard on the 6th of April. It was very small, had two wing-bars, and a white eye-ring, and was catching insects like a Flycatcher.

Four wild Ducks were on a neighbor's pond on the 8th of April, when they flew I saw white on their wings.

On the 9th of April I saw the Brown Thrasher, next day he was singing the sweetest I nearly ever heard ; we went under the tree and he sat there a long time singing the same as if we hadn't been near.

The Black and White Creeping Warbler came on the 10th, we saw it get a worm out of a hole in a limb.

On the 17th we saw a crooked long-necked bird that I think was a Little Green Heron.

The White-eyed Vireo came on the 18th, it sings very much like the Chat but is smaller and not as yellow underneath.

The same day I heard Cat Bird going like a cat crying but did not get to see it for a week.

The Myrtle Warbler was the first to come. Soon after others came, but were so high up in the trees we could not tell what they were.

On the 18th we saw two brown birds we took to be Wood Thrushes, which we call the "Quillaree." They were feeding on the ground with a Flicker.

We saw and heard several Log-cocks and heard Oven-birds in the laurel. After awhile I saw one walking on the ground. It made me think of a Titlark, only it did not tilt its tail.

We saw a large bird somebody had killed in a marshy field by a river. It looked something like the Little Green Heron, only it was much larger and a different color. It was an American Bittern. They call it the Indian Hen here.

On the 19th of April I heard the sweetest new song in the spruce

pinus. We saw a little bird about the size of a Chickadee hanging on the under side of a limb. It was a Ruby-crowned Kinglet. Afterward we saw two in the orchard so close that we saw the red on their heads.

The same day I saw a male Redstart in the plum trees, and a Summer Yellow-bird and a Warbler that was new to me. It had a chestnut cap and yellow under its tail, which it tilted all the time. I afterward saw it feeding on the ground with Chipping Sparrows. It was a Palm Warbler.

On the 20th we saw a flock of Purple Finches. We very much excited over them, as they were scarce to see.

On the 22d I saw a Catbird near its old nesting-place, and on the 24th saw it carrying straw to build another nest.

The Baltimore Oriole was in our orchard on the 22d.

On the 23d I saw about ten or twelve Indigo-birds.

April 26th I saw a large bird at our pond. I think it was an American Bittern. It would turn its head sideways and walk slowly out on the limb, putting one foot over the other.

On the 27th I heard a Chat singing, and I would mock it and it would stretch its neck and said "Whoo!"

On the 30th of April I saw the Cape May Warbler in the peach tree by our dining-room window. The male and female were both there, and we think they are the tamest Warblers we ever saw. They sit still longer than the other Warblers, and don't seem to care a bit if you look at them.

On the 2d of May I saw a Baltimore Oriole carrying strings to build its nest. It is interesting to watch it tie them to the limb to hang their nests by.

They built a nest in the same tree last year, and took the strings from the old nest to make their new one. I put out some strings on the fence, but they did not take them, as they did last year, but on the 4th a Redstart and a Summer Yellow-bird came and got them.

The other birds I saw in April and May that do not stay all the year were: Hummingbirds, Hooded Warbler, Blackburnian Warbler, Parula Warbler, Scarlet Tanager, Purple Martins, Solitary Sandpiper, Kingfisher, Rough-winged Swallows, Orchard Oriole, Whip-poor-will, Chimney-swift, Bullbats, Cuckoo, Cedar Birds, and a great many Warblers that I didn't know. I would like very much to tell about the nests I've found this spring, but it would make my paper too long, so I will give a list of them: Catbird's nest with five eggs; Field Sparrow's nest, on the ground, with three eggs; Chickadee's nest, in a fence-post, in a hole too deep to see eggs; Carolina Wren's nest, on front porch, in a cigar-box, five eggs; Bewick Wren's nest, in a hole in a chimney; four Chipping Sparrows' nests, two Blue-birds' nests, three Baltimore Orioles' nests, Blue-gray Gnatcatchers' nest, Chebec's nest, two Flickers' nests, and, the most interesting of all, an Oven-bird's nest.

Book News and Reviews

NESTS AND EGGS OF AUSTRALIAN BIRDS. Including the Geographical Distribution of the Species and Popular Observations Thereon. By ARCHIBALD JAMES CAMPBELL. Melbourne. With map, 28 colored plates and 131 photographic illustrations. Printed for the author by Pawson & Brailsford, Sheffield, England, 1900. 8vo, 2 parts, xl 1102 pages.

In these two handsome volumes Mr. Campbell presents the results of his long-continued study of Australian birds, together with what has been learned by others of their nesting habits, the whole forming a thoroughly up-to-date treatise on the subject. Of the some 765 species of Australian birds the eggs of 'considerably over 600 are known,' as compared with the 413 which had been discovered at the time Mr. Campbell published his 'Manual of the Nests and Eggs of Australian Birds' in 1883, an indication of the activity of Australian field ornithologists in the past twenty years.

Several pages are often devoted to a single species and the value of the text is greatly enhanced by the addition of twenty-seven admirably colored plates figuring the eggs of over two hundred species, and particularly by the presence of the one hundred and thirty-one photographs from nature, chiefly by the author, D. Le Souëf, and S. W. Jackson, illustrating the nests and eggs of nearly as many species.

Experience alone fits one to realize the labor involved in the preparation of a work of this kind, where the material is largely to be gathered from nature often under circumstances entailing much hardship and exposure of life and limb, and we can imagine the well-deserved satisfaction with which Mr. Campbell finally views the results of his many years of conscientious work in their present attractive form—a monument to his patience, perseverance, and enthusiasm.

Lack of space prohibits our going into detail, but readers of BIRD-LORE will recall Mr. Campbell's interesting article on the

'Bower-birds,' and in a future number we shall print an illustrated paper by him on the 'Mound-building Birds.'—F. M. C.

NESTLINGS OF FOREST AND MARSH. By IRENE GROSVENOR WHEELLOCK. With Twelve Full-page Photogravures and Many Illustrations in the Text from Original Photographs from Nature by Harry B. Wheelock. Chicago: A. C. McClurg & Co. 1902. 12mo, 257 pages, 12 gelatine full-page prints, 57 half-tones in the text.

The author of this book is evidently a keen observer and tireless student of birds in nature. If her sympathy with them leads her to over-humanize her subjects, we may pardon this failing for her many interesting and novel observations which she records with due detail.

Her studies have been made in the vicinity of Chicago, and she has evidently had unusually good opportunities to observe certain species—opportunities of which she has availed herself so effectively that her book contains much that is novel, and it is distinctly an important contribution to the literature of field ornithology.

The photographic illustrations serve well to illustrate the text and also the difficulties of this side of bird study. The text cuts would appear to better advantage if they had been printed on coated paper.—F. M. C.

AMONG THE WATER-FOWL. Observation, Adventure, Photography. A Popular Narrative Account of the Water-fowl as Found in the Northern and Middle States and Lower Canada, East of the Rocky Mountains. By HERBERT K. JOB. Profusely illustrated by photographs from nature, mostly by the author. New York: Doubleday, Page & Co. 1902. Sq. 8vo, xxi 224 pages, 97 half-tones.

The admirable series of articles by Mr. Job, published in 'Everybody's Magazine' during the past spring, is here attractively presented in book form.

Although these essays practically introduce Mr. Job to the public as a student of birds with a camera, he has had a wide

experience in this method of research and record, the sub-title of his work being fully borne out by its contents.

Though sometimes handicapped by the lack of proper apparatus, no one with experience can view the results of Mr. Job's camera hunting without realizing the difficulties he has conquered in winning success. Not only are Mr. Job's pictures interesting, but, illustrating comparatively little-known species, they form a distinct contribution to our knowledge of the habits of the birds treated; and, it should be especially noted, they are effectively supplemented by the accompanying text. Mr. Job, therefore, has achieved the desirable and by no means easy end of contributing to the literature of both popular and scientific ornithology.—F. M. C.

CASSINIA; A BIRD ANNUAL. Proceedings of the Delaware Valley Ornithological Club, of Philadelphia, 1901. Price, 50 cents. 8vo, 60 pages, 1 plate.

In a new, enlarged and attractive form the fifth volume of proceedings of the Delaware Valley Club is issued under the above title. Formerly containing only an abstract of the club's work, it now adds several of the more important papers presented before the club, the present publication containing the following: 'John Cassin,' by Witmer Stone; 'Observations on the Summer Birds of Parts of Clinton and Potter counties, Pennsylvania,' by Francis R. Cope, Jr.; 'Photographing a Nighthawk's Nest and Young (*Chordeiles virginianus*),' by William L. Baily (illustrated by photographs by the author); 'A Walk to the Paoli Pine-Barrens,' by William J. Serrill; 'The Yellow-winged Sparrow (*Ammodramus savaorum passerinus*) in Eastern Pennsylvania,' by Samuel Wright; 'Trespassing of the Rose-breasted Grosbeak (*Zamelodia ludoviciana*) in the Carolinian Fauna,' by William Evans; 'Nesting of the Mocking-birds (*Mimus polyglottos*) in Eastern Pennsylvania,' by W. E. Roberts and W. E. Hannum; 'A Spring Migration Record for 1893-1900,' by Frank L. Burns; 'Birds that Struck the City Hall Tower During the Migrations of 1901,' by W. L. Baily.

The Ornithological Magazines

The March-April number of 'The Condor' presents an interesting assortment of field notes. The leading article contains a description of the habits of the Scissor-tailed Flycatcher in Texas by Mrs. Bailey, and this is followed by an account of collecting eggs of the Long-billed Curlew and the Sharp-tailed Grouse in Montana by P. M. Silloway. Daggett contributes 'Winter Observations on the Colorado Desert,' Mollie Bryan some experiences with Anna's Hummingbird, and Wueste, notes on the nesting habits of the Black-chinned Hummingbird (*Trochilus alexandri*). Otto Holstein calls attention to the destruction of birds by petroleum along the railroads on the Colorado Desert. Where engines stand for any length of time in one place, the oil used for fuel drips down on the track, collects into little pools and soon becomes as thick as molasses. The birds evidently mistaking the oil for water, get into the pasty mass and are caught like flies on fly-paper.

Systematic ornithology is represented by the description of another new Song Sparrow from the northwest coast (*Melospiza cinerea phaea*, Fisher) and the recognition by Grinnell of the Fox Sparrow from Monterey county, California, originally described many years ago. Walter Fisher contributes a critical article on the Crested Jays of the Pacific coast which shows briefly but clearly the history and relations of the forms considered worthy of recognition. It is accompanied by a key and an outline sketch map and is a valuable addition to the literature of the genus *Cyanocitta*. The author is to be congratulated on presenting the results of his study in a way which might be adopted by others with advantage. Descriptions of west coast birds too often consist of new names and merely outlines of characters without proper indication of the relations which the new forms bear to the old.—F. S. P.

THE AUK.—The July Auk contains a large number of articles, and is illustrated by several half-tones. It opens with an

account of 'The Elepaio of Hawaii,' by H. W. Henshaw, two forms of this odd flycatcher being recognized. We find further along several annotated lists, one by O. Widmann, on birds of Wequetonsing, Mich., one by J. G. Wells on those of Carriacou Island, West Indies, and one by A. H. Clark on those of Margarita Island, Venezuela, in the last paper a Spine-tail (*Synallaxis albescens nesiotis*) and an Oriole (*Icterus xanthornus heliocides*) being described as new forms.

'Notes on the Specialized Use of the Bastard Wing,' by W. H. Fisher, is accompanied by photogravures throwing new light on the position in flight of this little 'packet' of feathers. Instantaneous photography has done much towards solving the complex problem of flight, and such contributions as Mr. Fisher's are of great value. J. Dwight, Jr., discusses 'Plumage-Cycles and the Relation Between Plumages and Moults,' and introduces a novel diagram that by the graphic method shows this relation in a number of species. O. P. Hay contributes 'On the Finding of the Bones of the Great Auk (*Plautus impennis*) in Florida,' and the southern range of an extinct species is thus extended. W. E. Saunders, who visited inaccessible Sable Island, Nova Scotia, in May, 1901, gives us some details concerning 'The Ipswich Sparrow in its Summer Home,' especially data of six nests secured with eggs. The 'Unusual Abundance of the Snowy Owl (*Nyctea nyctea*) in New England and Canada' during the past winter is vouched for by R. Deane, who, on the evidence of many correspondents, concludes that unusual incursions of the Owls recur about once in ten years.

The department of 'General Notes' is interestingly filled with large and small items, half-tone plates of the nest and eggs of the Red-shouldered Hawk and of the Ring-billed Gull, and of the carpenter work of the Pileated Woodpecker being inserted to illustrate some of the notes.

An 'Eleventh Supplement to the A. O. U. Check-List of 1886,' which occupies the concluding pages, furnishes food for

reflection. Stability in nomenclature is still only a dream, but, given the 'law of priority,' the 'process of elimination,' enough eager investigators, and an inflexible committee, and eventually we shall have a new outth of fixed names, with pedigrees of synonyms in as direct descent as the kings of Assyria.—J. D., Jr.

JOURNAL OF THE MAINE ORNITHOLOGICAL SOCIETY.—This publication continues to improve in interest, each number containing contributions of permanent value of which mention should be made in these columns.

In the issue for January, 1902, No. 1, Vol. IV, we find, in addition to brief notes, a report of 'The Sixth Annual Meeting of the Maine Ornithological Society,' together with President Powers' address, delivered on this occasion; 'Some Ornithological Problems for Maine,' a timely communication on lines which might well be adopted at other State Ornithological Society meetings; a history of 'One Yellow Warbler Family,' by Homer R. Dill, which would be more valuable if the author had given definite dates of the various incidents he records; 'The Bluebird,' by Guy H. Briggs, in which the author deplores the decrease in the numbers of this species and at the same time records the collecting of five nests and five sets of five eggs each from one pair of Bluebirds between May 1, 1901, and July 6, 1901, when the birds, apparently both mentally and physically discouraged, abandoned further attempts at housekeeping!

Number 2, Vol. IV, April, 1902, contains 'A Trip to Muscongus Bay, Maine, July 4 and 5, 1901,' by Herbert L. Spinney, a writer who has contributed much interesting information in regard to coast-birds to the 'Journal'; 'Shooting Matches,' by F. F. Burt, condemning the practice of 'Side-Hunts,' which, it seems, are still indulged in by the "village loafers" of Maine; 'A Phœbe's Summer,' by C. H. Morrell; 'Winter Birds of Southern Pines, N. C.,' by C. H. Morrell, a group photograph of some of the members of the Society, and various notes.—F. M. C.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand.

THE eleventh supplement to the Check-List of North American Birds published by the American Ornithologists' Union in 1886, appears in the July 'Auk.' It practically covers the period from April, 1901, to April, 1902, and an examination of its contents reveals, in a measure, the activity prevailing during the past year in the technical side of the study of North American birds.

Thus we find that the committee has endorsed some thirty-nine and rejected twenty-seven proposed changes in names; has accepted as additions to our fauna some twenty-two new sub-species and two new species, and has refused to recognize ten proposed 'new' forms. In one year, therefore, over sixty additions or changes have been made in the Check-List and with action on over fifty cases postponed, the lay student may well ask whether zoölogical nomenclature is, after all, the end and not the means of zoölogical science.

On the surface the prospects for stability in the names of our birds are indeed discouraging. Of the original 1886 Check-List, the result of several years' work of a committee of experts, comparatively little remains in its original form, and each succeeding year shows no decrease in the number of proposed emendations and additions which the Committee on Revision is called upon to consider. Small wonder, then, if the student to whom a name is in truth a means, condemns in disgust the whole matter of nomenclature technicalities and at the same time the disturbers of the Check-List.

There are, however, as usual, two sides

to the matter. Changes in the Check-List, we have seen, are chiefly of two kinds, additions and emendations. The former are composed of 'new' forms including actually new discoveries and what may be termed deferred discoveries, when for example, in the light of further material, the supposed distinctness of certain forms becomes a demonstrable fact. For the past twenty years, it is true, as fuel for the species' maker fire has become less and less abundant, he has split what was left finer and finer until we seem to have now reached the limit in this direction, and there is hope that in time the fire may burn itself out from very lack of material to feed on.

But will we ever cease making those revisions in names which, to the amateur, seem so wholly unnecessary? The answer to this question depends on the absolute fixity with which the A. O. U. adheres to its original 'Code of Nomenclature' and the consistency with which it is interpreted. This code is based on two fundamental principles, priority and preoccupation. That is, beginning with Linnaeus at 1758, the first specific name properly given to an animal is the one by which it shall be known, provided this name, combined with a similar generic term, is not preoccupied, in other words has not been used before in zoölogy.

No one can doubt the justness of these rules, but so vast and so scattered is the ornithological literature of the past one hundred and fifty years that often what was long thought to be the first name applied to a species is found to be antedated by a previously given name, while current names are frequently found to be invalid because they have been used before for some other animal.

It happens that at present we are passing through a period when much attention is being paid to this subject of names with correspondingly numerous 'discoveries' of long-standing errors in the nomenclature of our birds. But, eventually, provided the rules laid down are rigidly adhered to, we shall doubtless reach the stability we have so long sought and in the meantime we may welcome each change as a step toward this end.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Vermont.....	MRS. FLEICHER K. BARROWS, Brattleboro.
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Reports of Societies

Illinois Audubon Society

The Illinois Audubon Society, having reached the mature age of five years, feels that while it can hardly claim for itself the title of 'ancient and honorable,' it has at least passed the period of infancy and can stand firmly upon its feet.

At the date of its fifth annual meeting, April 5, 1902, the number of members joining during the five years counted some 932 adults and 10,024 juniors, a total of 10,956.

We have sent out nearly 3,000 leaflets during the year and have published one pamphlet, a reprint of Mr. William Praeger's 'Birds in Horticulture,' a work of considerable value. We have also issued new membership cards for adults and pa-

pers to be signed by juniors. These were the result of much thought and careful work, and are proving themselves most satisfactory. Our new class of members, paying an annual fee of \$1, grows slowly but surely, and has already more than justified the wisdom of the change and confirms the opinion that no society should attempt its work without at least one class of members paying *annual* dues.

We have held our usual semi-annual and annual meetings. At the former, addresses were made by the president, Mr. Ruthven Deane, and Mrs. Sara A. Hubbard. At the latter, beside the usual business meeting, an address was given by Dr. J. Rollin Slonaker on 'Birds and Their Nests,' which was illustrated by very beautiful slides taken by Dr. Slonaker.

Very excellent work has been done by Mrs. Julia Edwards in the Fourteenth District of the Illinois Federation of Women's Clubs, Mrs. Edwards having formed Audubon committees in a number of the clubs, some of which are doing fine work. At the biennial meeting of the Federation in Los Angeles the Illinois birds had a spokesman in Mrs. Wheelock, of Evanston.

An 'Outline of Bird Study' for the use of teachers, etc., has been prepared by the Committee on Bird Study, giving lists of books, etc.

Some of the dreams we have been dreaming during these five years are becoming realities, and we now have two traveling libraries ready to start on their travels. Among the books are bound volumes of some of the bulletins issued by the Agricultural Department at Washington and the delightful Arbor and Bird Day Annuals published by the State of Wisconsin. Another dream—that of an illustrated lecture to be sent to schools, clubs, etc., throughout the state—will also soon become a delightful fact, and we hope to have it ready for work in the autumn. A third dream—a law incorporating Bird Day with Arbor Day—is still a dream—but we trust that, too, will materialize during the coming year.

The work of the Society has so increased that it has become necessary to make a separate department of the junior work, and Mrs. William M. Scudder, of 604 E. Division street, Chicago, has been made chairman of this department. An interesting feature of the junior work has been the response to an offer made in the little paper, 'By the Wayside,' of a prize for the best list of proverbs and familiar sayings about birds. The result was so surprising that *five* prizes were sent, the first going to a little Wisconsin girl of ten, who sent in a list of 320 such proverbs, etc.!

Very excellent work is done by some of our teachers and county superintendents of schools. Among the latter, that of Mr. Orville F. Bright and Mr. A. D. Curran is worthy of special mention.

Our latest work is the sending, in this 'leafy month of June,' to all the 50

wholesale and retail milliners of Chicago, as well as to some in our smaller towns, a short but clear statement of the state law on the purchase and sale of birds, with a few words of suggestion, appeal and warning. Inclosed with each of these statements sent to the Chicago milliners was a copy of Mr. William Dutcher's leaflet, 'Save the Birds.'

And so the good work goes on. Much has been done; more remains undone; but with such a noble board of directors as this Society is blessed with, it would be impossible for any secretary to feel otherwise than full of hope and of a good courage.

MARY DRUMMOND, *Secretary.*

Minnesota Audubon Society

At the annual meeting held April 5, 1902, John W. Taylor was elected president and Sarah L. Putnam, secretary, they being the officers of last year. The reports show a membership of at least 1,800, and more interest shown throughout the state this spring than at any time during the existence of the Society.

On April 10, the Society issued a circular stating that the Lacey Law would be enforced against all milliners and others having in their possession or offering for sale 'protected' dead birds, their skins or feathers. The woods and parks in and around the cities are being posted, giving notice to boys and others not to kill or annoy birds or their nests. The superintendents of the schools have been asked to see that Bird Day, April 18, be observed fully and the day devoted to the study of birds by the children. Literature has been sent out through the state, but on account of lack of funds this has been much more limited than we could have wished. Mr. F. M. Chapman delivered some very interesting lectures at different towns, which resulted in good to the cause.

A system of outdoor classes for bird study is being conducted by Professor Lange and promises to be very helpful. We have every reason to feel gratified at the success of the work already done. The want of funds cramps us exceedingly. Just how to secure money is a problem not yet solved.

There are several plans now under consideration, some of which it is hoped will be successful. We need all the literature bearing on our cause that any Society or person can send us.

SARAH L. PUTNAM, *Secretary*.

Audubon Society of Missouri

Under the auspices of its president, Mr. Walter J. Blakely, and secretary, Mr. August Reese, this Society has been conducting a careful investigation of the true condition of animal life in Missouri, at the same time endeavoring to find the cause of the too-evident decrease. The result is issued in a four-page circular containing both the questions put to various observers and the answers,—market and plume-hunters, boys who shoot, and the non-enforcement of the law, bearing the blame in this as in other states.

The following quotations, conclusions and suggestions are pertinent and suggestive of the conditions existing, though unacknowledged in many other states, for even where satisfactory bird laws obtain their enforcement is too often regarded as fanaticism.

