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Bird-Lore

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

EDITED BY

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Official Organ of the Audubon Societies

AUDUBON DEPARTMENT EDITED BY

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JOHN BURROUGHS AT 'SLAB SIDES'

Flashlight photograph, by F. M. Chapman, October, 1896

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A BI-MONTHLY MAGAZINE
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Vol. 1 FEBRUARY, 1899 No. 1

In Warbler Time

BY JOHN BURROUGHS

THIS morning, May 5, as I walked through the fields the west wind brought to me a sweet, fresh odor, like that of fragrant violets, precisely like that of our little white sweet violet (*Viola blanda*). I do not know what it came from,—probably from sugar maples, just shaking out their fringe-like blossoms,—but it was the first breath of May, and very welcome. April has her odors, too, very delicate and suggestive, but seldom is the wind perfumed with the breath of actual bloom before May. I said it is Warbler time; the first arrivals of the pretty little migrants should be noted now. Hardly had my thought defined itself when before me, in a little hemlock, I caught the flash of a blue, white-barred wing; then glimpses of a yellow breast and a yellow crown. I approached cautiously, and in a moment more had a full view of one of our rarer Warblers, the Blue-winged Yellow Warbler. Very pretty he was, too, the yellow cap, the yellow breast, and the black streak through the eye being conspicuous features. He would not stand to be looked at long, but soon disappeared in a near-by tree.

The Ruby-crowned Kinglet was piping in an evergreen tree near by, but him I had been hearing for several days. The Kinglets come before the first Warblers, and may be known to the attentive eye by their quick, nervous movements, and small greenish forms, and to the discerning ear by their hurried, musical, piping strains. How soft, how rapid, how joyous and lyrical their songs are! Very few country people, I imagine, either see them or hear them. The powers of observation of country people are not fine enough and trained enough. They see and hear coarsely. An object must be big and a sound loud, to attract their attention. Have you seen and heard the Kinglet? If not, the finer inner world of nature is

a sealed book to you. When your senses take in the Kinglet they will take in a thousand other objects that now escape you.

My first Warbler in the spring is usually the Yellow Redpoll, which I see in April. It is not a bird of the trees and woods, but of low bushes in the open, often alighting upon the ground in quest of food. I sometimes see it on the lawn. The last one I saw was one April day, when I went over to the creek to see if the suckers were yet running up. The bird was flitting amid the low bushes, now and then dropping down to the gravelly bank of the stream. Its chestnut crown and yellow under parts were noticeable.

The past season I saw for the first time the Golden-winged Warbler—a shy bird, that eluded me a long time in an old clearing that had grown up with low bushes. The song first attracted my attention, it is so like in form to that of the Black-throated Green Back, but in quality so inferior. The first distant glimpse of the bird, too, suggested the Green Back, so for a time I deceived myself with the notion that it was the Green Back with some defect in its vocal organs. A day or two later I heard two of them, and then concluded my inference was a hasty one.

Following one of the birds, I caught sight of its yellow crown, which is much more conspicuous than its yellow wing-bars. Its song is like this, *'n-'n de de de*, with a peculiar reedy quality, but not at all musical, falling far short of the clear, sweet, lyrical song of the Green Back.

One appreciates how bright and gay the plumage of many of our Warblers is, when he sees one of them alight upon the ground. While passing along a wood road in June, a male Black-throated Green came down out of the hemlocks and sat for a moment on the ground before me. How out of place he looked, like a bit of ribbon or millinery just dropped there! The throat of this Warbler always suggests the finest black velvet. Not long after I saw the Chestnut-sided Warbler do the same thing. We were trying to make it out in a tree by the roadside, when it dropped down quickly to the ground in pursuit of an insect, and sat a moment upon the brown surface, giving us a vivid sense of its bright new plumage.

When the leaves of the trees are just unfolding, or, as Tennyson says, "When all the woods stand in a mist of green, and nothing perfect," the tide of migrating Warblers is at its height. They come in the night, and in the morning the trees are alive with them. The apple trees are just showing the pink, and how closely the birds inspect them in their eager quest for insect food! One cold, rainy day at this season Wilson's Black-cap,—a bird that is said to go north nearly to the arctic circle,—explored an apple tree

in front of my window. It came down within two feet of my face, as I stood by the pane, and paused a moment in its hurry and peered in at me, giving me an admirable view of its form and markings. It was wet and hungry, and it had a long journey before it. What a small body to cover such a distance!

The Black-poll Warbler, which one may see about the same time, is a much larger bird and of slower movement, and is colored much like the Black and White Creeping Warbler with a black cap on its head. The song of this bird is the finest, the least in volume, and most insect-like of that of any Warbler known to me. It is the song of the Black and White Creeper reduced, high and swelling in the middle and low and faint at its beginning and ending. When one has learned to note and discriminate the Warblers, he has made a good beginning in his or her ornithological studies.

John Burroughs at 'Slab Sides'

SOME years ago a favor to a neighbor resulted in Mr. Burroughs acquiring possession of a small 'muck swamp' situated in a valley in the hills, a mile or more west of his home at West Park, on the Hudson. To Mr. Burroughs, the agriculturist, this apparently worthless bit of ground promised a rich return after it had yielded to successive attacks of brush-knife, grubbing-hook, plough, and spade. To Burroughs, the literary naturalist and nature-lover, this secluded hollow in the woods offered a retreat to which he could retire when his eyes wearied of the view of nature tamed and trimmed, from his study on the bank of the Hudson.

In the spring of 1895 the muck swamp was a seemingly hopeless tangle of brush and bogs, without sign of human habitation. One year later its black bed was lined with long rows of luxuriant celery, while from a low point at one end of the swamp had arisen a rustic cabin fitting the scene so harmoniously that one had to look twice to see it.

This is 'Slab Sides,' a dwelling of Mr. Burroughs' own planning, and, in part, construction, its outer covering of rough sawn slabs, which still retain their bark, being the origin of its name. In a future number we hope to present a photograph of the exterior of Slab Sides, with an account of the birds its owner finds about it. Part of its interior is well shown by our photograph of Mr. Burroughs seated before the fireplace, in which, as head mason and stone-cutter, he takes a justifiable pride. Here, from April to November, Mr. Burroughs makes his home, and here his most sympathetic readers may imagine him amid surroundings which are in keeping with the character of his writings.

The Camera as an Aid in the Study of Birds

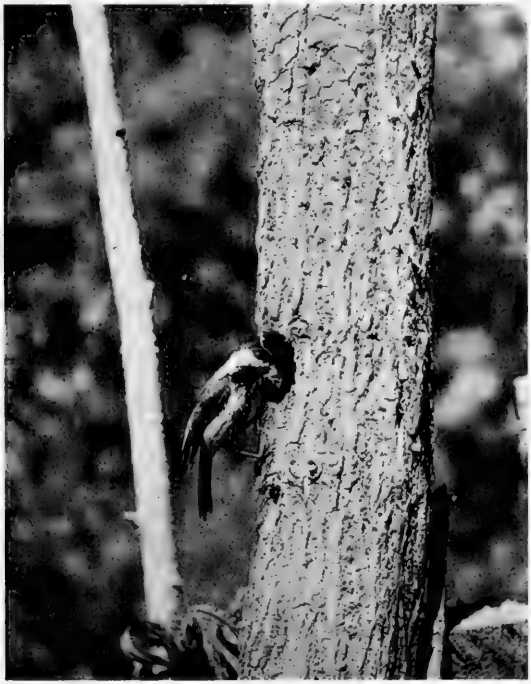
BY DR. THOS. S. ROBERTS

Director, Department of Birds, Natural History Survey of Minnesota.
With photographs from Nature, by the Author.

ANYONE having an earnest interest in both natural history and photography can find no more delightful and profitable way of spending leisure hours than by prying into the secrets of Dame Nature with an instrument capable of furnishing such complete and truthful information as the camera. Delightful and fascinating, because it not only gives worthy purpose and charming zest to all outing trips, but yields results that tell in no uncertain way of things and incidents that it would be well nigh impossible to preserve in any other manner. There is no department of nature-study in which the camera cannot be turned to excellent account, and while records of lasting and scientific value are being made, the devotee of amateur photography has at the same time full scope for the study of his art. What may, perhaps, be considered the greatest value, albeit an unrecognized one, of the present widespread camera craze, is the development of a love for the beautiful and artistic which may result, and along the line of study here suggested may surely be found abundant material to stimulate in the highest degree these qualities. Too much time is spent and too much effort expended by the average 'kodaker' in what has been aptly termed "reminiscent photography," the results being of but momentary interest and of no particular value to anybody.

In the present and subsequent articles, it is intended to illustrate by pictures actually taken in the field by the veriest tyro in the art of photography, what may be accomplished by any properly equipped amateur in the way of securing portraits of our native birds in their wild state and amid their natural surroundings. Supplemental to such portraits are the more easily taken photographs of the nests, eggs, young, and natural haunts of each species; the whole graphically depicting the most interesting epoch in the life-history of any bird. Words alone fail to tell the story so clearly, so beautifully, and so forcibly. And, best of all, this can be accomplished without carrying bloodshed and destruction into the ranks of our friends the birds; for we all love to call the birds our friends, yet some of us are not, I fear, always quite friendly in our dealings with them. To take their pictures and pictures of their homes is a peaceful and harmless sort of invasion of their domains, and the results in most cases are as satisfactory and far-

reaching as to bring home as trophies lifeless bodies and despoiled habitations, to be stowed away in cabinets where dust and insects and failing interest soon put an end to their usefulness. It is not intended, of course, to reflect in any way upon the establishment of orderly and well-directed collections, for such are absolutely necessary to the very existence of the science of ornithology. To such collections the great body of amateur bird students should turn



CHICKADEE AT NEST-HOLE, WITH FOOD FOR YOUNG

for the close examinations necessary to familiarize themselves with the principles of classification and the distinctions between closely related species. Indeed, it is impossible for anyone to be intelligently informed as to the many varieties of birds, and their wonderful seasonal changes of plumage, without having actually handled specimens.

The growth of avian photography has been of short duration,—only a few years in this country and not much longer in England, where it seems to have had its inception. But there are already one or two good books dealing with the subject; and a goodly number of ornithological works of recent date, and especially the pages of the journal literature of the day, bear excellent testimony to the

merit and beauty of this method of securing bird pictures. Attention, however, has thus far been directed chiefly to obtaining illustrations of nests and eggs and captive birds, to the neglect of the more difficult but more interesting occupation of securing photographs of live birds in their wild state. Herein lies the chief fascination of this branch of photography, for good photographs from life of any of our birds, even the most common, are still novelties.

The successful bird photographer must possess a good camera, including a first-class lens, with at least an elementary knowledge of how to get the best results from it; some acquaintance with field and forest and their feathered inhabitants, and a fund of patience, perseverance, and determination to conquer that is absolutely inexhaustible. No matter how well equipped in other respects, this latter requisite cannot be dispensed with. As to the technique and many details of the art of photography, the writer is still too much of a novice to speak very intelligently. Suffice it to say, that the general principles governing other branches of photography are to be consulted here. One great difficulty to be encountered is that there is little opportunity to arrange the lighting or background of the object to be photographed, and as the latter is apt to be either green foliage or the dull ground, with the camera very near the object, the beginner will be much perplexed to determine the proper stop and the right time of exposure. With the usual appliances a wide open stop will be found necessary with the rapid exposure required, and this will detract in a disappointing manner from the beauty of the negative as a whole. But every determined student will try in his or her own way to lessen these defects, and will find in failure only increased incentive to discover better methods and better appliances. Cameras and lenses especially devised for this kind of work are promised in the near future. A rapid telephoto lens is a great desideratum, and there is reason to believe that in the near future such an one will be available. Those to be had at present increase the time of exposure too much to be generally useful in bird work. The writer has used a 4x5 long-focus 'Premo' with Bausch and Lomb Rapid Rectilinear lens (Zeiss-Anastigmat, Series II-A, 4¼ x 6½), the focal length of the combination being about 6¼ inches. Many kinds of plates have been used, but any good rapid plate will do. For those who are willing to take the additional care necessary to handle them successfully, rapid isochromatic or orthochromatic plates are undoubtedly to be preferred, as they preserve quite clearly the color values.

A consideration of the actual field difficulties, rather than the more purely photographic problems to be encountered, is more within the scope of the present paper. To this end a rather detailed account is given of just how each of the following groups of photographs was secured, hoping that others better equipped, with a better knowledge of photography, and with more leisure, may be encouraged to go and do likewise and present us with the results.

One of the greatest of these field difficulties is that the camera is rarely focused upon the bird to be taken, but is either snapped at random or focused upon some spot to which the bird is expected to return. The latter, in the great majority of cases, is the nest; at other times a much-used perching-place or feeding-ground. Success depends, therefore, very largely upon the nature, disposition, and habits, especially nesting habits, of the particular bird being dealt with. Some birds are of a confiding, unsuspicious nature, and easily reconciled to quiet intrusion; while others are so timid and wary that hours of time have to be expended, and all sorts of devices resorted to, in order to get the coveted 'snap.' Of the risk of life and limb necessary to reach rocky cliff and lofty tree-dwelling species, the recital must come from such daring and fearless devotees of this art as the Kearton brothers of England, and others nearer home.

The nest being the lure usually employed to bring the bird within range of the camera, it will follow that the nesting season is the time of year when most of this work must be done. Thus, spring and early summer are the harvest time of the bird photographer, and as it happens that these, of all the seasons, are the most delightful in which to be afield, the bird-lover, with glass, camera, and note-book, can leave care behind and find contentment, rest, and peaceful profit in the glorious days of June, so happily styled the rarest of all that come.

Leaving general considerations, let us first study a series of photographs that well illustrates what charming and dainty little pictures can sometimes be secured with most trifling effort. Success in this instance was easily attained because the little 'sitters' were not very unwilling and because the conditions under which they lived were more than usually favorable. The subject of these photographs, the little Black-capped Chickadee, or Titmouse,—*Parus atricapillus*, the scientists call him,—is familiarly known to almost every one who has given even casual attention to birds. Its generally common occurrence throughout the United States, cheery, happy disposition, and lively notes as the little band, for they usually travel in companies, goes roaming through woodland and

copse, endears it to all. All through the long, dreary winter, with its short days and perpetual snow and ice, they are the same sprightly, contended little fellows, and refreshing it is to meet and visit with them at such times as they come 'chick-a-de-dee'-ing right into your very presence in their familiar, confiding way.

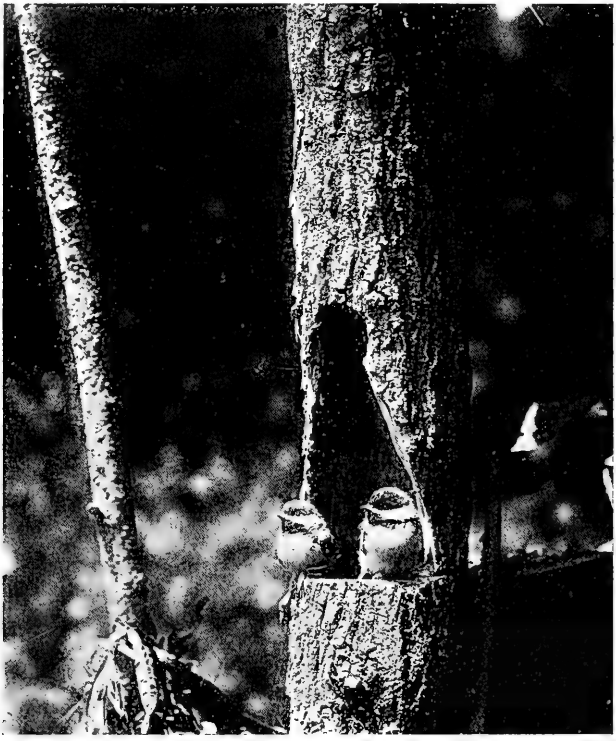
CHICKADEE LEAVING NEST

Springtime finds them with a mellow, long-drawn love whistle of two notes and thoughts of home and home likethings. Soon, down by the lake or brook-side, or in some moist woodland glade, where birch and willow trunks long since dead and soft with age stand sheltered among the growing trees, the little Black-cap and his chosen mate pick out a cozy retreat. This, perhaps, is some deserted Woodpecker den, decayed knothole, or more often it is a burrow of their own making, and here they assume the delights and cares of wedded life. A snug, warm nest of rabbit's hair or fern down is quickly built, and in this softest of beds the five or six rosy white, finely speckled little eggs are laid. Before very many days, eight or ten at most, the old stump exhibits unmistakable signs of being animated within, and in a wonderfully short time the little nestlings are as large as their parents, and full, indeed, is this family domicile. Owing to the cleanly habits and care of the old birds, the dresses of the youngsters are cleaner and brighter than those of their hard-worked, food-carrying parents. It was just at this stage in their progress that the little family, whose portraits are here shown, was discovered one late June day, snugly ensconced within the crumbling trunk of a long since departed willow tree. With a bird-loving companion, Mr. Leslie O. Dart, the writer was drifting idly in a little boat through one of the many channels of the Mississippi river, which cut up into innumerable islands, the heavily wooded bottomland of eastern Houston county, Minnesota. Being in search of the nests of numerous Prothonotary Warblers, which were flashing hither and thither across the channel, we skirted the shore closely, tapping on all likely-looking stubs.

Now the tapping brought to view a Downy Woodpecker, then a beautiful Golden Swamp Warbler; sometimes unexpectedly a great gray mouse scrambled out and plunged boldly into the water beneath; but this time the blow was followed by a subdued hum from within, and an inquiring, anxious parent Chickadee appeared suddenly on the scene, joined in a moment by a second, and we had the family complete. It was near noon, the sun was shining brightly, the hole was on the water side of the stub in the light, and we had no Chickadee pictures; so we camped at once and prepared to 'do' the situation. A little investigation showed the nest to be too high for setting up the camera satisfactorily, as the tripod legs sank deep in the mud and water. But our kit included a saw for just such an emergency, and sawing off the soft stub at the proper height, it was lowered gently until the hole came just on a level with the camera, placed horizontally and at a distance of about three feet. Propped with a forked stick, it rested quite securely on the soft bottom. This was better than tipping the camera and employing the 'swing back,' as the sun was nearly overhead. After focusing carefully on the opening in the stub, attaching to the camera fifty feet of small rubber tubing with large bulb, in place of the usual short tube and small bulb, setting carefully the trigger and other accessories of our harmless gun, and covering the whole camera with a hood of rough green cloth, the lens alone visible, we retreated to a convenient vantage point among the small willows close by. But a few minutes elapsed before the old birds were on the spot peering at us and the big green object from all sides. In an incredibly short space of time, considering the great liberties that had been taken with their habitation and door yard, they became resigned, and one of the birds, which we assumed to be the female, flew straight to the stub, and, with a last suspicious glance at the great glistening eye so near at hand, disappeared into the hole with a large brown worm in her bill. But that momentary delay was the looked-for opportunity, and all-sufficient; for with a quick squeeze of the bulb, click went the shutter, and in the twenty-fifth of a second the bird was ours; shot without so much as knowing it, without indeed the ruffling of a feather or the drawing of a drop of blood, and preserved lifelike and true to nature for all time to come.

