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, 1901, by C. D. Kellogg. (Plate exposed from 10.30 P. M. to 11.30 P. M.)

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Vol. IV JANUARY — FEBRUARY, 1902 No. 1

Recollections of Elliott Coues

Coues as 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 shotgun 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 wingèd 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."

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

H. M. Spelman Owen Durfee N. A. Francis G. C. Deane A. C. Bent R. H. Howe, Jr.

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 ths 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 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.

How to Name the Birds

STUDIES OF THE FAMILIES OF PASSERES

BY FRANK M. CHAPMAN

SECOND PAPER

FAMILY 4. STARLINGS. *Sturnidæ*. 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 *Sturnidæ*
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 *Alaudidæ*
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. *Alaudidæ*. 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 *Corvidæ*

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, *hoppers*. 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; Ce larbird, 1. Total, 11 species, about 84 individuals.—ANNA E. COBB.

GLOCESTER 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, 20; 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. Stoky.

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; Phœbe*, 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 Phœbe 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 1½ inches in length by 1¼ 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 Carribean Sea, and the Galapagos Archipelago. By ROBERT RIDGWAY. Part I. Family Fringillidæ—The Finches. Bull. U. S. Nat. Mus., No. 50, Washington: Government Printing Office, 1901. 8vo. Pages xxxi + 715; plls. 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 Fringillidæ 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 genus 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. Trostler; 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 Quadrupeds 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 halftones 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
Published by THE MACMILLAN COMPANY

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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 51)
One-half natural size.

Bird-Lore

A BI-MONTHLY MAGAZINE
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 *ŏ-ka-lĕe*. 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.

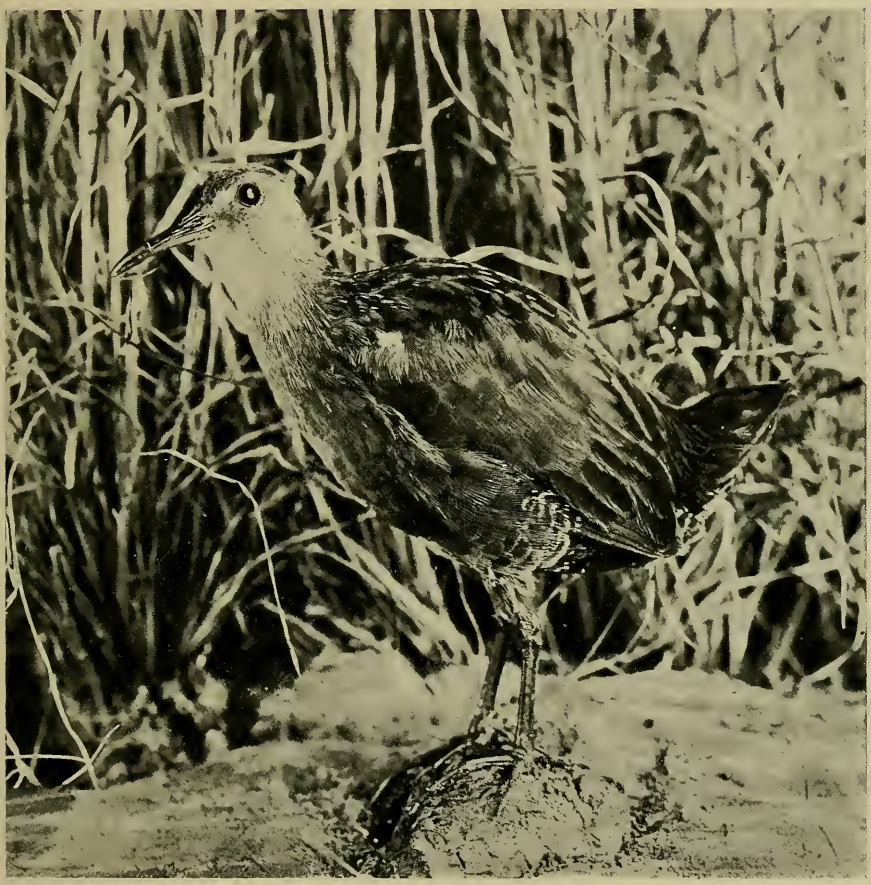
Unlike the Snipe, which pass further north to breed, the Bittern is a summer resident of our marshes. He sometimes arrives in March, but his presence is likely to be overlooked until about the middle of April, when he begins to make it evident to the dullest ears by his stentorian voice—louder and, perhaps, 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 *pùmp-er-lùnk* 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 *haink* 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 it 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 *oc-oc-oc-oc-oc* 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 *èr-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 developes 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-eep* 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 Yellow-throat 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, shee-shee-shee*, the first two given distinctly and emphatically, the remaining three rapidly and in a low, somewhat hissing tone.