"Reports furnished us, unquestionably reliable and accurate, almost stagger human belief. It proves that song and insectivorous birds decreased 62 per cent and game birds at the appalling rate of nearly 80 per cent within the past fifteen years. Deer are practically exterminated, excepting in a few inaccessible regions. Does any person doubt, unless sweeping reforms are inaugurated at once, that a few years hence will not witness the total annihilation of our birds and game?"

"*Market and Plume-hunters*. In studying these reports, we find it an indisputable fact that the market and plume-hunter stands preëminent and alone as the greatest factor in the destruction of our birds and game. He simply reaps nature's products, slays whatever is of any commercial value to him in and out of season and does not consider the reproduction of the different species of any consequence and importance.

"*Sportsmen*. Numerous reports, from certain districts of the state where game is still fairly numerous, denounce in forcible language the enormous slaughter of game and birds by would-be sportsmen, simply because the opportunities to kill presented themselves. A true sportsman does not pride himself on the amount of game killed,

but practices moderation and deplors wanton destruction and waste. He is a lover of nature's creations, a close observer of an ever-changing landscape; the giants of the forest, the murmuring of a silvery stream, the camp meal at the mouth of some sparkling spring are closely associated with and play an important role in his pleasures and recreations a-field.

"*Boys Who Shoot*. The outcry against the havoc wrought by boys persecuting and killing birds, especially in or near cities, is very general and bitter. Probably no other agency of destruction has contributed so largely to the absence of birds so necessary to the animation of suburban landscape. With the opening of spring, heralded by the arrival of our feathered friends who have come to greet us with their cheerful songs and twitter, an army of boys will be found with bean-shooters or rifles eager to kill whatever birds may be in sight. Relentlessly are they persecuted, until it appears as if all birds had vanished from the face of the earth. Thickets and meadows are searched for the homes of the nesting birds and eggs collected and destroyed. 'Not that they are willfully wicked or cruel, but because they are thoughtless, and have not been properly taught or trained.'

"*English Sparrows*. The English Sparrows have increased remarkably. According to reports, they are the arch enemies of those birds most useful to agriculture. They wage an incessant war against all birds that are inclined to make their homes with us. Various methods have been employed to check and diminish their numbers, but unsuccessfully. Recently, farmers in adjoining townships in Ohio inaugurated a side hunt, with the result that over three tons of Sparrows were killed. It seems that this method may be adopted elsewhere, with beneficial results.

"*Non-enforcement of the Game Laws*. Great indignation is expressed at the non-enforcement of existing game laws. It is reported that they are violated openly and with impunity, and prosecutions have been made only in a few cases. This has been the indirect cause of greatly reducing the inhabitants of our forests and fields. Furthermore, existing game laws are very unsatisfactory to a majority of the sportsmen and persons having the welfare of our birds and game at heart, and they express their desire that the next Legislature will exercise due diligence in enacting more comprehensive and effective, yet liberal bird, and game laws. It is a recognized fact throughout the country that the fundamental principle of all bird- and game-protection is effective bird and game laws and their enforcement.

"*Destructive Agencies Besides those Enumerated.* We desire to call attention to the fact that other agencies, besides the destruction by human hands, also wield a large influence in the decrease of birds. Deforestation reduces their number largely. Species which inhabit thickets, with the clearing of the land are deprived of shelter for the rearing of their young and disappear as if by magic. With the draining of marshes and lowlands, other species of birds, that live in such places only, vanish forever. Cats destroy a great many birds which build their nests on or near the ground; so do foxes, weasels and other rodents. It will be seen that agencies over which we have no control in conjunction with those already enumerated are constantly and irresistibly at work, trying to break down the barriers which nature has thrown around bird-life for their protection and reproduction. Knowing this, it is so much more important that more stringent measures should be adopted forthwith to check those over which we do have control.

"*Conclusions.* Bird life in general is being exterminated at an appalling rate.

"Edible birds especially are persistently persecuted.

"Song and insectivorous birds are killed for food on account of scarcity of game birds.

"The extermination of all desirable birds is certain within a short period.

"The very existence of the deer—the monarch of the woods only a few years ago, roaming in countless numbers through our forest—is doomed.

"Bird and game laws as they now exist and as now enforced, are entirely inadequate to prevent the annihilation of our birds and game.

"*A Few Suggestions.* Prohibit the killing, capture, possession or sale—dead or alive—of wild birds, except game birds and a few noxious species.

"Prohibit the destruction of birds' nests or collection of eggs.

"Prohibit the sale of all dead game at all seasons of the year, for a certain period.

"There is no agency so well calculated to protect wild bird life as to prohibit its sale. The market hunter is robbed of his vocation, and the incentive to slaughter at all times of the year for commercial purposes is abolished. Experience has taught that this object is broad-gauged and purely in the interests of the masses and in direct line with the unerring laws of nature reproduction.

"Restrict the number of game birds or game that may be taken or killed in one day or in a given time by a single individual.

"Prohibit the shipment of game outside the state.

"Prohibit the hunting of deer with dogs.

"Repeal what is known as the county act.

"No person should be denied the privilege of returning with the trophies of his chase, to enjoy same with his family at home.

"Prohibit the using of a gun for hunting without a license.

"It is gratifying to notice the strong sentiment sweeping across the state, demanding more stringent laws and their enforcement.

"The farmers are aware of the fact that the birds are 'the winged wardens of his farm' and his truest friends.

"The horticulturist recognizes the valuable services birds perform, and the tribute they levy on fruits at a certain time of the year is repaid a thousand fold by destruction of noxious insects.

"The true sportsmen are disheartened with the discouraging conditions confronting them when a-field.

"The fishermen know that a day's outing is fraught with uncertainties, as all our waters have been dynamited and seined of their finny inhabitants.

"Therefore, let us atone for the mistakes of the past, practice moderation in our pleasures, and encourage and protect God's noblest gift to mankind."

Fifth Annual Report of the Wisconsin Audubon Society

The Wisconsin Audubon Society was organized at Milwaukee in April, 1897. After four years of successful work its headquarters were transferred to Madison. This, the Fifth Annual Report, is the first issued from its new home.

Throughout its career the Society has had in view certain definite aims, the most important of which are:

1. The attempt to discourage the wearing of feathers of all birds, excepting those under domestication.
2. The preservation of our wild birds and their eggs.
3. The promotion of popular interest in bird-study.

In seeking to carry these into effect, the work has progressed along certain lines, as follows:

1. Under the direction of Mrs. Elizabeth G. Peckham, of Milwaukee, the continuance and further enrollment of the school branches already organized. These in-

clude as members both teachers and pupils, and are strong factors in spreading an interest in the Society's work. During the year just concluded, the membership thereof has increased from 13,441 to 17,858.

2. Publishing in conjunction with the Illinois Audubon Society, as the organ of both, a small monthly eight-page magazine, 'By the Wayside.' This is intended to interest both adults and children; the subscription price is 25 cents a year. Besides the 'Children's Department'—which is mainly filled with letters written by children about birds, for the best of which a prize or honor badge is awarded each month—'By the Wayside' has during the past year contained notes on bird-migration, book reviews, and scientific information along other lines of natural science. A similar editorial policy will hereafter be maintained.

3. The publication of Bulletin No. 1, 'Some Bird Problems for the Farmer,' written by Dr. O. G. Libby, of the University of Wisconsin.

4. The acquisition of nearly two hundred lantern-slides, seventy of which are colored. These are rented for a small sum to any school branch or local society desiring to use them. They have thus far been used at the following places: Milwaukee, White-water, Hillside, Medford, Hartford, Lake Forest, Kenosha, and Prescott.

5. Securing the passage by the state legislature of 1904, of a more efficient law (Chap. 196) for the protection of wild birds in Wisconsin.

6. The formation of classes at Madison, under competent guidance, for field-work in bird-study. During the spring of 1901, nearly two hundred different persons were present at these meetings. During the same spring a series of four lectures along this line, illustrated by lantern-slides and museum specimens, was given at the State University.

7. The circulation throughout the state, of the Gordon Library of ten bird books, the nucleus for which was presented to the Society in 1899, by Mrs. George Gordon of Milwaukee. During the past year there have been so many calls for these books that

the Society hopes to be able in the near future to purchase two similar collections.

Through the courtesy of the State Superintendent of Public Instruction, the 'Arbor and Bird Day Annual' for 1902, issued by his department, will again carry from the Audubon Society a message of invitation to each public school in the state to coöperate in this movement and to form a school branch. The success of these branches is almost entirely due to the intelligent assistance of the teachers, without which it would be impossible to carry on any organized work among the children of the commonwealth.

It is hoped that the coming year will bring to us many new members, as well as increased financial support. Contributions of money to be spent for the general work of the Society, or in some special manner indicated by the giver, are also much needed. JESSIE T. THWAITES, Sec.

Bird-Protection Abroad

It is pleasing to note that the government authorities abroad are paying much attention to the protection of birds. According to a recent cable dispatch the Minister of Agriculture of Belgium has instructed that berry-bearing trees in the government forests shall remain untrimmed until the end of winter in order to allow the birds plenty of food. Hitherto they have been trimmed in October. It is not generally known how much birds contribute to the sanitary condition of the world; in fact, it has often been said that man could not live upon the earth were it not for the birds. Besides being a perennial delight to lovers of nature, the existence of bird-life is a necessity for the health of the people. During the past season, on some of our outings, we have noted more birds than for many previous years. American people better understand at the present time the need of the preservation of birds; but there is much still to be learned. Every sportsman should assume his share of the work in protecting our birds. *Shooting and Fishing.*

NOTE.—A report from the Florida Audubon Society is of necessity postponed until our next issue.



ROBIN, NEST AND YOUNG

Photograph of tree nature, by A. E. Priscehorn, Glen Island, N. Y., May 11, 1902

Bird = Lore

A BI-MONTHLY MAGAZINE
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The Destructive Effects of a Hail-storm Upon Bird Life

BY H. McL. MORTON, M.D., Minneapolis, Minn.

THROUGH the familiar works of Gätke and others, through light-house reports, and through personal observation, ornithologists have been made conversant with the many remarkable accidents and fatalities which occur to our birds, and especially during the trying ordeal of migration. As an indication of one of these many possible vicissitudes in the life of a bird, I take pleasure in acceding to the editor's request that I write a brief report of the deadly effect upon bird life of an unusually severe hail-storm, accompanied by a very high wind, which occurred in Minneapolis during the summer of 1901.

After an afternoon and evening of threatening weather on August 25, a section of this city was visited by one of the most alarming and destructive rain- and hail-storms in the history of our local weather bureau. According to our imaginative — and I think pardonably so — newspaper reporter, "Hailstones as big as teacups, driven by a wind which gave them the momentum of a six-pound shell," were among the very unusual features of this sudden and alarming phenomenon. The path of the storm, which was not more than half a mile wide, passed through the central residence and park district of Minneapolis, and from a northwesterly to a southeasterly direction. Loring Park, the most central and attractive of our metropolitan reserves, suffered severely, trees being uprooted, branches torn, and foot-paths converted into great gullies three to four feet in depth; the pebbles, sand and mud thus carried away being deposited over the lower grassy areas of the park to a depth of from one to three feet. Added to this was the almost entire defoliation in certain areas of the park, due to the hail. That such results as these must of necessity have occurred will be evident from this extract which I take from the local weather report. These observations apply to the immediate region of the

park. They read: "It is estimated that not less than two inches of water fell in that vicinity during the fifteen minutes, while three inches would not be considered an extravagant estimate. The hailstones ranged in size from one-fourth to one and one-fourth inches in diameter, and were generally almost spherical. A gusty wind accompanied the hail and rain, and a velocity of forty-eight miles per hour prevailed from 9:13 P. M. to 9:24 P. M., with an extreme one-mile velocity of sixty miles at 9:20 P. M." There can be no doubt that the hailstones ranged larger in certain areas than one and one-fourth inches; of that I assured myself at the time.

Loring Park is a spot favored by our summer resident birds, and great numbers of Bluejays, Robins, Bronzed Grackles, four or five species of Woodpeckers, and hosts of smaller birds more arboreal in habit — especially of the Vireo and Flycatcher families — are always to be seen here in the summer. Strange to say, a nest in this entire area of thirty or forty acres is a rarity; last year there was one — a Robin's; this year not one was built in the park. It is distinctively, then, a day feeding- and playground for the birds, but to few species a roosting place. It is due to these facts that so many species so frequently seen in the park in daytime were not to be found among the dead, mutilated and maimed birds on the day following the storm.

My interest in the bird life of this little beauty spot led me to make an early reconnaissance on the following morning. It was an unpleasant sight to behold old and familiar trees robbed of their protecting limbs and often uprooted, but, saddest of all, the park was a veritable avian graveyard. At the very entrance I picked up a Red-eyed Vireo, which had been knocked from the trees by the merciless hail and drowned in the torrents beneath. There were in evidence many others, yet the small and dull-colored birds were difficult to find, many being washed away into the lake near the center of the park or into the street mains, or lost in the accumulated debris of leaves, sticks and sand. In a few steps I picked up a score of Robins and Bluejays, and thus it was all over certain areas of the park. The Robins and Jays were of the few roosting species and suffered proportionately, constituting most of the dead birds found. The Bronzed Grackles, so numerous in daytime, were not to be found among the dead, indicating that they did not roost at all in the park. This was also true of many other species common in the locality. I had for days previous noticed a number of Black and White Creeping and Yellow-rumped Warblers in the park, but found none on the ground or among the debris; yet they could have been easily overlooked, for no doubt many hundreds of smaller birds found death or injury in the path of the storm, and could not be found for this reason. Many of the large birds were on this account found simply by accident—by a head, a wing or tail projecting from a pile of rubbish.

Not the least interesting feature was the manner and cause of death. Of course hundreds of birds lost their lives by the deadly effect of the hail direct, simply being knocked from the trees—many of which were leafless in a few minutes—and literally battered to death. This was clearly shown by the finding of many birds on higher and sloping ground, where drowning would have been impossible, and on whom no injuries were discernible. Others were knocked off their roosts into the paths below—which were now great torrents of water—and carried into the lake, or left in the deposit of sand and mud covering the lower grassy parts of the park. Many of these birds which I examined had no manifest external injury, and I felt it was a clear case of drowning.

But the very interesting feature to me was the birds whose bodies showed by deep gashes or penetrating wounds the bullet-like power of penetration of the hail when driven by a wind of sixty miles an hour. For instance, one bird had a penetrating wound on the right side of the back which completely entered the thorax and lacerated the thoracic viscera. I observed a number with somewhat similar injuries, and there could be no doubt but that they were all caused by the hail. Here death must have been instantaneous. The saddest evidence of the storm was found in the great number of wounded Robins I found all about me. One poor Robin—a fine big fellow—had received a crack from the winged ice that shattered a portion of the bony arch over the eye and produced complete exophthalmos (protrusion of the eye). Death seemed nigh, and to him—as well as to many others—I gave release from their suffering. I found no wounded Jays; possibly those not killed outright had greater staying power than the Robins, and escaped from the inhospitable park. According to the press, "One effect of the hail was the dispatching of English Sparrows. Thousands of the little birds lay about the ground this morning underneath where they had been roosting before stricken by the ice pellets." I am convinced this statement is an exaggeration. A great many Sparrows were killed in all those parts of the city which lay in the path of the storm, but by the very nature of their roosting habits, so familiar, they were immune in much larger measure than other birds.

Severe hail-storms over the northwestern portions of the United States are of common occurrence, and especially over the prairie regions of North and South Dakota. Each summer areas of miles in extent are visited by such phenomena and attended with great destruction to the crops and vegetation generally. As such storms are 'a hot-weather product,' and occur frequently during the nesting period and soon after, I have no doubt many birds are lost each year in this manner.

Finally, is not a subject of unusual interest suggested by the incidents just recited? When we remember that millions upon millions of birds must die each year, is it not remarkable that we observe so few decrepit,

deformed or diseased birds, and how seldom while 'in the field,' and under usual conditions, we find the bodies, or skeletal remains, of a bird? True, one does see such occasionally on the plains, in wooded districts and along the lake shores, that have probably fallen prey to the raptorials or small mammals, but such findings are a numerically insignificant portion of the great host of birds which meet death each year. How, then, ends all this myriad avian host? Countless numbers, no doubt, fall prey to hungry birds and beasts—stronger links in the evolutionary chain—no evidence remaining to show a bird existed. Many eggs and nestlings fall to the reptiles, as well as to Crows, Jays and their near of kin, whose fledgling proclivities are well known. The deadly lighthouse claims its thousands of sacrifices, and the 'small boy' and the hunter add their quota to the death roll.

To these, what we may call, external death factors, I am inclined to believe we may add flood and hail, and I believe this applies with especial force and fitness to our prairie avifauna, so varied and so numerous in the great northwest country—the Dakotas, northern Minnesota and the Canadian plains still to the north. Here countless hosts of birds spend their summers and rear their broods. Over these districts hail-storms are of such frequency and intensity as to justify the belief that, compared to these causes, the work of the lighthouse and the hunter must be insignificant.



DOUBLE-CRESTED CORMORANTS

Photographed from nature, by Frank M. Chapman, Shoal Lake, Manitoba, July, 1901



WHAT THE EGGS WERE IN



WHAT WAS IN THE EGGS

NEST, EGGS AND YOUNG OF RED-WINGED BLACKBIRD

Photograph from *Life*, by C. G. A. '37

A Goldfinch Idyl

BY ELLA GILBERT IVES

DO you know of any far-away pasture where, in blueberry time, Sparrows play hide-and-seek in the bushes, and Finches are like little golden balls tossed on the breeze? It was in such a field that my Goldfinch found the thistle-down for her soft couch—*her* couch, observe, for it was the dull mate in greenish olive that made the bed.

I was there when the maple twig was chosen for the nest — as good luck would have it, close by our cottage door and in plain sight from my window. The choice was announced by a shower of golden notes from the male bird, and a responsive twitter from his mate. She began building at once, quickly outlining the nest with grasses and bark. Her approach was always heralded by a burst of song from her mate, who hovered near while she deftly wove the pretty fabric and then flew away with him to the base of supply.

It was August 2 when the nest began. I quote from my note-book:

"August 3. I observed the work closely for an hour. The working partner made eighteen trips, the first eleven in twenty-two minutes, grass and thistle-down being brought; the last nine trips only down, more time being taken to weave it into the walls. The male warbled near by, and twice flew into the tree and cheered his industrious mate with song.

"August 5. The home growing. The female tarries much longer at the nest, fashioning the lining.

"August 6. Both birds sing while flying to and from the nest.

"August 7. Nest completed. The mother-bird has a little 'song of the nest' — a very happy song. Think an egg was laid today.

"August 11. The male Goldfinch feeds his mate on the nest. Flies to her with a jubilant twitter, his mouth full of seeds. She eagerly takes from him from twelve to twenty morsels. They always meet and part with a song. Once the brooding mate grew impatient, flew to the next tree to meet her provider, took eight or ten morsels, then flew with him to the nest and took twelve more. A generous commissary!

"August 17. Breakfast on the nest; twenty-three morsels from one mouthful. How is it possible for song to escape from that bill before the unloading? Yet it never fails."

Here the record comes to an untimely stop, the reporter being suddenly called home. But the following year nature's serial opened at the same leaf.

Toward the last of July, a steady increase in Goldfinch music and a subtle change in its meaning marked the approach of nesting time. Again I quote from my journal:

"August 8. My careful search was rewarded by the discovery of a Goldfinch's nest, barely outlined, in the rock-maple near the former site, but on the road side of the tree. That my bird friends had returned to the old treestead I could not doubt, as they bore my scrutiny with unconcern. In six days the nest was completed. The builder flew to the brook and drank with her mate, but rarely stayed away long enough for food supply; that was carried to her and received on the nest.



NEST AND EGGS OF AMERICAN GOLDFINCH

From nature, by C. William Beebe

"August 18. An episode; a rival male flew to the home-tree with the male Goldfinch, both singing delightfully and circling about the nest. The mate, much excited, several times flew from the nest and joined in the discussion. Two bouts between the males ended in the discomfiture of Number two, and the return of my Goldfinch with a victor's song.

"August 20. The course of true love now ran smooth, and Goldfinch, sure of his intrenched affection, sang less volubly. The female, delicately sensitive of ear, apparently recognizes the voice of her mate,

and never fails to respond. Other Goldfinches flew by in song, calling and singing, but only one appealed to her.

"August 25 was a red-letter day in Goldfinch annals; then, and only then, I saw the male on the nest fed by his mate. The male then shares incubation? He certainly gave it a trial, but, so far as my observation goes, found it too confining to be repeated.

"August 29. 'Out today,' as the newsboy cries—the female's elevation on the nest determined that. Her eagerness now overcame caution, and she flew straight to the nest instead of in round-about course. Both parents fed the young.

"August 30. In a single trip the male Goldfinch brought forty morsels to the family, his mate eager to get her 'thirds,' but as soon as he had gone she slipped off the nest and fed the young. This method was pursued for three days.

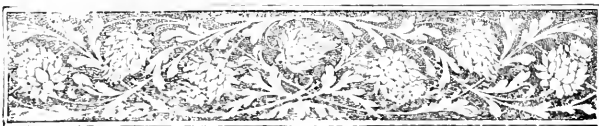
"Sept. 1. The female very active at the nest making toilets of young, reassuring them with tender syllables when a red squirrel ran up the tree with alarming sounds. I saw three open mouths. The brooding bird went for food and returned stealthily to the nest. The male came once, but brought nothing, and henceforth was an idle partner.

"Sept. 6. Young birds, having found their voices, announced meal-time with joyous twitter. They were fed, on an average, once in forty-five minutes, and were now forming cleanly habits, like young Swallows, voiding excrement over the rim of the nest.

"Sept. 8. The old bird no longer perching at the nest to feed her young, but on the branch, to lure them from their cradle. They shook their wings vigorously and preened their tiny feathers.

"Sept. 10. Young Finches ventured to the edge of the nest and peered curiously into the unknown.

"Sept. 11. An empty nest."