From this time on the birds came and went without hesitation, the only serious delays in our operations being due to the drifting clouds, which now and then obscured the sun and rendered the light too weak for the rapid exposures necessary. One of the birds, the one we took to be the female, was a little more courageous

than the other, and it is her picture that appears oftenest. The timid one,—the male,—even went so far on several occasions as to himself devour the worm he had brought rather than trust himself at close quarters with the unknown enemy, although his mate was at the time coming and going industriously and keeping the little folk well supplied with the great larvæ. Surely personal traits and individuality are quite as well marked in the bird world as higher



YOUNG CHICKADEES.

in the scale! After we had made several more exposures similar to the first, one of the best of which shows the bird, worm-laden as before, balanced on the edge of the hole and taking the usual last look at the camera, we turned our attention to catching her as she was coming out. This required quicker coöperation between eye and hand, as the exit was generally made with a dash; but the accompanying picture, with head just emerging, will show that we were fairly successful.

Having concluded from all indications, chief among which was the immense number of huge caterpillars carried in to the young,

that the latter must be fairly grown, we decided to expose the nest and complete our collection by securing the entire family. So carefully sawing away the front wall of the cavity with a keyhole saw carried for just such purposes, we gave the little fellows within their first view of the outside world. I fear they must have thought the manner of opening their second shell a rather rude one, and the outlook somewhat forbidding. They were pretty little youngsters, fully grown, with clean, jaunty coats, and a grown-up 'chickadee-dee,' just like the old folks. Though somewhat dazzled at first by the sudden flood of bright sunlight, they were, after a little coaxing, induced to sit out on the veranda that had been improvised for them; but, like youthful sitters generally, they were hard to pose, and after many exposures, we succeeded in getting no more than two of them at once. The prettiest one of all, showing two of the little fellows as they finally settled down contentedly in the warm sunshine, was obtained at the expense of much patient effort and a great deal of slushing back and forth in mud and water between boat and camera, and it was gratifying to find that one at least of the negatives did fair justice to the situation.

The old ones came and went after the mutilation of their home, just as before, and, indeed, apparently found the new arrangement much more convenient than the old. In one of the photographs here presented, domestic affairs that had before been entirely concealed from view are fully revealed, and had not the plate been light-struck by one of the many aggravating accidents likely to occur in the outdoor work of the beginner, the picture would have been the best of the series. The courageous parent is attending to her maternal duties under circumstances which must appear most appalling. The little fellow sitting so contentedly by has undoubtedly had his share of the huge juicy caterpillars, and patiently recognizes that it is not his turn.

(*To be concluded*)

CHICKADEE FEEDING YOUNG

From a Cabin Window

BY H. W. MENKE

With Photographs from Nature by the Author

DURING the winter of 1897–8 I prospected for Jurassic fossils in Carbon and Albany counties, Wyoming. When cold weather and snow rendered field work impracticable as well as very disagreeable, I made permanent camp for the winter at Aurora, Wyoming,—a mere station on the Union Pacific R. R., an old abandoned section-house serving as my winter quarters.

This part of Wyoming,—at all times dreary and lonely,—is strikingly so during winter months. Then snow fills the ravines and lends a level, prairie-like aspect to the landscape. I doubt if there is to be found anywhere a more desolate country

HORNED LARKS AND SNOWFLAKES

than this; at least such was my impression when the novelty of my surroundings had worn off.

Among the various expedients to which I resorted for amusement, was photographing such birds as I could lure around the cabin. That I was not more successful in securing good negatives is due to the difficulties with which I had to contend. Chief of these were the

fierce, wintry blasts sweeping over the plains and filling the air with snow and dust.

A single experiment taught me the inadvisability of leaving the camera exposed for any length of time to these conditions. I had been trying to get a large photograph of Horned Larks. The camera was placed on the ground and a handful of oats scattered before it,

HORNED LARKS AND SNOWFLAKES

while I waited within the cabin for nearly two hours for an opportunity to pull the thread attached to the camera shutter. But the birds persistently avoided the pebble marking the focal plane, and clouds continually obscured the sun when I wished to make an exposure. At last the right moment came, I pulled the thread, and hurried out to get the result. That plate was never developed. Snow had clogged the shutter, and I found it had remained wide open after being sprung.

By throwing oats on only one spot, and that close to the window, I soon gathered quite a flock of Horned Larks, who came regularly every morning to feed from the constantly replenished supply. Finally, after a week of gloomy, dark weather, a cloudless sky offered especially good chances for a photograph of my feathered friends. This time I placed the camera on the window-sill. Maneuvres attendant upon focusing and inserting a plate-holder, of course,

frightened the birds away. They were back again within a few minutes, but an unexpected source of annoyance interfered. A freight train stopped opposite the scene of my operations and belched great billows of smoke between the sun and the birds. Also the shadow of the cabin was gradually encroaching on the feeding ground. I made a trial exposure, however, and obtained a very good negative. But a shadow in the foreground and a wagon tongue in the rear, did not add to the pictorial effect of the group.

After much pulling and prying, I pushed the objectionable wagon out of the drifts, and put off further photographing until the next morning. The morning came as bright and sunny as I desired. My

YELLOW-HEADED BLACKBIRDS

feathered subjects were early in the open air studio, and required no conventional admonition to 'look pleasant.' In fact, they were almost too lively for the camera shutter. The negative obtained proved very good, and well repaid me for all trouble and annoyance.

A few Yellow-headed Blackbirds were attracted by the food supply I furnished, and I made several negatives of them. The Yellow-heads were more wary than the Horned Larks, and flew away at the slightest disturbance. Only a few at a time gathered beneath the window, while the others perched on fence-posts at a safe distance and kept watch.

But it remained for a Northern Shrike to add 'insult to injury,' by seizing a dead mouse I had placed on a post and alighting on the camera with its capture!

For Teachers and Students

Bird-Studies for Children

BY ISABEL EATON

IT IS a simple matter enough, with the little folk who happily live in the country, to excite an interest and develop a familiar friendship with their bird neighbors. The birds can easily be coaxed to the piazza or the window-shelf by the judicious offer of free lunch, and so a speaking acquaintance, perhaps even a life-long friendship, with them may be gained.

But with city children, especially those of the poorer classes, the case is very different. The question how to teach them to know and care for birds is by no means so easy.

Look at their case: they have seen no birds but English Sparrows and caged Canaries and Parrots; few of them know the Robin; they practically never go to the country, and many of them never even go to the parks. How shall they be taught about birds? Observing the rule of advancing from known to unknown, would suggest Dick the Canary, as the obvious point of departure from a tenement into the world of birds; then, perhaps, the Summer Yellow-bird in the park, commonly known as the 'Wild Canary,' and then Mr. Goldfinch and his little olive-brown spouse, who would make a natural transition to the brown Sparrow family, and so on. The difficulty here is that it is so nearly impossible to get city children up to the park to see the Yellow-bird.

So another method, involving no country walks and no live birds, has to be resorted to. We may use pictures,—drawn before the class and colored, if possible,—and, trusting to the children's powers of imagination and idealization, may connect with their experience at some other point. After studying about the carpenter, in kindergarten or primary school, for instance, it is easy to interest children in the Woodpecker by proposing to tell them about a "little carpenter bird;" after talking of the fisherman, a promise to tell them of a bird who is a fisherman is sure to stir their imaginations of the doings of the Kingfisher, and so with the weaver (Oriole), mason (Robin) and others.

When several birds have been learned, the best kind of review for little people is probably some game like the following, which has been

played with most tumultuous enthusiasm and eager interest in a certain New York school of poor children. The teacher says:

"Let's play 'I'm thinking of a bird.' All shut your eyes tight and think. Now, I'm thinking of a bird nearly as large as a Pigeon; he is brownish, with black barring on the back, black spots all over the breast," etc., etc., giving a description of the Yellow Hammer, or Flicker, but leaving the characteristic marks until the end of the description. Before the teacher has gone far, a dozen hands are waving wildly and several vociferous whispers are heard, proclaiming in furious pianissimo: "*I* know," "*I* know what it is." Then the child who gets it right is allowed to describe a bird for the class to guess, and if the description fails in any point the class may offer corrections.

This appeal to the play instinct excites great interest, which is the thing chiefly to be desired.

When a number of birds have been learned in this way, a trip to the Natural History Museum would be of very great value, especially noticing the wonderful reproductions of actual scenes from bird-life there displayed. In this way city children could see in a single day more real bird-life than they could otherwise get in a year, as their few country days are generally populous picnics, from which the birds flee aghast.

The children should take their kindergarten principles of observation and conversational description to the Museum with them, and, on returning to school, should draw and color some bird they have seen. To observe and describe and, perhaps, draw each new bird whose picture is shown in the classroom is also a good thing. The writer passed a mounted Flicker through a class of fifty children of kindergarten age, let them look and carefully handle, and then asked for "stories" about it. One child said: "I know—Oh—I know seven stories—no, eight—*nine* stories about Mr. Yellow Hammer," and she really did know her nine "stories."

When they have gone as far as this, most bird stories will interest them, especially if the birds are humanized for them by the teller of the tale.

To sum up, it may be said that the best way to begin is to teach a few birds well,—a dozen or so,—by connecting with the child's experience, in some way, the information to be given, and then employing the play instinct by having bird games of various kinds, both kindergarten bird games and others; observation, description and drawing of birds may follow, and first and last, and all the time, all descriptions and stories given to children should be in terms of human nature.

Winter Bird Studies

ALTHOUGH we have fewer birds during the winter than at any other season, at no other time during the year do the comparative advantages of ornithology as a field study seem so evident. The botanist and entomologist now find little out of doors to attract them, and, if we except a stray squirrel or rabbit, birds are the only living things we may see from December to March. Winter, therefore, is a good time to begin the study of birds, not only because flowers and insects do not then claim our attention, but also because the small number of birds then present is a most encouraging circumstance to the opera-glass student, who, in identifying birds, is at the mercy of a 'key.'

Indeed, the difficulty now lies not in identification, but in discovery; unless one is thoroughly familiar with a given locality and its bird-life, one may walk for miles and not see a feather—a particularly unfortunate state of affairs if one has a bird-class in charge. This dilemma, however, may be avoided by catering to the dominant demand of bird-life at this season, the demand for food. Given a supply of the proper kind of food, and birds in the winter may nearly always be found near it. Bird seed and grain may be used, but a less expensive diet, and one which will doubtless be more appreciated, consists of sweepings from the hay-loft containing the seeds to which our birds are accustomed. This may be scattered by the bushel or in a sufficient quantity to insure a hearty meal for all visiting Juncos and Tree Sparrows, with perhaps less common winter seed-eaters.

The bark-hunting Woodpeckers, Nuthatches, and Chickadees will require different fare, and meat-bones, suet, bacon-rinds and the like have been found to be acceptable substitutes for their usual repast of insects' eggs and larvæ.

Winter, strange as it may seem, is an excellent season for bird-nesting. The trees and bushes now give up the secrets they guarded from us so successfully during the summer, and we examine them with as much interest as we pore over the 'Answers to Puzzles in Preceding Number' department of a favorite magazine.

Immediately after a snow storm is the best time in which to hunt for birds' nests in the winter. Then all tree and bush nests have a white cap, which renders them more conspicuous.

When walking with children, the spirit of competition may be aroused by saying "Who'll see the first nest," or "Who'll see the next nest first," as the case may be, and the number discovered under this impetus is often surprising.

For Young Observers

Boys and girls who study birds are invited to send short accounts of their observations to this department.

Our Doorstep Sparrow

BY FLORENCE A. MERRIAM.

DON'T think that I mean the House, or English Sparrow, for he is quite a different bird. Our little doorstep friend is the very smallest of all the brown Sparrows you know, and wears a reddish brown cap, and a gray vest so plain it hasn't a single button or stripe on it. He is a dear, plump little bird, who sits in the sun and throws up his head and chippers away so happily that people call him the Chipping Sparrow.

He comes to the doorstep and looks up at you as if he knew you wanted to feed him, and if you scatter crumbs on the piazza he will pick them up and hop about on the floor as if it were his piazza as well as yours.

One small Chippy, whom his friends called Dick, used to light on the finger of the kind man who fed him, and use his hand for dining-room, and sometimes when he had had a very nice breakfast, he would hop up on a finger, perch, and sing a happy song!

Dick was so sure his friends were kind and good, that as soon as his little birds were out of the nest, he brought them to be fed too. They did not know what a nice dining-room a hand makes, so they wouldn't fly up to it, but when the gentleman held their bread and seeds close to the ground, they would come and help themselves.

CHIPPY'S NEST.

If you were a bird and were going to build a nest, where would you put it? At the end of a row of your brothers' nests, as the Eave Swallows do? Or would that be too much like living in a row of brick houses in the city? Chipping Sparrows don't like to live too close to their next door neighbors. They don't mind if a Robin is in the same tree, on another bough, but they want their own branch all to themselves.

And they want it to be a branch, too. Other birds may build their nests on the ground, or burrow in the ground, or dig holes in

TAMING A CHIPPY

Photographed by Mr. George Wood at the home of Lieutenant Wirt Robinson, in Virginia. Lieutenant Robinson writes that a pair of Chipping Sparrows placed their nest in the climbing rose bush at the end of the piazza. One of the pair, supposed to be the female, was easily tamed with the aid of bread crumbs, and for three successive years she returned to the piazza, always immediately resuming her habits of familiarity.

tree trunks, or even hang their nests down inside dark chimneys if they like, but Chippy doesn't think much of such places. He wants plenty of daylight and fresh air.

But even if you have made up your mind to build on a branch, think how many nice trees and bushes there are to choose from, and how hard it must be to decide on one. You'd have to think a long time and look in a great many places. You see you want the safest, best spot in all the world in which to hide away your pretty eggs, and the precious birdies that will hatch out of them. They must be tucked well out of sight, for weasels and cats, and many other giants like eggs and nestlings for breakfast.

If you could find a kind family fond of birds, don't you think it would be a good thing to build near them? Perhaps they would drive away the cats and help protect your brood. Then on hot summer days maybe some little girl would think to put out a pan of water for a drink and a cool bath. Some people, like Dick's friends, are so thoughtful they throw out crumbs to save a tired mother bird the trouble of having to hunt for every morsel she gets to give her brood. Just think what work it is to find worms enough for four children who want food from daylight to dark!

The vines of a piazza make a safe, good place for a nest if you are sure the people haven't a cat, and love birds. I once saw a Chippy's nest in the vines of a dear old lady's house, and when she would come out to see how the eggs were getting on she would talk so kindly to the old birds it was very pleasant to live there. In such a place your children are protected, they have a roof over their little heads so the rains won't beat down on them, and the vines shade them nicely from the hot sun.

When you are building your house everything you want to use will be close by. On the lawn you will find the soft grasses you want for the outside, and in the barnyard you can get the long horse hairs that all Chipping Sparrows think they must have for a dry, cool nest-lining. Hair-birds, you know Chippies are called, they use so much hair. The question is how can they ever find it unless they do live near a barn? You go to look for it, someday, out on a country road or in a pasture. It takes sharp eyes and a great deal of patience, I guess you'll find then. But if you live on the piazza of a house, with a barn in the back yard, you can find so many nice long hairs that you can sometimes make your whole nest of them. I have seen a Chippy's nest that hadn't another thing in it—that was just a coil of black horse hair.

After you have built your nest and are looking for food for your young it is most convenient to be near a house. The worms

you want for your nestlings are in the garden, and the seeds you like for a lunch for yourself are on the weeds mixed up with the lawn grass. You needn't mind taking them, either, for the people you live with will be only too glad to get rid of them, because their flowers are killed by the worms, and their lawns look badly when weeds grow in the grass, so you will only be helping the kind friends who have already helped you. Don't you think that will be nice?

CHIPPY'S FAMILY.

Did you ever look into a Chippy's nest? The eggs are a pretty blue and have black dots on the larger end.

When the little birds first come out of the shell their eyes are shut tight, like those of little kittens when they are first born.

If you are very gentle you can stroke the backs of the little ones as they sit waiting for the old birds to feed them.

I remember one plum tree nest on a branch so low that a little girl could look into it. One day when the mother bird was brooding the eggs the little girl crept close up to the tree, so close she could look into Mother Chippy's eyes, and the trustful bird never stirred, but just sat and looked back at her. "Isn't she tame?" the child cried, she was so happy over it.

There was another Chippy's nest in an evergreen by the house, and when the old birds were hunting for worms we used to feed the nestlings bread crumbs. They didn't mind the bread not being worms so long as it was something to eat. It would have made you laugh to see how wide they opened their bills! It seemed as if the crumbs could drop clear down to their boots! Wouldn't you like to feed a little family like that sometime?

A Prize Offered

WE want the boys and girls who read BIRD-LORE to feel that they have a share in making the journal interesting. Young eyes are keen and eager when their owner's attention is aroused; so we ask the attention of every reader of BIRD-LORE of fourteen years or under to the following offer: To the one sending us the best account of a February walk we will give a year's subscription to this journal. The account should contain 250 to 300 words, and should describe the experiences of a walk in the country or some large park, with particular reference to the birds observed.

Notes from Field and Study

An Accomplished House Sparrow

In June, six or seven years ago, my daughters found in the courtyard of our home, a young House or English Sparrow who had evidently fallen from the nest, and had broken its leg in the fall. They took it in and cared for it, binding up the injured limb and feeding it as experience with other birds of the same family had taught them to do. Happily, the bird recovered, and in a short time became quite a pet of the household.

At that time we had two Canary Birds, both beautiful singers, and in almost constant song. The Sparrow was in the same room with them, and very soon (making use of its imitative power, which we have observed is a strong characteristic of the Sparrow) acquired the full and complete song of the Canaries. We followed with much pleasure the unfolding of his musical ability, which was gradual, and found that he had surpassed his teachers, producing melodies much richer and stronger, as all who had the pleasure of listening to him freely admitted.

The bird retained his song to the last, although as age came upon him, as with all other pet birds, his singing was less and less frequent till he passed away, some few months ago. Besides imitating the song of the Canary, he acquired the song of a bird in our collection known as the 'Strawberry Finch,' which he gave perfectly. His plumage was greatly improved by his confinement and the very great care given him, so much so, that one almost doubted his being an English Sparrow till convinced upon closer examination.