LONG-BILLED MARSH WREN
(One-half natural size)

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 *keé-ar-r, kreé-ar-r*. They have other calls so numerous, complex and variable that is 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; kh-kh-kh-kh-kea-kea*, delivered rapidly and falling in pitch towards the

SHORT-BILLED MARSH WREN
(One-half natural size)

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: *cŏo*, *hoo-hoo-hŏo* (the first and last syllables slightly and about evenly accented), *coo-coo*, *coo-hoo-hŏo* (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 Yellow-throats 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, quèeah,
Kik-kik-kik, ki-quèeah.
Kik-ki-ki-ki, ki-quèeah.
Kĭc-kic, kĭc-kic, kĭc-kic, kĭc-kic, ki-quèeah.

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 *quèeah* or *ki-quèeah* 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 *umph*, *umph*, *umph*, *umph*, 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 *keks*,

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 daybreak 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.

Photographed by H. Parker Rolfe, January, 1898

THE DELAWARE VALLEY ORNITHOLOGICAL CLUB

1. H. W. Fowler
2. J. B. Hutchinson
3. W. L. Whitaker
4. A. M. Githens
6. F. G. Meyers
7. A. C. Emlen
8. W. J Serrill
9. E. Sheppard
11. F. R. Cope, Jr.
12. J. W. Evans
13. F. Clark
14. J. W. Tatum
16. S. M. Freeman
17. C. J. Pennock
18. H. Fox
19. S. Wright
21. C. F. Seiss
22. A. P. Fellows
23. S. N. Rhoads
24. G. S. Morris
25. C. A. Voelker
26. Spencer Trotter
27. I. N. DeHaven
28. Witmer Stone
29. W. L. Baily
30. J. Harris Reed
31. W. A. Shryock
32. D. N. McCadden

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 zoölogical 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 7¼ 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

BLACKBIRDS, ORIOLES, ETC. (One-third natural size)

1. Cowbird. 2. Orchard Oriole. 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.) *Fringillidæ*

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 Grosbeaks
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 Anatidæ 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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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 seeding 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 compositæ, 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, if 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 spireas and weigelias 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 arborvitæ, 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 house 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 shutters 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 CHESTNUT-SIDED WARBLER

From nature, by A. Radclyffe Dugmore

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

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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 o 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 predaceious 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, 6½ 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 Holbœlls' 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 Holbœll'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 Holbœll'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.

SWALLOWS. Family *Hirundinidæ*. (One-third natural size)

Family 8. Swallows. *Hirundinidæ*.

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

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 aud 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. *Ampelidæ.*

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. *Laniidæ.*

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 *Ampelidæ*
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 *Laniidæ*
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."

Whew! cried a Veery perched in view
To hear if what they said were true. *Whew!!*

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, *Whew!*
I hardly think that story true. *Whew!!!*

—FLORENCE A. VAN SANT.

Notes from Field and Study

A Home in a Cellar

The Phœbe 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 befell 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 Phœbe, 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-eze* 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-swee-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, an 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. SILLOWAY. Prepared at the University of Montana Biological Station, 1901. 8vo., pp. 83; pll. 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 whitneyi*) 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

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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.

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 Catbirds, 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

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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 various 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 efficency 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 to 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 'bend of the wing.' Photographed from life, by E. F. Keller.

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

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 nonchalent 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 drabbled 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.