The Massachusetts Audubon Society's Bird-Lists

ONE of the means employed by the Massachusetts Audubon Society to interest its members in the practical side of bird study is an invitation to make lists of the birds noted in the state during the year, blanks being furnished for the purpose of properly recording observations. The best ten lists received by the secretary for the Society for the last year were made by the following members: Richard S. Eustis, Cambridge, 145 species; Mrs. L. E. Bridge, West Medford, 125 species; Elizabeth S. Hill, West Groton, 116 species; Lilian Cleveland, West Medford, 111 species; Isabel B. Holbrook, Milton or Rockland, 107 species; Abby W. Christensen, Brookline, 107 species; Louise Howe, Brookline, 103 species; Bertha Langmaid, Boston, 99; James See Peters, Jamaica Plain, 90; Mrs. W. H. Simonds, Bedford, 89. The three first mentioned lists are published herewith.

Blanks for recording the species observed from July 1, 1902, to July 1, 1903, will be furnished to members of the Society by its secretary, Miss Harriet E. Richards, Boston Society of Natural History.

NAME OF SPECIES	* List of Birds observed by Richard S. Eustis, Cambridge, Mass., from May 19, 1901, to May 19, 1902.		List of Birds observed by Elizabeth S. Hill, West Groton, Mass., from Mar. 1, '01, to July 1, '02.		List of Birds observed by Mrs. L. E. Bridge, West Medford, Mass., from July 1, 1901, to July 1, 1902.	
	Locality	Date	Locality	Date	Locality	Date
Holbeell's Grebe	Nahant	Dec. 31, '01				
Horned Grebe	Marblehead	Nov. 16, '01				
Pied-billed Grebe	Lexington	June 10, '01	Groton	July 30,		
Loon	Ipswich	Oct. 26, '01			Middlesex Fells	Mar. 24, '02
Parasitic Jaeger	Ipswich	Aug. 30, '01				
Kittiwake	Ipswich	Jan. 12, '02				
Great Black-backed Gull	Marblehead	Aug. 29, '01			Ipswich	Mar. 12, '02
American Herring Gull	Marblehead	July 7, '01			Ipswich	Mar. 12, '02
Common Tern	Rockport	Aug. 1, '01			Providence	July 17, '01
Red-breasted Merganser	Ipswich	Oct. 26, '01				
Black Duck	Belmont	May 25, '01	Groton	Mar. 22, '01	Middlesex Fells	Sept. 22, '01
Wood Duck	Belmont	May 2, '02	Groton	April 1,		
Lesser Scaup Duck	Cambridge	Oct. 31, '01				
American Golden-eye	Boston	Oct. 18, '01			Boston	Jan. 1, '02
Bufflehead					Ipswich	Mar. 12, '02
Old-squaw	Ipswich	Oct. 26, '01				
White-winged Scoter					Cohasset	Sept. 19, '01
Surf Scoter	Nahant	Feb. 15, '02				
Ruddy Duck	Marblehead	Oct. 9, '01				
Canada Goose			Groton	Mar. 13,		
American Bittern	Belmont	May 22, '01	Groton	April 4,	Cohasset	Sept. 23, '01

* Heard
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List of Birds observed by Richard S. Eustis, Cambridge, Mass., from May 19, 1901, to May 19, 1902.

List of Birds observed by Elizabeth S. Hill, West Groton, Mass., from Mar. 1, '01, to July 1, '02.

List of Birds observed by Mrs. L. E. Bridge, West Medford, Mass., from July 1, 1901, to July 1, 1902.

NAME OF SPECIES	Locality	Date	Locality	Date	Locality	Date
Great Blue Heron . . .	Marblehead	Aug. 10, '01	Groton	May 6, .	Middlesex Fells	Sept. 22, '01
Green Heron	Cambridge	May 20, '01	Groton	Aug. 20, .	Middlesex Fells	Aug. 8, '01
Black-crowned Night Heron	Middlesex Fells	June 8, '01	Groton	Apr. 24, .	Concord	Apr. 19, '02
Virginia Rail	Cambridge*	May 26, '01	. . . . .	. . . . .	Cambridge**	May 15, '02
Sora	Cambridge*	May 20, '01	. . . . .	. . . . .	Cambridge**	May 15, '02
American Woodcock .	Belmont . .	Dec. 8, '01	Groton	Mar. 31, .		
Wilson's Snipe	Cambridge	April 3, '02				
Red-backed Sandpiper	Ipswich . .	Oct. 26, '01				
Semipalmated Sandpiper	Marblehead	Oct. 10, '01				
Sanderling	Rockport .	Aug. 2, '01	. . . . .	. . . . .	Cohasset	Aug. 18, '01
Greater Yellow-legs .	Ipswich . .	Aug. 30, '01				
Solitary Sandpiper . .	Rockport .	Aug. 2, '01	Groton	May 3, .	Medford	May 11, '02
Bartramian Sandpiper	Belmont . .	April 4, '02				
Spotted Sandpiper . .	Cambridge	May 24, '01	Groton	April 4, .	Medford	Aug. 11, '01
Black-bellied Plover .	Ipswich . .	Aug. 30, '01				
Killdeer	Belmont . .	Oct. 19, '01				
Semipalmated Plover .	Ipswich . .	Oct. 26, '01				
Bob-white	Belmont*	May 22, '01	Groton	April 6, .	Waltham	May 24, '02
Ruffed Grouse	Arlington.	June 8, '01	Groton	Jan. 30, .	Medford	Sept. 22, '01
Mourning Dove. . . .			Groton	May 21, .		
Marsh Hawk	Belmont . .	May 23, '01	Groton	Mar. 27, .	Medford	Oct. 20, '01
Sharp-shinned Hawk .	Belmont . .	May 23, '01	. . . . .	. . . . .	Medford	Sept. 28, '01
Cooper's Hawk	Arlington .	April 3, '02				
Red-tailed Hawk . . .	Concord . .	Oct. 20, '01	Groton	May 30, .	Medford	Feb. 16, '02
Red-shouldered Hawk	Belmont . .	May 31, '01	Groton	Mar. 10, .	Medford	Mar. 24, '02
Rough-legged Hawk . .	Cambridge	Dec. 8, '01				
Bald Eagle			Groton	May 6, .		
Amer. Sparrow Hawk .	Belmont . .	May 25, '01	Groton	Apr. 29, .	Medford	Apr. 14, '02
American Osprey . . .	Marblehead	Oct. 5, '01	Groton	Mar. 16, .	Middlesex Fells	Sept. 22, '01
Long-eared Owl	Arlington .	Jan. 26, '02				
Screech Owl	Cambridge*	Nov. 6, '01	Groton	Dec. 30, .		
Great-horned Owl . . .			Groton	Jan. 20, .		
Yellow-billed Cuckoo .	Cambridge	May 24, '01	Groton	May 10, .	Medford	May 11, '02
Black-billed Cuckoo . .	Belmont . .	May 31, '01	Groton	May 8, .	Medford	May 9, '02
Belted Kingfisher . . .	Cambridge	May 21, '01	Groton	Apr. 19, .	Medford	May 5, '02
Hairy Woodpecker . . .	Concord . .	Oct. 20, '01	Groton	Jan. 20, .	Concord	Mar. 25, '02
Downy Woodpecker . .	Belmont . .	May 22, '01	Groton	Jan. 30, .	Medford	Oct. 2, '01
Yellow-bellied Sapsucker.	Marblehead	Sept. 26, '01	. . . . .	. . . . .	Medford	Sept. 28, '01
Red-headed Woodpecker					Newton	July 24, '01
Flicker	Cambridge	May 19, '01	Groton	Jan. 25, .	Medford	Feb. 16, '02
Whip-poor-will	Concord . .	June 17, '01	Groton	Apr. 14, .		
Nighthawk	Marblehead	Sept. 23, '01	Groton	May 16, .	Medford	Aug. 18, '01
Chimney Swift	Cambridge	May 20, '01	Groton	May 7, .	Medford	May 4, '02
Ruby-throated Humming-bird	Belmont . .	May 31, '01	Groton	May 15, .	Medford	May 11, '02
Kingbird	Cambridge	May 20, '01	Groton	May 7, .	Medford	May 8, '01
Crested Flycatcher . .			Groton	May 7, .	Middlesex Fells	May 11, '02
Phoebe	Belmont . .	May 23, '01	Groton	Mar. 13, .	Medford	Apr. 16, '02
Olive-sided Flycatcher					Greylock	June 14, '02
Wood Pewee	Arlington .	May 26, '01	Groton	May 7, .	Medford	May 18, '02

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NAME OF SPECIES	Locality	Date	Locality	Date	Locality	Date
Alder Flycatcher	Belmont . .	June 22, '01			Waltham	May 24, '02
Least Flycatcher	Cambridge	May 19, '01	Groton Apr. 24		Medford	Apr. 27, '02
Horned Lark	Ipswich . .	Oct. 20, '01	Seen this winter			
Blue Jay	Cambridge	May 21, '01	Groton Jan. 10,		Medford	May 11, '02
American Crow	Cambridge	May 12, '01	Groton Jan. 10,		Medford	July 1, '02
Bobolink	Cambridge	May 20, '01	Groton May 7,		Concord	May 28, '02
Cowbird	Belmont . .	May 29, '01	Groton Mar. 31,		Medford	April 4, '02
Red-winged Blackbird	Cambridge	May 19, '01	Groton Mar. 13,		Ipswich	Mar. 12, '02
Meadowlark	Cambridge	May 21, '01	Groton Jan. 26,		Ipswich	Mar. 12, '02
Orchard Oriole			Groton May 23,		North Adams	June 15, '02
Baltimore Oriole	Cambridge	May 19, '01	Groton May 8,		Medford	May 4, '02
Rusty Blackbird	Cambridge	Oct. 21, '01	Groton Mar. 31,			
Bronzed Grackle	Cambridge	May 19, '01	Groton Mar. 2,		Medford	Mar. 13, '02
Pine Grosbeak			Groton Mar. 17,			
Purple Finch	Belmont . .	May 31, '01	Groton Apr. 15,		Medford	Apr. 14, '02
Redpoll			Groton Feb. 4,			
American Goldfinch . . .	Cambridge	May 19, '01	Groton Jan. 1,		Medford	Mar. 3, '02
Pine Siskin	Cambridge	Dec. 4, '01	Groton Jan. 20,		Medford	Oct. 27, '01
Snowflake	Ipswich . .	Oct. 26, '01	Groton Mar. 1,			
Lapland Longspur	Ipswich . .	Jan. 12, '02				
Vesper Sparrow	Waltham . .	May 25, '01	Groton Apr. 17,		Medford	Apr. 20, '02
Ipswich Sparrow	Ipswich . .	Oct. 26, '01				
Savanna Sparrow	Lincoln . .	Nov. 2, '01			Medford	Apr. 23, '02
Grasshopper Sparrow . . .	Lincoln . .	May 18, '02	Groton Apr. 26,		Concord	May 28, '02
White-crowned Spar'w	Belmont . .	May 17, '02	Groton May 17,			
White-throated Spar'w	Cambridge	May 20, '01	Groton Apr. 21,		Medford	Apr. 23, '02
Tree Sparrow	Lexington .	Oct. 27, '01	Groton Jan. 30,		Medford	Mar. 3, '02
Chipping Sparrow	Cambridge	May 19, '01	Groton Apr. 16,		Medford	Apr. 20, '02
Field Sparrow	Arlington .	May 22, '01	Groton Mar. 31,		Medford	Apr. 20, '02
Slate-colored Junco	Marblehead	Sept. 25, '01	Groton Mar. 18,		Greylock	June 14, '02
Song Sparrow	Cambridge	May 19, '10	Groton Mar. 10,		Medford	Mar. 3, '02
Swamp Sparrow	Cambridge	May 19, '01	Groton Apr. 19,		Medford	May 11, '02
Fox Sparrow	Lexington .	Oct. 27, '01	Groton Jan. 13,		Medford	Mar. 22, '02
Towhee	Middlesex Fell	May 26, '01	Groton May 4,		Medford	May 1, '02
Rose-breasted Grosbeak	Cambridge	May 21, '01	Groton May 7,		Medford	May 9, '02
Indigo Bunting	Arlington .	May 21, '01	Groton May 17,		Medford	May 11, '02
Scarlet Tanager	Belmont . .	May 23, '01	Groton May 17,		Medford	May 9, '02
Purple Martin	Concord . .	June 15, '01	Groton Apr. 15,		Concord	May 28, '02
Cliff Swallow	Cambridge	May 20, '01	Groton Apr. 22,		Cambridge	May 15, '02
Barn Swallow	Cambridge	May 20, '01	Groton Apr. 9,		Concord	Apr. 19, '02
Tree Swallow	Cambridge	May 20, '01	Groton Mar. 31,		Concord	Apr. 19, '02
Bank Swallow	Cambridge	May 25, '01	Groton Apr. 25,		Concord	May 28, '02
Rough-winged Swal'w					North Adams	June 17, '02
Cedar Waxwing	Arlington .	May 22, '01	Groton Jan. 30,		Medford	Oct. 6, '01
Northern Shrike	Cambridge	Nov. 14, '01	Groton Jan. 29,		Medford	Mar. 23, '02
Red-eyed Vireo	Cambridge	May 21, '01	Groton May 8,		Medford	May 12, '02
Warbling Vireo	Cambridge	May 19, '01	Groton May 6,		Medford	May 9, '02
Yellow-throated Vireo	Cambridge	May 20, '01	Groton May 4,		Medford	May 8, '02
Blue-headed Vireo	Arlington .	Apr. 27, '02	Groton Apr. 25,		Medford	May 12, '02
White-eyed Vireo			Groton May 5,		Belmont	June 7, '02
Black and White Warbler	Belmont . .	May 21, '01	Groton Apr. 23,		Medford	Apr. 27, '02
Golden-winged Warbler	Belmont *	May 22, '01			Medford	May 9, '02

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NAME OF SPECIES	Locality	Date	Locality	Date	Locality	Date
Nashville Warbler	Lexington .	May 23, '01	Groton	May 13, .	Medford	May 7, '02
Northern Parula Warbler	Cambridge*	May 24, '01	Groton	Apr. 30, .	Medford	May 9, '02
Cape May Warbler			Groton	May 8, .		
Yellow Warbler	Cambridge	May 19, '01	Groton	May 30, .	Medford	May 4, '02
Black-throated Blue Warbler	Boston . . .	May 14, '01	Groton	Apr. 30, .	Medford	May 11, '02
Myrtle Warbler	Cambridge	May 20, '01	Groton	Apr. 22, .	Medford	May 7, '02
Magnolia Warbler	Cambridge	May 22, '01	Groton	May 12, .	Medford	May 9, '02
Chestnut-sided Warbler	Belmont . . .	May 23, '01	Groton	May 20, .	Medford	May 8, '02
Bay-breasted Warbler					Medford	May 20, '02
Blackpoll Warbler	Cambridge	May 20, '01	Groton	May 8, .	Medford	May 20, '02
Blackburnian Warbler	Arlington . .	May 26, '01	Groton	May 16, .	Greylock	June 15, '02
Black-throated Green Warbler	Belmont . . .	May 21, '01	Groton	Apr. 29, .	Medford	July 14, '02
Pine Warbler	Arlington*	May 21, '01	Groton	Apr. 5, .	Medford	June 8, '02
Yellow Palm Warbler	Swampscott	Sept. 26, '01	Groton	Apr. 20, .	Medford	Apr. 27, '02
Prairie Warbler	Arlington . .	May 30, '01	Groton	May 14, .	Medford	May 21, '02
Ovenbird	Arlington . .	May 21, '01	Groton	May 6, .	Medford	May 4, '02
Water-thrush	Cambridge	May 20, '01	Groton	May 25, .	Cambridge	May 27, '02
Mourning Warbler					Greylock	June 16, '02
Maryland Yellow-throat	Cambridge	May 19, '01	Groton	May 3, .	Medford	May 8, '02
Yellow-breasted Chat					Medford	May 21, '02
Wilson's Warbler	Cambridge	May 19, '01	Groton	May 15, .	Medford	May 20, '02
Canadian Warbler	Cambridge	May 22, '01	Groton	May 25, .	Medford	May 19, '02
American Redstart	Cambridge	May 19, '01	Groton	May 10, .	Medford	May 4, '02
American Pipit	Marblehead	Oct. 7, '01				
Catbird	Cambridge	May 20, '01	Groton	May 6, .	Belmont	May 3, '02
Brown Thrasher	Belmont . . .	May 22, '01	Groton	Apr. 20, .	Medford	May 5, '02
House Wren	Belmont . . .	May 31, '01	Groton	June 3, .	Belmont	May 3, '02
Winter Wren	Marblehead	Oct. 9, '01			Concord	Oct. 1, '01
Short-billed Marsh Wren					Belmont	July 10, '01
Long-billed Marsh Wren	Cambridge	May 25, '01			Cambridge	May 15, '02
Brown Creeper	Cambridge	Nov. 2, '01	Groton	Jan. 25, .	Concord	Oct. 1, '01
White-breasted Nuthatch	Arlington . .	May 21, '01	Groton	Jan. 26, .	Medford	Nov. 10, '01
Red-breasted Nuthatch	Marblehead	Oct. 3, '01	Groton	Dec. 28, .	Medford	Sept. 22, '01
Chickadee	Cambridge	May 19, '01	Groton	Jan. 30, .	Medford	May 8, '02
Golden-crowned Kinglet	Marblehead	Sept. 26, '01	Groton	Jan. 25, .	Medford	Sept. 22, '01
Ruby-crowned Kinglet	Marblehead	Sept. 26, '01	Groton	Apr. 23, .	Carlisle	Apr. 19, '02
Wood Thrush	Belmont . . .	May 22, '01	Groton	May 15, .	Medford	May 7, '02
Wilson's Thrush	Cambridge	May 21, '01	Groton	May 17, .	Medford	May 11, '02
Olive-backed Thrush	Cambridge	May 24, '01	Groton	May 21, .	Medford	May 20, '02
Hermit Thrush	Arlington . .	Oct. 19, '01	Groton	Apr. 17, .	Medford	Apr. 25, '02
American Robin	Cambridge	May 19, '01	Groton	Feb. 28, .	Medford	Jan. 8, '02
Bluebird	Belmont . . .	May 21, '01	Groton	Mar. 1, .	Ipswich	Mar. 12, '02

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For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

SIXTH PAPER

FAMILY 14. WRENS, THRASHERS, ETC. *Troglodytidae*.

Range.—The Wrens (subfamily *Troglodytinae*) number some 150 species, all but a dozen of which are confined to the western hemisphere, where they are distributed from Patagonia to Labrador and Alaska. Fourteen species inhabit America north of Mexico, eight of these occurring east of the Mississippi.

The Thrashers (subfamily *Miminae*) number some 50 species and are confined to America. Eleven species inhabit the United States, of which only three, the Brown Thrasher, Catbird and Mockingbird, are found east of the Mississippi.

Season.—Our Wrens, with the exception of the Carolina Wren and Bewick's Wren, are migratory. One species, the Winter Wren, comes from the north in the fall, reaching the latitude of New York city about September 22 and remaining until April; the others come from the south, appearing late in April and early in May and leaving us in October.

The Mockingbird is migratory only at the northern limit of its range; our other representatives of the *Miminae*, the Thrasher and Catbird, are both migratory, coming late in April and remaining until October.

Color.—Shades of brown and gray are the characteristic colors of the Wrens and Thrashers, as they are of most brush- and thicket-haunting birds. With the Wrens fine black markings are common; with the Thrashers and Mockers solid colors prevail.

External Structure.—Although differing so markedly in general appearance (compare a House Wren and Brown Thrasher, for example), the Wrens and Thrashers possess many points of structure in common, and when some of the larger tropical Wrens are examined their resemblance to the Thrashers is obvious. Both Wrens and Thrashers have scaled tarsi, rounded or graduated tails, the outer feathers being, as a rule, much the shortest, and the outer primary is about half as long as the longest.

Appearance and Habits. The nervous, excitable manner of our House Wren and its habit of holding the tail erect or even pointing toward its head, is characteristic of most of the members of this group, though with the largest Wrens the tail is not held upright. With the Thrashers and



WRENS, THRASHERS, ETC. Family *Troglodytidae*. (One-third natural size)
House Wren Brown Thrasher
Carolina Wren

Catbird

Mockers the tail is also important in gesture, the white markings on the tail of the latter being conspicuously displayed by a spreading of the feathers. Both Wrens and Thrashers inhabit the lower growth, the former being more secretive than the latter.

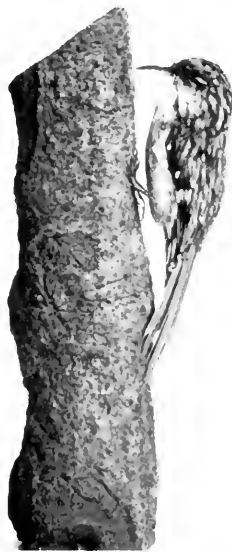
Song.—Wrens and Thrashers are distinguished among birds for their powers of song. Our Mockingbird is probably unexcelled as a songster by other members of his genus, but there are numerous species of Mockingbirds, one ranging as far south as Patagonia, which sing equally well, while some of the southern Thrashers and Wrens even exceed ours in musical ability.

FAMILY 15. CREEPERS. *Certhiidae*.

Range.—Of the dozen or more species included in this family only one, the Brown Creeper, reaches the New World, the others being distributed over the larger part of the eastern hemisphere.

Season.—The Brown Creeper nests from northern New England northward, and in the western United States his racial representatives all extend south along the Rocky mountains to southern Mexico. In the east it migrates southward late in September and returns about May 1, wintering from northern New England to the Gulf States.

Color.—With the exception of the European Wall Creeper, which has rose markings in the wings, the Creepers are dull, neutral-tinted birds, the streaked brown of our species bringing it into close harmony in color with the bark of trees which it frequents.

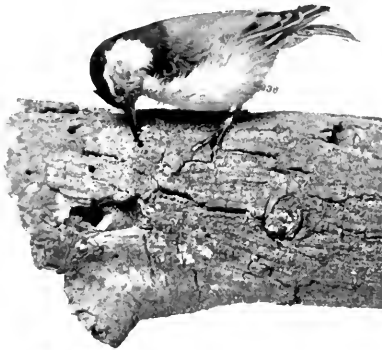


BROWN CREEPER. Family *Certhiidae*
(One-third natural size)

External Structure.—The slender, curved bill and especially the stiffened, pointed tail-feathers are the most noticeable characteristics of our Creeper, but the latter feature is not shared by all the members of the family, some of which have soft, rounded tail-feathers.