We have had a large experience with these birds; they become very affectionate with petting, and show a wonderful degree of intelligence.

I would further say that our Sparrow had all the notes common to the English Sparrow, beside his acquired accomplishments, and there was sadness in our home when his little life went out.—JOHN L. ROYAEL, *Brooklyn, N. Y.*

A Nut-hatching Nuthatch

On October 14, 1898, while on a short visit to my old home, at New Baltimore, New York, I sat down near a clump of trees and shrubs to enjoy the bird-life so abundant there.

ACORN WEDGED IN BARK BY WHITE-BREASTED NUTHATCH
Photographed from Nature, by E. B. Southwick

Here I saw the Chickadee carefully examining the fruit-heads of the smooth sumach, and twice take from them a mass of spider-web; then, flying to a limb, dissect it and obtain from it the mass of young or eggs. It was with difficulty that the food was disentangled from the silk, and I found on examination that much of it had been so crushed, that it was impossible to determine whether the web contained eggs or young.

While thus engaged, I saw a White-breasted Nuthatch, with something in its

beak, alight on the trunk of a wild cherry tree. While running about over the bark, the bird dropped what proved to be an acorn, but immediately flew down and picked it from the long grass, and returned to the tree. A second time it dropped it, and then, after carrying it again to the tree, thrust it into a crevice in the bark with considerable force, and began to peck at it vigorously. This it did for a few seconds, when I jumped up quickly and, with wild gesticulations, frightened it away. It proved to be the acorn of the pin Oak (*Quercus palustris*), and as no fruiting tree of this species was nearer than the Island, in the river opposite, I concluded that the bird had carried it across the water from that point.

After photographing the acorn on the tree, I cut the section of bark off, glued the acorn in its cavity, and the photograph shows the result.—E. B. Southwick, *New York City.*

A Cover Design

This interesting sketch was contributed by a prominent ornithologist as an appropriate cover design for this magazine at a time when it was proposed to call it "The Bird World." The appearance of a book bearing this title renders it necessary for

us to abandon its use, but we do not, for the same reason, feel justified in depriving the world of this remarkably artistic effort, and therefore present it for the edification of our readers, and we trust, to the delight of its author!

Collecting a Brown Thrasher's Song

Rustler, my pet Brown Thrasher, was pouring out his loud, long, spring song. A phonograph, or rather a graphophone, had been left on a table by the cage. Everything seemed to favor the collection of a bird song. I placed the instrument so that the open funnel of the horn came within less than a foot of the Thrasher's swelling throat, and touching a lever, set the wax cylinder revolving below a sapphire-tipped style, which cut the bird notes into the wax. Just as the medley changed from that of a Catbird to that of a Wood Thrush, a Robin flew past the window. Rustler stopped short, but the style continued to cut and ruin the wax cylinder. When Rustler started in again he hopped to the opposite side of the cage, rudely turning his back upon the graphophone.

More than a little vexed at the perversity of dumb animals, I quickly covered over the end of the cage farthest from the graphophone; then Rustler sulked beneath the cloth in silence. Next I removed the perch from that side and then Rustler absolutely refused to sing any more. Some hours later, however, I made another attempt, but each time the graphophone was started the whir of the revolving cylinder cut short my Thrasher's rich, rippling notes, so that the only thing to do was to remove the recording style and accustom him to the noise of the cylinder, and when this had been accomplished, I replaced the recording style. I found that by shutting off the graphophone the instant Rustler's notes became weak or stopped, I could catch a continuous series of notes. I succeded the following morning in getting a pretty fair song. It was not so loud as it might have been, but in pitch and timbre it was perfect.

In September dear old Rustler died. For nine long years he had enlivened my northern New Jersey home with his cheery music. In November, at a meeting of the American Ornithologists' Union, the notes of Rustler's love song fell sweetly upon sympathetic ears.—Sylvester D. Judd, Ph. D., *Washington, D. C.*

Book News and Reviews

With Nature and a Camera. By Richard Kearton, F. Z. S. Illustrated by 180 Pictures from Photographs by Cherry Kearton: Cassell & Co., London, Paris and Melbourne [New York, East 18th St.], 1898. 8vo. Pages xvi + 368. Price, $5.

Authors may or may not be indebted to reviewers of their works, but it is not often that reviewers are under obligations to the authors of the works they review. In the present instance, however, we feel that we must express our gratitude to the Messrs. Kearton for furnishing us with such an admirable demonstration of the kind of ornithology for which this journal stands. If, following the same lines, we can bring Bird-Lore to the high standard reached in 'With Nature and a Camera,' we shall have nearly approached our ideal.

Briefly, this book is a record of observation and photography by two ornithologists in Great Britain. Doubtless, no birds in the world have been more written about than the birds of this region, and still this book is filled with fresh and original matter, which is always interesting, and often of real scientific value.

Asked to explain how it was that in such a well-worked field the author of this volume had succeeded in securing so much new material, we should reply that we believed it was because he was an observer rather than a collector. Apparently realizing that to collect specimens of British birds would add but little to the store of our knowledge concerning them, he has devoted his time to a study of their habits, and in presenting the results of his labors, he has been most ably seconded by his brother, whose photographs of birds in nature have not, so far as we know, been excelled.

Perhaps the most forcible lesson taught by this book is the pleasure to be derived from photographing wild birds in nature, and the surprisingly good results which may be achieved by patient, intelligent effort. We do not recall a more adequately illustrated nature book, and its pictures not only claim our admiration because of their beauty, but also because they carry with them an assurance of fidelity to nature which no artist's pencil can inspire.

Bird Gods. By Charles de Kay. With decorations by George Wharton Edwards. A. S. Barnes & Co., New York. 12mo., pages xix+249. Price, $2.

So singular a combination of ornithologist and mythologist is the author of 'Bird Gods' that students of birds, as well as of myths, will find his pages of interest. "Why," he asks himself, "should certain birds have been allotted to certain gods and goddesses in the Greek and Roman mythology? Why should the Eagle go with Zeus, the Peacock with Hera, the Dove with Venus, the Swan with Apollo, the Woodpecker with Ares, the Owl with Pallas Athené?" And his search for a reply to these questions has led him into many little-frequented by-paths of early European literature, in which he has found much curious information concerning the influence of birds on primitive religions. Impressed by the "share birds have had in the making of myth, religion, poetry and legend" he wonders at their wholesale destruction to-day, and ventures the hope that "recollection of what our ancestors thought of birds and beasts, of how at one time they prized and idealized them, may induce in us, their decendants, some shame at the extermination to which we are consigning these lovable but helpless creatures, for temporary gains or sheer brutal love of slaughter."

Birds of Washington and Vicinity. By Mrs. L. W. Maynard, with Introduction by Florence A. Merriam. Washington, D. C., 1898. 12 mo, pages 204. Cuts in the text, 18. Price, 85 cents.

In a prefatory note the author states that this book "has been prepared at the suggestion of the Audubon Society

of the District of Columbia, in the belief that a local work giving untechnical descriptions of all birds likely to be seen in this vicinity, with something of the haunts and habits of those that nest here, will be useful to many who desire an acquaintance with our own birds, but do not know just how to go about making it."

The book seems admirably adapted to achieve this end. The opening pages by Miss Merriam are a capital introduction to the study of birds in the District of Columbia. They are followed by 'A Field Key to Our Common Land Birds,' and attractively written biographical sketches of the breeding species. The migrants and winter residents are treated more briefly, and an annotated 'List of All Birds Found in the District of Columbia,' by Dr. C. W. Richmond, is given. There are also nominal lists of winter birds, birds that nest within the city limits, etc., and an 'Observation Outline,' abridged from Miss Merriam's 'Birds of Village and Field.'

The book is, in fact, a complete manual of ornithology for the District of Columbia, and will undoubtedly prove an efficient guide to the study of the birds of that region.

BIRD-LIFE: A GUIDE TO THE STUDY OF OUR COMMON BIRDS. TEACHERS' EDITION. By FRANK M. CHAPMAN. With 75 full-page plates and numerous text-drawings by ERNEST SETON THOMPSON. D. Appleton & Co. New York. 1899. 12mo, pages xiv + 269 + Appendix, pages 87.

This is the original edition of 'Bird-Life,' with an Appendix designed to adapt the work for use in schools. The new matter consists of questions on the introductory chapters of 'Bird-Life,' as, for instance, 'The Bird, its Place in Nature and Relation to Man,' 'Form and Habit,' 'Color,' 'Migration,' etc.; and, under the head of 'Seasonal Lessons,' a review of the bird-life of a year based on observations made in the vicinity of New York City. This includes a statement of the chief characteristics of each month, followed by a list of the birds to be found during the month, and, for the spring and early summer months, a list of birds to be found nesting.

For the use of teachers and students residing in other parts of the eastern United States there are annotated lists of birds from Washington, D. C., by Dr. C. W. Richmond; Philadelphia, Pa., by Witmer Stone; Portland, Conn., by J. H. Sage; Cambridge, Mass., by William Brewster; St. Louis, Mo., by Otto Widmann; Oberlin, Ohio, by Lynds Jones, and Milwaukee, Wis., by H. Nehrling.

The Appletons have also issued this book in the form of a 'Teachers' Manual,' which contains the same text as the 'Teachers' Edition,' but lacks the seventy-five uncolored plates.

This 'Teachers' Manual' is intended to accompany three 'Teachers' Portfolios of Plates,' containing in all one hundred plates, of which ninety-one, including the seventy-five plates published in 'Bird-Life,' are colored, while nine are half-tone reproductions of birds' nests photographed in nature. The one hundred plates are about equally divided in portfolios under the titles of 'Permanent Residents and Winter Visitants,' 'March and April Migrants,' and 'May Migrants and Types of Nests and Eggs.'

Audubon Bird Chart

A most practical step in Audubon educational work is the publication, by the Massachusetts Audubon Society, of a chart giving life-size, colored illustrations of twenty-six of our common birds. On the whole, both in drawing and coloring, these birds are excellent, and while a severe critic might take exception to some minor inaccuracies, the chart may be commended as the best thing of the kind which has come to our attention. It is accompanied by a pamphlet containing well written biographies, by Mr. Ralph Hoffmann, of the species figured. The chart is published by the Prang Educational Company, of Boston, from whom, with Mr. Hoffmann's booklet, it may be purchased for one dollar.

Bird-Lore

A Bi-monthly Magazine
Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN
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SUBSCRIPTION RATES.

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Subscriptions may be sent to the Publishers, at Harrisburg, Pa., 66 Fifth avenue, New York City, or to the Editor, at Englewood, New Jersey.

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Manuscripts for publication, books, etc., for review, should be sent to the Editor at Englewood, New Jersey.

Advertisements should be sent to the Publishers at 66 Fifth avenue, New York City.

DURING THE past six years New York and Boston publishers have sold over 70,000 text-books on birds, and the ranks of bird students are constantly growing. With this phenomenal and steadily increasing interest in bird-studies, there has arisen a widespread demand for a popular journal of ornithology which should be addressed to observers rather than to collectors of birds, or, in short, to those who study "birds through an opera-glass."

The need of such a journal has also been felt by the Audubon societies, and in concluding his report for the year 1898, Mr. Witmer Stone, chairman of the American Ornithologists' Union's Committee on Bird Protection, remarks on the necessity of a "magazine devoted to popular ornithology which could serve as an organ for the various societies and keep the members in touch with their work. All societies which have reached a membership of several thousand realize that it is impossible to communicate with their members more than once or twice a year, owing to the cost of postage, and the success of the societies depends largely upon keeping in communication with their members."

It is to supply this want of bird students and bird protectors that BIRD-LORE has been established. On its behalf we promise to spare no effort to make it all that the most ardent bird student could desire, and, in the event of our success, we would appeal to all bird-lovers for such support as we may be deemed worthy to receive.

WE HAVE issued a 'Prospectus,' setting forth in part the aims of BIRD-LORE, and as a matter of permanent record, we enter its substance here. It stated that BIRD-LORE would attempt to fill a place in the journalistic world similar to that occupied by the works of Burroughs, Torrey, Dr. van Dyke, Mrs. Miller, and others in the domain of books. This is a high standard, but our belief that it will be reached will doubtless be shared when we announce that, with one or two exceptions, every prominent American writer on birds in nature has promised to contribute to BIRD-LORE during the coming year. The list of contributors includes the authors just mentioned, Mabel Osgood Wright, Annie Trumbull Slosson, Florence A. Merriam, J. A. Allen, William Brewster, Henry Nehrling, Ernest Seton Thompson, Otto Widmann, and numerous other students of bird-life.

The Audubon Department, under Mrs. Wright's care, will be a particularly attractive feature of the magazine, one which, we trust, is destined to exert a wide influence in advancing the cause of bird-protection.

The illustrations will consist of half-tone reproductions of birds and their nests from nature, and on the basis of material already in hand, we can assure our readers that, whether judged separately or as a whole, this volume of BIRD-LORE will contain the best photographs of wild birds which have as yet been published in this country.

At present BIRD-LORE will contain from thirty-two to forty pages, but should our efforts to produce a magazine on the lines indicated be appreciated, we trust that the near future will witness a material increase in the size of each number.

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.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries.

New Hampshire.....MRS. F. W. BATCHELDER, Manchester.
Massachusetts.....MISS HARRIET E. RICHARDS, care Boston Society of Natural History, Boston.
Rhode Island.....MRS. H. T. GRANT, JR., 187 Bowen street, Providence.
Connecticut.....MRS. HENRY S. GLOVER, Fairfield.
New York.....MISS EMMA H. LOCKWOOD, 243 West Seventy-fifth street, New York City.
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Minnesota.....MRS. J. P. ELMER, 314 West Third street, St. Paul.

THIS department will be devoted especially to the interests of active Audubon workers, and we earnestly solicit their assistance, as our success in making it a worthy representative of the cause for which it stands largely depends upon the heartiness of their coöperation. Others also, who are lovers and students of nature in many forms, but who have never, for divers reasons, engaged in any bird protective work, may, through reading of the systematic and effective methods of the societies, become convinced of the necessity of personal action.

We intend at once to establish the more practical side of the department by printing in an early issue a bibliography of Audubon Society publications, in order that anyone interested may know exactly what literature has appeared and is available. For this reason we ask the secretaries of all the societies to send us a complete set of their publications, stating, if possible, the number of each which has been circulated, and, when for sale, giving the price at which they may be obtained.

We also request the secretaries to send us all possible news of their plans and work, not merely statistics, but notes of anything of interest, for even the record of discouragements, as well as of successes, may often prove full of suggestion to workers in the same field, and aid toward developments that will broaden and strengthen the entire movement. A movement in complete harmony with the great desire of thinking people for a broader life in nature, which is one of the most healthful and hopeful features of the close of this century.

M. O. W.

Reports of Societies*

THE MASSACHUSETTS SOCIETY

THE MASSACHUSETTS AUDUBON SOCIETY has reissued the Audubon Calendar of last year and it is having a good sale. The drawings were made especially for

* The editor acknowledges the receipt from Mr. Witmer Stone, chairman of the Committee on Bird Protection of the American Ornithologists' Union, of a number of the following reports, which, before the establishment of an official organ for the Audubon Societies, had been sent to Mr. Stone for inclusion in his annual report to the A. O. U., from which, through lack of space, they were necessarily omitted.

the calendar by a member of the society; the originals are painted in water colors on Japanese rice paper, and are very artistic bird portraits. The same artist is now at work on drawings of new birds for a calendar for 1900, which the directors hope will be reproduced by a more accurate and satisfactory process.

The Bird Chart of colored drawings of twenty-six common birds, which the Directors undertook last spring, is now ready. The drawings have all been especially made for the chart by E. Knobel and are reproduced by the Forbes Lithograph Manufacturing Co., on twelve stones. Some of our best ornithologists have seen the color proof and pronounce it good. The society has published a descriptive pamphlet to accompany the chart which has been prepared by Ralph Hoffman. His sketches of the birds are delightfully written, and the book is valuable in itself.*

The Directors have recently sent out a new circular mainly in Boston and vicinity, which briefly describes the work undertaken and asks for further coöperation from interested persons, and states that "in addition to our first object, the support of other measures of importance for the further protection of our native birds has been assumed by the Society. Among such measures may be mentioned:

1. Circulation of literature.

2. Improved legislation in regard to the killing of birds, and the better enforcement of present laws.

3. Protection during the season for certain breeding places of Gulls, Herons and other birds, which, without such protection will soon be exterminated.

4. Educational measures. This includes the publication of colored wall charts of birds, Audubon Calendars and other helps to bird study.

The response to this circular has been gratifying.

The society now numbers over twenty-four hundred persons, twenty-six of these are Life Associates, having paid twenty-five dollars at one time; four hundred and seventy-five are Associates, paying one dollar annually; the remaining are Life Members, having paid twenty-five cents.

While the rage for feather decoration is unabated, we feel that there is steadily growing a sentiment among our best people in condemnation of the custom. There is a noticeable decrease in the use of aigrettes and of our native birds, excepting the Terns and the plumage of the Owl; and a marked increase in the employment of the wings and feathers of the barnyard fowl. While the latter continue to feed the fashion they are harmless in themselves.

HARRIET E. RICHARDS, *Sec'y.*

*See note on this chart and pamphlet in *Book News and Reviews.*

THE RHODE ISLAND SOCIETY

THE AUDUBON SOCIETY of Rhode Island was organized in October, 1897, and has now about 350 members.

The purposes of the society, according to its by-laws, are: the promotion of an interest in bird-life, the encouragement of the study of ornithology, and the protection of wild birds and their eggs. Some work has been done in the schools, abstracts of the state laws relating to birds have been circulated throughout the state, lectures have been given, and a traveling library has been purchased for the use of the branch societies.

Nearly five thousand circulars of various kinds have been distributed, and it is evident that the principles of the society are becoming well known and are exerting an influence, even in that difficult branch of Audubon work, the millinery crusade. ANNIE M. GRANT, *Sec'y.*

THE CONNECTICUT SOCIETY

A score of ladies met in Fairfield on January 28, 1898, and formed "The Audubon Society of the State of Connecticut." Mrs. James Osborne Wright was chosen president and an executive committee provisionally elected, representing so far as possible at the beginning, the State of Connecticut.

An effort was made to find every school district in the state, and a Bird-Day pro-

gramme was sent to 1,350 of these schools. Care was naturally used to see that the rural schools, at least, should be reached. Through the kindness of Congressman Hill of this district, one of our vice-presidents, 740 copies of Bulletin No. 54, 'Some Common Birds in their Relation to Agriculture,' issued by the United States Department of Agriculture, were received by the secretary, and 600 of these have been mailed to individuals.