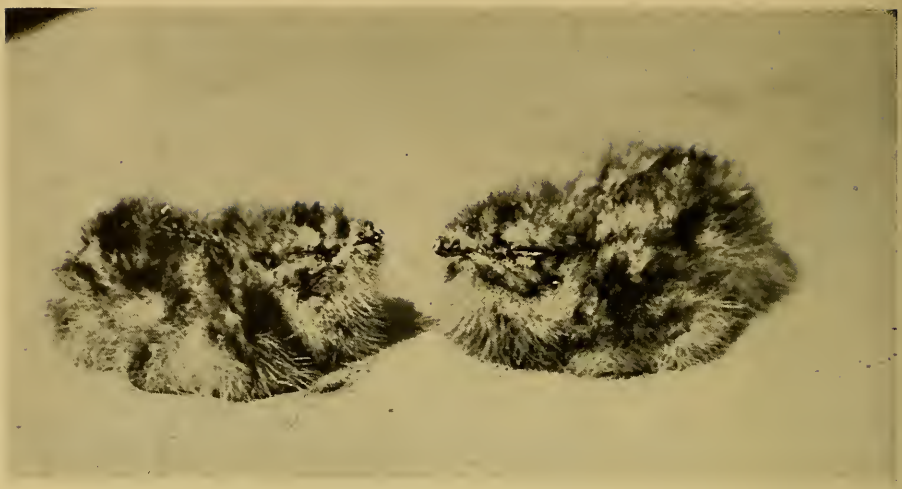
We had worked for an hour or more and had taken five time-exposures and one snap-shot, yet we left the bird at home when we went away. "What a devoted mother!" you say, but it was really the father, whose habit it is to sleep on the nest after his night's outing. Meantime the mother was flying about 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 hintings, 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 throught 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 11. VIREOS. *Vireonidæ.*

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.

VIREOS. Family *Vireonidæ*. (One-third natural size)

Yellow-throated Vireo

Red-eyed Vireo

Blue-headed Vireo

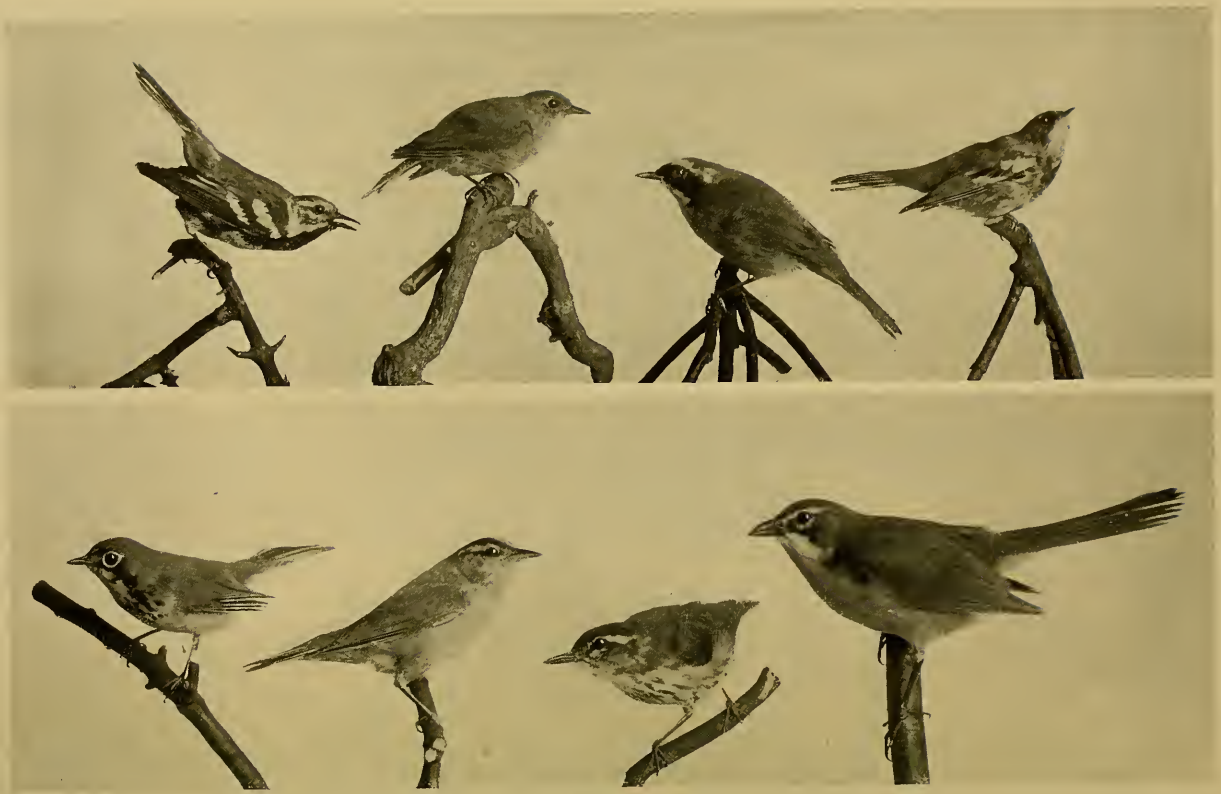
Warbling Vireo

FAMILY 12. WARBLERS. *Mniotiltidæ*.