Appearance and Habits.—The Creeper's distinguishing trait is made known by its name. In ascending trees it uses the tail, as do the Woodpeckers, for a prop or support; and we have here, therefore, an interesting instance of the development of similar structure, among birds distantly related, as a result of similar habit.

Song.—The Brown Creeper's usual note during the winter is a faint *scep*. To the birds inhabiting Maine is attributed a song 'exquisitely pure and tender,' but the song of those I heard in Mexico was a decidedly mediocre, squeaky performance.



White-breasted Nuthatch



Red-breasted Nuthatch



Chickadee



Tufted Titmouse

TITMICE AND NUTHATCHES: Family Paridae. (One-third natural size)

FAMILY 16. TITMICE AND NUTHATCHES. *Paridae.*

Range.—As is the case with most northern families of birds, the Paridæ have representatives in both the New and Old Worlds. The Titmice number some 75 species, of which 19 are American, 7 of these being found north of Mexico and four of them east of the Mississippi.

The Nuthatches number some 20 species, only four of which are American, all of these being found from Mexico northward and three of them east of the Mississippi.

Season.—Our Titmice and Nuthatches are, as a rule, only slightly but regularly migratory. The Red-breasted Nuthatch, however, is an exception, coming to us more or less irregularly from the north early in September and remaining until April or May.

Color.—Gray above and white below is the prevailing type of coloration in this family; a color-

scheme which, while it apparently does not bring them into harmony with their surroundings, conforms with Thayer's law for the coloration of animals, that is, darker above than below.

External Structure.—Chickadees and Nuthatches are so different in structure that some authors place them in separate families, though they are not so treated in the 'Check-List' of the American Ornithologists' Union. The Chickadees have a short, stout bill, the nostrils being covered by bristly tufts as in the Crows and Jays; indeed, as many systematists have remarked, there are no structural characters other than size to distinguish the Chickadees from the Jays. The tail is rather long and rounded, the outer primary being short, and the plumage loose and fluffy.

The Nuthatches agree with the Chickadees in having the outer primary short, but differ from them in having a short, square tail, long, slender bill, and much longer toes and toe-nails.

Appearance and Habits.—The climbing habit of Nuthatches is their distinguishing characteristic in life, and their elongated toes and toe-nails are doubtless of assistance to them in this connection, though the tail apparently here plays no part beyond being short enough not to interfere with their movements in either direction. The bill is used as a pick, but its length apparently renders it more serviceable in reaching into cracks and crevices.

With the Chickadees the stout bill is employed in excavating a nesting-hole and in hammering food held by the strong feet.

Song.—Though possessing a variety of notes, neither Chickadees nor Nuthatches can be considered songsters. The former, however, utter whistled calls which are often possessed of much sweetness.

The Migration of Warblers

Few subjects are of more interest to field students of birds than the migration of the host of Warblers which pass northward in the spring and southward in the fall. Coming from their far winter homes when the weather is comparatively settled, there is a certain regularity in their movements which makes a study of them unusually valuable. For both these reasons BIRD-LORE proposes to devote much attention during the coming year to the times of arrival and departure of Warblers in eastern North America, and in this undertaking it asks the cooperation of all its readers who have notes on the migration of Warblers. The notes should give (1) the place of observation; (2) the observer's name; (3) name of the species, followed by the data called for in the Biologic Survey Migration Schedules, that is, (4) when was it first seen? and about how many were seen? (5) when did it become common? (6) when was it last seen? (7) is it common or rare? If you cannot reply to all these questions answer those you can and send your notes to the editor of BIRD-LORE any time during the next two months.

The Young Observers' Contest

The prize for the best essay on the birds of June and July goes to Master Stewart Mackie Emery, of Morristown, N. J.

In preparing their essays on the birds of August and September, in competition for the prize offered in August BIRD-LORE, we ask young observers to remember that those contributions showing the greatest amount of original observation will stand the best chance of winning the award. What we desire is not general information on the bird-life of August and September, but we want to know what *you* have seen in the woods, fields or marshes during these two months. These essays should be sent in during the first half of October.

We now offer a fifth prize of a book or books to the value of two dollars to the young observer of fourteen years or under who sends us the best seven- or eight-hundred word article on the birds of October and November.



What Bird is This?

Field Description.—Length 5.75 inches. Upper parts streaked with black, brownish gray and grayish brown a grayish line over the eye, under parts white streaked with black, a buff band across the breast and on the flanks.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in August is the female Indigo Bunting, which in worn, breeding plumage shows almost no trace of blue and is then easily confused with certain Sparrows.

Notes from Field and Study

A Catbird's Musical Ability

A Catbird who chose our back yard as his home during the past summer has interested me on several occasions by his attempts at imitation.

One noon, as I came in at the back door, I heard a Canary singing, and wondered whose song it could be that I could hear so plainly. I came into the house, but curiosity got the better of me and I had to go back to investigate. There was my Canary, perched on a lawn-seat, dressed in dark drab instead of yellow, singing as a three-months-old Canary would sing. There were no rough notes in his song, such as are usually heard when the Catbird tries to imitate; but he stopped short of the full melody and left me with that aggravating feeling one has when the final measure of any musical composition is left off on account of an interruption.

Another day, I heard what started to be my Rose-breasted Grosbeak's familiar sentences, and I opened my eyes to see him. Just then that squawk, so familiar to those who are acquainted with the Catbird, came out in the middle of his imitation, and I said, "No, you don't fool me. The Grosbeak never puts in any such discords. His notes are all harmonious and pure tone. You will have to do better than that." He finished just as the Grosbeak does, and that one rough squawk was all there was to tell me it was not the Grosbeak.

Memorial Day, a hand-organ came along. That was his chance. The hand-organ was putting in its best efforts on some rattle-te-bang music, which was too much for the poor Catbird; he must try anyway—do it or die. So he struck in. A few of the notes he got right, but more of them he did not, for in his haste to keep up to the time he put in almost anything to fill up the measures. He had this to comfort him anyway,—he did not let that tormenting hand-organ come out ahead. His

time was as good as the organ's,—accent, evenness of beat, rests and all. I have not seen much of him for several weeks now, but presume he has been attending the music festival which has been in progress.
—EMILY B. PELLET, Worcester, Mass.

The Warbling Vireo a Nest Singer

The account of the singing of a Warbling Vireo from its nest, in the September-October, 1901, BIRD-LORE, almost exactly describes a similar experience of my own last summer, which surprised me greatly, it seemed so unusual. It would be interesting to know whether these two incidents are exceptions, or whether they merely show the habit of the species.

It was at New Russia, Essex county, New York. The nest was in a maple tree, bordering the road in front of the house. After sitting had begun it was noticed (on June 1) that at intervals the singing of the Warbling Vireo was stationary for some minutes near the nest. The nest was watched more closely, and soon one of my class discovered that one of the birds sang while brooding, and the other did not. By advancing with caution we could stand directly beneath the nest and see the little bill open to pour forth the song. The music was not so continuous while the singer was thus under inspection, for he had to stop often to cock his head and turn his bright eye inquiringly down upon the listener below. But when undistracted by a sight of his audience he repeated the strain with almost perfect regularity *once in five seconds!* Once, when he was timed, this was kept up for five minutes. This period was about the usual length of his sitting, and then his mate entered the tree with little scolding notes, a small tom dashed through the air to a distant row of trees, leaving a trail of song behind, and silence fell in the maple tree.

It was natural to conclude that the singer

was the male and the silent sitter the female, which was doubtless the case.—MARY MANN MILLER.

Nesting Habits of the Chimney Swift

Although having often read of the Chimney Swift nesting in hollow trees, and the usual place being in unused chimneys, nothing has ever come to my notice, in literature, stating that they nest in other places.

In this locality, more nests are built inside buildings than there are inside chimneys. The nests are usually glued to the gable end of the building—sometimes barns, sometimes old uninhabited houses are chosen—and one nest, the past summer, was built in a blacksmith shop within fifteen feet of the forge. A number of years ago a pair nested in the upper part of a house in which a family lived, and near to a bed in which children slept every night. In this case the birds entered through a broken window.

On only two occasions has the writer observed the Swifts collecting their nest material. They chose the dead twigs from the tops of trees, on one occasion a white maple, another time from a hemlock. As the birds flew slowly along, they would seize a twig in their bill and were generally successful in breaking it away. When the twig was not broken off, the bird would fly but a short distance and return and try another.

Sometimes the egg-laying begins before the nest is completed. The eggs are laid usually in the morning, one being laid each day until the set is completed, the number being five.

When the last egg is laid incubation begins, twenty-two days being required before the young are hatched.

Should the first set of eggs be taken, and the birds not frightened, they will again have eggs, in the same nest, in two weeks' time.

Whether both birds incubate I do not know, as the sexes are so nearly alike in plumage.

About three weeks are required for the

young to get a sufficient growth of wing-feathers to be able to fly. During this time they are fed by both birds, at any time, day or night.

A chimney would appear to be a very safe place for a pair of birds to raise a brood to be free from enemies. Yet there is one enemy they are unable to cope with—that is rain. A heavy rain, when the young are about half grown, loosens the glued sticks from the sooty chimney, and young and nest fall to the bottom of the shaft, where the young soon perish of hunger, as the old birds do not seem to feed them after the fall.

In such cases the young are often taken by the people of the house, placed in a small basket or box, lowered a short distance into the chimney from the top, where they are fed and cared for as if nothing had happened.—W. H. MOORE, *Scotch Lake, N. B.*

Destruction of Birds by Lightning

In connection with Dr. Morton's account of the destruction of birds by a hail-storm, at Minneapolis, in August, 1901, published in this issue of BIRD-LORE, the following report from the 'N. Y. Sun' of the effect on Sparrows of a severe storm which occurred in New York city on the evening of July 28, is of interest: "More than a thousand Sparrows were killed by the storm at the corner of Hudson and Third streets, Hoboken. Two large shade trees in front of the Beachwood apartment house were struck by lightning shortly after the storm began, and a moment afterward the lawn in front of the house was a carpet of feathers. Most of the birds were killed outright, but there were several hundred that began to hop about their dead mates and chirp."

Cats and Bells.

A correspondent recommends the placing of bells on cats to prevent them from catching birds, and states that the plan has been tried with success.

Book News and Reviews

TWO VANISHING GAME BIRDS: THE WOODCOCK AND THE WOOD DUCK. By A. K. FISHER, Ornithologist Biological Survey. Year-Book U. S. Dept. of Agriculture, 1901, pp. 447-456.

Dr. Fisher's experience as a sportsman, combined with his wide knowledge as an ornithologist, permits him to speak with unusual authoritativeness on the question of game protection. This paper, therefore, as might be expected, is one of the most practical, convincing contributions to the subject which has come to our attention. Sentiment is an admirable thing in itself, but a weak weapon when turned toward those who observe the game laws simply because they might be subjected to penalty for breaking them; and the strength of Dr. Fisher's argument lies in the hard, sound undeniable *facts* on which it is based. He shows the rapid decrease of Woodcock and Wood Duck, and then proves, and proves conclusively, that if these birds are not given better and more uniform protection than they now receive they will become practically exterminated.—F. M. C.

CHECK-LIST OF CALIFORNIA BIRDS. By JOSEPH GRINNELL. Pacific Coast Avifauna No. 3. Cooper Ornithological Club, Santa Clara, Calif. 8vo. 98 pages, 2 maps.

An annotated list of California birds has long been one of the wants of working ornithologists which the author of the list under consideration is well qualified to fill. He enumerates 491 species and subspecies as duly entitled to recognition as California birds, and under each one gives, as synonyms, the names which have also been applied to it as a California bird, and its "status" or manner of occurrence. Maps, based on climatic conditions, outline the "life zones" and "faunal areas" adopted by the author, and greatly assist the reader in understanding that portion of the work which relates to distribution.

While we should be grateful to Mr.

Grinnell for the preparation of a paper which will undoubtedly be useful, we believe its value would have been increased by the inclusion of the dates of occurrence of the rarer species, with references to the publication in which their capture was recorded. Again, with no desire to be over-critical, we cannot but feel that the interests of ornithology in California—the 'Check-List,' we understand is intended chiefly for younger students—would have better served had the author accepted the verdict of the A. O. U. Committee by omitting numbers of races which the committee has rejected. Mr. Grinnell is, of course, entitled to his opinion in regard to the desirability of recognizing these forms, but it is unfortunate that the "younger students" of California's birds should be called upon to learn, even by name, birds which have been declared by those perhaps better qualified to judge than Mr. Grinnell, not worth the naming.

In any event, there is no excuse for giving these rejected forms the apparent endorsement of the A. O. U. by placing before their names, without other comment than an unexplained "part," the A. O. U. Check-List number.—F. M. C.

MORE TALES OF THE BIRDS. By W. WARDE FOWLER. Illustrated by FRANCES L. FULLER. The Macmillan Co. 1902. 12mo. 232 pages, 8 plates.

We have no American writer on birds with whom Mr. Fowler can be compared; his methods differ from those of our popular authors, and make his 'tales' a singular combination of fact and fancy which it would be hazardous for a less skilful writer to attempt to duplicate. His birds talk, but they are a true ornithologist's bird for all that, and each story emphasizes the close relation which should and does exist between birds and man, and is admirably adapted to awaken genuine sympathy with bird life.—F. M. C.

THE BIRD CALENDAR. BY CLARENCE MOORES WEED. Rand, McNally & Co. 32mo. 80 pages.

The purpose for which this booklet and similar ones for trees and flowers is intended, is best explained in their author's preface: "The use of these books will give a connection between school work and outdoor observations of the pupil that is very advantageous. They will dignify the nature-study work, and will develop the power of seeing things accurately"—remarks which we heartily endorse. J. M. C.

The Ornithological Magazines

THE OSPREY.—The April number of 'The Osprey' opens with a most interesting and instructive article on the 'Feeding Habits of the Coot and other Water-Fowl,' by B. W. Evermann. The observations were made at Lake Maxinkuckee, Indiana, upon twenty-seven species of birds, but, as the title of the paper indicates, the Coot received the greatest amount of attention. Professor Evermann found that this bird, which is usually despised by sportsmen, is an expert diver, and as an article of food is superior to most Ducks. Early in the season the Coots fed largely on the winter buds of the wild celery, but after these became scarce and hard to procure, other aquatic plants were eaten. In securing this food it was often necessary for them to go to a depth of over twenty feet, and to remain under water for at least a quarter of a minute. The paper on the vernacular names of the birds of the Marianne, or Ladrone Islands, by W. E. Safford, is continued from the March issue and contains notes on thirty-five species of birds, together with an alphabet of the Chamorro language. The May and June numbers contain several noteworthy papers. In the 'Winter Water-fowl of the Des Moines Rapids,' E. S. Currier treats of the various species that inhabited the open holes during the winter, and especially of the Golden-eye, or Whistler, which was the commonest Duck.

B. J. Bretherton makes some pertinent remarks on the 'Destruction of Birds by

Lighthouses,' and gives interesting details showing how vast numbers of migrating birds are killed. 'The Works of John Cassin,' by Doctor Gill; 'Recent Views of the Sable or Ipswich Sparrow,' by W. E. Saunders; 'The Mississippi Kite,' by A. F. Gamier; 'Northern Parula Warbler,' by J. M. Swain; and 'The Porto Rican Pewee,' by B. S. Bowditch, are all of interest and are well worthy of careful reading. The three supplements, containing 'A General History of Birds' by Doctor Gill, cover twenty pages. The great delay in the appearance of 'The Osprey' is partly due to the serious illness of the esteemed editor, Doctor Gill. We are glad to allay anxiety, however, by assuring his friends that he has so far recovered his health as to be able to enjoy literary work once again.—A. K. F.

WILSON BULLETIN.—Number 39 of 'The Wilson Bulletin' has appeared since our last review, and contains 'Winter Bird Studies in Lorain County, Ohio,' by Lynds Jones; 'A Preliminary List of the Birds of Yakima County, Washington,' by W. L. Dawson; 'Incubation Period of the Mocking Bird,' by J. W. Daniel, Jr., and the recording of the European Widgeon as a new bird for Ohio by Lynds Jones. Professor Jones has devoted a great deal of time and energy during the past six years in making a study of the winter birds of Lorain county as complete as possible. He found it impracticable to work over this whole area, so chose as an alternative five routes that would bring him in contact with the most diversified country. As a reward for this labor sixty-five winter residents were observed, of which fifty were of more or less regular occurrence. A map showing the routes along which observations were made accompanies this interesting paper. Local bird lists from the northwest are especially desirable; consequently the paper by W. L. Dawson on 'The Birds of Yakima County, Washington,' is most timely. The author wishes it to be understood that this list of one hundred and twenty-three species, which is necessarily incomplete on account of the extent of territory, is merely a working basis for future

investigation. A Yellow-throated Vireo, which had wandered hundreds of miles out of its normal range, is recorded 'as narrowly scrutinized in a quaking ash grove, May 12, 1895.' Although Franklin's Grouse undoubtedly occurs on Mt. Adams and about Cowlitz Pass, the remarks under this caption evidently refer to the Sooty or 'Blue Grouse' and not to the Fool Hen, which is a typical boreal species dwelling among firs and spruces, and not in the lower mountain ranges of the Upper Sonoran and Transition Zones.—A. K. F.

THE CONDOR.—The July-August number of 'The Condor' contains several interesting articles on the nesting habits of western birds, among which may be mentioned Bowles' 'Notes on the Black-throated Gray Warbler,' Gilman's 'Nesting of the Little Flammulated Screech Owl on San Geronio Mountain' in southern California, and Bailey's 'Nesting of the Ruby-crowned Kinglet' near Kenai, Alaska. The Kinglet's nest was found in a dense spruce about thirty feet from the ground, and is described as pyriform in shape, with the small end down, beautifully made of moss, fur, and silky, fibrous substances compactly woven together. On June 6 it contained eleven eggs slightly advanced in incubation. Two sets of eggs of Clarke's Nutteracker are recorded by Johnson from Box Elder Mountain, Utah, one with five eggs collected on April 8, when the snow was five feet deep under the tree, and the other taken on April 17.

Under the title 'Notes on the Verdin,' Gilman calls attention to the winter nests of *Auriparus flaviceps*, constructed for roosting purposes, which are built by both sexes and differ somewhat from the breeding nests. An interesting account of two Yellow-billed Magpies raised in captivity is given by Noack, showing that the California bird has remarkable vocal powers and considerable ability to articulate. These characteristics would seem to render it more attractive as a pet than the European Magpie, which is often imported as a cage bird. The Southern White-headed Woodpecker (*Xenopicus graxirostris*) is sep-

arated from typical *X. albolarvatus*, by Grinnell, on characters which are "slight, and apparently exist only in dimensions, chiefly of the bill." In spite of the fact that "individual variation brings an overlapping of characters" and that "geographical continuity of ranges possibly exists," the new form is given the rank of a full species!—T. S. P.

Book News

HOUGHTON, MIFFLIN & Co., announce for early publication a 'Hand-book of the Birds of the Western United States,' by Florence Merriam Bailey. The book will be fully illustrated by Louis Agassiz Fuertes, and will, it is needless to say, satisfactorily supply the long-existing demand for a work devoted to western birds.

WE are informed that the results of Dr. R. M. Strong's long-continued studies on the colors of feathers will be published by the Museum of Comparative Zoölogy during the autumn.

THE Southern Pacific Railroad Company has published, in attractive form, Mr. H. P. Attwater's admirable address to Texas farmers, on 'Birds in their Relation to Agriculture.' Copies of this pamphlet can doubtless be obtained from Mr. Attwater at Houston, Texas.

NOT only the personal friends of Mr. Otto Widmann, but readers of his characteristic and delightful sketches of bird life, will learn with extreme regret of his loss, by fire, of field notes covering a period of thirty years' observation.

CIRCULAR No. 38 of the Biological Survey of the United States Department of Agriculture, calls the attention of sportsmen, dealers in game, and transportation companies to the laws relative to the shipment of game, insectivorous birds and birds killed for millinery purposes.

From the same source a chart is issued giving a synopsis of the game laws of the United States, and also, as Farmers' Bulletin No. 160, a summary of the provisions of the game laws for 1902.

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Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

A Question of Identity

We are frequently in receipt of reports of the occurrence of rare birds or of birds far beyond the boundaries of their normal range, which, while sent in perfectly good faith, are obviously based on faulty observation, though it is difficult, in fact sometimes impossible, to convince the observer of his error in identification. When such observations are not published no especial harm results from them beyond increasing the student's liability to err again, but when they are recorded in print they become part of the literature of ornithology and cannot be ignored, even by those who feel assured of their incorrectness.

So the question arises, What constitutes justifiable grounds for publicly recording the occurrence of an exceedingly rare species or of a species beyond the limits of its own country? The professional ornithologist replies, "the capture of a specimen;" but to this violent method of identifying, the opera-glass student objects, and, sentiment aside, we think rightly. It is undeniably exciting to secure a specimen of a rare species, or to add a species to the known fauna of one's state; but we believe that the science of ornithology would have been more benefitted

by the life of most of these "rare" birds than in their death. What, for instance, might now be the range of the Mockingbird if practically every bird and nest of this species found by collectors north of its usual range had not been taken? Again, how often the gun has robbed us of most interesting and important facts in the life history of that ornithological mystery, Brewster's Warbler!

But, in refusing to use the gun, must the opera-glass student be denied the privilege of having his observations accepted without question? It depends upon many and varied circumstances. In the first place, gun or no gun, we must take into consideration the mental attitude of the enthusiastic bird student afield. It is in the highest degree receptive; he is on the lookout for rare birds, and both eye and ear are ready and willing to interpret favorably any sight or sound not clearly seen or heard. We know an experienced collector of birds who was exceedingly desirous of securing a specimen of a Nonpareil, a bird he had never seen in nature. When, therefore, he first reached the range of this beautiful and strikingly colored bird he was constantly alert to detect it; and it was not long before he saw a bright, full-plumaged male perched in plain view on the topmost twig of a low bush. It was in easy range; he fired, the bird fell, he rushed in and picked up a—Yellow-rumped Warbler!

Another collector we know of identified with certainty a Blue Grosbeak some two or three hundred miles north of its usual range, but the report of his gun, singularly enough, transformed it into a male Cowbird! Still another excitedly chased a Dickcissel from field to field, and when it at length fell a victim to his aim he found he had been pursuing a male English Sparrow!