The Society has had two lectures prepared, one by Willard G. Van Name, entitled 'Facts About Birds That Concern the Farmer,' illustrated by sixty colored lantern slides, and one by Mrs. Mabel Osgood Wright, on 'The Birds About Home,' illustrated by seventy colored slides. A parlor stereopticon has been purchased for use in projecting the slides.

The lectures and slides are intended primarily for the use of the local secretaries of the society, and after these for such members of the society as desire to give educational entertainments in the interest of bird protection.

The only expense connected with the use of the lectures and slides will be the expressage from Fairfield to place and return.

Under no circumstances will the outfit be allowed to go outside of the State of Connecticut.

The oil lantern accompanying the slides is suitable for a large parlor or school room, and can be worked by anyone understanding the focussing of a photographic camera, but it is advised that when the audience is to be composed of more than fifty people the exhibitor should secure a regular stereopticon.

Applications should be made at least two weeks before the outfit is desired.

No admission fee is to be charged at any entertainment at which the outfit is used, the intention of the Audubon Society of the State of Connecticut being to furnish free information about our birds, and so win many, who may never have given the matter a thought, to a sense of the necessity and wisdom of their protection.

The secretary is glad to report on January 1, 1899, that the society has had practical proof of the success of its experiment in sending out these free illustrated lectures. Much interest has been awakened by them, and the State Board of Agriculture has listed both lectures for the Farmers' Institutes, held during the winter months. Much enterprise is being shown by local secretaries. An illustrated lecture by Mrs. Kate Tryon, having been given in Bridgeport, November 19, under the auspices of Miss Grace Moody (local secretary), Mrs. Howard N. Knapp, and Mrs. C. K. Averill. While Mr. Frank M. Chapman lectured before a large audience at the Stamford High School, on December 2, under the auspices of Mrs. Walter M. Smith, the local secretary of that city.

HARRIET D. C. GLOVER,
Cor. Sec'y and Treas.

NEW YORK SOCIETY

Since November, 1897, the society has distributed 13,465 leaflets, making a total distribution of over 40,000 since its organization on February 23, 1897.

In spite of this large circulation of literature, the society has only 529 members, including 9 patrons, 7 sustaining members, 356 members, 157 junior members.

Financially, the society is now in a sound condition.

During the year two public meetings have been held in the large lecture hall of the American Museum of Natural History, at both of which the hall was well filled. Addresses were made by Dr. Henry van Dyke, Dr. Heber Newton, and others.

A 'Bird Talk' was also given by Mr. W. T. Hornaday, at the house of one of the honorary vice-presidents, which was well attended.

In educational work we have secured the publication of a paper on 'The Relation of Birds to Trees,' by Florence A. Merriam, in the annual Arbor Day Manual of New York State, and Mr. Chapman, chairman of our Executive Committee,

reports that in connection with Professor Bickmore, of the American Museum's Department of Public Instruction, and a committee representing the science teachers of the fourteen normal colleges of the State, he has prepared a course in bird study for the normal colleges for the present year.

Further interest in birds was shown by the science teachers of the State in their invitation to Mr. Chapman to address them on the subject of 'The Educational Value of Bird Study,' during their convention, held in New York City, December 29–30, 1898.

That the good work accomplished cannot be gauged by the number of members is proved by the constant reports received from local secretaries and others, telling of classes formed for bird study, of clubs that have taken up the subject, of bird exercises in schools, etc. If all these silent sympathizers would only realize how much the cause might be strengthened by open, concerted action, shown by a large membership roll of the Audubon Society, its influence would be greatly increased.

EMMA H. LOCKWOOD, *Sec'y.*

NEW JERSEY SOCIETY

We have at present 124 members and have distributed over 1,000 general circulars in regard to the work, and 1,000 aigrette circulars written by Mr. Chapman. We expect to have new literature issued during the coming year, and are now having the State bird-laws printed for distribution.

MARY A. MELLICK, *Sec'y.*

DISTRICT OF COLUMBIA

Mrs. John Dewhurst Patten, secretary of the Audubon Society of the District of Columbia, reports much valuable work. A course of six lectures was given by Mrs. Olive Thorne Miller, and others by Mr. Chapman and Dr. Palmer.

A successful and fashionably attended exhibit of millinery was held in April. Nine of the leading milliners contributed hats and bonnets, which, of course, were entirely free from wild bird feathers. The society has designed an Audubon pin after a drawing of the Robin, by Mr. Robert Ridgway. This has already been adopted by the Pennsylvania and Massachusetts societies. At the suggestion of the secretary of the Pennsylvania society, efforts have been directed towards the establishment of societies in the south.

In response to a great demand for a cheap book of information about local birds, this society has been instrumental in issuing 'Birds of Washington and Vicinity,'* by Mrs. L. W. Maynard — 200 pages 12mo, illustrated, which may be had for the small sum of 85 cents. The price placing the volume within the reach of teachers and pupils in the public schools.

OHIO SOCIETY

Miss Clara Russell, corresponding secretary of the Ohio society, informs us that at a meeting held in Cincinnati on December 14 an Ohio Audubon society was organized with the following officers: President, William Hubbell Fisher; vice-president, William H. Venable; corresponding secretary, Miss Clara Russell; secretary, Mrs. T. B. Hastings; treasurer, Mrs. W. T. Armor.

On December 30 Miss Russell writes: "We have over fifty members, and feel much encouraged that we have aroused a sentiment in this locality to know more about our feathered friends, and to protect birds from being wantonly destroyed for pleasure, fashion, or the table."

☞REPORTS from the New Hampshire, Pennsylvania, Indiana, Illinois, Iowa, Wisconsin, and Minnesota Societies, will appear in the April number.

*See a review of this book in *Book News and Reviews*.

LEAST BITTERN ON NEST

Photographed from Nature by E. G. Tabor. (*See page 39*)

Bird-Lore

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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The Camera as an Aid in the Study of Birds

BY DR. THOS. S. ROBERTS

Director Department of Birds, Natural History Survey of Minnesota
With photographs from Nature by the Author

(*Concluded from page 13*)

TURNING reluctantly from the attractive little Chickadee family, described in the preceding number of this magazine, we will next seek the acquaintance of a bird of entirely different feather, and, what is of more moment to the bird photographer, of entirely different disposition.

The Killdeer Plover, perhaps from his close kinship to the fraternity of game birds, has come to regard man and all human devices with deep suspicion, and to get on terms of close fellowship with him is no easy matter. While not himself an usual object of the sportsman's effort, owing to his lean body and indifferent savor, he is the immediate relative of those much sought-after birds, the Golden and the Black-bellied Plover. Unlike these more aristocratic members of the Plover group, the Killdeer does not retire to semi-arctic fastnesses to rear its brood, but nests wherever found throughout the eastern United States. Its ever-restless nature and loud alarum, "killdee, killdee," as it moves from place to place, or circles round and round, always at a safe distance, together with its common occurrence throughout populated as well as wild regions, makes this plebeian well-known to every country lad and the bane of every would-be stealthy Nimrod. So noisily persistent is its outcry that it has been dubbed by ornithologists *vocifera*—*Ægialitis vocifera*—and a most appropriate appellation it is.

Like many loquacious people, Mr. and Mrs. Killdeer have a rather lazy vein in their makeup, and spend but little time or effort nest building. A little depression lined with a few bits of stick or

straw, a few pebbles or other handy materials satisfies their ambition. In the bare, exposed situation usually chosen, such a nest, with its four spotted eggs, is much less conspicuous than would be a well made one. The first of our pictures showed one of these nests located in a cornfield, which is a not very uncommon site, although bare pasture knolls and gravelly banks are more usually selected. The photograph of the nest and eggs was, of course, easily secured, and is chiefly of interest because it shows so well how an open nest with its eggs may be protected by blending perfectly with the general color of the immediate surroundings — protective coloration, as it is called. To secure the portrait of the

KILLDEER ON NEST

wary old Killdeer, who left the nest the instant anyone but entered the large field, seemed a hopeless task. But the novice is ever ambitious, and the attempt was made in the following fashion, with what success the accompanying pictures will show. Placing the camera on the sharply tilted tripod, so that the distance from lens to nest was about four feet, the dreadful looking object was left in position for some time on the evening preceding the day on which the photographs were taken. The next day proved light and clear, and with the sun well up in the heavens we began operations, my companion and assistant on this occasion being Rev. H. W. Gleason, a bird enthusiast undaunted by any obstacle and fertile

in devices. Arranging the camera as already described, omitting the green hood in this instance, as it would have been worse than useless, we retired entirely from the field, which fortunately lay on a gently sloping hillside. From our distant retreat we watched, with field-glass in hand, the maneuvers of the mother bird. The experience of the preceding evening had evidently helped to prepare the way, for after only brief delay the anxious bird began running in a great spiral steadily converging to the central point. Every clod of earth or little mound in the path was mounted and, with much craning of neck and turning of head, the dreadful engine glistening in the sunshine was closely scrutinized from all sides, but as it was motionless, it probably was regarded as some new-fangled contrivance for cultivating corn, of finer build than the hoes, rakes, and other implements left by the men in the field. Once satisfied, she made a last quick run directly between the legs of the tripod, and stood erect over her treasures. A long trolling-line, procured at a neighboring farmhouse, had been attached to the lever arm releasing the shutter, as our seventy-five feet of tubing was not half long enough. Creeping to the end of the line, a quick pull made the exposure,—$\frac{1}{25}$ of a second, with wide open stop and rapid plate. Pulling up the slack of the line seemed to startle the bird more than the click of the shutter, and after repeating this procedure several times we were altogether uncertain as to whether the bird had been caught at all; and as it was impossible, there in the field, to follow the advice of an interested farmer spectator, who insisted that we "ought to look at them there plates and see what we had before going further," we cast about for some surer method. Carefully looking over the ground, I found that some seventy-five feet from the nest there was a shallow depression just deep enough to entirely conceal a man lying prone on the soft, ploughed ground. So the rubber tube was substituted for the line and the bulb end carried up the slope to the little hollow. As it would be impossible from this position to see the bird, and as we had discovered that a low whistle or noise caused her to leave the nest at once, some method of signaling had to be arranged. The trolling line suggested a way, as we found that it would reach readily from the bulb in the hollow to the edge of the field. So, attaching one end of it to my wrist, I took my position flat on the ground in the middle of the field, with a hot noon sun pouring down over-head, and awaited the signal,—a vigorous jerk on the trolling line, to be given by Mr. Gleason, who from a distance was watching with a glass the movements of our unwilling sitter. The signal soon came, and these complicated and rather juvenile tactics proved so successful

that very soon Mrs. Plover did not so much as change position at the click of the shutter, and when driven away to rearrange the camera between exposures, came quickly back again. In a short time we had exposed all the plates that seemed necessary, and retired from the field conquerors, though leaving the foe in peaceful possession. Returning to the house for supplies for a new expedition, a lady member of the party, who, from a shady hammock, had been watching for several hours these rather boyish antics, saluted us with the withering remark, "About four years of age, I should think, instead of forty." But we hoped that the end would

KILLDEER, NEST, AND EGGS

justify the means, and were anxious to inspect the developed results. This part of the work was accomplished a day or two later, and the pictures here presented show, I think, that our efforts were not entirely in vain. Several others were not so good. In one, the female sits quietly on her nest, back to the camera, and in coloration blends admirably with the surroundings. In another, she is crouching in a half uncertain attitude, while in still another she stands erect, revealing the four eggs directly beneath her, and with ruffled plumage seems a little resentful of the intrusion. In all, it will be noticed that the bill is partly open, either because it was a very warm day, because the poor bird was startled and ill at ease, or, it may be, because it was no easy matter for this always loquacious bird to keep its mouth shut even when posing for its picture.

A Least Bittern Portrait

BY E. G. TABOR

(See Frontispiece)

ON the morning of May 27, 1897, equipped with an extra supply of patience and a 5 x 7 'Premo B' camera fitted with rapid rectilinear lens, my plate-holders filled with unexposed plates, and accompanied by my wife, who has been a partner in all of my successful trips, I started for Otter Lake, Cayuga County, N. Y.

It was a beautiful morning, with not a breath of air stirring (by the way, this is the hardest of all things to control, and is an absolute necessity if you are to make fine, clear-cut negatives of birds and their natural surroundings), and the lake looked like a mirror. It took but a minute to get the large, flat-bottomed row-boat ready for the start, and we were soon gliding along, an oar's-length from shore, scanning every tree, bush, and bunch of rushes, in search of nests, those of the Red-winged Blackbird being very plenty and placed both in bushes or rushes in about equal numbers. A pair of Kingbirds had selected as the place for their summer home, a large, low willow limb which projected over the water; a peep into the nest revealed three eggs, common, yet so beautiful in their bed of wool and feathers.

Our next finds were several nests of a pair of Long-billed Marsh Wrens, which looked more like mouse-nests than anything else I have in mind. As we could return to these later, if unable to find anything better, we had not yet exposed a single plate, reserving them for a rare or unusual find.

We were in search of nests of the Least Bittern, and as we were passing that part of the shore where they always nested, we soon located a nest, but as it only contained one egg, another nest must be found. A male Least Bittern flew up a short distance ahead of us and 'dropped in' back of the bushes. We rowed down to the place from which he flushed, and standing up in the boat looked around, and not more than a boat's-length ahead, we espied a female sitting on a nest. I pushed the boat very carefully to within a couple of feet of the nest, and prepared to make an exposure. The camera was set to focus on an object 34 inches from cap of lens, and I moved it back and forth until the focus was perfect, the diaphragm was closed to *f* 16, and an instantaneous exposure with speed at $\frac{1}{25}''$ was made.

As most of my operations, preparatory to making the exposure, were of necessity carried on within three feet of the bird on the nest,

she at several times started to leave it; but when the bird moved I kept still, and when she kept still I worked; in this way I finally completed my preparations. The peep I got of the eggs as she partly raised off from them, just as I finished, made me squeeze the bulb before I intended to; but the result I obtained fully satisfied me, for in no other way could I describe the results of this trip, and what I saw and learned of the habits and home-life of the Least Bittern.

Loons at Home

BY WILLIAM DUTCHER

I SHOULD like to say a few words to the readers of BIRD-LORE on the subject of making good photographs of birds. Don't conclude at once, when you see pictures of nests, or birds in their wild state, that it is an easy matter to get them. A year ago, when I saw the fine exhibition of slides presented by Mr. Brewster and Mr. Chapman at the American Ornithologists' meeting, I at once concluded that it would be an easy thing for me to get similar results. So I forthwith invested much good money in purchasing a camera, and all the accompanying outfit; but not until I had worried all my photographic friends for advice of all kinds. With all the confidence of an expert I started on this unknown sea, and I must confess to you, patient reader, that my efforts were a brilliant string of failures, for from the more than one hundred and twenty-five plates that I exposed, I succeeded in getting only two good negatives. But I had lots of fun and plenty of experience, and am just as proud of my two good negatives as the celebrated old hen that had but one chick. If you want to learn to be patient and persevering, try photographing in the fields and woods. If you wish to learn more of the habits of birds than you can in any other possible way, try for hours to get them familiar enough with you and your camera to go on with their nest-building, or feeding their nestlings. Besides all this, in later days, whenever you see the photograph, it will recall to you every pleasant moment that you spent in getting the negative.

That you may share with me some of the pleasures that I experienced in getting a negative of a nest of eggs, from which the accompanying picture was made, let me tell you the following story about the Great Northern Diver, more commonly known as the Loon, and among the scientists as *Gavia imber*.

Those of you who are familiar with the Adirondack or Canada lakes can easily picture the surroundings of this nest, which I found in Higley Lake, Canada. This is a small body of water, hardly more than a very large pond. This section of Canada may be called a lake region, and is very beautiful. Most of the lakes are surrounded with forests, in which the contrasting colors of the evergreens and white birches add greatly to the natural beauty of the scenery. This nest was built in very shallow water, about eight feet from the shore. It was, at its base, about twenty inches in diameter, and at its apex about fifteen inches wide. It was about nine inches above the water at its greatest height, and composed entirely of mud, so far as I could determine, of a very dark color. The water where it was placed was not over six or eight inches deep, but it was really a very hard matter to determine exactly where the water ended and the mud commenced. This I ascertained to my sorrow and discomfiture when I undertook to set up my tripod. Standing in a very round-bottomed boat and trying to plant a tripod in silt of seemingly unfathomable depth is no easy job, as I found out. Finally, however, I succeeded in getting what I now have the pleasure of showing you; but I dare not tell you of the beautiful failures I made before this picture was obtained. When I first discovered the nest, the Loon was upon it, but as soon as she saw me she slid off into the lake and made every effort to dive. It is true that her head was under the water, but her back was not until she had gone some feet from the nest out into the lake, where the water was deep enough to entirely cover her. She did not then appear until she was well across the pond, where she was joined by her mate. The nest contained only one egg when I first saw it; but in the water, on the lake side of the nest, I found another egg, which the mother bird had evidently rolled out of the nest, perhaps in her fright and hasty departure when she first saw me. This egg I replaced in the nest by lifting it with the broad end of the boat oar, thinking, perhaps, that handling it might cause the Loon to desert the nest. The egg that was in the water was many shades lighter in color than the one found in the nest, which leads me to believe that the eggs of birds that habitually breed in damp mud nests acquire a darker color from stains.

In another pond of about the same size, and within half a mile of Higley Lake, I subsequently saw a pair of Loons that had but one young, so far as I could ascertain. If there was another it was kept well hidden. I was very much interested in watching the methods by which the old birds kept the little fellow out of

danger. When I first saw the family group, both parents and the little one were together; but immediately on the appearance of my boat the whole group disappeared under the surface. The young bird soon came to the surface again in about the same spot, but the parents were some distance off on the other side of the boat, so that I was between them. Both parents were perfectly quiet until I undertook to row toward their offspring, when

NEST AND EGGS OF LOON
Photographed from Nature, by William Dutcher

one of the parents uttered what was to me a very new and peculiar cry, on hearing which the little one immediately dove; the cry was entirely different from the usual loud, maniacal cry of the Loons. As soon as the young one appeared I again started toward him, when the old bird repeated the same cry, and down went the little fellow. It was very evident that he knew whenever he heard that warning cry he must disappear at once. I had so much sympathy for the lonely little chap that I left him, after I had tried the experiment a number of times. As soon as I drew away to another part of the pond the old birds uttered the usual well known cry of the species, but the little one then remained on the surface and was soon joined by the parent birds.

A few weeks later the same group acted in an entirely different manner; then they remained together, and as the boat approached, the old bird with its bill seemed to push the young one under the water before it dove itself.

If this bit of the domestic life of these two Loon families has interested you as much as it did me, I shall feel amply repaid for the thirty-two miles I had to drive each time I visited them.

Photographing a Bluebird

BY ROBERT W. HEGNER

With Photographs from Nature by the Author.