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



WARBLERS. Family *Mniotiltidæ*. (One-third natural size)

Black-throated Green Warbler — Nashville Warbler — Maryland Yellow-throat — Parula Warbler

Canadian Flycatcher — Worm-eating Warbler — Louisiana Water-Thrush — Yellow-breasted Chat

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 flutterers—the feathered embodiment of perpetual motion.

Song.—With some marked exceptions, notably in the genera *Geothlypis* and *Seiurus*, 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. *Motacilidæ.*

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 *Motacillidæ*
(One-third natural size)

Appearance and Habits.—The *Motacillidæ* 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 in. Above grayish brown, wings and tail darker; below 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 screaking.

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

pines. 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 WHEELOCK. 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 (*Ammodromus savanarum 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 phæa*, 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.—T. 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 outfit 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
Published by THE MACMILLAN COMPANY

Vol. IV Published August 1, 1902 No. 4

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 interpretated. This code is based on two fundamental principles, priority and preoccupation. That is, beginning with Linnæus 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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Wisconsin.....MRS. REUBEN G. THWAITS, 260 Langdon street, Madison.
Minnesota.....MISS SARAH L. PUTNAM, 125 Inglehart street, St. Paul.
Wyoming.....MRS. N. R. DAVIS, Cheyenne.
Kentucky.....INGRAM CROCKETT, Henderson.
Tennessee.....MRS. C. C. CONNER, Ripley.
California.....MRS. GEORGE S. GAY, Redlands.

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 papers 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 T. 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 550 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 deplores 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, Whitewater, Hillside, Medford, Hartford, Lake Forest, Kenosha, and Prescott.

5. Securing the passage by the state legislature of 1901, 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

Photographed from nature, by A. L. Princehorn, Glen Island, N. Y., May 11, 1902

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. IV SEPTEMBER — OCTOBER, 1902 No. 5

The Destructive Effects of a Hail-storm Upon Bird Life

BY H. McI. 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 play-ground 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 immuned 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 evolutional 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

Photographed from nature, by C. G. Aobbtt

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.

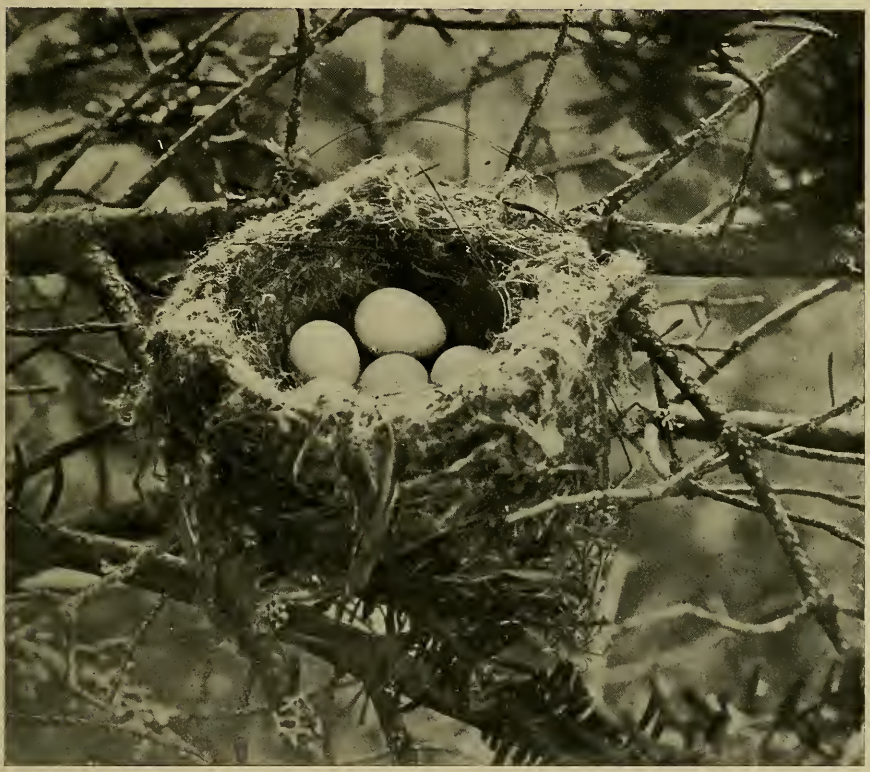
"August 11. The male Goldfinch feeds his mate on the nest. Flies to her with a jubilant twitter, his mouth full of seeds. She eagerly takes from him from twelve to twenty morsels. They always meet and part with a song. Once the brooding mate grew impatient, flew to the next tree to meet her provider, 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 mealtime 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.