So we might enumerate dozens of cases illustrating our liability to err in making field identifications, and the extreme care needed to name accurately in nature birds which we have never seen alive. Consequently, we should number among the requirements of field identification the following: (1) Experience in naming

birds in nature, and familiarity, at least, with the local fauna. (2) A good field- or opera-glass. (3) Opportunity to observe the bird closely and repeatedly with the light at one's back. (4) A detailed description of the plumage, appearance, actions and notes (if any) of the bird, written while it is under observation. (5) Examination of a specimen of the supposed species to confirm one's identification. Even with these conditions fulfilled, our belief in the correctness of an observer's identification would depend upon the possibility of the occurrence of the species said to have been seen. For example, the presence of an *individual* bird at a given locality, either as an escape or stray, is always possible, provided the bird has sufficient power of flight to enable it to make long journeys, or could endure caged life. But when we receive news of the observation, in large numbers and frequently, of some species which has never been seen within two or three thousand miles of the place whence our correspondent reports it, we feel assured that an error has been made in identification.

After all, the discovery of one new fact in the life history of the most common species is of greater importance than the capture, with gun or glass, of a bird which, like thousands of birds before it, has lost its way and wandered to parts uninhabited by its species.

A Debt of Bird Students

No science in this country has been more benefitted by organization than that of ornithology, through the formation, in 1883, of the American Ornithologists' Union. Wholly apart from the Union's work in inaugurating systematic observations on the migration of birds, in supporting a journal of ornithology, and in establishing and maintaining a committee on bird protection which for the past eighteen years has been actively engaged in the work of bird preservation, the Union brought order out of chaos in formulating a code of nomenclature for zoologists and in publishing an authoritative 'Check-List' of North American birds,

wherein, as a result of the labors of the Union's Committee on Classification and Nomenclature, the views of various ornithologists were harmonized and for the first time in many years we had one standard system of nomenclature and classification. Nor did the labors of this committee end with the publication of the 'Check-List,' annual meetings now being held to pass upon the systematic work of the preceding year, so far as it affects American birds, so that the layman is kept thoroughly abreast of the times by a committee of experts, in whose judgment he may have complete confidence.

Amateur ornithologists in America are, therefore, far more deeply indebted to the good offices of the Union than they realize, and they should acknowledge the assistance which, directly or indirectly, they have received from it by showing sufficient interest in the welfare of the Union to lend it their personal support. Every student of birds in America should be a member of the American Ornithologists' Union, and there are probably none who are not eligible as candidates for election to its recently formed class of Associates, which is composed wholly of amateurs. The annual dues are three dollars, in return for which the member receives a copy of the Union's official magazine, 'The Auk,' a quarterly, each volume of which contains about 400 pages, and, what is even more important, he has the satisfaction of knowing that he is identified with an organization of kindred spirits, to which is largely due the present widespread interest in bird-study in this country.

The Union meets annually, and the Congress for the present year will be held in the United States National Museum, at Washington, D. C., November 18-20. We hope all the readers of *BIRD-LOVE* who can attend this twentieth Congress of the Union will do so, but, in any event, whether or not it is possible for them to be present, we trust they will not fail to apply for Associate Membership in the Union to its treasurer, William Dutcher, at 525 Manhattan Avenue, New York City.

The Audubon Societies

"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairfield, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Back to First Principles

The first tenet of the Audubon movement was the suppression of the use of bird plumage for millinery purposes. "So long as women wear any but Ostrich feathers on their hats, so long will birds be killed to supply them"—ranged the protest in turn from every society that joined the ranks. After we had preached and talked this for several years, some of us began to feel that an impression had been made once and for all, and that it was no longer necessary to dwell so forcibly upon this phase of the work; people were getting bored, and we heard on all sides that the really nice people were at least giving up the wearing of egrets and the plumage of our native birds. We therefore flattered ourselves that what

the 'really nice' elect to do, must sooner or later be followed by *hoi polloi*, and turned our attention to the educational side of bird protection, i. e., teaching the masses to identify birds, to know their habits and economic value, and so, logically, come to desire of their own volition to give birds the complete protection that is the end and aim of our work.

Not to bore people and to render the pledge suitable for the sterner sex, we said less and less about birds on bonnets and appealed more to the love of outdoor life to gain our ends.

As a direct result, laws have been passed in many states curbing and stopping the traffic in native birds and, carried by the Abbot Thayer fund, the cry of "Save the Gulls and Terns" has echoed along the en-

ture Atlantic coast. But the masses have been only stirred, as a ripple passing over the surface of the great deep; and the millinery trade journals of midsummer herald another period of feather-wearing that promises to equal in quantity anything we have seen. We cannot blame the dealers so long as they keep within the letter of the law; we cannot blame them for desiring to have the laws framed to suit their purposes. It is the demand alone that we must blame, and it is this demand that can only be subdued by international coöperation, as well as by organized home effort. Nothing can present the present status more graphically than some clippings from these same trade journals, for the more we see how we are regarded by the opposition the more we shall realize its force.

The following advertisement, unique in its way, taken from one of these journals, appears in conspicuous type ornamented by cuts of birds and fishes:

Factory, Lindenhurst, L. I.

MAX HERMAN & CO.

Beg to offer to the Trade a complete line of novelties imported and of our own make.

The prospects for the coming season are apparently for a general line, such as Fancy Feathers, Wings, Pompons, Palms, Paradise, Aigrettes, Ostrich Plumes, Autumn Flowers, and last, but not least, BIRDS.

To our kind and feeling friends who are prejudiced against the wearing of birds, besides such as are protected by law, we respectfully offer a fine selection of FISH of different breeds, which are the latest Parisian creation.

It is really difficult to tell whether this offer to supply *fish* to decorate the hats of the sensitive is a tribute to their feelings or subtle satire; and we greatly wonder if the fish are real stuffed fish or hollow mockeries of gauze.

These from the midsummer number of 'The Millinery Trade Review':

HANDLING LARGE LOTS

"There can be no gainsaying the fact that fancy feather effects are to take an extraordinary part in the coming season's millinery, and, judging from the great number of cases received and shipped by William Kōnemann, his American representatives are getting a full share of business. They carry a large stock of birds' breasts, wings, quills and novelty effects, which are added to by each incoming steamer. From this assortment excellent selections can be made by millinery jobbers, not only now, but all through the season. 'Tis a good house to make a friend of."

PLUMAGE OF THE FEATHERY KINGDOM

"That high-class novelties in birds, bird plumage and fancy feather effects, consisting principally of breasts, wings, quills, aigrettes, paradise and pompons, are to be prominent feature in the season millinery, goes without the saying. The edict of fashion has gone forth, and Paris will revel in bird plumage as soon as the season opens, with increasing demand as the season advances.

"L. Henry & Co., while importing large quantities of this class of merchandise, have a domestic plant that is productive of more than ordinary results in creating designs that meet with marked favor with millinery buyers. Their sample-room is now filled with all the plumage of the feather tribe that is at all likely to be sought for, and it is an exhibition that will be appreciated by the general millinery public. Their pattern hats will be placed on exhibition, together with their more recent shipments from Paris of novelties in fancy effects, commencing Monday, July 7."

The following, from the same journal, is interesting in that the matter is logically handled and the lines we italicize regarding the use of bird pests for decorative purposes is full of import. If we could be sure that the use of the English Sparrow and English Starling, who has come to stay,—and we fear will prove a greater nuisance than the former bird,—for millinery purposes would not cause the innocent species of Sparrows to suffer through mistaken identity, the trade might easily supply the "long-felt want" of small birds:

BIRDS AND BIRD PLUMAGE IN MILLINERY

"The Illinois Audubon Society has issued a circular letter, which it has forwarded to the millinery trade of Chicago, wholesale

and retail, warning it against the buying and selling of birds for millinery purposes. The circular has been widely copied by the press of the country, and no doubt will have some influence upon the timid ones of the trade. The circular reads:

"GENTLEMEN: The Illinois Audubon Society for the protection of birds desire to call your attention to the following extract from the Illinois Game Law, which has been in force in this state since April, 1899:

"SECTION 3. Any person who shall within the state kill or catch or have in his or her possession, living or dead, any wild bird, other than a game bird, English Sparrow, Crow, Crow Blackbird, or Chicken Hawk, or who shall purchase, offer or expose for sale any such wild bird after it has been killed or caught, shall, for each offense, be subject to a fine of five dollars for each bird killed or caught or had in possession, living or dead, or imprisonment for ten days, or both, at the discretion of the court.

"Public sentiment, as evidenced by the action of both state and national governments, no longer warrants the use of wild birds for millinery purposes, many states besides Illinois no longer permitting their sale. Birds are an absolute necessity to man as consumers of insects and weed seeds, and as scavengers along their shores.

"The Illinois Audubon Society urges you to comply with the law of the state, because it hopes that you will place yourself on the side of those who protect birds rather than of those who destroy them, and also failure to comply with the law must lay those who violate it open to prosecution.

"In purchasing your fall stock, we hope most earnestly that you will take these facts into consideration."

"The above circular applies to the wild birds of the state or those of any other state, sold within the state of Illinois. The law was ostensibly passed to protect game birds, and to prevent the killing of game birds out of season. Various amendments make the law apply to any wild bird, whether it be water fowl, song bird or insectivorous bird. The members of the Millinery Merchants' Protective Association are in accord with the law as it reads, and will not handle North American birds or foreign birds of the same species, but the association claims that no state can legislate for the protection of birds of foreign countries not of the same species as the birds of America. *There are myriads of birds that are pests in other countries, which said countries are glad to be rid of, that are not under the ban, which will be imported and*

which will be passed by the custom inspectors, and on which a duty will be paid. As long as the United States Government collects the duty on such importations it will be construed as a license to sell such merchandise, and it will be sold until the courts decree otherwise.

"The press of the whole country has a mistaken idea regarding bird plumage. It assumes that everything in the shape of a feather that is used in millinery trimming is embraced in the law from which the above extract is taken, and which is similar to other state laws passed for the protection of birds and bird plumage. There are tons of feather plumage used in the manufacture of what the trade technically terms 'Fancy Feathers,' much of which is the plumage of game birds or plumage of barnyard fowl.

"Fashion has already decreed that bird plumage will obtain as an article of millinery ornamentation to a great extent this coming fall and winter; and, notwithstanding the efforts of the extremists of the Audubons to prevent its sale, much of it will be used. The Millinery Merchants' Protective Association will aid every laudable effort to prevent the killing of native song birds, but it will brook no interference with the manufacture and sale of made birds or fancy feathers made from the feathers of barnyard fowl."

Such sane and logical arguments as these show that it is not merely the ignorant and unreasonable that we have to combat.

The 'Review' is full of announcements of the coming reign of feathers, for which, I have said before, the law and the lady must join hands to shorten. But if these two continue to disagree, let us invoke the law by all means, as it is constitutionally more dependable.

The manner in which the bird protectionists are referred to in editorial squibs by these same journals is somewhat encouraging, for people seldom take the trouble to deride an object which in no wise troubles them; for example:

"No intimidation' should be the watchword of the millinery trade from land's end to land's end when it comes in contact with the extremists of the Audubon societies. It was the Chicago branch of the Audubon conclave that rejected the proposition of the trade to import no birds of the same species as the North American species, provided it the trade, would not be interfered with in disposing of such stock that it had on hand. The independent self-righteous spirit of the

Audubon kindled a like spirit in the breasts of dealers, who have made up their minds to defy the sentimentalists. The trade at large should pay no attention to Audubon circulars or newspaper comments, but move along in the even tenor of its way, awaiting the action of the civil authorities, who alone have the right to enforce the laws of the state, and who will do it when they see a necessity for it. Sooner or later this matter will have to be taken to the courts, when it will be found that what Uncle Sam passes through the custom-house goes."

It is easy to laugh at these tirades, but we are not certain enough of having the last word to laugh—at least not now.

It behooves each state society to obtain the best possible legal advice and guidance in framing or amending its own laws at the same time that it woos every effort to educate public opinion and furnish a better viewpoint to the rising generation.

In November the delegates of these societies will meet at Washington for the Annual Audubon Convention. Let them bring reports and queries digested, pertinent and well threshed, the kernel of the wheat only, so that we may not spend the limited time in sweeping up chaff. That the convention is held in conjunction with the annual meeting of the A. O. U. should be an inspiration to the delegates, and the fact that it is really the only chance in a twelve-month for the societies to meet face to face, should be enough to make each act in all seriousness, for many will journey to the joint meeting to whom attendance at the spring meeting of the Advisory Committee will be impossible.

A good plan would be to have a question box, placed the first day of the A. O. U., to be opened during the conference and the queries answered and discussed there and then. M. O. W.

Bird Protection Abroad

In connection with the destruction of foreign birds, the appended information, quoted from 'Science' in regard to an international law for the protection of birds, is of interest:

"The Paris correspondent of the London 'Standard' states that the Ministers of For-

eign Affairs and Agriculture, just before the summer recess, presented to the Chamber a bill approving the international convention for the protection of birds useful to agriculture. The international convention has been signed by eleven European states. Encouraged by the constantly renewed resolutions of the Councils General and the agricultural societies, which deplored the systematic destruction of certain birds useful to agriculture, the French Government, in 1892, took the initiative in the matter of inviting the European powers to send their representatives to an international commission intrusted with the task of elaborating a convention. That committee met in Paris in June, 1895. After long negotiations, the convention thus framed has now obtained the adhesion of France, Germany, Austria, Belgium, Spain, Greece, Hungary, Luxembourg, Portugal, Sweden, Switzerland, and the principality of Monaco. All the other states are empowered by the terms of the agreement to adhere, if they think fit, to this convention for the protection of birds. The various contracting governments undertake to prohibit the employment of snares, cages, nets, glue, and all other means for the capture and destruction of birds in large numbers at a time. In addition to this general measure of protection, no one is to be allowed to capture or kill, between March 1 and September 15, any of the birds useful to agriculture, of which a complete list is contained in the international agreement. This list of useful birds comprises Sparrows, Owls, common Brown Owls, Tawny Owls, Sea Eagles, Woodpeckers, Rollers, Wasp-eaters, Peewits, Martins, Fern Owls, Nightingales, Redstarts, Robin Redbreasts, White Boustards, Larks of all kinds, Wrens, Fountits, Swallows, Flycatchers, etc."

Reports of Societies

REPORT OF THE FLORIDA AUDUBON SOCIETY

Our second annual meeting occurred in March last, and since that time there has been an increased interest in the saving of our birds. Throughout the state, and in

places far distant from headquarters (Maitland), we have been enabled to secure good local secretaries, who are now, despite the enervating influence of a southern summer, organizing bird classes and doing most commendable work. To some of these the society has furnished charts purchased from the Massachusetts Society; they prove to be very attractive to the children.

We have much to contend with in this state, settled by a hunting and sporting community who consider killing birds legitimate sport—as their forefathers did before them. The extended seacoast is the home of birds dear to the milliner, and throughout the state there are birds of bright plumage largely sought for feminine adornment. All this makes our work more necessary and more difficult. To counteract this we have circulated many pamphlets on the wearing of aigrettes; letters have been published in the leading papers calling special attention to the wearing of this plume, and warnings, setting forth the state laws, have been posted in every post office in the state. An "Appeal to Sportsmen," as requested by the National Committee, has been published and will appear from time to time during the summer in the local papers. Circular letters, setting forth our views, have been freely sent where they would do the most good. As requested by the L. A. S., our congressmen have been asked to support H. R. 11,536, and intelligent work has been done by members of our Executive Committee, who spare no efforts to further the work of our society.

Nor have the schools been forgotten. The Orange county school board officially recognizes our work, and it will be our aim this summer to induce others to follow their example. Most of the schools in the state close in March, but to those in Orange county whose terms extended to May a prize was offered for the best essay on birds as studied from charts loaned by the society. Only one school accepted, and to the Maitland school must be given much praise for the intelligent and well-written compositions that were submitted to the committee. Many excellent drawings, also, were sent in, and to Master Rae Auld we had the pleasure of

awarding a most justly earned prize. Ere the year closes we hope to add many members to our ranks, and by our united efforts accomplish much (especially in the schools) that we feel necessary for the success of our work.—MRS. I. VANDERPOOL, *Secretary*.

A New Audubon Society

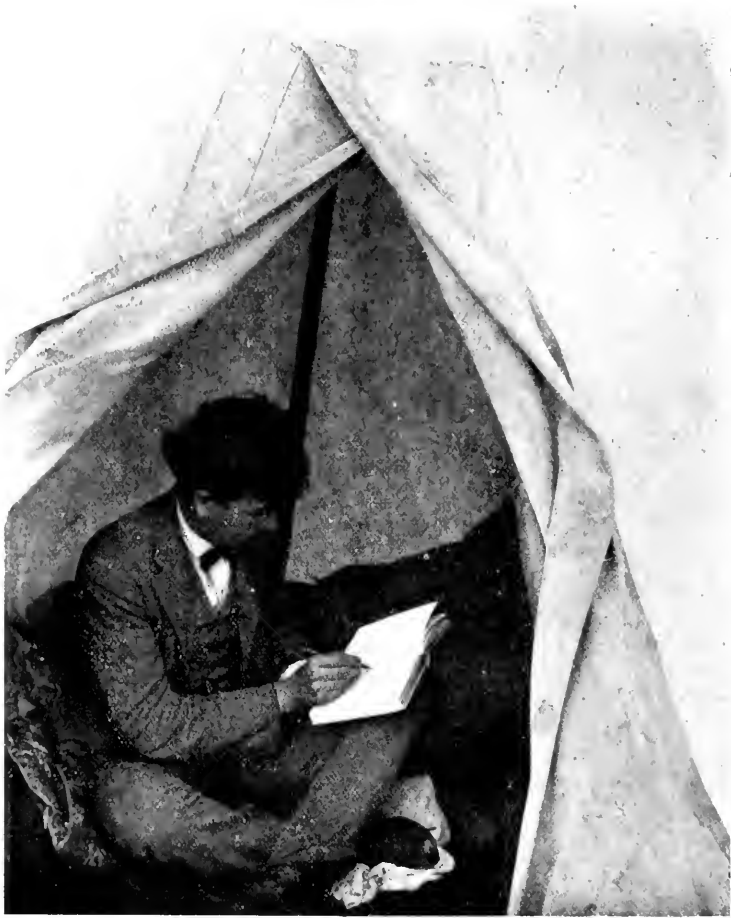
Now that Florida has an Audubon Society and has passed the A. O. U. model bird-law, there is no state in the south which needs the attention of bird protectionists more than Louisiana. We learn, therefore, with more than usual pleasure that a Louisiana Audubon Society is about to be organized in New Orleans. The attempt to secure the passage of the A. O. U. law by the legislature of Louisiana at its last session proved a failure, but we are assured that this new society will succeed in so arousing public sentiment that at the next meeting of the legislature no difficulty will be experienced in securing proper legal protection for the birds of Louisiana.

Annual Conference of Audubon Societies

The annual conference of the Audubon Societies will be held in Washington, D. C., in conjunction with the annual congress of the American Ornithologists' Union, to be held November 18-20 next. The Audubon Societies will doubtless convene immediately after the adjournment of the Union, but the exact date and place of meeting can be ascertained from Mrs. John D. Patten, Secretary of the District of Columbia Society, at 2212 R street, Washington.

A meeting of the National Committee of the Audubon Societies will also occur at this time, and it is to be hoped that routine affairs may be left to this committee, in order that the conference may be devoted to a discussion of matters of general interest in which not only delegates, but all members of Audubon Societies should be urged to participate.

The consideration of such subjects as traveling lectures and libraries, of bird classes, circulars, appeals through the press, and other means of bringing the various phases of Audubon work to the attention of the public can not fail to be attended with good results.



Ernest Thompson Seton



Shoal Lake. Mass.
1901

Bird = Lore

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On Journal Keeping

BY ERNEST THOMPSON SETON



WHEN first I went into the West, just twenty-one years ago, with the intention of using my eyes and learning all I could of nature in the wilds, a friend, an old naturalist, said to me: "Do not fail to keep a journal of everything you see and hear."

I could not see just why, but I had faith enough in his opinion to begin a journal, which I have kept ever since and hope to keep to the end. My friend did not tell me, probably did not know, what good purpose was to be served by the journal; but I think it came to me gradually as the years went by. The older I grow the more I see and realize the value of the daily note of the truth, the simple fact, bald, unadorned and incomplete perhaps, but honestly given as it was found. I would have each observer in the natural history world keep a journal on the lines already sketched in BIRD-LORE, and enter therein *daily*—not from faded memory a month later—whatever facts he can observe, fully embellished with such diagrams, sketches, or photographs as will help more fully to set forth the facts. He may wonder at the time what good end it will serve, and one might answer that it is always useful to have a record of one's own doings; or yet more truly, that writing a fact makes one observe it better. But be very sure that all past experience proves it to be a good thing—how good and how valuable one may not learn for years, may never learn at all. But we do know that it is always good to follow the truth for its own sake; and there is no way that more quickly makes some returns than the Nature Journal. It always pays in the end. There never yet was a sincere, full record made of the testimony of the senses that did not in the end prove a priceless treasury of fact. "The Journal of a Citizen of Paris," "Pepys' Diary," "Harmon's Journal," "Lewis & Clark's Journal," are familiar

examples. These men wrote down the simple daily doings of the time, without intent to do anything but tell the truth and without any suspicion that they were doing a great thing. These same journals are to-day among the most treasured sources of authentic history in the world.

I have written and spoken of this before, and have had more than once to defend the keeping of journals. Several somewhat scornful critics have asked: "Are there not enough commonplace records of commonplace things, why should you set a new army of scribblers to work?"

I reply, "No man can daily write the simple truth of what he sees in nature and leave a commonplace or valueless record. It will, of course, be limited by his limitations, but every one, sooner or later, gets a chance to observe something that no one else ever did—an opportunity that happens but once in an age comes to him, and the opportunity is not lost if he has the habit of record."

How that record is to be of benefit can be illustrated thus:

There was once a vast and priceless mosaic inscription that contained the Truth, the one essential of human happiness. It was shattered to a million pieces and scattered to the corners of creation. The pieces are imperishable. Human happiness depends on the reconstruction of the inscription. Every one who finds a little fact, however small, finds a scrap of that mosaic. If he honestly brings it, just as he found it, to those in charge, he is helping by that much. If he attempts to chisel that fact to make it fit into one or two others that he may have found, he is by that much hindering the ultimate restoration of the lost inscription. When enough are brought together, no matter how ragged, they will fit each other—the right ones always fit, the wrong ones never do—and when they are put together they will surely spell TRUTH.