During the severe cold of January and February, 1895, most of the Bluebirds were thought to have perished. So it is with the spirit of a genuine Audubon that we hail their return in ever increasing numbers each succeeding spring. How sadly we should miss these little friends may be judged by the great commotion among ornithologists caused by their supposed extinction. In order to have more than a mere remembrance of their habits, I set out one day in the summer of 1898, at Decorah, Iowa, to obtain photographs of them in their haunts, and secured two interesting negatives of the female, as shown

BLUEBIRD FLYING TO NEST

in the accompanying illustrations. The history of the case is as follows: A pair of Bluebirds, after several previous attempts at housekeeping, and subsequent removals by 'small boys,' at last selected an old, deserted, Woodpecker's hole in a fence-post, and built, as usual, a nest of dry grass with a softer lining of horse-hair. The birds had already begun incubating the three pale blue eggs, which formed the set, when I disturbed them. I crept within five feet of the post be-

fore the female left the nest and joined her mate, who had been keeping guard in a neighboring plum tree.

After focusing my camera to within three feet of the post, and arranging a string attachment, I concealed myself in some bushes about seventy-five feet away. I waited patiently for ten minutes before the female left the tree and flew down to the fence. The male followed close after, and they hopped about the post and wires, getting nearer and nearer the nest, until the female flew straight into the hole. A snap-shot, just before she reached the entrance, was only partially successful, but shows very clearly the pose of the bird's head and neck while it was in the air. It was made in a twenty-fifth of a second with the lens stopped down to sixteen. I disturbed the female several times before she gained the desired position at the nest-opening; but, finally, the snap of the shutter helped bring to life one of my best bird-pictures.

BLUEBIRD AT NEST

A knowledge of the bird's nesting habits is a prime requisite in avian photography. Much patience is needed, as failures are very numerous. A camera which may be focussed to within two or three feet is an absolute necessity in order to make the picture large enough. Most of my failures have been caused by the lack of bright sunlight, under-exposure, or movement of the bird the instant the picture was taken; but one good photograph is sufficient reward for many trials.

A Tragic St. Valentine's Day

BY ANNIE TRUMBULL SLOSSON

THE cold wave reached us at Miami, on Biscayne Bay, Florida, in the night of February 12, 1899. It was preceded by severe thunder storms in the evening. On the 13th, Monday, it was very cold all over the state, with snow and sleet as far south as Ormond and Titusville. Our thermometers at Miami ranged from 36° to 40° during the day. As I sat in my room at the hotel, about four in the afternoon, I saw a bird outside my window, then another and another, and soon the air seemed full of wings.

Opening my window to see what the visitors could be, I found they were Tree Swallows (*Tachycineta bicolor*). Several flew into my room, others clustered on the window ledge, huddling closely together for warmth. There were hundreds of them about the house seeking shelter and warmth. They crept in behind the window blinds, came into open windows, huddled together by dozens on cornices and sills. They were quite fearless; once I held my hand outside and two of them lighted on its palm and sat there quietly. As it grew dark and colder their numbers increased. They flew about the halls and perched in corners, and the whole house was alive with them. Few of the guests in the hotel knew what they were; some even called them 'bats,' and were afraid they might fly into their faces or become entangled in their hair. One man informed those about him that they were Humming Birds, 'the large kind, you know,' but all were full of sympathy for the beautiful little creatures, out in the cold and darkness. A few were taken indoors and sheltered through the night, but 'what were these among so many?'

The next morning the sun shone brightly though the weather was still very cold—the mercury had fallen below 30° during the night. But as I raised the shade of one of my eastern windows I saw a half-dozen of the Swallows sitting upon the ledge in the sunshine, while the air seemed again filled with flashing wings. I was so relieved and glad. Surely the tiny creatures, with their tints of steely blue or shining green contrasting with the pure white of the under parts, were more hardy than I had feared. But alas! it was but a remnant that escaped. Hundreds were found dead. Men were sent out with baskets to gather the limp little bodies from piazzas, window ledges, and copings. It was a pitiful sight for St. Valentine Day, when, as the old song has it,

"The birds are all choosing their mates."

Clark's Crows and Oregon Jays on Mount Hood*

BY FLORENCE A. MERRIAM

CLOUD CAP INN, the loghouse hotel fastened down with cables high on the north side of Mount Hood, is too near timber-line to claim a great variety of feathered guests, but Oregon Jays and Clark's Crows or Nutcrackers are regular pensioners of the house. The usual shooting by tourists does not menace them, for the nature-loving mountaineers, who keep the Inn and act as guides to the summit, guard most loyally both birds and beasts. They like to tell of a noble Eagle which used to fly up the cañon and circle over the glacier every day, and they recall with pleasure the snowy morning when an old Blue Grouse brought her brood to the Inn, and the birds ate the wheat that was thrown them with the confidence of chickens. The Grouse were, apparently, regular neighbors of the Inn, and while there I had the pleasure of seeing a grown family. They fed on the slope close above me with the unconcern of domestic fowls, conversing in turkey-like monosyllables as they moved about, and two of them came within a few feet and looked up at me—that not forty rods from the Inn! The pleasure of the sight was doubled by the reflection that such things could be so near a hotel, even on a remote mountain.

CLOUD CAP INN

It was delightful to see how familiarly birds gathered about the house. You could sit in the front doorway and when not absorbed in looking off on the three wonderful snow peaks—St. Helens, Rainier, and Adams—rising above the Cascade range, could watch Oregon Juncos, Steller's Jays, Oregon Jays, and Nutcrackers coming down to drink at the hydrant twenty feet away; while the Ruby Kinglet and White-

*Read before the American Ornithologist's Union, Nov. 16, 1898.

crowned Sparrow, together with Townsend's Solitaire and other interesting westerners, moved about in the branches of the low timber-line pines; and Lewis' Woodpeckers, with their long, powerful flights, crossed over the forested cañons below. Crossbills had stayed around the house sociably for three weeks together, Mrs. Langille, the noble old mother of the mountaineers, told me. She said they would fly against the logs of the house and call till she went out to feed them. They left with the first heavy storms, though usually, she said: "That's the time when we have birds come around the house—when there are storms." And a friendly hospice the feathered wayfarers find it so long as the Inn is open!

The Oregon Jays and Clark's Crows are, as I said, the regular pensioners of the house. The Jays look very much like their relatives the Canada Jays, but are darker, and when you are close to them the feathers of their backs show distinct whitish shaft-streaks. The Crows have the general form and bearing of Crows, but are black only on wings and tail, their general appearance being gray. Speaking of the birds, Mrs. Langille said: "If I was in the kitchen myself I'd have them come right to the porch outside; when I'm in the kitchen I'm always throwing out crumbs for the birds and squirrels, and I've had the Jays come and sit right down on the block where I was cutting meat and take the fat right out of my hands." Clark's Crows, she said, would not eat from her hand, but would sit on the back porch and call for their breakfast.

CLARK'S CROW

When I was at the Inn, the Chinese cook used to throw scraps from the table over a lava cliff, and both Crows and Jays spent most of their time carrying it off. As the foot of the cliff was one of the best places to watch them, I spent part of every day there, and when the smell of coffee grounds got too strong, consoled myself by looking through the trees up at the grand white peak of Hood.

It was interesting to see the difference in the ways of the two birds. The Nutcracker would fly down to the rocks with rattling wings, and, when not too hungry to be critical, would proceed to investigate the breakfast with the air of a judge on the bench, for

he is a dignified character. To touch the hem of his robe to the food would have been defilement, so he went about pressing his wings tight to his sides, sometimes giving them a little nervous shake. To smile at this sober-minded person seems most disrespectful, but the solemnity of his gambols was surely provocative of mirth. Not content with turning his long-billed head judicially from side to side as he advanced through the scraps, if the biscuit on his left was not to his mind, with one great ungainly leap he would box half the compass and plant his big feet before a potato on his right. This he would proceed to probe with a grave air of interrogation, and if he decided the case in the negative would withdraw his beak and pass to the next case on the docket. Once when the potato was half a waffle, he pried it up tentatively with his long bill, and at last, deciding in its favor, proceeded to fly off with it, his long legs dangling ludicrously behind him.

The Oregon Jays were quite unlike their Crow cousins. They would come flying in, talking together in sociable fashion, and drop down so noiselessly you could but be struck by the difference between fluffy owl-like feathers and stiff quills. Sometimes one of the Jays would touch the side of a tree a moment before dropping lightly to the ground. All their motions were quick and easy, if not actually graceful, and they worked rapidly, with none of the profound deliberation shown at times by the Nutcracker. The smaller pieces of food they ate; the larger ones they carried off, usually in their bills, occasionally in their claws. In eating, the Jay would sometimes adopt the Blue Jay style and put his food under his foot, where he could pull it apart, throwing up his head to swallow. When the food was soft and too large to swallow at one gulp, both Crows and Jays would carry it to an evergreen, lay it down on a twig before them, and there eat comfortably, as from a plate. Both birds often flew to the ledges of the cliff for food that had lodged there in falling, and it made a busy scene when eight or ten of the big fellows were flying about the place at once.

OREGON JAY

(*To be concluded.*)

For Teachers and Students

Suggestions for Bird-Day Programs in the Schools

BY C. A. BABCOCK

(Originator of Bird-Day)

A BIRD-DAY exercise, in order to have much value educationally, should be largely the result of the pupils' previous work, and should not be the mere repetition of a prepared program, taken verbatim from some leaflet or paper. The program should be prepared by the pupils, under the direction of the teacher, and should contain as many original compositions or statements about birds, derived from personal observation, as possible.

Bird-Day should be announced some weeks beforehand, in order to give the children time to prepare for it. In the meantime, direct them to observe the birds, and allow from five to ten minutes each morning to receive the reports. Direct that crumbs be scattered in the back yards, and cups containing seeds be put up in the trees, or on the fences, and that bones from the table be fastened where they can be seen from the windows. Then, with an opera glass, if one can be obtained, results are to be looked for.

For directing the young observer, write upon the board a scheme like this:

ENGLISH SPARROW

Length from tip of beak to end of tail?
What is the shape, color, and size of beak?
What is the color of legs and feet?
How many toes? Which way do they point?
Gait upon the ground,—does it walk, hop or run?
Color of head and throat? Color of under parts?
Color and marking of back?
Difference in markings of male and female?
Describe actions which indicate its character.
Is it pugnacious? Is it brave? Is it selfish?
Does it trouble other birds?
Describe its voice or song. Does it utter notes indicating diverse feelings, as joy, anger? What syllables best recall some of its notes?

For the younger pupils a few of these questions, perhaps two or three, will be sufficient for one exercise. Children will vary, and often contradict one another in answering the same questions. Dwell

upon each question till it is answered correctly, and all agree upon the answer.

A similar plan may be followed for studying the Robin, Bluebird, Catbird, Oriole, or other birds as they arrive, or as they become accessible to certain of the pupils. In April, two years ago, one little girl had observed, and described accurately, seventeen different species of birds which she had seen in the little yard of her home. They had been attracted by the food she had put out for them.

The nest-building of birds is also a good subject for observation, the Robin being, perhaps, the best species for a first study.

QUESTIONS ON NEST-BUILDING AND NESTING HABITS

Which bird does most building, the male, or the female?

Do both carry material?

Does the male ever seem to be acting as escort or guard to his mate?

What materials are used? What is the appearance of the nest? Its situation — sheltered, or not?

After the nest is completed, watch it till the young are hatched. Which bird sits upon the eggs? Does the male ever relieve his mate at this task? Does he bring food to her? Does he spend some time singing to her, as if he were trying to keep her cheerful? Does he protect her from attack by birds or other enemies?

SOME QUESTIONS TO BE ANSWERED ABOUT ROBINS

Learn to distinguish the voices and call notes of the male and female. Which bird wakes first in the morning and calls the other? You may also notice, sometimes, in the night, that one bird wakes and calls the other. Which one generally wakes first at these times?

Do Robins raise more than one brood in a season? If so, do they use the same nest twice? If they raise two broods, what becomes of the first, while the mother is sitting upon the eggs for the second?

Watch for a Robin leading out a family of chicks. Notice the feeding after the birds are old enough to run and fly fairly well. The young birds are placed apart by the parent, who visits each one in turn, and rebukes any who tries to be piggish, sometimes nipping it with its bill when it runs up out of turn. Notice this parent teaching the young to sing,— it is a very interesting sight.

The teacher will need some good manual to aid in identifying some of the species, though much of the work the first season would better be upon common, well-known birds. The following are recommended:

'Handbook of Birds of Eastern North America,' by Frank M. Chapman, published by D. Appleton & Co.; 'Bird-Craft,' by Mabel Osgood Wright, published by The Macmillan Company.

FOR BIRD-DAY PROGRAMS

For the first Bird-Day in every school it would be well to have some one read Senator Hoar's petition of the birds to the Legislature of Massachusetts. This remarkable paper deserves reading by all friends of birds at least once a year.

Compositions.—Have also original compositions, describing some bird studied, or describing some of its habits, especially its habit of feeding, and the actions showing its disposition.

Personations.—Special interest will be awakened by having 'personations' of birds. These are descriptions of birds told in the first person, as if the bird itself were telling its own story. An accurate account of the bird's appearance, habits, feelings, and life from the bird's view-point, is given, but without telling the bird's name. At the close of the reading, the hearers vote upon the name of the bird 'personated.'

Audubon Society Literature.—The teacher should also obtain circulars from the secretaries of the New York, Massachusetts, Pennsylvania and other Audubon Societies. These will give information concerning the rapid destruction of birds. Extracts may be read from them.

Poems.—Extracts from the poets naturally form an interesting feature of Bird-Day. Poets are generally bird-lovers and bird-seers. Among the poems peculiarly adapted are the following:

'Robert O'Lincoln,' Bryant; 'The Mocking Bird,' Sidney Lanier; 'The Sky Lark,' Shelly; 'The O'Lincoln Family,' Wilson Flagg; 'The Rain Song of the Robin,' Kate Upson Clark; 'The Titmouse,' R. W. Emerson; 'The Eagle,' Tennyson; 'To The Skylark,' William Wordsworth.

Personal Experiences.—Another pleasant part of the program will be the short statements of facts about birds, by the pupils, obtained from their own observation. Birds of the Bible may also be given in short extracts.

Prose Selections.—John Burroughs' 'Birds and Poets,' and 'Wake Robin;' Bradford Torrey's 'Birds in the Bush;' Olive Thorne Miller's 'Bird Ways,' and many other books, abound in suitable passages for Bird-Day.

The pupils will enjoy preparing a Bird-Day program much more than learning little set speeches from one already prepared. The preliminary observation of birds will arouse an enthusiasm that will be of great value in all educational work.

Summer Boarders for Girls and Boys

THE Bureau of Nature Study of Cornell University offers to assist all boys and girls who want to take bird boarders this season. By addressing this Bureau, at Ithaca, N. Y., one may receive a copy of an admirable leaflet entitled 'The Birds and I,' containing numerous designs for houses which may be constructed for the occupation of the expected 'boarders.'

A Bird-Day Program

BY ELIZABETH V. BROWN

Washington Normal School

BIRTHDAYS, red letter days, memorial days, arbor days and bird days!

The two hundred days of the school calendar are hardly sufficient to meet the special demands made upon them in the interests of history, literature, and philanthropy. After all, is not this call for specialization something of a reproach to both home and school? If the child is symmetrically developed, harmoniously educated, will not all these influences find their proper place and expression in his life in the *regular* course of events?

But in the meantime since 'days' are ordained, it is highly important that they shall be celebrated in a manner to make lasting impressions on the minds and hearts of children. The mental hysteria resulting from the spasmodic, sentimental fervor worked up for this cause to-day, and for that to-morrow, is to be strongly condemned.

As in every other subject, an interest in *birds* should be based upon the knowledge gained by the child primarily through his own observations and experiences, supplemented and enriched later by what he reads or has told him. The interest thus aroused leads to sympathy and love as enduring as life itself.

Hence the Bird-Day program should mark the culminating rather than the initial point of bird study for the year.

The children should be led to anticipate it, and should be prepared for it in as many ways and for as long a time as possible. All that nature lovers have written or poets sung will have deeper significance after the child's contact with the birds of his neighborhood, as seen in parks, woods, or fields. To see their pictures is not enough. Field work alone can give the stimulus which leads to fellowship, sympathy, love, and protection.

For young children especially, interest is most readily aroused through the study of the *activities* which ally bird and child. The character and the adaptation of birds' clothing, foods and homes to their peculiar needs and environment; glimpses of nest-life; characteristic traits; disposition; the cleverness of the parent birds in outwitting enemies and protecting the young; the skillful uses of tools—bills and claws—are all readily appreciated by the children. Add to these, studies in protective coloration, migration, the relation

of birds to insects injurious to vegetation, and kindred subjects, which form a never-failing source of delight. Through such work, the child learns almost unwittingly much of bird structure, classification, and description which would otherwise prove dry and barren of interest.

The boy who thus comes into fellowship with birds will not delight in beanshooters or find his chief joy in robbing birds' nests and violating game laws; while his sister will try to find something more ornamental for her hat than slaughtered birds.

THE PROGRAM

While programs must vary according to the needs and ability of the children, a few suggestions may be helpful to all.

DECORATION

'Sharp Eyes,' and 'I Spy,' by William Hamilton Gibson, 'Nature's Hallelujah,' and 'The Message of the Bluebird,' by Irene Jerome, are full of delightfully suggestive and artistic bits of bird-life for black-board pictures.

A pretty corner may be made by a small bush or the branch of a large tree in which the nests collected by the children are appropriately placed.

Pictures of bird-lovers and writers should be in evidence. Audubon, Wilson, John Burroughs, Bradford Torrey, Olive Thorne Miller, and others. Many of these may be found in recent magazines.

Anecdotes and short sketches from their books may be told or read.

COMPOSITIONS

Compositions prepared in advance, on various phases of bird-life, may be read by their young authors. These may be the result of work previously done in class along the lines before mentioned, or of new observations and experiences gathered for Bird-Day. The greater the variety of topics, the better.

Descriptions of individual birds, comparisons of birds, individually or by classes, as to:

Food.— Character; where, when, and how obtained.

Home.— Location; materials; construction; appearance.

Young.— Number; appearance; care and education.

Songs and Calls.— Emotions expressed; character, short or sustained, high or low, sweet or harsh, etc.

Relations.— Names of other birds of same class.

Bird Craftsmen.— Masons, miners, weavers, tailors, etc.

Tree-top Neighbors.— Spring, summer, fall and winter.

How Birds Travel.

How Birds Help the Farmers.

Invitations to the Birds.— Boxes put up for them; seed-cups, bits of suet nailed to posts or trees.