	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
Holbœll'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,	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

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
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	Midd'sex Fells	June 8, '01	Groton	Apr. 24,	Concord	Apr. 19, '02
Virginia Rail	Cambri'ge*	May 26, '01			Cambridge*	May 15, '02
Sora	Cambri'ge*	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 Sandpi'r	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	Cambri'ge*	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
Phœbe	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

* Heard

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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	Mar. 13,	Medford	Mar. 22, '02
Towhee	Midd'sex Fells	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-wi'ed Warbler	Belmont*	May 22, '01			Medford	May 9, '02

* Heard

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	Locality	Date	Locality	Date	Locality	Date
Nashville Warbler	Lexington	May 23, '01	Groton	May 13,	Medford	May 7, '02
Northern Parula Warbler	Cambri'ge*	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 Warb'r	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

* Heard

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. *Troglodytidæ.*

Range.—The Wrens (subfamily *Troglodytinæ*) 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 *Miminæ*) 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 *Miminæ*, 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 *Troglodytidæ*. (One-third natural size)

Catbird Carolina Wren House Wren Brown Thrasher

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. *Certhiidæ.*

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.

BROWN CREEPER. Family *Certhiidæ*
(One-third natural size)

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.

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.

White-breasted Nuthatch

TITMICE AND NUTHATCHES. Family *Paridæ*. (One-third natural size)

Red-breasted Nuthatch

Chickadee

Tufted Titmouse

Song. — The Brown Creeper's usual note during the winter is a faint *seep*. 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.

Family 16. Titmice and Nuthatches. *Paridæ.*

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 coöperation 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 form 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 overcritical, 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. Ganier; 'Northern Parula Warbler,' by J. M. Swain; and 'The Porto Rican Pewee,' by B. S. Bowdish, 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 Gorgonio 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 Nutcracker 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 gravirostris*) is separated 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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A Bi-monthly Magazine
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 Mocking-bird 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 Cow-bird! 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 estray, 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 zoölogists 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-LORE 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-

tire 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 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 Könemann, 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 Foreign 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, Pewits, Martins, Fern Owls, Nightingales, Redstarts, Robin Redbreasts, White Bustards, Larks of all kinds, Wrens, Tomtits, 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