Now it is given to every one who uses his eyes to find some of these fragments, and the best way to preserve them untooled is in a sincere journal.

Those who made such journals and such records a hundred years ago were really providing material for Darwin and Pasteur, making them possible; and those who do it to-day are in like manner preparing material for some other prophet, whose message to mankind is sure to be yet more important. Each of these men took the accumulated fragments, put them together and restored for us a section of the great mosaic; and the latest restored part will be most important because that much nearer the whole design. No one knows or can know who the new prophet is to be, or when he is to come, any more than what will be the new restoration; but we do know that his work must be founded on the daily observation of many observers, and will be great in proportion as these are abundant and sincere, for he is only the master-builder and can do no more than his best with the material provided.

Flamingoes' Nests

BY FRANK M. CHAPMAN

With photographs from nature by the author



NOT very many years ago, so little did we know about the nesting habits of the Flamingo, it was commonly believed that the incubating bird straddled the nest when hatching, letting her legs hang down on either side! The observations of H. H. Johnston* and Abel Chapman* on the European species (*Phenicopterus antiquorum*) and of Sir Henry Blake† on the American species (*P. ruber*) proved the absurdity of this belief by showing that incubating birds folded their legs under them in the usual way, but we still know very little about the nesting habits of these birds.

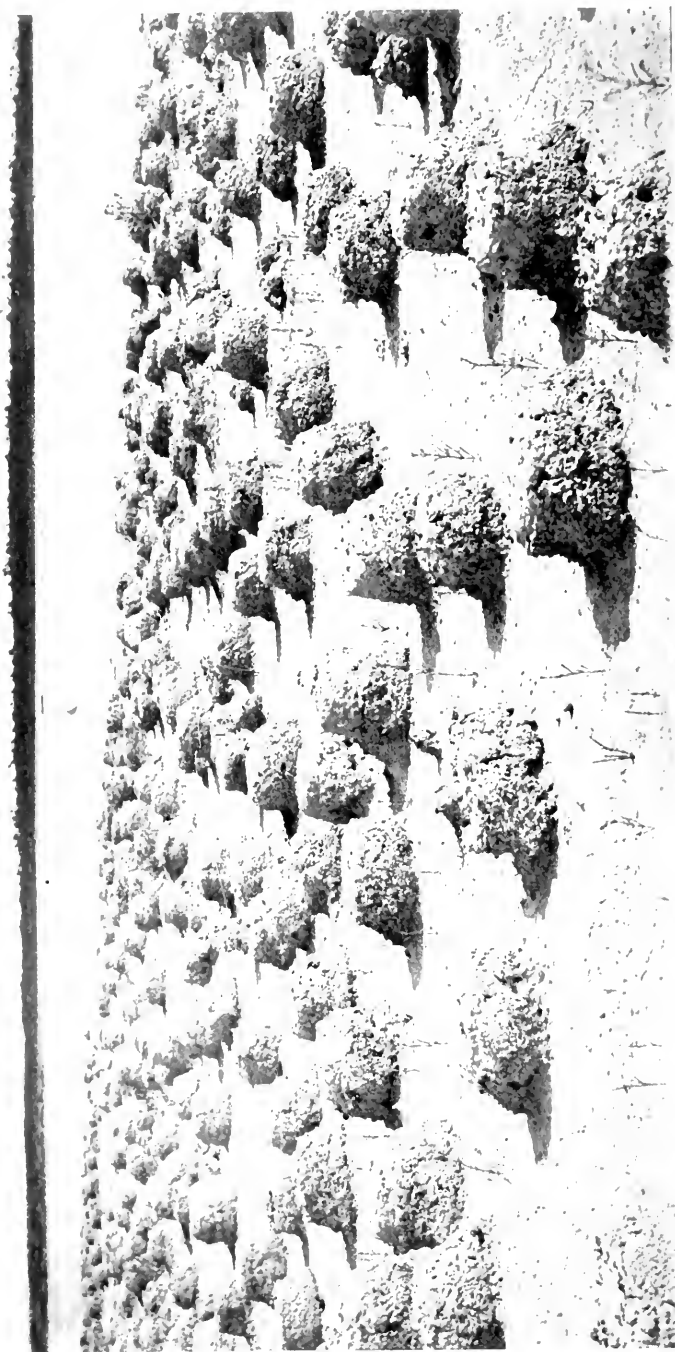
Largely with the object of studying the Flamingo on its nesting grounds, I went to the Bahamas in April of the present year, accompanied by Mr. Louis Agassiz Fuertes, the well-known artist. At Nassau we joined Mr. J. Lewis Bonhote, of Cambridge, England. Mr. Bonhote was formerly Governor's secretary in the Bahamas, when he acquired a knowledge of the islands which was of the greatest value to us. He had already made a reconnoissance in search of Flamingoes' nesting retreats, and, with the aid of one of the few natives who was familiar with their whereabouts, had succeeded in reaching a locality on Andros Island, at which the birds had bred the previous year.

It is not my purpose to recount here the various adventures which befel us while cruising about the Bahamas in a very comfortable 50-ton schooner, and I proceed at once to a description of our experiences with the Flamingo.

Flamingoes are late breeders. It is not improbable that the time of their nesting is dependent upon the rainy season, which, in the Bahamas, begins about the middle of May. Consequently we deferred our trip to the locality previously visited by Mr. Bonhote until the middle of May. Then we anchored our schooner at the mouth of a certain channel, and, loading our small boats with needed supplies, rowed for the better part of a day, pitching our tents toward evening on a low, slightly shelving shore with a background of dense, scrubby vegetation. Exploration of the surrounding country showed that it was regularly frequented by Flamingoes in numbers during the nesting season. Within a radius of a mile no less than eight groups of nests were discovered. They showed successive stages of decay, from the old nests, which had almost disappeared before the action of the elements, to those which were in an excellent state of preservation

* The Ibis, 1884, p. 175; 1884, p. 497.

† Nineteenth Century, 1887, p. 886.



NESTS OF FLAMINGOES

Part of a colony believed to have been occupied in 1900. A view of the entire colony, which contained about 2,000 nests, is shown on page 179

and were doubtless occupied the preceding year. Some were placed among young, others among fully grown mangroves, and one colony, probably inhabited in 1900, was situated on a sand-bar two hundred yards from the nearest vegetation. All the colonies found contained at least several hundred nests, and the one on the sand-bar, by actual count of a measured section, was composed of 2,000 mud dwellings. What an amazing sight this settlement must have presented when occupied, with the stately males, as is their habit, standing on guard near their sitting mates!

Flamingoes in small flocks containing from three or four to fifty individuals were seen in the vicinity, but it remained for Mr. Bonhote's negro assistant to discover the spot which had been selected by the birds for a nesting site in 1902. Climbing a small palm, an extended view was had of the surrounding lagoons, sand-bars and bush-grown limestone; and he soon ex-



COLONY OF ABOUT TWO THOUSAND FLAMINGO NESTS
A section of this colony is shown on the facing page

claimed, "Oh, Mr. Bonhote, too much, too much Fillymingo!" Less than a mile away, indeed, was a flock estimated to contain at least 700 of these magnificent birds, which Mr. Bonhote approached so cautiously through the thick growth of mangroves, that he was fairly among them before they took wing. They had not then begun to build, but the open spaces among the mangroves were closely dotted with nests (see photograph), which apparently had been occupied the preceding year and in some of which old eggs were seen. Here, some days later, nests were found in the early stages of their construction; but, to our great regret, circumstances compelled us to leave before they were completed and we did not therefore see the birds upon them. However, we learned some things regarding the nesting habits of Flamingoes which, in view of our comparative ignorance of the ways of these birds at this season, it may be worth while recording.

In the first place, although the birds return to the same general locality year after year, they apparently use a nest only one season. This seemed proven by the nicely graduated series of groups of nests which we found, each one of which, beginning with those best preserved, seemed about a

year older than the other, and by the fact that the birds were building fresh nests near numbers of others which were seemingly as good as new.

The thousands of nests seen were built of mud, which the nests in process of construction showed was scooped up from about their base. In fact, it is difficult to conceive of a Flamingo carrying mud. In selecting a nesting site, therefore, the bird is governed by the condition of the ground, which, to be serviceable, must be soft and muddy. For this reason, as I have suggested, the time of the breeding season may be regulated by that of



FLAMINGO NESTS AMONG MANGROVES
Believed to have been occupied in 1901

the rainy season; the heavy, tropical downpours not only moistening the earth but doubtless raising the water sufficiently, in this exceedingly low, flat country, slightly to flood large areas. While the birds, therefore, must build near, or, indeed, in the water, they guard against complete submergence of their home by building it high enough to protect the egg from possible danger. The popular conception of a Flamingo's nest makes it not more than six or eight inches in diameter at the base, whence it tapers to a truncate, hollowed top nearly two feet in height. I saw no nest, however, over twelve inches high, and most of them were not over eight inches high. The average basal diameter was about thirteen inches, that of the top about ten inches.

It is possible that the height of Flamingoes' nests, like that of the mud chimneys to the burrows of fiddler crabs, may depend upon the amount of rise and fall in the neighboring waters. This is a point to be ascertained by subsequent observation.

Flamingoes are wonderful birds. Their brilliant coloring and large size, habit of perching and flying in files, and the openness of the country which they inhabit, all combine to make a flock of Flamingoes one of the most remarkable sights in bird-life. Indeed, so far as my experience goes, it is *the* most remarkable sight in bird-life.

They are very shy and can be approached closely only when they are unaware of your presence. Attempts to use a telephoto lens in photographing birds about two hundred yards away failed because of the force of the trade-winds over the mangrove flats. Even at this distance the birds are large enough to make a strip of glowing color, in strong contrast to the blue water before, and the green mangroves behind them. This is near their danger line, and if one attempts to approach more closely without cover there is a sinuous movement along the whole line as the long, slender necks are raised and the birds regard the cause of their alarm. Soon a murmur of goose-like honkings comes to one's ear; then the birds begin, in slow and stately fashion, to move away step by step, and if their fears are not allayed the leader will soon spring into the air and, followed by other members of the flock, stretch his long neck and legs to the utmost and begin a flight which usually takes them beyond one's view. As the birds raise their wings displaying the brighter feathers below, the effect is superb beyond description, the motion showing their plumage to the best possible advantage.

It is surprising how far, under the proper light conditions, even a small flock of Flamingoes may be seen. Long after one can distinguish the individual in the waving, undulating line of birds, they show pink against the sky like a rapidly moving wisp of cloud which finally dissolves in space.



PART OF A FLOCK CONTAINING THIRTY SEVEN FLAMINGOES

Photographed with a 14 inch lens at a distance of about 250 yards. Enlarged 4 diameters.

The Weapons of Birds

BY FREDERIC A. LUCAS

Curator of Comparative Anatomy U. S. National Museum



IKE the good little boy who figured in the story books of our grandparents, the bird in literature is always gentle and well-behaved; in real life neither the boy nor the bird are quite as peaceable as they might be. It may be treasonable to say it in the columns of BIRD-LORE, but the fact is that even the best of birds fight now and then, while some of them are well provided with weapons of offense and defense. Sad to say, Pigeons, those favorite emblems of gentleness, are among the birds that fight most systematically; for they, or at least our domesticated birds, are skilled boxers, feinting, guarding and striking most dextrously with their wings. It might perhaps be pleaded that the manners of the Pigeon have suffered from long association with man, but, unfortunately, one of the species that grew up in total and fortunate ignorance of man was provided (pity we can not say *is*) with a special weapon, a sort of natural slung-shot as it were, in the shape of a knob of bone on the wrist. The wrist of a bird, as most readers of BIRD-LORE doubtless know, comes right at the bend of the wing, and there, or thereabouts, is the place where such a weapon would be most effective. (Fig. 1.) The bird that wore this knob of bone was the flightless Solitaire, a big, overgrown, aberrant Pigeon related to the equally aberrant Dodo, though better-looking, and confined to the island of Rodriguez, where years ago the Frenchmen "caught him, and cooked him, and ate him"—quite out of existence.



FIG. 1. Part of the wing of the Solitaire

François Leguat, the historian of the Solitaire, to whom we are obliged to turn for all information concerning this bird, wrote that, "The Bone of this Wing grows greater towards the Extremity, and forms a little round mass under the Feathers as big as a musket ball. They will not suffer any other Bird of their Species to come within two hundred Yards round of the Place; But what is very singular, is, the Males will never drive away the Females, only when he perceives one he makes a noise with his Wings to call the Female, and she drives the unwelcome Stranger away, not leaving it 'till 'tis without her Bounds. The Female does the same as to the Males and he drives them away. We have observed this several Times and I affirm it to be true."

"The Combats between them on this occasion last sometimes pretty long, because the Stranger only turns about and do's not fly directly from

the Nest. However the others do not forsake it till they have quite driven it out of their Limits."

This same keep-off-my-territory trait is as strong in the common Pigeon as in his extinct relation, for if one Pigeon trespasses on the breeding box of another he will be set upon and belabored without mercy. And while no existing Pigeon has the bony knob of the Solitaire, some wild species have a rudiment of such a weapon; and if any one will part the feathers on the outer edge of a Pigeon's wing, near the bend, he, or she, will find a small bare spot and more or less trace of a little prominence covered with tough skin.

Most birds, indeed, are compelled to get along without any special weapon, and some, the Swans for example, are said to give very severe blows with the unaided wing; although one may reasonably question the statement that even this bird can break a man's arm with a stroke of its pinion. Nearly every one has seen the rough-and-tumble fights of those ill-bred little feathered *gamins*, the English Sparrows, and know the vigorous manner in which they hammer one another with beak and wing.

The writer does not know whether or not such well-armed birds as Gannets or Herons quarrel among themselves; but if they do so this should result in serious damage, for the beak of the Gannet is wonderfully keen-edged, while a thrust from the bill of such a bird as the Blue Heron would be powerful enough to kill an adversary of the same species. Such as these need no adventitious aids; neither do such hard kickers as the Ostrich and his relations, who are well able to take care of themselves. But many of the game birds, as we all know, make up for any lack of size and strength by the spurs with which their legs are provided, while still other birds wear spurs upon their wings; and it is to be noted that these are such as have weak legs or have uses for them that would render spurs upon their



FIG. 3. The Wattled Plover

legs more or less inefficient as weapons. Several species of Plovers found in South America, India and Africa, distributed among the genera *Hoplopterus*, *Belonopterus*, *Lobivanellus* and *Sarciophorus*, have these wing spurs, and very sharp spurs they are, too, and seemingly very effective. None of these



FIG. 2. Spur of the Spur-winged Plover

birds are found in the United States, and most of them, as indicated above, come from southern latitudes, one of the largest and finest being the Chilean Plover (*Belonopterus chilensis*). The spur is situated just at the base of the thumb and, like the spurs on the legs of other birds, consists of a sheath of horn fitting closely over a core of bone (Fig. 2). Some of the spur-winged Plovers have fleshy wattles about the face, whence the names *Lobivanellus* (Fig. 3), lobed-plover, and *Sarciophorus*, flesh-bearer; and there is a curious relation between the size of the spur and the size of the wattle, for when one is large the other is correspondingly well developed, and when the wattle is small the spur also is small. No such relation as this exists between the spurs and wattles of domesticated fowls, but in their case selection has been artificial and not natural, so the instances are not similar.

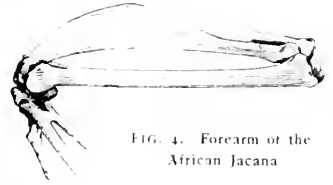


FIG. 4. Forearm of the African Jacana

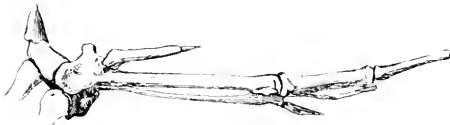


FIG. 5. Part of the wing of the Spur-winged Goose

The pretty little Jacanas are among the spur-winged birds, and it is apparent from the length and slenderness of the toes that spurs upon the legs would be of little or no use for the birds would probably not be a success as kickers. Now there is a group of Jacanas peculiar to Africa which have no spurs on their wings, and these present a curious modification of the radius, or outer bone of the forearm (Fig. 4), so that this may serve instead. The bone is flattened and widened until it somewhat resembles an Australian throwing-stick in miniature and projects so far beyond the edge of the wing that it makes a very effective little weapon with which to buffet an adversary about the ears. There seems to be, however, one disadvantage about this arrangement; that is, the blow ought to hurt the bird by which is delivered about as much as the one by which it is received, but if birds are like unfeathered bipeds there would be much consolation in knowing that the more one smarts the worse is the opponent punished.

The Spur winged Goose, *Plectropterus gambensis*, shows a variation in the making of a weapon by having the spur on one of the wrist bones instead of on the metacarpus (Fig. 5), where it is usually placed, but this only serves to show that nature is not bound to any hard and fast method of equipment.

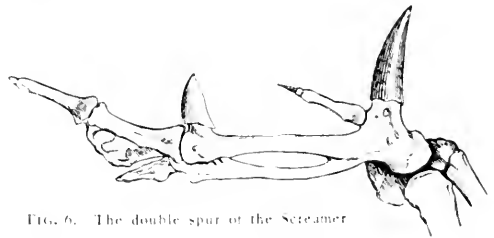


FIG. 6. The double spur of the Screamer

Last and largest of the spur-winged birds are the South American Screamers, *Chauna* and *Anhima*, and these not only have the longest, strongest and sharpest spurs of all birds, but they have a second smaller spur on the lower part of the metacarpus (Fig. 6). The large spur is slightly flattened on the side next the body as well as gently curved, forming a formidable-looking weapon about an inch and a quarter long and seemingly capable of being driven quite through a man's hand by a wing-stroke of so large a bird as the Screamer. And yet, according to Mr. Hudson, this bird is preëminently a bird of peace and dwells in peace amid large numbers of its fellows, so perhaps its arms are, as they should be, merely a warning to would-be enemies and not a menace to its friends.



WHITE-TAILED PTARMIGAN IN WINTER PLUMAGE

Photographed from nature, by F. R. Warren, Crested Butte, Colorado

Whiskey John in Colorado

BY EDWARD R. WARREN, CRESTED BUTTE, COLORADO

With photographs from nature by the author



If you ask a western man whether he is acquainted with Whiskey John or Whiskey Jack, he will most likely say, "No; never heard of him." Ask him about Camp Robbers, and he will say "Yes" if he lives in the mountains of Colorado, for the bird does not, as a rule, come much below 10,000 feet. He lives mostly in the heavy spruce timber and at once makes himself at home about your camp or cabin, as Mrs. Hardy so vividly described in BIRD-LORE for August, 1902.

Breeding while the snow is deep in the timber, no one ever sees their nests. Ornithologists are scarce in the mountains, and I imagine it would be quite a task to find the nest in the thickly branched trees. I have seen young just out of the nest in the middle of May, when there was still three



A CAMP PET

or four feet of snow in the timber, at an altitude of nearly 11,000 feet. They are then in the dark plumage Mrs. Hardy mentions. They are somewhat lighter in the fall, and I often think become grayer as they grow older; at least the very light-colored ones have a most venerable and patriarchal

aspect, and will steal anything in sight they can possibly pack off. One once carried away an "Out-o'-sight" mouse-trap with a dead mouse in it—I presume he ate the mouse, but he forgot to bring back the trap. Around a camp or cabin they will become so tame as to eat from one's hand, and



WHISKEY JOHN PROSPECTING

pay regular visits to mines to feed on the refuse thrown out from the boarding houses. It is amusing to watch one pick up a mouthful or two and swallow it, then take as much into its bill as it possibly can, look sidewise at you with an expression that seems to say, "What are you going to do about it?" then fly away with its load. I am sure birds must hide a great deal of what they carry away, for they soon come back for more, and it does not seem as if they could possibly eat it all.

A friend is living with his wife at a mine in the heavy timber, and the birds are quite numerous, and several are very tame. I took a number of pictures of the bird taking bread from my friend's hand; and others were taken by setting the camera on the ground, sprinkling crumbs at the desired spot and inducing the bird to come there. But do not think for a minute that, because the birds are so tame, it is easy to get good pictures of them. You see your bird in a tree, throw out a few crumbs as an inducement to him to come down; he hops onto another limb closer to you, then to the roof of the house, perhaps, then to the ground, cocks his head to one side and takes a look at you, hops about and picks up a crumb or two but is perhaps too far back for a picture; then two or three hops bring him up right close to the camera, for which he cares nothing, then off again in

some other direction, and at last gets just where you want him; you snap the shutter, and when you develop the plate find, very likely, that just as you made the exposure the bird had turned its head, though keeping the body perfectly still. I have had numbers of exposures spoiled that way. It is certainly very aggravating to develop a plate and find perfect, sharp detail on body, wings, tail and legs, and the head a shapeless blur. The birds must think their pictures are being taken for the Rogue's Gallery!

The birds have several different notes, most of them of a distinct Jay character, but beyond me to reduce to writing. My ears are not sharp enough for that. There is also one note which sounds extremely like the call of the Red-tailed Hawk. So strong is the resemblance that I often have to look to see which bird it is uttering the call. After all, I don't think we western folks have such a spite against Whiskey John as the woodsmen of Maine and Canada seem to cherish. He is a jolly, good-natured sort of fellow, and, if you don't have too many small things lying about loose, does not do very much harm.

Bird-Lore's Christmas Bird Census

THE interest aroused by BIRD-LORE'S Christmas Bird Census in 1900 and 1901, prompts us again to invite our readers to join in this modern development of the 'Side Hunt,' on December 25, 1902. Reference to the February, 1901, or 1902 numbers of BIRD-LORE will acquaint one with the nature of the report of the day's hunt which we desire; but to those to whom neither of these issues are available we may explain that such reports should be headed by a brief statement of the character of the weather, whether clear, cloudy, raining, etc., whether the ground is bare or snow-covered, the direction and force of the wind, the temperature at the time of starting, the hour of starting and of returning. Then should be given, in the order of the A. O. U. 'Check-List,' a list of the species seen, with exactly, or approximately, the number of *individuals* of each species recorded. A record should read, therefore, as follows:

Yonkers, N. Y., Time 8 A. M. to 12 M. Clear; ground bare; wind west, light; temperature 38°. Herring Gull, 75; etc. Total, — species, — individuals.—JAMES GATES.