CHALK TALKS

Stories may be told by teachers or pupils with accompanying illustrations hastily sketched on the blackboard as the story progresses. The following lend themselves readily to this work:

'The Ugly Duckling,' 'The Daisy and the Lark,' Hans Christian Anderson; 'The White Heron,' Sarah Orne Jewett; 'The White Blackbird,' Guy de Maupassant; 'The Crane Express,' Child World; 'The Crow and the Pitcher,' 'The Fox and the Crane,' 'The Crane and the Crows,' Æsop's Fables.

FOR READING OR RECITATION

'Nest Egg,' Robert Louis Stevenson; 'Anxiety,' George Macdonald; 'The Song Sparrow,' 'The Veery,' Dr. van Dyke; 'The One in the Middle,' Margaret Eytinge; 'The Bluebird,' Emily Huntington Miller; 'The Peter Bird,' Henry Thompson Stanton; 'The Robin,' Celia Thaxter; 'Brother Robin,' Mrs. Anderson; 'The Birds' Orchestra,' Celia Thaxter; 'The Sandpiper,' Celia Thaxter; 'Little Birdies,' Tennyson; 'The Brown Thrush,' Lucy Larcom; 'The Titmouse,' Emerson; 'The Stormy Petrel,' Barry Cornwall; 'The Sorrowful Sea Gull,' Child World; 'Robert of Lincoln,' 'The Return of the Birds,' Bryant; 'The Blackbird,' Alice Cary; 'The Crow's Children,' 'The Chicken's Mistake,' Phœbe Cary; 'What the Birds Said,' Whittier.

Migration Tables for April and May

AT our request, Dr. A. K. Fisher has furnished the following notes on the spring migration. They are based on fifteen years' observation and will therefore prove valuable as a guide, and interesting for comparison, to other observers. A list of Mississippi Valley migrants, which we expected to receive, unfortunately arrived too late for publication, while a list from Philadelphia, by Mr. Witmer Stone, is necessarily omitted for lack of space.—Ed.

AVERAGE DATES OF ARRIVAL OF THE COMMONER BIRDS AT SING SING, N. Y., DURING APRIL AND MAY

BY DR. A. K. FISHER

APRIL 1 TO 10

Pied-billed Grebe, Wilson's Snipe, Sparrow Hawk, Osprey, Kingfisher, Fish Crow, Cowbird, Savanna Sparrow, Vesper Sparrow, Swamp Sparrow, White-throated Sparrow, Tree Swallow.

APRIL 10 TO 20

Green Heron, Black-crowned Night Heron, American Bittern, Pigeon Hawk, Yellow-bellied Sapsucker, Purple Finch, Chipping Sparrow, Field Sparrow, Myrtle Warbler, Yellow Palm Warbler, Large-billed Water Thrush, Ruby-crowned Kinglet, Hermit Thrush.

APRIL 20 TO 30

Chimney Swift, Least Flycatcher, Towhee, Purple Martin, Barn Swallow, Bank Swallow, Blue-headed Vireo, Black and White Warbler, Catbird, Brown Thrasher, House Wren, Wood Thrush.

MAY 1 TO 5

Spotted Sandpiper, Hummingbird, Kingbird, Bobolink, Baltimore Oriole, Red-eyed Vireo, Yellow-throated Vireo, White-eyed Vireo, Parula Warbler, Yellow Warbler, Black-throated Green Warbler, Black-throated Blue Warbler, Ovenbird, Maryland Yellow-throat, Yellow-breasted Chat, Redstart, Wilson's Thrush, Olive-backed Thrush.

MAY 5 TO 10

Solitary Sandpiper, Yellow-billed Cuckoo, Black-billed Cuckoo, Whip-poor-will, Nighthawk, Crested Flycatcher, Orchard Oriole, Yellow-winged Sparrow, Rose-breasted Grosbeak, Scarlet Tanager, Cliff Swallow, Rough-winged Swallow, Warbling Vireo, Blue-winged Warbler, Golden-winged Warbler, Magnolia Warbler, Long-billed Marsh Wren.

MAY 10 TO 15

Least Sandpiper, Wood Pewee, Green-crested (Acadian) Flycatcher, White-crowned Sparrow, Indigo Bunting, Nashville Warbler, Worm-eating Warbler, Chestnut-sided Warbler, Kentucky Warbler, Wilson's Warbler.

MAY 15 TO 20

Olive-sided Flycatcher, Yellow-bellied Flycatcher, Bay-breasted Warbler, Black-poll Warbler, Blackburnian Warbler, Small-billed Water Thrush, Canadian Warbler, Gray-cheeked Thrush.

MAY 20 TO 25

Alder Flycatcher, Tennessee Warbler, Mourning Warbler.

For Young Observers

Boys and girls who study birds are invited to send short accounts of their observations to this Department.

The Legend of the Salt

BY FRANK M. CHAPMAN

A GREAT many years ago a little boy, whom I knew very well, accepted the advice of an elder, and went out with a salt-cellar to make friends with the birds. But they would not have him, even with a 'grain of salt,' and it was not until he was considerably older that he learned he had begun his study of birds at the wrong end. That is, you know, the wrong end of the bird, for it is not a bird's tail, but his bill, you must attend to if you would win his confidence and friendship.

So, instead of salt, use bread-crumbs, seeds, and other food, and some day you may have an experience which will surprise those people who would think it a very good joke indeed to send you out with a salt-cellar after birds. I have recently had an experience of this kind. It happened in the heart of a great city, surely the last place in the world where one would expect to find any birds, except House Sparrows. But Central Park, New York City, the place I refer to, contains several retired nooks where birds are often abundant. A place

known as the 'Ramble' is a particularly good one for birds, and during the past winter, when it was not too cold, I have often gone from my study in the nearby Museum of Natural History to eat my luncheon with the birds in the Ramble. Many other bird-lovers have also visited the Park to study and feed the birds, and, as always happens when birds learn that they will not be harmed, they have become remarkably tame.

This is especially true of the Chickadees, who, under any circumstances, seem to have less fear of man than most birds. When I

A BIRD IN THE HAND
Photographed from nature, by F. M. Chapman.

entered the Ramble they soon responded to an imitation of their plaintive call of two high, clearly whistled notes. And in a short time we became such good friends that I had only to hold out my hand with a nut in it to have one of them at once perch on a finger, look at me for a moment with an inquiring expression in his bright little eyes, then take the nut and fly off to a neighboring limb, where, holding it beneath his toes, he would hammer away at it with his bill, Blue Jay fashion.

One day I induced one of them to pose before my camera, and, as a result, I now have the pleasure of presenting you with his portrait, as an actual proof that nuts are much more effective than salt, in catching birds. So, after this, we won't go out with salt-cellars, but with a supply of food; nor should we forget to take a "pocketful of patience," which, Mrs. Wright says, is the salt of the bird-catching legend.

The February Walk Contest

WE have been delighted with the interest aroused by our request for descriptions of February walks, and in imagination have enjoyed outings throughout a large part of the United States with our little correspondents.

We have found ourselves obliged to give two prizes, one of which goes to Mildred A. Robinson, of Waltham, Massachusetts, whose essay will appear in our next number; the other to Floyd C. Noble, of New York City, whose description of a walk in Central Park appears in this issue of BIRD-LORE.

Much to his surprise, the Editor found that he was competing for the prize he himself had offered! He had written an account of some Central Park birds for this department before Master Noble's article was received, and is obliged to confess that Master Noble mentions several species which he had not observed. He, therefore, presents only that part of his manuscript relating to the Chickadee, and leaves Master Noble to tell of the other birds in the Park.

The selection of the winning essays was made with much difficulty, and, in addition to the two chosen, we would especially commend those written by the following named boys and girls:

Philip Baker, Indianapolis, Ind.; Harriet J. Benton, New Bedford, Mass.; Zelda Brown, Yuma, Ariz.; Donald Bruce, East Hampton, Mass.; Walter S. Chansler, Bicknell, Ind.; Marion Flagg, 90 Washington St., Hartford, Conn.; Charles B. Floyd, Brookline, Mass.; Kathryn Gibbs, Kalamazoo, Mich.; Albert Linton, Moorestown, N. J.; Clara T. Magee, Moorestown, N. J.; George S. Mac Nider, Chapel Hill, N. C.; Barnard Powers, Melrose, Mass.; Elden Smith, Milville, Mass.; Lydia Sharpless, Haverford, Pa.—ED.

A February Walk in Central Park, New York

BY FLOYD C. NOBLE

(Aged 14 years)

ON February 18, 1899, my friend and I started out 'bird-hunting,' as usual, in the 'Ramble,' Central Park. It was during the comparatively warm spell after the blizzard of the 12th, and the preceding zero weather. On the way we saw a Starling, perched high on a building, trying to sing. On entering the Park we saw a White-throated Sparrow. I have seen this species more times than any other this month—of course, excepting the common Sparrow.

On nearing our 'hunting-grounds,' we heard the familiar '*cree-e*' of a Brown Creeper, and soon discovered the little fellow hard at work, as usual. A little later we came upon the beautiful Cardinal, with his two wives. It is a fact that there are one male and two

females, though probably only one is his real mate. He does not, however, appear to be partial to either.

Further on we found what we were chiefly looking for—a flock of lively little Chickadees. I found that I had only a very small supply of hazelnuts with me, but I made the best of them. There was a good deal of snow on the ground, which made the Chickadees unusually tame—being hungry. They would light on our hands, inspect the pieces of crushed nut there, knock off the ones that did not suit them, and finally fly off with one—usually the largest. We soon began to recognize separate birds, and gave them names; such as 'Buffy,' 'Pretty,' etc. Then our attention was attracted by the queer noise made by the Nuthatch, and this trunk-crawling friend of ours appeared. We think that continued close inspection of tree-trunks has made him near-sighted, because when you throw him a piece of nut he generally just gazes at it, grunts a little, and then looks at you again. My cousin suggested that when he did find what you threw him, it was by the sense of hearing rather than that of sight, as he can generally find a big piece that makes a noise in falling. When he succeeds in getting 'something good,' he wedges it into the bark somewhere and hits it with his bill.

But, between the Nuthatch, the Chickadees, and the hungry squirrels—that would sit up with their paws on their breasts, and their heads on one side, imploring for food, it is needless to say successfully,—our small supply of nuts was soon gone. So we went home as fast as we could, procured more nuts, and in twenty minutes were again in the 'hunting grounds.' But we found, to our dismay, that others had monopolized our flock of chickadees! However, what partly compensated for this, was a good close view of a Downy Woodpecker. There is a pair of these birds around here, which you are almost sure to see,—either together or singly.

But it was soon time to go home, and on the way we heard the lively song of the European Goldfinches, and soon found four of them high up in a tree. They are shy birds, and flew as we approached. They feed on pine cones, and a flock of them will take possession of a pine tree, hide themselves in the dark tufts of pine needles, and eat the seeds at their leisure. The only way you can have knowledge of their presence is by the frequent cracking of the seeds heard. For a long time we thought they were Crossbills, but one day a flock of noisy Sparrows came into the tree and drove the quiet Goldfinches out of their tufts—much to my surprise, for I did not suppose that Goldfinches, which I had been accustomed to find singing loudly, could keep so quiet. We also saw a Song Sparrow quietly picking away at some bird-seed scattered there.

The Myth of the Song Sparrow

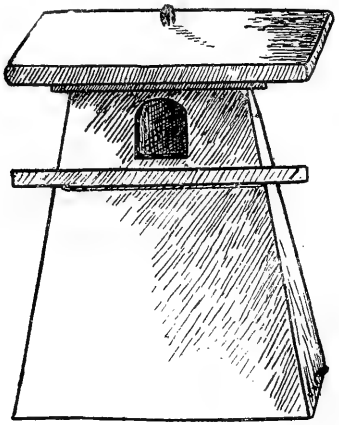
BY ERNEST SETON THOMPSON

His mother was the Brook, his sisters were the Reeds,
And they every one applauded when he sang about his deeds.
His vest was white, his mantle brown, as clear as they could be,
And his songs were fairly bubbling o'er with melody and glee.
But an envious Neighbor splashed with mud our Brownie's coat and vest,
And then a final handful threw that stuck upon his breast.
The Brook-bird's mother did her best to wash the stains away,
But there they stuck, and, as it seems, are very like to stay.
And so he wears the splashes and the mud blotch as you see,
But his songs are bubbling over still with melody and glee.

Notes from Field and Study

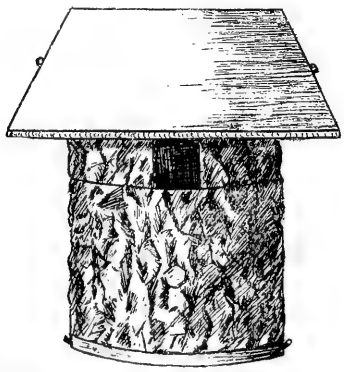
Sparrow Proof Houses

Mr. D. R. Geery, of Greenwich, Conn., sends us descriptions of the two bird-houses here figured. When designed for Bluebirds, they should be suspended from



Made of rough boards. Size, 6 inches high, 5½ inches square at the bottom, 3½ inches square at the top.

a limb ten or twelve feet from the ground, in such a manner as to allow them to swing slightly. Mr. Geery writes: "It may happen that the Sparrows will go to these houses and even commence to build, but, as soon as they find that they swing and are not firm, they will abandon them entirely. Wren boxes should be stationary, with an opening not much larger than a twenty-five-cent piece, and placed so as to be well shaded most of the day."



Made from a bark-covered log, 8 inches long and 8 inches in diameter, a hole 5 inches in diameter being bored from end end, leaving an outer wall 1½ inches thick.

A Musical Woodpecker

In the pursuit of my profession I had occasion for some time to travel over a certain road, along which is a telephone line, the glass insulators of which are placed on short pieces of hard wood which are nailed directly to the post.

Probably half a dozen times, when on this road, I saw a male Downy Woodpecker perched directly beneath the hard wood block, pecking at it in a manner to make the wire ring, then pausing and evidently listening to the music it had produced.

When the vibration ceased the performance was repeated and continued at intervals until I was obliged to drive by and frighten the bird away.—Dr. D. L. Burnett, *South Royalton, Vt.*

An Ornithologist at San Juan

An English newspaper correspondent, who called at the American Museum of Natural History to identify certain birds which he had seen in Cuba, gave an interesting illustration of how, under the most adverse circumstances, an enthusiastic naturalist may exercise his powers of observation. He said, "I noticed at San Juan a bird which seemed to be much alarmed by the firing. He hopped from the bushes to the lower branches of trees, and then, limb by limb, reached the tree tops," and continued with a readily identifiable description of the singular Cuban Cuckoo, locally known as Arriero (*Saurothera merlini*).

There is one bird in Cuba, the Turkey Buzzard or Vulture, of which many of our soldiers probably retain a too vivid recollection, but how many of the men who were at San Juan can recall any other bird observed during the day of battle?

Book News and Reviews

SKETCH BOOK OF BRITISH BIRDS. By R. BOWDLER SHARPE, L. L. D., F. L. S. With Colored Illustrations by A. F. and C. LYDON, London: Society for Promoting Christian Knowledge, New York, E. & J. B. Young & Co. 4to. Pages xx + 255. Numerous colored illustrations. Price, $6.

Although more books have been written about British birds than on the birds of any other region, and although Dr. Sharpe has written more bird books than any other living ornithologist, this we believe is the first treatise he has produced on the birds of his native land. He explains that the text is only a "running commentary" on the pictures, but claims that his "Systematic Index" is "the most complete record of the birds in the 'British List' yet published." It enumerates 445 species of birds which, according to Dr. Sharpe, have been recorded from Great Britain. In his 'Introduction' he classifies these according to the manner of their occurrence, as follows: Species which have probably escaped from confinement, 14; Indigenous species, 138; Visitors from the South — regular, 70, occasional or accidental, 69; Visitors from the East — regular, 5, accidental or occasional, 38; Visitors from the North — regular, 35, occasional or accidental, 29; Visitors from the West — regular 1, occasional, 43. The latter are all American species, and the number recorded indicates how much more frequently our birds are found on the other side of the Atlantic than European birds are observed here.

The illustrations consist of colored vignettes in the text of nearly every species. They are not above criticism, but, on the whole, are excellent and form a far more certain and convenient aid to identification than the most detailed description or elaborate key. In many cases even American species of accidental occurrence are figured, and, in this connection, we are tempted to ask why British authors cannot use for our birds the names by which they are known in this country? Who would recognize the Rusty Blackbird under the name of the "Rusty Black Hang-Nest," a misnomer in every sense of the word, or our Robin as the "American Thrush," to cite two among numerous examples. F. M. C.

Book News.

IT is exceedingly gratifying to find the American Ornithologists' Union, as represented by Mr. Witmer Stone, the Chairman of its Committee on Bird Protection, taking so strong a stand on the question of egg-collecting. In his annual report to the Union (The Auk, XVI, January, 1899, p. 61), Mr. Stone says, "Egg-collecting has become a fad which is encouraged and fostered by the dealers until it is one of the most potent causes of the decrease in our birds. The vast majority of egg-collectors contribute nothing to the science of ornithology, and the issuing of licenses promiscuously to this class makes any law for bird protection practically useless.

"Too often boys regard the formation of a *large* collection of eggs or birds as necessarily the first step towards becoming an ornithologist of note; but if those who have already won their spurs will take the trouble to point out to the beginners the lines of work which yield results of real benefit to science, they will be led to see exactly how much collecting and what sort of specimens are really needed for scientific research, and not needlessly duplicate what has already been procured. Further, they will in all probability become known as original contributors to ornithological science, while as mere collectors they would bid fair to remain in obscurity."

Mr. Stone's report is of the utmost interest to all workers for the better protection of our birds. We have not space to notice it further here, but it may be obtained by addressing him at the Academy of Natural Science, Philadelphia, Pa., and enclosing six cents in stamps.

Two ornithological organizations established, in January, magazines for the publications of their proceedings and papers relating to the avifauna of their respective states. The first, the 'Journal of the Maine Ornithological Society,' an octavo quarterly, is edited by C. H. Morrill, at Pittsfield, Maine; the publisher and business manager being O. W. Knight, of Bangor, Maine. The second, the 'Bulletin of the Cooper Ornithological Club,' is edited by Chester Barlow, of Santa Clara, California, with the assistance of Henry Reed Taylor and Howard Robertson. The business managers are Donald Cohen, of Alameda, and A. I. McCormick, of Los Angeles, California. Both journals are the outgrowth of a demand on the part of the societies they represent for an official organ, and they will undoubtedly exert a stimulating influence on the study of birds in the states in which they are published.

We have also to acknowledge the receipt of the initial number of a third new periodical, 'Nature Study in Schools,' conducted by the well-known naturalist, C. J. Maynard, at West Newton, Mass. It is an illustrated monthly of 26 pages, containing papers interesting alike to teachers and students, and should prove very helpful in its chosen field.