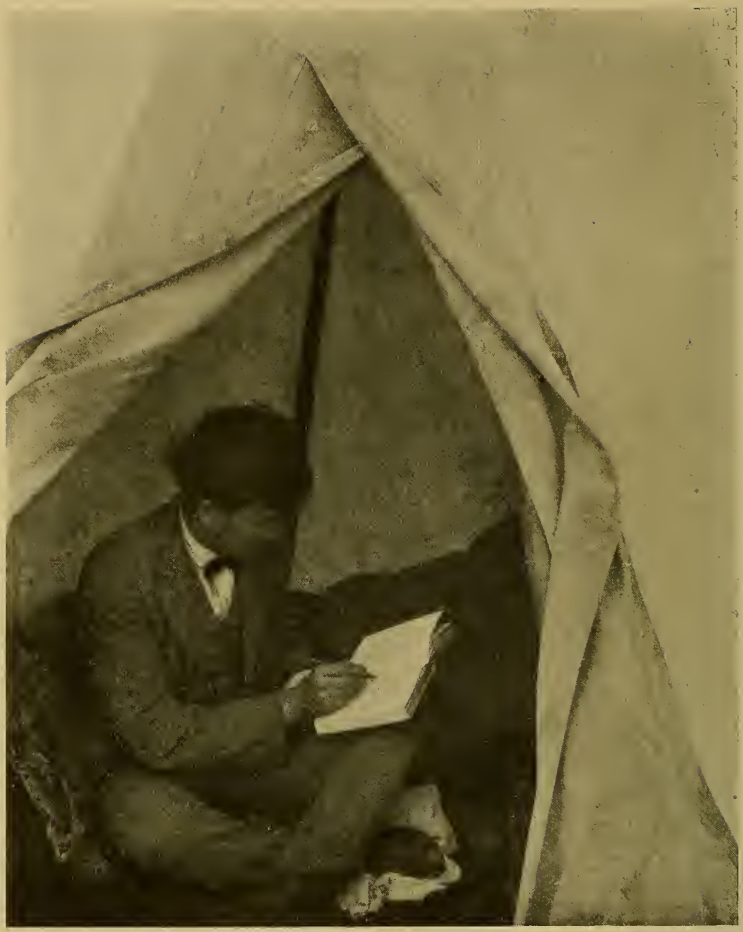
Now that Florida has an Audubon Society and has passed the A. O. U. model bird-law, there is no state in the south which needs the attention of bird protectionists more than Louisiana. We learn, therefore, with more than usual pleasure that a Louisiana Audubon Society is about to be organized in New 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. Man.
1901

Bird-Lore

A BI-MONTHLY MAGAZINE
DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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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, untooled 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 (*Phœnicopterus 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, 1881, p. 173; 1883, p. 397.

†Nineteenth Century, 1887, p. 886.

NESTS OF FLAMINGOES

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

LIKE 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 Extemity, 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.

FIG. 2. Spur of the Spur-winged Plover

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 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

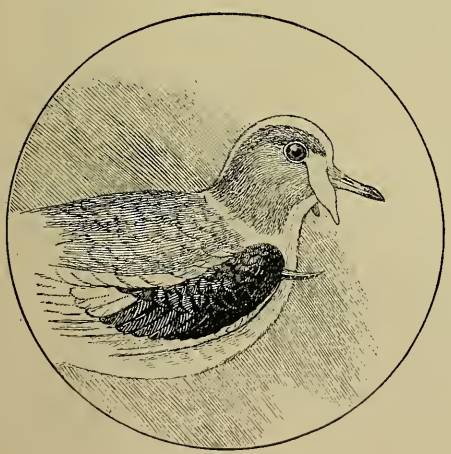


FIG. 3. The Wattled Plover

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.

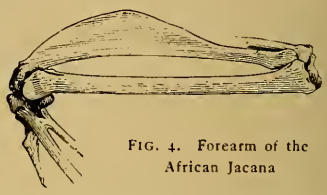


FIG. 4. Forearm of the African Jacana

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.

FIG. 5. Part of the wing of the Spur-winged Goose

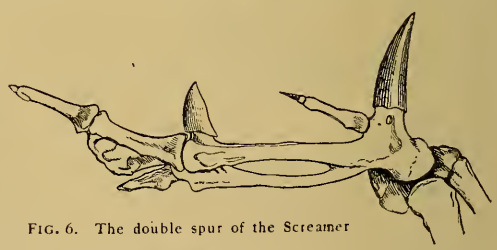


FIG. 6. The double spur of the Screamer

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.

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 E. 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 *Sylviidæ*

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 *Sylviinæ*, or Old World Warblers, numbering about one hundred species, only one of which reaches this country (the Willow Warbler, in western Alaska); the *Regulinæ*, or Kinglets, with seven species, three of which are American, and the *Polioptilinæ*, 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 *Sylviidæ*. (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 Gnatcatchers 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*.