These records will be published in the February issue of BIRD-LORE, and it is particularly requested that they be sent the editor (at Englewood, N. J.) not later than December 28.

For Teachers and Students

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

SEVENTH PAPER

FAMILY 17. KINGLETS AND GNATCATCHERS. FAMILY *Sylviidae*

Range.—Ornithologists differ greatly in their treatment of the three subfamilies of birds included in this family by the American Ornithologists' Union's Check-List, that is, the *Sylvinae*, or Old World Warblers, numbering about one hundred species, only one of which reaches this country (the Willow Warbler, in western Alaska); the *Regulinae*, or Kinglets, with seven species, three of which are American, and the *Polioptilinae*, or Gnatcatchers, with some fifteen species, all of which are American. Two Kinglets and one Gnatcatcher are found east of the Mississippi.

Season.—The Kinglets, representatives of an Old World family, as might be supposed, are northern, migrating southward in September and October.



KINGLETS AND GNATCATCHERS. Family *Sylviidae* (One third natural size)
Blue-gray Gnatcatcher Ruby-crowned Kinglet Golden-crowned Kinglet

The Gnatcatcher is southern, wintering from the Gulf States southward and breeding as far north as middle New Jersey.

Color.—Kinglets are olive-green or Warbler green, as it is called, above, lighter below; with a bright patch on the crown, which is wanting in the female and young Ruby-crown. Gnatcatchers are gray above, white below.

External Characters.—Kinglets and Gnatcatchers have the slender bill

of most Warblers, for which they might readily be mistaken; but their smaller size and short outer primary, which is not more than one-third as long as the longest, are distinguishing characters.

Appearance and Habits.—Like the Warblers, the Kinglets and Gnat-catchers are active inhabitants of the trees, and here again they might be compared with the former; but their smaller size, the Kinglets' trick of quickly flitting the wings, and the Gnatcatcher's long tail, which in life is very noticeable, will serve to separate them.

Song.—Both the Kinglets and Gnatcatchers are unusually good singers; indeed, in view of their small size their vocal gifts are surprising. The Gnatcatcher's voice, it is true, lacks volume, but his execution is above criticism, while the Ruby-crowned Kinglet's remarkable, rich, loud notes place him among songsters of the first rank.

FAMILY 18. THRUSHES, SOLITAIRES, STONECHATS, BLUEBIRDS, ETC. Family *Turdidæ*.

Range.—Few ornithologists agree as to what birds shall be included in the family Turdidæ. Its composition will doubtless always be a matter of opinion: and in cases of this kind it is of far more importance to adopt some uniform plan of treatment and stick to it, than to follow every author who thinks he has discovered the true key to the classification of the group. In other words, in the minor details of classification, the jugglings of the systematist are apt to do more harm than good. Fortunately, we have the 'Check-List' of the American Ornithologists' Union to guide us, and the Turdidæ as there defined numbers some 275 species, of which 125 are found in the western hemisphere, 13 in North America, and 7 east of the Mississippi.

Season.—Most Thrushes are highly migratory. The Hermit alone, of our smaller species, winters in eastern North America. The Robin and Bluebird make shorter journeys, rarely crossing our southern boundaries and wintering regularly as far north as southern New England.

Color.—The typical Thrush is brownish above, white, spotted with black below. From this pattern there is wide variation, but the young of all the species included in this family show their ancestry by being spotted in juvenal plumage.

External Structure.—In the Thrushes the tarsus is booted, or, in less technical language, the covering of the so-called 'legs' is without scales; the tail-feathers are of nearly equal length, distinguishing Thrushes from Thrashers, which have rounded tails; and the outer primary is less than one inch in length.

Song.—Thrushes are preëminent as song-birds, and with the inclusion of the Solitaires, the family might well challenge all the remaining members of the class Aves to a song contest without danger of defeat.



THRUSHES, BLUEBIRDS, ETC. Family *Turdidae*. (One-third natural size)

Hermit Thrush
Wood Thrush

Olive-backed Thrush
Wilson's Thrush

Gray-checked Thrush
Bluebird

The Advisory Council

ON a former occasion we have commented on the happy results which have followed BIRD-LORE'S efforts to bring the isolated student in touch with an authority on the bird-life of the region in which he lived, through the formation of an Advisory Council composed of prominent ornithologists representing the United States, Canada, Mexico and the West Indies. The plan has worked admirably, and we are assured that the many of our readers who have established pleasant relations with members of the Council will be glad to know that, beginning with the present number, we propose to publish, in BIRD-LORE, the portraits of the ornithologists composing the Council. The full list of Councilors will appear in the next issue of BIRD-LORE.

Questions for Bird Students

ONE of the most effective means of acquiring information is to have one's interest in a subject aroused by a direct question concerning it. The statement of a fact may make no impression on our minds; whereas the same matter, presented interrogatively, will excite our curiosity and so prepare the way for the answer that it is more readily memorized. It is on this principle that BIRD-LORE has been publishing, during the past two years, pictures of birds without their names, and it is on this principle that it plans to present, during the coming year, questions relating to birds, bird men, and bird matters generally. One year from this month, in our issue for December, 1903, we shall have a somewhat surprising statement to make concerning these questions, and in our issue for that date we will give a list of the names of all BIRD-LORE readers who send us correct answers to them. The first lot of questions is appended.

1. When was the American Ornithologists' Union founded, and who was its first president?
2. How many tons of seeds has the Tree Sparrow been estimated to destroy in a single state during the period of its presence?
3. What is the greatest number of species of birds observed at, or near, one locality in North America during a single day?
4. What bird is known to nest in only three places in North America?
5. At what height above the earth does a recent observer state that night-migrating birds fly?
6. How long after hatching do Ruby-throated Hummingbirds leave the nest?



WILLIAM DUTCHER. *Long Island*



T. GILBERT PEARSON. *North Carolina*



LYNDS JONES. *Ohio*



E. W. NELSON. *Mexico*

BIRD LORE'S ADVISORY COUNCILORS
FIRST SERIES

How to Study Birds

BY FRANK M. CHAPMAN

FIRST PAPER

INTRODUCTORY

DURING the past three years BIRD-LORE has published a series of articles designed to be of permanent value to teachers and students of birds,—articles which should not be merely of passing interest but which should be of real assistance to our readers; articles to refer to as one would to a text-book. In 1900, it may be remembered, we presented a number of suggestive papers on methods in teaching ornithology, wherein such well-known teachers as Olive Thorne Miller, Florence Merriam Bailey, Lynds Jones and others explained their methods in the field, classroom or lecture-hall. In 1901 we published a series of articles on 'Birds and Seasons,' in which the bird-life of the vicinity of Boston, New York city, Philadelphia, Oberlin, Ohio; Chicago, and Stockton, Cal., was discussed month by month, and seasonal lists of birds, suggestions for the season's study and season's reading were given. During the past year these contributions have been followed by seven articles on the families of perching birds, treating the preliminary steps in a systematic study of birds. Thus, it will be seen that in natural sequence we have considered (1) how to teach birds, (2) when to find birds, and (3) how to name birds. It is now proposed to follow these subjects by a number of articles on 'How to Study Birds.' We have seen that identification, the naming of the bird, is, as might be expected, the first object of the student; and to this end we have told him when he may expect to find certain birds and how to make their acquaintance. But naming birds is only the first step in their study. Having learned to recognize a species, we should next begin to inquire into its habits, its life-history. A study of bird migration is usually the first subject in field ornithology which interests the student, once he has acquired some familiarity with the birds themselves. Migration, from the practical standpoint of dates, however, has been dealt with in our articles on 'Birds and Seasons,' and the thereto appended suggestions for the season's study contained numbers of hints to the student of this remarkable phenomenon. Next to the fascination of observing and recording the comings and goings of birds, the field student is probably most attracted by their habits while nesting, and it is this interesting phase of bird-life which we propose to study with BIRD-LORE'S readers during the coming year. Mating, the selection of a nesting-site, nest-building, egg-laying, incubation, the care and habits of the young,—all these developments of the nesting season will receive our attention, with the especial object of telling the student what to look for and how to look at it. Hundreds of opportu-

nities to add to our knowledge of birds' habits during this most important part of their lives are lost simply because the persons to whom the opportunities come do not know what is known or what is unknown, what he should try to see or the significance of things seen.

The day has passed when general observations on the habits of our birds are likely to prove of value. Nor can the student hope to discover much that is new unless, after learning what we especially desire to know, he devotes himself systematically to the study of comparatively few birds: selecting, preferably, the most common species in his vicinity.



What Bird is This?

Field Description—Length, 6.25 in.—Brownish gray, lighter below, more or less streaked with whitish. A whitish line over the eye is more or less evident.

NOTE.—Each number of BIRD-LORE will contain a photograph, from specimens in the American Museum of Natural History, of some comparatively little-known bird, or bird in obscure plumage, the name of which will be withheld until the succeeding number of the magazine, it being believed that this method of arousing the student's curiosity will result in impressing the bird's characters on his mind far more strongly than if its name were given with the picture.

The species figured in October is Lincoln's Finch

For Young Observers

The Screech Owl's Valentine

BY FLORENCE A. VAN SANT

A Screech Owl once set out to find
A comely mate of his own kind;
Through wooded haunts and shadows dense
He pressed his search with diligence;
As a reward
He soon espied
A feathered figure,
Golden-eyed.

"Good-night! my lady owl," said he;
"Will you accept my company?"
He bowed and snapped, and hopped about,
He wildly screamed, then looked devout.
But no word came,
His heart to cheer,
From lady owl,
That perched so near.

The suitor thought her hearing dull,
And for her felt quite sorrowful.
Again by frantic efforts he
Did try to woo her from her tree;
"Pray, loveliest owl,
The forest's pride,
Descend and be
My beauteous bride."

"A wedding feast of mice we'll keep,
When cats and gunners are asleep;
We'll sail like shadows cast at noon,
Each night will be a honey-moon."
To this she answered
Not one breath;
But sat unmoved
And still as death.

Said he, "I guess that she's the kind
That people in museums find;
Some taxidermist by his skill
Has stuffed the bird, she sits so still.
Ah me! that eyes
Once made to see
Should naught
But ghostly specters be."

At this she dropped her haughty head
And cried, "I'm neither stuffed nor dead.
Oh! weird and melancholy owl.
Thou rival of the wolf's dread howl:
Since fate so planned,
I'll not decline
To be for life
Your valentine."



SCREECH OWL

Photographed from life by A. L. Princehorn

Notes from Field and Study

Wintering Robins and Cedar Waxwings.

At Belmont, Massachusetts, adjoining Cambridge, where the venerable Waverley Oaks are within one of the public reservations, a bewildering number of birds was found on January 7 and 8, 1902. Upon reaching the grounds a very unusual activity in the quiet bird-life of midwinter was at once apparent. Many birds were flitting from bough to bough of the great oaks and the shrubbery beneath. The subdued cries of Robins reached the ear, and presently their coloration was seen. With them, but in closer groups, were Cedar Waxwings. They, too, were numerous, and upon a nearer approach many were seen to be in full beauty of plumage, the black markings about the bill strong, the brown of the back rich in shade, the yellow on the under side of the body almost as bright as the tips of the tail feathers, and the dots of scarlet upon the wings clearly discernable. Their pointed crests were well raised above their heads. They showed to a full degree that sleekness of plumage and refined air which are characteristic of the species. And now their 'wheezy whistles' were heard. Beneath the old oaks were privets well hung with berries, and red cedars. In among the boughs of these were many both of the Robins and Cedarbirds, making a satisfying meal. Occasionally from a high branch overhead came a Robin's 'cheerily, cheerily, cheerily.' Now a squad of Cedarbirds makes a rapid sweep through the air and returns to its perch in a tree-top. Now half a dozen Robins descend to the edge of a small stream, tributary to Beaver creek, and take a plunge. It is a happy company, not at all discouraged by rigors of winter. There is no suggestion that the season is going hard with them. Voices are cheerful, movements are quick.

But what is the number of each species? At length the Waxwings seem well settled in several smaller close flocks upon near

trees and can be counted with approximate accuracy. There are seventy-five or eighty. And now the Robins begin to pass in squads from the left to the right across an open space to another group of trees and shrubbery beyond. It is the time to get their number. Successively they go in half-dozens and twenties. The movement is all one way. Seventy-five, one hundred, have been counted. Still they go. One hundred and twenty-three, and there the movement stops. Now snow-flakes begin to sift down, and a chilling breeze quickens from the north. Notwithstanding there comes to the ear 'cheerily, cheerily, cheerily,' as the observer leaves the ground. By afternoon the snow was falling fast. It seemed of interest to ascertain whether all these birds were still at the reservation, stout-hearted and happy. So a second trip was made from the city. Yes; they were all there at three o'clock in the afternoon. Again an enumeration was made. The Cedarbirds numbered about the same as at noon. The Robins, however, as they repeated a one-direction flight, were reckoned up as one hundred and seventy-seven. So not all were seen at the noon hour. Just before four o'clock all took wing, both Robins and Waxwings. They were quickly lost to view in the fast-falling snow. Were they seeking some well-proved thick covert for the night? No longer could one be seen or heard. In the following forenoon, under skies still clouded and with five inches of newly fallen snow underfoot, a third trip to the 'Oaks' was made, to see if these flocks were repeating the visit of the day before. Yes; they were there again in full numbers. The Cedarbirds seemed to be rather more numerous and to be quite a hundred. The Robins reckoned up, as the first time, about a hundred and twenty-five. The privet berries were still in ample supply. The little stream flowed between snowy banks and afforded the same bathing facilities, which the Robins were again utilizing. To

the delight of the ear and the heart again came on the air the familiar song, 'cheerily, cheerily, cheerily'. And the subdued cries and cacklings betokened much of interested communication one with another. While enjoying this novel midwinter experience of all the Robins and Waxwings which one could wish for, there were also noted two Purple Finches in rose-colored plumage, two Goldfinches, Crows, Blue Jays, a Flicker and several Chickadees and Juncos. On the border of a meadow near by were heard and seen a Song Sparrow and a Swamp Sparrow. The latter had not been found there before, but Song Sparrows and Tree Sparrows have been frequently observed previous winters. Upon the ninth, in the forenoon, a fourth trip was made. The sky was clear, the sun warm, and the air soft. But under these conditions, which would seem to be alluring, no Robin or Cedarbird could be found within the reservation during a two-hours' stay. Still there were privet berries there to attract them, although much reduced in number by so many mouths.—HORACE W. WRIGHT, *Boston Mass.*

The Twentieth Congress of the American Ornithologists' Union

The business meeting of the Twentieth Annual Congress of the American Ornithologists' Union was held November 17, 1902, at the residence of Dr. C. Hart Merriam in Washington, D. C. The following Fellows were in attendance:

J. A. Allen, W. B. Barrows, F. E. L. Beal, William Brewster, L. B. Bishop, Frank M. Chapman, W. W. Cooke, C. B. Cory, Ruthven Deane, Wm. Dutcher, J. Dwight, Jr., A. K. Fisher, F. A. Lucas, C. Hart Merriam, E. W. Nelson, T. S. Palmer, William Palmer, C. W. Richmond, T. S. Roberts, John H. Sage, Witmer Stone.

The election of officers resulted in the choice of those selected in 1901, namely: President, C. Hart Merriam; vice-presidents, C. B. Cory, C. F. Batehelder; secretary, John H. Sage; treasurer, William Dutcher; councilors, Frank M. Chapman, Ruthven Deane, J. Dwight, Jr., A. K. Fisher, E. W. Nelson, T. S. Roberts, Witmer Stone.

The following additions were made to the membership of the Union:

Honorary Fellows, Ernst Hartert, Fring, England; John A. Harvie-Brown, Stirlingshire, Scotland. Fellow, Harry C. Oberholser. Corresponding Fellows, A. J. Campbell, Melbourne, Australia; A. J. North, Sydney, Australia; H. von Jhering, San Paulo, Brazil. Members, Andrew Allison, Paul Bartsch, A. C. Bent, W. C. Braislin, Hubert Lyman Clark, E. A. Goldman, A. H. Howell, F. H. Knowlton, A. H. Norton, T. Gilbert Pearson, S. F. Rathbun, P. M. Silloway, C. O. Whitman. Eighty-two Associates were elected.

The public sessions of the Union were held at the United States National Museum November 18-20. A list of the papers presented is given on page 203 of this issue of BIRD-LORE. Many of these papers were of more than usual interest and value, and provoked much comment and discussion.

Luncheon was provided each day by the Washington members of the Union, and from both social and scientific points of view the congress was one of the most successful ever held by the Union. The attendance exceeded that at any previous congress.

The Union adjourned on Thursday, November 20, to meet in Philadelphia on November 16, 1903.

The Death of Mr. Barlow

With extreme regret we learn of the death of Mr. Chester Barlow at Santa Clara, California, on November 6, in the twenty-eighth year of his age.

Both personally and as editor of 'The Condor,' Mr. Barlow exerted an influence of unusual importance on ornithological interests in California. One of the founders of the Cooper Club, the success of that organization was, in no small measure, due to his energy and executive ability, to which also may in great part be attributed the high standard of the Club's official organ. Mr. Barlow's death at so early an age is, therefore, not only peculiarly sad, but it deprives the Club with which he was so prominently associated of an active, earnest, efficient worker whose place, we imagine, it will be very difficult to fill.

Book News and Reviews

HANDBOOK OF BIRDS OF THE WESTERN UNITED STATES. By FLORENCE MERRIAM BAILEY. Illustrated by LOUIS AGASSIZ FUERTES and others. Houghton, Mifflin & Co., Boston, Mass. 1902. 12mo. 88+487 pages+index; 36 full-page plates, 2 diagrams, 601 figures in the text. Price, \$3.50 net and 19 cents postage.

Lacking space in which to give an adequate idea of the surprising amount of information contained in this volume, or of its sterling value as a text-book, we feel tempted to begin and end our review by urging every one interested in the birds of our western states to procure a copy of this 'Handbook' with the least possible delay. Experience with bird students, as well as with birds, has given the author all needed training for her task, while the unexcelled collections to which she has had access have furnished the best available equipment for the technical side of her work.

Some conception of the contents and method of treatment of the book may be gained from the appended summary. The introduction of 88 pages contains instructions for collecting and preparing birds, their nests and eggs, and recording observations; sections on 'Life Zones,' 'Migration,' 'Economic Ornithology,' 'Bird Protection;' local lists from Portland, Oregon, San Francisco Bay, Santa Clara Valley and Santa Cruz Mountains, and Pasadena, California, Fort Sherman, Idaho, Cheyenne, Wyoming, and Pinal, Pima, and Gila Counties, Arizona. There are also extended lists of books and papers on birds and a detailed explanation of how to use the 'Keys' which follow.

The systematic portion of the book, treating the birds of the United States west of the one-hundredth meridian, comprises, (1) a key to the orders; (2) key to the families; (3) keys to the genera; (4) generic characters; (5) keys to the species; (6) descriptions of plumages; (7) distribution; (8) description of nest and eggs; (9)

food; (10) biographies, part of which have been supplied by Vernon Bailey.

For all of this, both as regards matter and manner, we have only the highest commendation to offer; in short, in our opinion, the work is the most complete text-book of regional ornithology which has ever been published.—F. M. C.

BIRDS OF THE ROCKIES. By LEANDER S. KEYSER. With eight full-page plates (four in color) by LOUIS AGASSIZ FUERTES; many illustrations in the text by BRUCE HORSEFALL, and eight views of localities from photographs. With a complete check-list of Colorado birds. Chicago. A. C. McClurg & Co. 1902. Square 12mo. ix+355 pages; illus. as above. Price, \$3. net.

In this handsome, beautifully illustrated volume, Mr. Keyser tells the story of two seasons ("Spring of 1899, and again in 1901") among the birds of Colorado. Readers of his previous works are familiar with his love of the bird in nature and his glowing portrayal of his experiences afield; and in this last volume his undiminished ardor in the pursuit of some, to him, new bird and his keen delight in making its acquaintance, serve not only to give pleasure to his audience but well illustrate the undying enthusiasm of the genuine bird-lover.

Selecting a region whose birds were for the most part strangers to him and where altitude added much of interest in studying distribution, Mr. Keyser abandoned himself to the fascinations of bird study on plains and foothills, mountain parks and peaks; and his recountal of his experiences cannot fail to arouse the spirit of desire in the minds of those who follow his pages.

The book possesses a scientific as well as literary value, many of Mr. Keyser's observations being of permanent worth; though, from the scientific point of view, the value of his text would have been increased if he had not been quite so sparing of dates.

In the matter of illustrations the publishers have been both liberal and discriminating, securing two well-equipped artists and reproducing their work in a thoroughly satisfactory manner. The photographs of typical scenes are rendered extremely instructive by detailed captions explanatory of their significance and naming the birds characteristic of the locality depicted.—F. M. C.

BIRDS OF THE CAPE REGION OF LOWER CALIFORNIA. By WILLIAM BREWSTER. Bull. Mus. Comp. Zool., XLI, No. 1, 1902. 241 pages; 1 map.

Based primarily on the field-work and collections of Mr. M. Abbott Frazar, who was sent by Mr. Brewster to the Cape Region, this book also includes whatever it has seemed desirable to quote from the publications of previous authors, and it therefore forms a complete exposition of our knowledge of the bird-life of the region to which it relates. It is prepared with the care and attention to detail which characterizes all its author's published writings and at once takes its place among the standard treatises on faunal ornithology.

After defining the limits of the Coast Region and presenting a narrative of Mr. Frazar's explorations, the 167 species and 88 subspecies known from the Cape Region are treated at length. Of this number 36 species and subspecies are here recorded from the Cape Region for the first time; while Mr. Frazar's activity in the field yielded 3 new species and 12 new subspecies, 3 of which, with a new Screech Owl, are described in this important paper.—F. M. C.

BIRDS OF THE HAWAIIAN ISLANDS. By H. W. HENSHAW. Thos. G. Thrum, Publisher, Honolulu, H. I. Price, \$1. 12mo. 146 pages; 1 plate.

Readers of BIRD-LORI will recall Mr. Henshaw's interesting papers on Hawaiian birds published in this magazine in 1901, and will be glad to learn that this author has placed in accessible form the results of his wide experience with Hawaiian birds, including, also, the better part of that which has been recorded by other workers among these islands.