Houghton, Mifflin & Company have in press a bird-book for children by Mrs. Olive Thorne Miller, to be entitled 'The First Book of Birds.' As its name indicates, it will aim to introduce its readers to the study of birds by taking them from the nest through all the ordinary phases of a bird's existence, and including chapters on structure, economics, directions for study, etc. The book will be illustrated, and its author's experience as a student and teacher of birds is an assurance that it will be a valuable addition to ornithological literature.

Few nature books not designed to assist in identification of species have met with the sale that has been accorded Ernest Seton Thompson's 'Wild Animals I Have Known' (Charles Scribner's Sons). Published late in October, it went rapidly through several editions, and by January 1, or little more than two months after its appearance, 7,000 copies had been disposed of.

The reason for this phenomenal success is not hard to find; it appears on every page of the book, the text, illustrations, and make-up of which are equally pleasing.

Mr. Thompson goes a step further than most students of animals in nature. He does not present us with the biography of the species, but with its personal history, and his minute knowledge of and close sympathy with his subjects leads to his writing a singular charm.

Josephine A. Clark, of 1322 Twelfth street, N. W., Washington, D. C., publishes a useful 'Bird Tablet for Field Use.' It is abridged from the 'Outline for Field Observations' in Miss Merriam's 'Birds of Village and Field,' and may be obtained from the publisher for the sum of twenty-five cents.

Mr. C. A. Babcock, well-known as the originator of Bird-Day, has in manuscript a book entitled 'Bird-Day and How to Prepare for It,' which will undoubtedly be of much assistance to teachers, and add greatly to the value of Bird-Day observances.

The following books and papers relating to birds have been received and will be reviewed in future numbers: The Cambridge Natural History, Vol. IX, Birds, by A. H. Evans (The Macmillan Co.); The Birds of Ontario in Relation to Agriculture, by Charles W. Nash; The Winter Food of the Chickadee, The Feeding Habits of the Chipping Sparrow, by Clarence M. Weed; A Preliminary List of the Birds of Belknap and Merrimack counties, New Hampshire, with notes, by Ned Dearborn; Check List of British Columbia Birds, by John Fannin.

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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SUBSCRIPTION RATES.

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THE establishment of BIRD-LORE has brought its editor in touch with many previously unknown friends, who, with the utmost kindness, have expressed their approval of the new publication and predicted for it a successful career. To thank all our correspondents individually has been out of the question, and we take this means, therefore, to assure them of our appreciation of their good wishes.

Doubtless they will be interested to know that within two weeks after the publication of BIRD-LORE, the publishers had disposed of more copies than it was supposed they would sell in two months, while the demand for specimen copies was so large, that at the end of the same period our edition of 6,000 was nearly exhausted and we were obliged to issue a notice to the effect that the remaining copies would be delivered only to subscribers.

THE Lacey-Hoar Bird Bill has met with a greatly to be regretted fate. With earnest advocates of bird protection in both the House and Senate, and with sufficient support to ensure the passage of any desirable measure, the prospects of securing needed legislation seemed to be excellent. Doubtless both Congressman Lacey's and Senator Hoar's bills would have passed if they had been presented separately, but making the latter an amendment to the former, created a series of contradictions that apparently could not be adjusted in conference, and, as a result, measures the intent of which the majority of both houses evidently favored, failed to become laws.

However, the terms of neither Mr. Hoar nor Mr. Lacey have expired, and it is to be hoped that before the next Congress convenes they will have prepared a bill in which their interests in birds will be harmoniously presented.

ONE of the most dangerous enemies threatening our birds to-day is the man who, under the mask of 'science,' collects birds and their eggs in wholly unwarranted numbers. He is dangerous not alone because of the actual destruction of life he causes, but because his excesses have brought into disrepute the work of the collector who, animated by the spirit of true science, and appreciating the value of life, takes only those specimens which he needs to assist him in his studies.

For this reason we feel it to be our duty to publicly protest against such wholly inexcusable nest-robbing as Mr. L. W. Brownell, of Nyack, N. Y., confesses himself to be guilty of in the January issue of 'The Osprey.' In describing a visit to Pelican Island, Florida, he states that in "about an hour he had collected all the eggs he could conveniently handle, about 125 sets."

This is an outrageous piece of bird-slaughter. It is especially to be deplored because Brown Pelican quills and back feathers are fast becoming fashionable, and, unless the species is protected, Florida will speedily lose one of its most characteristic and interesting birds. But how can we expect women, unfamiliar with the bird in nature, to aid in its protection, when people who have seen it in its haunts, and know how much it adds to Florida's coast scenery, ruthlessly destroy it.

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.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries.

New Hampshire.....MRS. F. W. BATCHELDER, Manchester.
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Minnesota.....MRS. J. P. ELMER, 314 West Third street, St. Paul.

The Conducting of Audubon Societies

It is one thing to organize a society or club and quite another to set it upon a permanent footing and keep it in step with the constant requirements of progression. At a time when a great majority look askance at the startling array of societies that they are asked to 'join,' it behooves all Bird Protective bodies to conduct themselves with extreme conservatism, that they may not bear the stigma of being called emotional 'fads,' but really appeal to those whom they seek to interest.

Many men (and women also) have many minds, and a form of appeal that will attract one will repel another. It is upon the tactful management of these appeals and the bringing of the subject vitally home to different classes and ages, that the life of the Audubon Societies depends.

Leaflets have their influence with those who already care enough to take the trouble to read them. Special exercises in schools have a potent influence for good. But the best method of spreading the gospel of humanity, is that by which it was first spread 1900 centuries ago, by personal contact and the power of the human voice. A few spoken words are worth a score of printed ones. A compelling personality is worth a well of ink in this Bird Crusade of 1899. Let the heads of societies come in contact with the members as much as possible, and gather them in local circles. Let those who are able to speak about birds do so, and let those who lack the gift of words read aloud from the works of others.

Whenever possible, urge local secretaries to hold bird classes during spring and summer in their respective towns. If no one person knows enough to teach the others let them club together, buy a few books, and, going out of doors, work out the problems of identification as best they may, until every little village has a nature study class working its way, Chautauqua-Circle fashion. Remember one point, please. No society can succeed that is content to count the quantity rather than quality of its members. One hundred intelligent members who know how to spread the *why* and *how* of the crusade are worth 10,000 who have merely 'joined' because some one they were proud of knowing asked them to and it was easier to say 'yes' than 'no,' especially as

the *saying* was all it cost. Also, no society succeeds that *bores* people into joining it. Remember that no matter how near one's own heart a project may be, we have no right to *force* it upon others. We have no right to take people by the throat, so to speak, to make them pause and listen, but setting a high standard, holding out a helping hand and making the way attractive to those who wish to reach it is a different thing, and is the only sane policy under which Audubon Societies can be conducted. One word to you who wish to see the societies flourish, who love birds, but are shy and retiring, and do not care to commit yourselves to joining anything. You may safely join the cause in *spirit* by sending a nice little check to the treasurer of your local state society. Piers Plowman discovered long ago that he couldn't "spede" far without money, neither can the Audubon Societies.—M. O. W.

A Letter from Governor Roosevelt

At the annual meeting of the New York State Audubon Society, held in the American Museum of Natural History on March 23, 1899, a letter was read from Governor Roosevelt, which is of such interest and importance that we print it in advance of a report of the meeting, which will appear in a future issue.

Governor Roosevelt regretted his inability to be present, and addressed the following letter to Mr. Frank M. Chapman, Chairman of the Executive Committee:

My dear Mr. Chapman:—

I need hardly say how heartily I sympathize with the purposes of the Audubon Society. I would like to see all harmless wild things, but especially all birds, protected in every way. I do not understand how any man or woman who really loves nature can fail to try to exert all influence in support of such objects as those of the Audubon Society.

Spring would not be spring without bird songs, any more than it would be spring without buds and flowers, and I only wish that besides protecting the songsters, the birds of the grove, the orchard, the garden and the meadow, we could also protect the birds of the sea shore and of the wilderness.

The Loon ought to be, and, under wise legislation, could be a feature of every Adirondack lake; Ospreys, as every one knows, can be made the tamest of the tame, and Terns should be as plentiful along our shores as Swallows around our barns.

A Tanager or a Cardinal makes a point of glowing beauty in the green woods, and the Cardinal among the white snows.

When the Bluebirds were so nearly destroyed by the severe winter a few seasons ago, the loss was like the loss of an old friend, or at least like the burning down of a familiar and dearly loved house. How immensely it would add to our forests if only the great Logcock were still found among them!

The destruction of the Wild Pigeon and the Carolina Paroquet has meant a loss as severe as if the Catskills or the Palisades were taken away. When I hear of the destruction of a species I feel just as if all the works of some great writer had perished; as if we had lost all instead of only part of Polybius or Livy.

Very truly yours,

THEODORE ROOSEVELT.

Reports of Societies

PENNSYLVANIA SOCIETY

The Audubon Society of Pennsylvania was organized in October, 1896, and was the first society to follow the admirable example set by Massachusetts. During the first year 2,200 members were enrolled and nearly 30,000 circulars distributed. The first annual report was sent out in November, 1897, and it mentions a 'Hat Show,' and a course of lectures to be given in Philadelphia during the spring. Both of these were carried out with marked success, the 'Hat Show' attracting much attention to the work of the society, and

the lectures adding materially to its income, as there are no dues of any kind connected with membership. The second annual report appeared in November, 1898, and announces an increase of 1,100 members during the year. It referred to the fact that as a direct result of the 'Hat Show' several of the best milliners had established special Audubon departments. Lectures were given in many parts of the state with most satisfactory results, and finally, the coöperation of school teachers was solicited to observe May 5, 1899, as Bird-Day. A course of five lectures, by Mr. Stone, will be given this year at the Acorn Club, Philadelphia, beginning March 16. A number of new slides have been bought by the society to illustrate these lectures, and the course promises to be more interesting than ever. Since the second report was issued seven new local secretaries have been secured, making 42 in all. It is hoped that this number will be doubled during the coming year, for as the membership, which is now nearly 3,800, continues to increase, the need of workers throughout the state becomes more important every day.

Julia Stockton Robins, *Sec'y.*

INDIANA SOCIETY.

In 1889 the Indiana Academy of Science appointed a committee, of which I was chairman, to secure the passage of a satisfactory law for bird protection. The committee accomplished nothing. It was continued, and in 1891 secured the enactment of the enclosed law. The Academy of Science has, through its efforts in the way of advancing science work in the public schools of the state, encouraged and taught bird protection. In this it has had, since 1890, the co-öperation of the Indiana Horticultural Society.

In 1897 at different times several bodies were interested in the movement in favor of bird protection. These appointed committees. These committees united in a call for a meeting to be held at Indianapolis. A programme was prepared, and the meeting held in the State House April 26, 1898. I send you a copy of the call and programme; also of the constitution of the Indiana Audubon Society. The Governor, and Superintendent of Public Instruction have both been much interested, and as a consequence Bird Day and Arbor Day were celebrated October 28, 1898. The "Outline of Township Institute Work" has gone into the hands of every teacher and school officer in the state. . . . You will see that the work we are doing is practical, even though it is not so much as some States are accomplishing. I have not the enrollment or statement of publications issued, but counting the issue of the State Department of Public Instruction, 20,000 copies of different articles, at least, have been distributed.

Amos W. Butler, *Sec'y.*

ILLINOIS SOCIETY.

The past year has shown a very marked improvement as the results of bird protection and the general work of our Illinois Audubon Society. While the fashion for decorating hats with feathers still continues, yet there is a very noticeable decrease in the display of aigrettes and the feathers of wild birds. I have visited the establishments of several of our Chicago wholesale milliners and find that the larger portion of their stock, this fall, is made up of the feathers of the domestic fowl and game birds. Our Audubon Society has had two public meetings this year, which were well attended, and the interest in its work has rather increased than abated. Our membership has increased to 3,426. We have liberally distributed leaflets, including 500 of our circulars, stating the purpose of the society, to the editors of local newspapers in the state, with request that they aid the society by publishing same and calling attention to it editorially.

On February 7, 1898, an Interstate Convention was held in Chicago, represented by the game and fish wardens, and delegates appointed by the legislatures of the six states which responded to the call. At

the request of Mr. Witmer Stone, I presented at this convention the text of a new law for the protection of birds and their nests and eggs, as drafted by our committee on Bird Protection. The convention agreed to submit the proposed law to each of their respective legislatures.

Great credit is due to the efficient work which has been done in our state by Warden H. W. Loveday and his deputies. Since the first of the year over one hundred prosecutions and convictions have been made, for the wanton killing and trapping of song and insectivorous birds by men and boys largely Italians and Bohemians. In 1897 there were 580 convictions in the state for the illegal killing and transportation of game birds. This year the game has been so carefully watched and such prompt action taken of reported cases of violation, that the poachers and market hunters have been less bold, and the number of arrests and seizures of game have been reduced over one-half.

On April 9, 1898, as a result of the efforts of County Superintendent of Schools Mr. Orville T. Bright, a meeting was held in Chicago in the interest of the school teachers of Cook county. Over three hundred were present, and the meeting was devoted exclusively to birds, and addresses given by several members of the Audubon Society. A "Finding List" of sixty species of birds, compiled by Mr. Frank E. Sanford, Superintendent of the La Grange, Ill., Schools, was distributed. This is a most effective method to inspire the teachers and in turn impart their love for birds to the scholars.

RUTHVEN DEANE, *President.*

IOWA SOCIETY.

Under the auspices of the Keokuk Woman's Club, the Audubon Society of Iowa was organized April 5, 1898.

The first work taken up was the establishment of Bird Day in the public schools.

The second meeting was held in Rand Park. Short talks were made by Hazen I. Sanger, John Huiskamp, Rabbi Faber, Doctor Ehinger, and a paper was read by Miss Read.

We have bought and distributed through the schools, from kindergarten up, bird pictures and bird literature.

One of our men milliners asked to become a member.

On August 6 the officers of the society met and adopted articles of incorporation, this being the first Audubon Society to be incorporated under the laws of Iowa. The laws of Iowa give fair protection to the birds; our work is in creating the right sentiment.

NELLIE S. BOARD, *Sec'y.*

MINNESOTA SOCIETY

Mr. John W. Taylor, President of the Minnesota Audubon Society, reports the passage of a law establishing Arbor and Bird Day in Minnesota, and writes: "It is, as you can well imagine, a source of great gratification to the lover of birds in the state, and especially to the Audubon Societies. Through this law we can do more towards bird protection than we could accomplish in many years' labor without it. It brings the subject before the teachers and children, and as you educate the child so you mould the man. We have now in this state 58 branch societies, besides many school organizations and children's bird clubs. The number of members I am not able to give, as I have not all the reports in. We have sent out considerable literature, and used the press largely to interest our people. We feel that we are doing wonders for the first active year we have had, and congratulate ourselves that the hardest work is done. We hope by April 1st to have a branch in every county in Minnesota."

REPORTS from the New Hampshire and Wisconsin Societies and a notice of the American Society of Bird Restorers are necessarily postponed until June.

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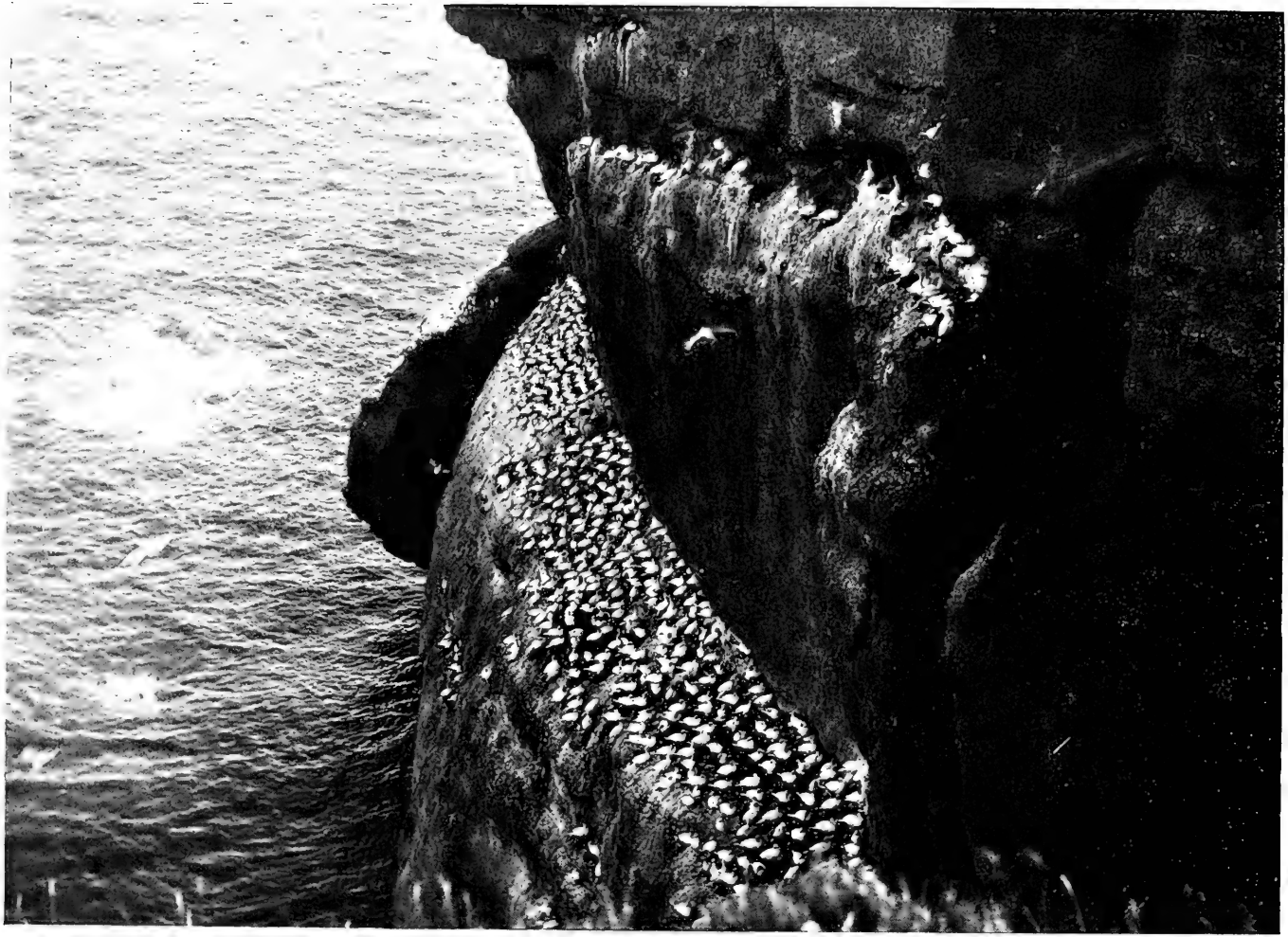

GANNETS ON BONAVENTURE ISLAND

Bird-Lore

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

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Gannets on Bonaventure

BY FRANK M. CHAPMAN

(*See Frontispiece*)

GANNETS (*Sula bassana*) are known to nest in only three places in North America—Perroquet Island, the Bird Rocks, and Bonaventure Island, all in the Gulf of St. Lawrence. By far the largest colony is found on the last named island, where, on the ledges of the red sandstone cliffs, some three hundred feet in height, they are practically secure from molestation. Bonaventure Island itself, however, is the most accessible of the three localities mentioned, and may be easily reached in a small fishing boat from the neighboring village of Percé, where the famous Percé Rock, with its colony of Herring Gulls and Double-crested Cormorants, makes the region particularly interesting to the ornithologist.