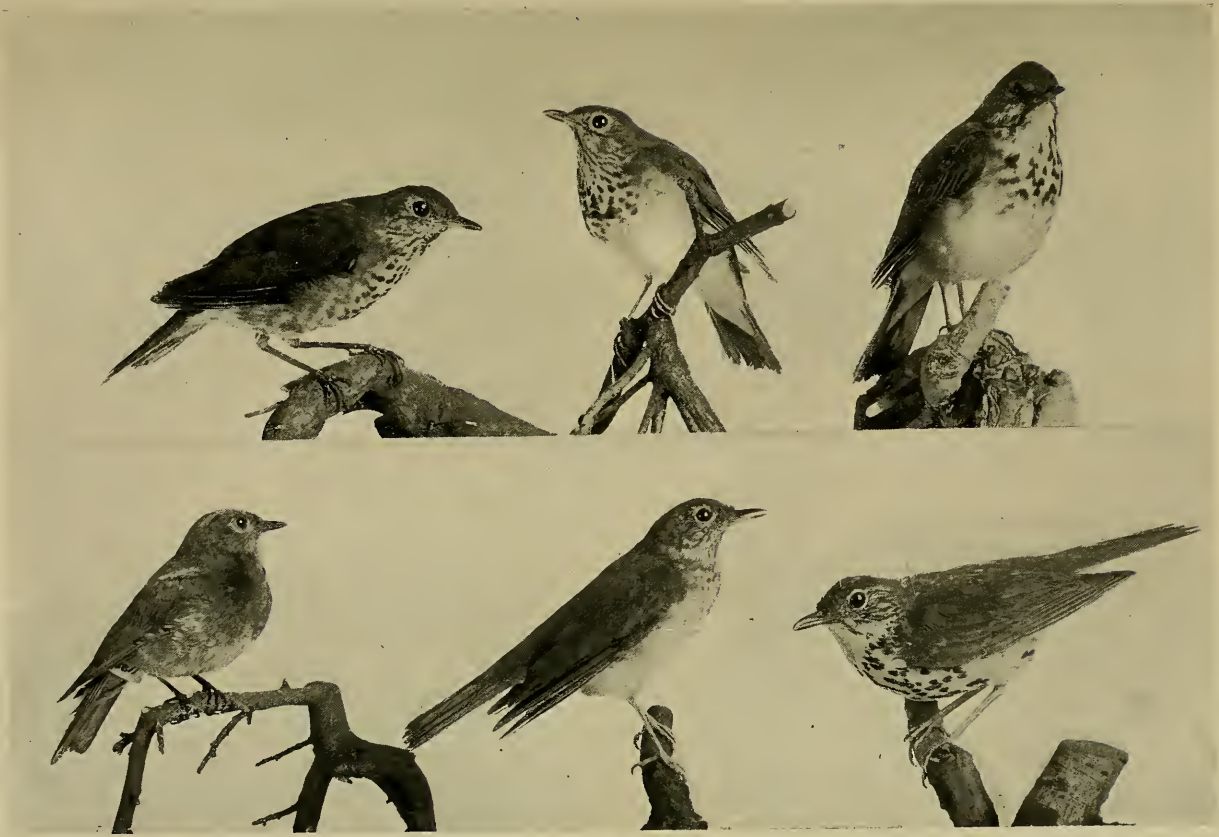
Range.—Few ornithologists agree as to what birds shall be included in the family Turdidæ. Its composition will doubtless always be a matter of opinion; and in cases of this kind it is of far more importance to adopt some uniform plan of treatment and stick to it, than to follow every author who thinks 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 *Turdidæ*. (One-third natural size)

Gray-cheeked Thrush
Bluebird

Olive-backed Thrush
Wilson's Thrush

Hermit Thrush
Wood Thrush

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?

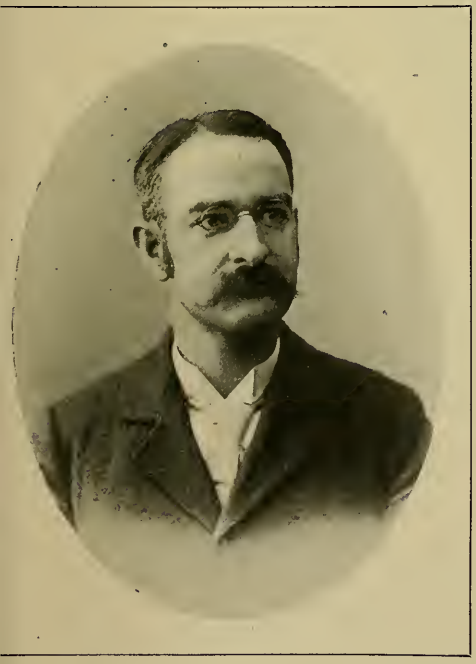
4. What bird is known to nest in only three places in North America?