In an admirable introduction of 28 pages the peculiar conditions affecting Hawaiian bird-life, its origin, the faunal zones of the island, etc., are discussed, and the 125 birds native to the islands are then described, under each species being given the known facts in its history as a Hawaiian bird; we have here, therefore, a complete text-book of the Hawaiian avifauna.

Ten species of birds have been successfully introduced into the islands, among them the Skylark, and it is most instructive to observe with what facility most of these birds appear to have established themselves.

Lack of space prevents a more extended notice of this important contribution to the literature of ornithology and island-life. American ornithologists will now feel that their loss, when Mr. Henshaw left this country to take up his residence in Hawaii, was at least sustained in a good cause.—F. M. C.

The Ornithological Magazines

THE AUK.—In the October 'Auk' will be found two papers on West Indian birds, one the conclusion of a list of 'The Birds of the Island of Carriacou,' by J. G. Wells, the other a similar list of 'Birds of Porto Rico,' by B. S. Bowditch, to be continued. Both are pleasantly annotated. A paper also worthy of consideration is by R. E. Snodgrass, on 'The Relation of the Food to the Size and Shape of the Bill in the Galapagos, Genus *Geospiza*.' There are plates and tables of the seeds found in 200 specimens of about a dozen species of the genus, and we read "that one is almost forced to the conclusion that all the species of *Geospiza* eat simply whatever seeds are accessible to them." The evidence indicates that "there is no correlation between the food and the size and shape of the bill."

Under the title of 'A New Long-billed Marsh Wren from Eastern North America,' O. Bangs puts in the subspecific wedge and splits the inland fresh-water bird from the dweller of the salt-marshes. We will hope that salt has been put upon the right tail in catching the subspecies. 'The Nomenclature and Validity of Certain North American Gallinæ' is a defense by F. W. Nelson

of the status of several Mexican species (chiefly Quail) recently discredited by Mr. Ogilvie-Grant. Two half-tone plates seem to sustain Mr. Nelson's views. 'A Description of the Adult Black Merlin,' by F. H. Eckstorm, shows ingenuity, introducing, for instance, "high lights" to "demark" a crown patch otherwise concolor. 'A Hybrid between the Cliff and Tree Swallows' is described by F. M. Chapman, and C. W. Wickham writes on the 'Sickle-billed Curlew.' There is much of interest among the numerous notes and reviews that fill thirty pages.—J. D., Jr.

THE CONDOR.—The leading articles of the September-October number of 'The Condor' are very appropriately devoted to the life and work of Dr. James G. Cooper, the distinguished ornithologist and naturalist, who died July 19, 1902, and in whose honor the Cooper Ornithological Club was named. His death marks the passing of the last of the naturalists connected with the Pacific Railroad Surveys who laid the foundations of our knowledge of western birds. The brief but sympathetic biographical sketch by Emerson is illustrated by reproductions of a photograph of Dr. Cooper taken in 1865, and a view of his home at Haywards, California. Dr. Cooper attained the age of seventy-two years, and during the forty years in which his researches were actively carried on, published about seventy-five papers on the natural history of the Pacific coast. The titles of his ornithological writings have been collected by Grinnell, who contributes a complete annotated list of twenty-six papers, the most important of which are the report on the birds of Washington, in the reports of the Pacific Railroad Surveys, 1860, and the 'Ornithology of California,' 1870.

The first part of an important paper on 'The Redwood Belt of Northwestern California,' by Walter K. Fisher, is devoted to a discussion of the faunal peculiarities of the region. Lists of the characteristic plants and birds are given, and the difficulties attending a precise definition of the life zones of this belt are clearly shown. 'The

status of the Arizona Goldfinch in California' is reviewed by Grinnell, who concludes that the so-called *Astragalinus psaltria arizonae* which is found in California is merely a peculiar plumage of *A. psaltria*, in which the black dorsal markings are unusually extended. Two other papers which merit special mention are Barlow's 'Observations on the Rufous-crowned Sparrow,' illustrated by an excellent half-tone of the nest and eggs; and Sharp's 'Nesting of the Swainson Hawk.' The latter article contains the curious misstatement that the bird's food supply "consists wholly of those four-footed pests which every farmer and ranchman recognizes as among his worst enemies." As a matter of fact, Swainson's Hawk is remarkable for the large number of grasshoppers it destroys. A specimen which I examined at Pomona, California, on August 31, 1887, contained the heads of more than one hundred and thirty of these insects.—T. S. P.

WILSON BULLETIN.—'Wilson Bulletin' No. 40 contains a number of interesting papers, but we can not help regretting the lateness of its arrival. This tendency among natural history magazines to delay publication far beyond the designated period is a growing evil, and is one for which there is little excuse. The fault usually lies with the contributors, whose belated ideas prevent the good-natured editors from liberating the proof at the proper time. All, however, should have sufficient pride to be willing to cooperate with the editors in making the magazines business-like productions.

The opening paper by Rev. W. F. Henninger on the Birds of Scioto and Pike counties, Ohio, is a well-prepared annotated list covering 216 species, classified under the following categories: residents, 42; summer residents, 61; regular transients, 65; irregular and rarer transients, 27; winter residents, 10; accidental visitors, 7; extinct, 2; introduced, 2. The observations were made chiefly at three localities and ran through a period from the summer of 1894 to that of 1902. Notes on the arrival and departure are given for many of

the species, and their relative abundance is always stated. As both Chickadees are given as common residents, remarks on their local distribution would have been interesting. In working out the 'Spring Migration of 1901' in Lorain county, Ohio, R. L. Baird has given a tolerably complete index of the movements of the birds of that section during their northward flight. A table is appended patterned after those published in BIRD-LORE giving the species arriving between February 15 and May 15. This table is divided into ten parts, each of which covers from 5 to 10 days, so that it is easy to observe just what combination of species arrive between certain dates. In an article on 'Maryland Birds,' Rev. J. H. Langille shows among other things how adequate protection during spring will induce birds to nest in increasing numbers.

As soon as proper laws were enforced in Baltimore and Washington the sale of song-birds in the game markets practically stopped and the lives of myriads of Robins and other birds were spared throughout the surrounding country. We might point out in this connection that waterfowl when unmolested will return in like manner to their former breeding grounds. Two years ago Jefferson county, New York, abolished spring shooting. The experiment fully demonstrated the soundness of the movement, for the Ducks at nesting time resorted to the marshes in such numbers that when autumn came their bountiful flight was a surprise to everyone.—A. K. F.

Program of the Twentieth Congress of the American Ornithologists' Union

At the morning and afternoon sessions of the Union, held at the United States National Museum, Washington, D. C., November 18-20, 1902, the following papers were presented:

Notes on the Life of Edward Harris, with Extracts from his Journals. George Spencer Morris.

The Development of the Pterylosis. Hubert Lyman Clark.

The Domestic Affairs of Bob-white. John N. Clark.

Summer Bird-Life of Eastern North Carolina. T. Gilbert Pearson.

Change of Color without Molt. R. M. Strong.

Iridescence and White Feathers. R. M. Strong.

Some Problems of Local Bird Population. Walter B. Barrows.

Notes on *Picoides americanus* and *Picoides arcticus* in Minnesota. Illustrated with lantern slides. T. S. Roberts.

Comparison of the Bird-Life of Gardiner's Island and Cobb's Island. Illustrated with lantern slides. Frank M. Chapman.

A Contribution to the Life-History of the Herring Gull. Illustrated with lantern slides. By W. L. Baily and William Dutcher.

The A. O. U. Check-List—its History and its Future. J. A. Allen.

A Glance at the Historical side of the Check-List of North American Birds. Witmer Stone.

Evolution of Species and Subspecies as illustrated by certain Mexican Quails and Squirrels. E. W. Nelson.

Form in Bird Music. H. W. Olds.

Ancient Birds and their Associates. Illustrated with lantern slides. F. A. Lucas.

Observations on the Herons of the District of Columbia. Illustrated with lantern slides. Paul Bartsch.

Bird-Life in the Bahamas. Illustrated with lantern slides. Frank M. Chapman and Louis Agassiz Fuertes.

Report of the Chairman of the Committee on the Protection of North American Birds. William Dutcher.

Federal Game Protection in 1902. T. S. Palmer.

Some Variations in the Piping Plover. (*Egialitis meloda*.) Jonathan Dwight, Jr.

Nesting of the Red-bellied Woodpecker in Hartford County, Maryland. Wm. H. Fisher.

Some Food Habits of West Indian Birds. B. S. Bowditch.

The Significance of Trinomials in Nomenclature. Witmer Stone.

An Epidemic of Roup in the Canandaigua Crow Roost. Flon Howard Eaton.

Bird-Lore

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Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

1902

Each year, in reviewing the contributions to the literature of ornithology made during the preceding twelve months, it has not seemed possible that a succeeding period of equal time would witness the production of so many and, in the main, such excellent books and papers on birds. But one by one they appear, and when we reckon the sum total for 1902 we find no evidence of a decrease in their number.

In systematic ornithology the second volume of Mr. Ridgway's great work on the 'Birds of North and Middle America' takes first place; and under this head are to be included the third volume of Dr. Sharpe's 'Hand-List' of the birds of the world and Mr. Oberholser's critical studies of the Horned Larks.

A text-book which will exert a marked influence on the study of birds in our western states is Mrs. Bailey's 'Handbook of the Birds of the Western United States,' a publication of the first importance.

In original research Dr. R. M. Strong's paper on the development of pigment in feathers may be counted the year's most valuable contribution to subjective ornithology; merited praise it gives us pleas-

ure to bestow. Here, also, should be mentioned Dr. Dwight's continued studies of the molt.

The most startling find of the year in the field, is undoubtedly Professor Blatchley's discovery of Great Auk's bones in Florida, subsequently confirmed by Professor Hitchcock. In exploration, the results of Mr. Preble's trip to the Hudson Bay region add much to our knowledge of the bird-life of that little-visited land. Mr. Brewster's 'Birds of the Cape Region of Lower California' is also a welcome contribution to the faunal and biographical literature of ornithology and will long remain a standard treatise on the birds of that region. Mr. Grinnell's 'Check-List of California Birds,' is a state list of exceptional value, and lists have also been published of the birds of Oregon and Vermont by Woodcock and Perkins, respectively. Mr. Silloway's 'Summer Birds of Flathead Lake' deserves mention here, and Mr. Burns' 'Sectional Bird Census' is a capital piece of field work.

Of original observation presented in popular form and none the less valuable for that,—in fact, more valuable in that it reaches a wider audience—the camera-illustrated books call for first mention, because they convey their information through a graphic medium more impressive and more instructive than written descriptions of the scene or fact figured can possibly be. Mr. Job's 'Among the Water Fowl' is a good book of this class, and Mrs. Wheelock's 'Nestlings of Forest and Marsh' shows how much may be gleaned in old fields. Possessed of both popular and scientific value, as well as beauty of make-up, is Mr. Keyser's 'Birds of the Rockies' which takes the reader to new scenes among birds concerning which there is much yet to learn.

Of educational value is Professor Hodge's 'Nature Study and Life,' with its generous section devoted to birds, and Mr. Lord's 'Birds of Oregon and Washington,' which has been adopted for use in the schools of those states. Both educational and practical is Neltje Blanchan's 'How to Attract the Birds,' with its many hints to those who would have birds about their homes.

In the movement for bird protection much activity of a practical kind has been shown. The American Ornithologists' Union, through Mr. Dutcher and Dr. Palmer, has worked largely from the legal point of view, in enforcing existing laws and securing the enactment of new ones; while the Audubon Societies have continued to develop the educational side of their work, in which everywhere there seems to be great interest.

While, therefore, there have been no especially remarkable developments in 1902, the year has been one of most assuring progress.

Bird-Lore for 1903

With its next issue BIRD-LORE will enter upon its fifth volume. Five years is not usually considered an exceptionally long period in the life of a magazine, but we believe that there have been only five ornithological journals in this country which have lived to see their fifth birthday, while the number of those which have expired in early youth is the despair of the bibliographer! The magazine of ornithology, therefore, which lives to see its fifth year has cause for congratulation, and may well return thanks to those to whom its continued existence is due. We want, however, to express our thanks in some medium more valuable than mere words, and as an earnest of our desire to deserve the support which has been so generously given us, we append an outline of our plans for 1903.

Probably no feature of BIRD-LORE for the coming year will create greater interest than the publication of the portraits of the members of the Advisory Council. Bird men are sometimes almost as interesting as birds, that is, to other bird men familiar with their accomplishments; and we are assured that this photographic symposium will have its practical bearing on the relations between the members of the Council and those who avail themselves of their assistance.

The series of articles on Bird Clubs in America will be continued by the publica-

tion of historical accounts of the Spencer F. Baird Club, by Mrs. Edward Robins, the Nebraska Ornithologists' Union, by Professor Bruner, and the Colorado Ornithological Association, by Dr. Bergtall.

William Brewster, Dr. J. Dwight, Jr., and other well-known ornithologists will write on American birds, Charles Keeler will tell his impressions of some New Zealand birds and A. J. Campbell, of Melbourne, will describe the remarkable nesting habits of the mound-building birds of Australia, illustrating his paper with the first photographs of the mounds of these birds to be published in this country.

'Bird-Life on the Dry Tortugas,' by Dr. Joseph Thompson, U. S. N., who is resident at this stepping-stone of the birds on their journey from Florida to western Cuba, will include data on bird migration as well as notes on the breeding habits of the sea-birds, which come to the islands in immense numbers to breed. The latter portion of Dr. Thompson's paper will be illustrated by photographs made by Dr. A. M. Mayer.

In view of the expected appearance of Dr. Coues' new 'Key to North American Birds,' the manuscript of which was completed before its author's death, an article on the first (1872) edition of this epoch-making work by its publisher, Prof. F. W. Putnam, will be of peculiar interest. With Professor Putnam's paper we will reproduce the proof of the first page of the systematic portion of the 'Key,' with many characteristic annotations by Dr. Coues.

Our plan to publish records of the migration of Warblers has been abandoned, owing to our discovery, since announcing the proposed publication of such data, that Professor W. W. Cooke, of the Biological Survey, has in preparation a bulletin on this subject which will no doubt thoroughly cover the ground.

We expect, however, to publish a series of papers on a study of birds during the nesting season, which we believe will be found to be of practical value.

The Audubon Societies

*"You cannot with a scalpel find the poet's soul,
Nor yet the wild bird's song."*

Edited by MRS. MABEL OSGOOD WRIGHT (President of the Audubon Society of the State of Connecticut), Fairheld, Conn., to whom all communications relating to the work of the Audubon and other Bird Protective Societies should be addressed. Reports, etc., designed for this department should be sent at least one month prior to the date of publication.

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Reports of Societies

Audubon Society of New York State

In reviewing the work of the past eighteen months, since the last annual meeting was held, on March 8, 1901, the New York Audubon Society has cause for much encouragement. We now stand to face any adverse conditions, supported by the strong arm of both state and federal law. The bill securing protection to Gulls and Terns was signed by Governor Odell, March 12, 1901. This was due to the untiring effort of Mr. Dutcher, who in making his final report to our Executive Committee, as a committee on law, said: "All that has been attempted for the betterment of the New York law for bird protection, has been successfully accomplished."

The anti-pigeon shooting bill was a great victory won by the Society for the Prevention of Cruelty to Animals. In behalf of this bill the Audubon Society sent appeals throughout the state urging its support. Appeals urging the passage of the Alaska bill and Forest Reserve bill were also sent out. Through our local secretaries many signatures were obtained and forwarded to our senators at Washington. The Alaska bill became a law on June 7, 1902.

The Society is now better equipped to develop the educational features of the work than ever before. We are much indebted to the thought and energy of Miss Eliza S. Blunt, one of our local secretaries, who raised one hundred dollars to enable the Society to purchase a lantern and set of

seventy-five colored slides of our native birds. A lecture has been compiled from 'Bird-Life' to accompany this outfit, which is entrusted to the care of our local secretaries, who may loan it to responsible persons in adjacent towns. Clergymen, principals of schools and directors of farmers' granges have already been interested. The only expense to be met is the expressage to the next point of destination, as the lantern box is always sent prepaid.

The Society now possesses three sets of colored plates from Mr. Chapman's 'Bird-Life.' These are loaned for work in classes, upon application from our local secretaries. Fifty colored wall charts, issued by the Massachusetts Audubon Society, have been distributed among the local secretaries. These may be loaned to schools, to clubs, to lecturers for special occasions, wherever they will serve to advance the educational work.

The only new leaflet issued is an especially valuable one,—a list of books recommended to the bird-student. This pamphlet was compiled by Mrs. Olive Thorne Miller, and contains notes describing the contents of each work mentioned, to guide the purchaser. Altogether, over 17,340 leaflets and law posters have been distributed since the last report, March, 1901.

Ten meetings of the Executive Committee have been held, with Mr. Chapman as chairman.

In November, 1901, the New York Society had the pleasure of welcoming delegates from eleven other Audubon Societies to the second Audubon Conference, held in the American Museum of Natural History. The result of this conference was the formation of a National Committee of Audubon Societies, of which our own delegate to this committee, Mr. Dutcher, has been the able chairman for the past year. This National Committee is particularly valuable in securing prompt concerted action in any matter of national import. It is a pillar of strength to the cause of bird protection.

Eleven new local secretaries have been added to our list, making the present number sixty-eight. The fidelity of these local

secretaries cannot be too highly commended. They are watching conditions in all parts of the state, and sowing the educational seed in communities utterly callous to the cause of bird protection; they are forming bands of little converts, keeping them interested in the work by 'Bird Talks,' organizing classes and taking them out to the woods and fields; all of this often at much personal sacrifice of time, as many of them are teachers, or in other busy walks of life.

With the coöperation of the American Museum of Natural History, the Linnæan Society and the Audubon Society, last spring, Saturday afternoon talks were given to teachers at the Museum. The class was held for eight consecutive weeks, and was enjoyed by an audience of one hundred and seventy-five or two hundred teachers.

The present total membership of the Society is now 3,418, and this constant expansion of the influence of the Society must go hand in hand with increase of income. The chief means of support comes from the annual dues of the sustaining members. I would most earnestly urge all members and friends of the Society to use the utmost possible effort to increase this class of membership. Much has been gained. If our work is now to be put to the test, we must not fail for lack of funds. The New York Audubon Society must appeal to each loyal member to manifest in its service courage, constant effort and an abiding sense of personal, individual responsibility for the welfare of the bird.

EMMA H. LOCKWOOD, *Secretary*.

Third Annual Conference of Audubon Societies

The Third Conference of Audubon Societies, held in Washington, D. C., November 19 and 20, 1902, was a marked success. Through the efforts of the District of Columbia Society an excellent program was prepared. The proceedings of the conference were, consequently, well directed and attended by definite results.

A public session of the societies for the consideration of papers on educational methods in Audubon work was held in

the Columbian University at 8.15 P. M. November 19, Surgeon-General Sternberg, president of the local society, presiding. The following papers were presented:

1. Introductory Remarks, Dr. T. S. Palmer; 2. Ornithology in the Schools, Mrs. Olive Thorne Miller; 3. Traveling Libraries, Miss Hilda Justice; 4. Traveling Libraries and Lectures, Mr. O. B. Zimmerman; 5. Publications, Miss Harriet E. Richards; 6. Free Lectures—Free Bird Charts—Free Circulating Libraries, Mrs. Mabel Osgood Wright.

During the discussion which followed the presentation of these papers, Prof. T. Gilbert Pearson, secretary of the North Carolina society, in an eloquent address, spoke of the importance of scientific accuracy in the reasons for bird-protection presented to the public, but, once assured of the correctness of their claims as to the value of birds, he urged the societies to repeat them with a force and insistence which should win them the recognition they deserved.

At 10 A. M. the following day there was a joint meeting of the Audubon societies and the American Ornithologists' Union to listen to the reports on bird protection of William Dutcher, chairman of the Union's committee on bird protection, and of Dr. T. S. Palmer, in charge of the enforcement of the Federal law for bird protection.

At 8 o'clock the evening of the same day the meeting of delegates to the national committee of the Audubon societies was held at the residence of Mrs. J. D. Patten, secretary of the District of Columbia society. Fifteen societies were represented, as follows:

Delaware, Mrs. R. L. Holliday; District of Columbia, Dr. T. S. Palmer; Florida, Mr. R. W. Williams, Jr.; Illinois, Mr. Ruthven Deane; Massachusetts, Miss Harriet E. Richards; Minnesota, Dr. Thomas S. Roberts; New York, Mr. William Dutcher; North Carolina, Prof. T. Gilbert Pearson; Ohio, Miss A. L. Hall; Oregon, Wm. R. Lord; Pennsylvania, Mr. Witmer Stone; Vermont, Mrs. E. B. Davenport; Virginia, Mrs. J. C. Plant; Wisconsin, Mrs. Robert K. Shaw; Wyoming, Mr. Frank Bond. Delegate by election, representing BIRD-LORE, Frank M. Chapman.

Mr. Dutcher, who was reelected chairman of the committee, in reporting on the activities of the past year, stated that, in addition to giving a large share of his time to bird-protective work, he had personally expended in clerk hire the sum of \$700; and, while he was willing to give one-half his time to the duties of chairman of the committee, he did not feel that he could longer defray the expenses incident to their proper performance. He, therefore, asked the societies to contribute the \$700 required for clerical labor during the ensuing year.

The sum of \$400 was at once subscribed by several of the delegates present and, on motion, it was resolved that each delegate report the matter to his society, and that the action of each society be, in turn, reported to the chairman of the National Committee.

In view of the great importance of Mr. Dutcher's work, which reaches a field untouched by the state societies, and which, at the same time, is of much assistance to every society, it is earnestly to be hoped that the sum he needs for clerical help will be forthcoming. Unquestionably, the amount required could not be expended more profitably.

On motion, it was decided that during the coming year the National Committee's efforts to secure the passage of bird protective laws be restricted to the states of Virginia, North Carolina, Tennessee, Missouri, California, Oregon and Washington.

On motion, a committee composed of the chairman, Frank M. Chapman, T. S. Palmer and Witmer Stone was appointed to make an especial examination of the sample stock of wholesale millinery dealers before these dealers had placed their orders for their fall supplies, with the object of calling their attention to the feathers which could not be legally sold in this country.

The question of coöperative publishing, through the National Committee, was discussed, as was also the possibility of establishing with the chairman of the National Committee a bureau for the exchange of lantern-slides, both projects appearing to be feasible.

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