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, class-room 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; in life 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. Batchelder; 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, Tring, 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, Pimà, and Gila Countries, 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 HORSFALL, 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. Zoöl., 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. T. Price, $1. 12mo. 146 pages; 1 plate.

Readers of Bird-Lore 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. Bowdish, 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 209 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 E. 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 coöperate 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. (*Ægialitis meloda.*) Jonathan Dwight, Jr.

Nesting of the Red-bellied Woodpecker in Harford County, Maryland. Wm. H. Fisher.

Some Food Habits of West Indian Birds. B. S. Bowdish.

The Significance of Trinomials in Nomenclature. Witmer Stone.

An Epidemic of Roup in the Canandaigua Crow Roost. Elon Howard Eaton.

Bird-Lore

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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 pleasure 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 publication 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. Bergtald.

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), 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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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 reëlected 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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FRANK M. CHAPMAN

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Subscribers whose subscription expires with the present issue will find a properly dated renewal blank in their magazine. In the event of a desire not to renew, the publishers would greatly appreciate a postal to that effect.

☞**To subscribers whose subscription expired with the issue for December, 1901,** and who have as yet neither renewed their subscription nor, in response to our request, sent us a notice to discontinue their magazine, the present number is sent in the belief that the matter of renewal has been overlooked. We trust it will now receive prompt attention.

Complete sets of Volumes I, II and III of 'Bird-Lore' can still be supplied.

Volume I contains 206 pages, with 79 illustrations; Volume II, 204 pages, with 80 illustrations; Volume III, 228 pages, with 92 illustrations, or a total of 638 pages (equivalent to about 1,200 pages of the average 12mo book), and 251 illustrations.

Every number of 'Bird-Lore' is as readable and valuable today as when it was issued, and no bird-lover who is not already supplied can find a better investment than back volumes of this magazine. Vols. I and III are offered at the subscription price of $1 each, postpaid; the price of Vol. II is $2.

PUBLISHERS' ANNOUNCEMENT

BIRD-LORE for April will contain 'The Bird Voices of New England Swamps and Marshes' (illustrated), by William Brewster; 'The Weapons of Birds' (illustrated), by F. A. Lucas; 'The Delaware Valley Ornithological Club,' by S. N. Rhoads, and the third part of 'How to Name the Birds,' by Frank M. Chapman.

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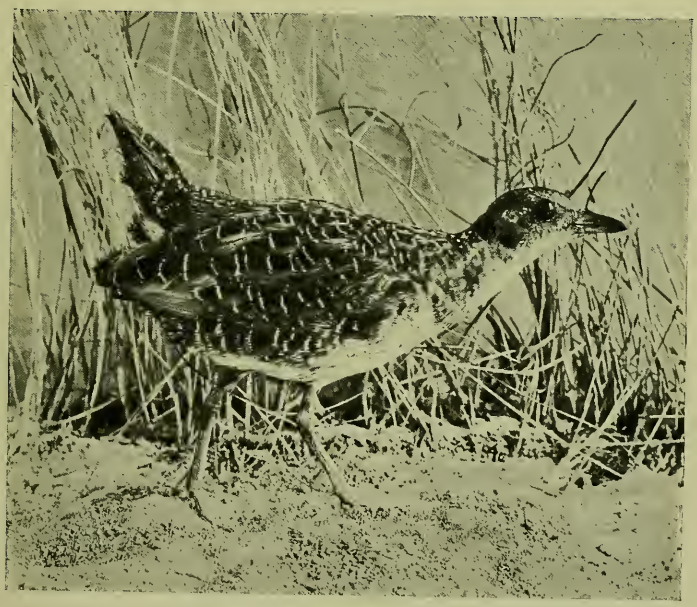

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FRANK M. CHAPMAN

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SPECIAL NOTICE.

BIRD-LORE'S Bird Chart, described elsewhere, will be sent to all subscribers renewing their subscriptions, and its receipt should be considered a notice that due entry of renewal has been made. Subscribers whose subscription does not expire with this issue may have the Chart at once by renewing now, when their subscription will be extended one year from the date of its expiration.

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