The Gannet cliffs are on the east side of Bonaventure, and are exposed to the full force of the sea. To visit them satisfactorily, therefore, one should select a calm day, when one may closely approach the cliffs, and view with both safety and comfort the long, white rows, containing thousands of birds nesting on the shelves and ledges on the face of the cliff; a remarkable spectacle!

The unusually turbulent sea which prevailed during my visit to these cliffs, on July 11, 1898, prevented me from securing satisfactory pictures from a boat, but, landing on the west side of Bonaventure, I crossed the island (here about one and a half miles in width), and reached a position on the crest of the cliffs, from which the accompanying picture was made. About four hundred Gannets are shown nesting on this single ledge—one of many quite as densely populated. Preparations were made to secure a picture of these birds on the wing, but my best efforts to startle them into flight did not succeed in making a single bird leave its nest!

Clark's Crows and Oregon Jays on Mount Hood

BY FLORENCE A. MERRIAM

(*Concluded from page 48*)

CLARK'S CROW AND OREGON JAY
Photographed from nature by Florence A. Merriam

ALTHOUGH the Nutcrackers and Jays were masters of the feast, they did not altogether monopolize it. Ground squirrels with golden brown heads and striped backs would look out at me from the rocks, and pretty little striped-nosed chipmunks would pick up choice morsels and climb nimbly back along the cliff with them. Juncos often dropped in, pecked indifferently at the crumbs, slipped off the tin cans they tried to perch on, and flew off. Two Lewis' Woodpeckers stopped one day and, flying down, clung awkwardly to the side of the cliff, as if vaguely wanting to join in the proceedings, but not knowing how, finally left. A single Steller's Jay hung around the outskirts in the same way, the first day I was there. He hopped about, looked this way and that, and pecked at the food perfunctorily, as if it was new to his palate and not quite to his mind, acting altogether as if he realized that something was going on he ought to be enjoying, though he really didn't see just where the fun came in. Unlike the Woodpeckers, however, he was determined to improve his opportunities, and cultivated his appetite so successfully that on the last day when I visited the dining-room he and a comrade were working away, apparently enjoying the viands as much as their neighbors.

But the Crows and Oregon Jays were the regular habitues of the place. When resting from his labors a solitary Crow would often perch on the tip of a bare spar on the crest of the cliff, apparently quite satisfied with his own society, but I never saw a Jay there, and one whom I did see separated from his band for a moment fairly made the welkin ring with shouts for his clan. Several Clark's Crows were often at the table with the Jays, but while I never saw a Crow disturb a Jay, a Crow would often fly with animation at a newcoming fellow Crow. This was a surprise to me, for on Mt. Shasta I had seen the Nutcrackers hunting in bands quite as the Jays did here. But on the wide lava slopes of Shasta there were, doubtless, grass-

hoppers enough for all the world, while here the feast was restricted to the foot of one cliff on the mountain — quite a different matter. When I spoke to Mrs. Langille about this difference in disposition, she acquiesced as if it were an old story to her, unhesitatingly denominating the Jays 'generous fellows,' and the Crows 'greedy' ones.

One Crow made a special exhibition of egoistic tendencies. He was engaged in hurriedly carrying off future breakfasts for himself when a party of brother Crows appeared. He had been working with absorption, flying back and forth to the table with eager haste, being gone less than half a minute at a time, but on the arrival of his friends dropped his work and devoted himself to driving them from the field. Not content with keeping them from the table, he flew at them with a strange note of ominous warning when they sat quietly in the tree-tops. It seemed as if he were nervous lest they discover what he had been storing among the branches. When he had fairly routed the enemy he apparently acted on his fear of discovery, for, instead of placing his supplies near at hand as before, he flew out of sight with them. As before, he worked with nervous haste. As I looked down on the tree-tops from above it was impossible to see where he put all the food, but several times when he flew up in sight he seemed to be sticking small bits between the needles of the pines. As the bunches of needles are compact and stiff in this white-barked pine (*Pinus albicaulis*), this might be a safe temporary cache, but the winter gales that make it necessary to hold down the Inn with huge cables would presumably leave little biscuit between the needles of a pine.

OREGON JAYS
Photographed from nature by Florence A. Merriam

The question is, do these birds — and others which hoard — really use their stores? The testimony of all who are in the field in winter is needed to clear up the matter. The first point to be determined is whether the individual birds winter where they store. The Nutcrackers, Mr. Langille informed me, do remain at the high altitudes all the year. As he said, it is stormy indeed when they cannot be seen sailing across the cañons or perched on the topmost branches of the trees, screaming and calling in their harsh way, always restless and seeming to resent any intrusion of man, beast,

or fowl. On the other hand, he said that the Jays seldom remain at the high altitudes during the winter months, usually descending to lower elevations, where they flit about in flocks of from six to twenty, sounding their plaintive varied notes and whistles at all times.

Nevertheless, the storing of the Crows at this altitude was certainly much less systematic than that of the Jays. The Jays' movements were easy to follow, for they were concerted and regular. The Inn was on a ridge between two cañons, and commanded the birds' pathway. A band would come up from under the cliff at the top of the western cañon, cross over the ridge, and drop down into the eastern cañon, where they would fly over the tops of the firs

CLARK'S CROW
Photographed from nature by Walter K. Fisher

till they disappeared from sight. They would be gone some little time, and then return empty-handed to repeat the performance.

The Jays talked a good deal in going back and forth, and their notes were pleasantly varied. One call was remarkably like the chirp of a Robin. Another of the commonest was a weak and rather complaining cry, repeated several times; and a sharply contrasting one was a pure, clear whistle of one note followed by a three-syllabled call, something like *ka-wé-ah*. The regular rallying cry was still different, a loud and striking two-syllabled *ka-wheé*. The notes of Clark's Crow often suggested the rattling of the Red-headed Woodpecker. The bird had a variety of *kerring*, throaty notes, and when disturbed, as at the unexpected sight of me at its dining-room, gave a loud, warning *quarr*. Besides these Woodpecker-like calls, it had a squawking cry similar to that of Steller's Jay.

The voices of the birds were often heard from the house as they got water from the hydrant in front of the Inn, the Jays frequently stopping on the way back from their cañon storehouse. Sometimes

three Jays would suddenly appear overhead, drop noiselessly to the pool under the hydrant, and squatting close together fill their bills and then raise their heads to swallow. Though the Jays usually went to the pool for water, they would sometimes light on the hydrant and, leaning over-drink from the faucet, which Mrs. Langille always left dripping for their benefit. The Clark's Crows, so far as I noticed, always drank right from the faucet.

CLARK'S CROW
Photographed from nature by Walter K. Fisher

It was hard to get photographs of the birds at the hydrant, as they stopped only in passing, but as it was impossible to take them under the cliff on account of the poor light, I determined to bait them. Finding a number of the Nutcrackers in front of the kitchen window, I asked the Chinaman for some meat for them, holding up my kodak to explain that I wanted to take the birds' pictures. To my surprise, the man promptly and decidedly shook his head! I didn't know what to make of such apparent rudeness at first, but it finally dawned on me that he could not understand English and, not being an ornithologist, from past experience with tourist cameras concluded that I wanted *his* picture! Accordingly, nothing daunted, I appealed to Mrs. Langille, and when she gave me a plate of suet, returned to take the Crows. They flew at my approach, but quickly settled back and fairly fell on the meat I put in the road for them. I got a snap of one with a big mouthful. After taking all the Nutcrackers I wanted, I went back to the hydrant to wait for the Jays, but the Crows followed and one fellow fairly gorged himself on the fat. He gulped it down so fast I had to drive him off in order to have either meat or films left for the Jays. It was hard to persuade him that I wanted him to leave. He had had no experience of such inhospitality. Mild shooing did no good. I actually had to throw small stones at him before he would take the hint! When he finally started to go, I got his picture as he turned and looked regretfully over his shoulder at the Jay he was leaving in possession of the field.

The Jays were even more fearless than the Crows. Several of them would often be on the ground at once, but they ate so fast and flew back and forth so rapidly that it was hard to focus on them quickly enough to get their most interesting poses. I put a

brown paper behind or under the pan for a lighter background, and at first the birds hopped nervously when it moved, but they soon got used to it, and ate on it and on the pan, as it happened. And how they did stuff! They were so absorbed that, although I sat within four feet of the pan, they sometimes came too near for me to focus. They paid so little heed to my presence I have no doubt they would have eaten from my hand had I not been engaged in keeping them at a proper distance. When the raw meat was gone Mrs. Langille gave me a supply of cooked fat, and it was astonishing to see how much of the greasy stuff they could swallow. I caught one just as he was about to fly off with a billful of it. The fat seemed to make them thirsty; they had to go to the hydrant to wash it down with cold water.

Meat Hawk, the name the mountaineers have for them, is certainly appropriate. They are on the lookout for meat wherever it is to be found, be it kitchen door or forest. Their appetite for game is truly remarkable. Mr. Langille told me he might go through the woods all day without seeing a single Jay, but if he killed a deer and the smell of blood filled the air, in a few moments the birds would be about, calling and whistling; and, emboldened by the prospect of a feast, they would fly down and perch upon the carcass within reach of his hand, sometimes before the deer was entirely skinned.

CLARK'S CROW
Photographed from nature by Walter K. Fisher

On Mount Shasta, although the Nutcrackers came about camp, they showed no desire for camp food, and on Hood Mr. Langille informed me that the Crows tamed this year were the first they had ever succeeded in coaxing about. After I left the mountain they became still more familiar, and, I am told, would gather in the trees at daybreak and call until the family went out to feed them.

The Masquerading Chickadee*

BY EDITH M. THOMAS

I came to the woods in the dead of the year,
I saw the wing'd sprite thro' the green-brier peeping:
"Darling of Winter, you've nothing to fear,
Though the branches are bare and the cold earth is sleeping!"

With a *dee, dee, dee!* the sprite seemed to say,
"I'm friends with the Maytime as well as December,
And I'll meet you here on a fair-weather day;
Here, in the green-brier thicket,—remember!"

I came to the woods in the spring of the year,
And I followed a voice that was most entreating:
Phebe! Phebe! (and yet more near),
Phebe! Phebe! it kept repeating!

I gave up the search, when, not far away,
I saw the wing'd sprite thro' the green-brier peeping,
With a *Phebe! Phebe!* that seemed to say,
"I told you so! and my promise I'm keeping."

"You'll know me again, when you meet me here,
Whether you come in December or Maytime:
I've a *dee, dee, dee!* for the Winter's ear,
And a *Phebe! Phebe!* for Spring and Playtime!"

*"March 1, 1856.—I hear several times the fine drawn *Phe-be* note of the Chickadee, which I heard only once during the winter."—"Early Spring in Massachusetts."—Thoreau.

Matins

BY ROSA MEYERS MUMMA

As sable night fades into soft rose tint,
Through leafy aisles slow filters daylight's glint;
From green tree arch is faintly heard the call
Which summons quickly feathered choir all
To Nature's vast cathedral, where in song
Unite the worshippers, a feathered throng.
What harmonies pour forth from each bird throat!
A morning prayer ascends with each clear note.

Home-Life in a Chimney

BY MARY F. DAY

NEAR BOONTON, N. J., it was my good fortune last summer to have the exceptional opportunity of watching closely the rearing of a family of Chimney Swifts. The nest was built opposite and slightly above an opening in the chimney designed for the insertion of a stovepipe. The opening was about two feet from the floor of a second-story room in the house where I spent the summer.

When discovered, the nest was only partially completed, so it was necessary to exercise care, lest the birds become alarmed and choose a more secluded spot. To guard against disturbance to them, a black cloth was hung over the opening in such a way that it could be carefully and noiselessly lifted during periods of observation. Although the room was used as a bedchamber throughout the summer, the Swifts never seemed to be annoyed by the close proximity of their human neighbors. They were of a trustful disposition, and soon became accustomed to being watched. Occasionally, when I looked in upon them at the beginning of our acquaintance, they would spread their long, beautifully formed wings and lift them gracefully above the back, as if intending to fly, but usually, upon second consideration, would conclude it was unnecessary.

It was the 21st of May when I first peeped in upon the little bracket against the chimney wall that became the stage for the enactment of scenes filled with absorbing interest to me in the weeks that followed. It was not placed in an angle, but against the north side of the flue, beneath a slight projection formed by an accumulation of soot.

In a week one egg was apparent, but there may have been others, for the little builders had been adding one twig after another to the front edge of the nest, so that it had become impossible to see the bottom. Two more days passed, after which it could be seen that there were at least two eggs, and yet the structure continued to be enlarged.

June 5 marked the beginning of incubation. In mid-afternoon of this day I saw the sitting bird had flown, and, going out-of-doors to study birds, my attention was attracted to a Swift flying among the branches of the locust trees near by. This was an unusual sight to me, and, recalling that I had read that Swifts never alight in trees, I watched eagerly to see what it might mean. Soon I saw that the

bird was snatching at little dry twigs. She flew round and round, and presently was gone. Suspecting that it was my little friend, I ran quickly upstairs, and sure enough, there sat my bird upon the nest, with a twig in her mouth, panting as if tired by extra exertion. Resting a moment, she proceeded to apply the salivary glue and adjust the twig, and then settled again to the task of sitting.

After a few days there came a cold storm, and it was believed that the little brooder proved unfaithful to her duties, for late one evening and early the following morning she was seen huddled with others of her kind beneath the nest. Great were my fears that no birds would ever come from these chilled eggs, but time made it clear that the tiny creature knew what she was doing. This was the sole act of parental neglect that was apparent during all the weeks required to rear the family. Under date of June 17, I noted that the eggs were constantly protected. At whatever time of day I looked I saw a sitting bird.

June 24 dawned fair and warm. As was my custom, I called to say "good morning" into the chimney before going down to breakfast, when I found that there was excitement in the little home. A faint peep reached my ear, which caused the mother anxious restlessness each time it was repeated. From half-past eight until ten o'clock that morning I sat at my post of observation, during which time it appeared that two or three more young were hatched, for there was much peeping on the part of the little ones and much fidgeting about by the adults. Two shells, or parts of shells, were tossed from the nest. Occasionally the parents exchanged places, one brooding the infants while the other went out into the air. Even at the tender age that must be reckoned by minutes, these young birds were fed, seemingly, by regurgitation.

During the progress of my study I found that one of the pair, which from manners and appearance I judged to be the female, had lost a tail feather, and this one I affectionately dubbed "Swiftie." She appeared worn out with anxiety added to the confinement of a long period of incubation, and embraced every opportunity to rest, but seasons of sleep were of short duration, for it seemed that the body of the brooding bird was lifted each time a movement was felt beneath. The mate, with his sleek coat, bright eyes and calm demeanor, formed a decided contrast to the ragged, unkempt appearance of the female.

Even four days showed perceptible growth in the swiftlings. They were not allowed to remain uncovered, a wise precaution, for their bodies were perfectly naked. At this age the instinct of cleanliness began to assert itself. The weak, awkward little creatures would

struggle backward from beneath the brooder, up to the edge of the nest and deposit over it that which, remaining within, would have made their home uninhabitable.

From this time forth a third Swift was seen to enter into the care of the nestlings, taking its turn at brooding and feeding. Was this a nurse-maid employed to relieve the overburdened mother, or a kind and helpful friend or neighbor, or the younger and less care-taking of two wives? Who can tell?

It was not until the sixth day after hatching that I knew to a certainty how many young birds there were. Then, to my surprise, I found there were five. They had grown to be very clamorous for food. Two, at most three (later but one), were served at one feeding, and the process was after this manner: "Swiftie" would drop into the chimney and alight below the nest, her throat bulging with the fullness of captured insects. The little ones that were hungry were alert, for all had learned that a rumbling noise in the chimney, followed by a sound of "chitter, chitter, chitter," meant something to eat. After resting a moment, the mother would scramble up over the nest, and, with closed eyes, feel about until she came in contact with an open mouth, whereupon she would place her beak far down the throat, deposit a portion of food, then seek another yawning cavity. No system appeared to be observed in the matter of feeding. The hungriest youngsters made the greatest effort to reach the source of supply.

July 1 feathers began to appear. They grew rapidly, especially those of wings and tail, and in a week the bodies were about covered. With feathers came employment, for they must often be dressed, though from a habit of yawning frequently, common to the family, one might be led to believe that time hung heavily on their claws.

The nestlings were two weeks old before the eyes began to open, and nearly three before they were much used. But when they were fully open, and the feathers had grown out and were fast becoming sooty instead of black, how winning these young birds appeared!

The time had now come to take up exercises preparatory to flying. The young aspirants would stand in the nest and for a time vibrate the wings rapidly, so rapidly that the identity of wing was lost. Two first ventured from home when nineteen days old, clinging to the wall for a short time a few inches from the nest.

One afternoon about this time there came a severe and prolonged shower. The rain beat into the chimney, reaching down to the nest. What now did I see? Besides the five grown-up swiftlings, the three adults, packed in and upon the nest, the rain dripping from

those which were exposed. I mention this incident to give an idea of the adhesiveness of the glue used in the construction of Swifts' nests.

July 20 I made the following note: "Swiftlings no longer make use of the nest, but dispose themselves in various parts of the chimney, sometimes in a cluster, sometimes in twos or threes, and sometimes separately. They take flying exercises up and down the chimney, but I believe have not yet left it." The next morning I was forced to conclude that three had taken flight into the great outside world, for upon looking the chimney over thoroughly with the aid of a small mirror, I could find but two birds.

The chimney was much used by this interesting family until the 24th of August. Early in the morning of that day a large number of Swifts were seen gathering in a flock at a short distance from the house. Ten o'clock that night I searched the chimney with a lighted candle, but found no sign of life, and I believe that the Swifts did not again enter within its walls.

Three Cobb's Island Pictures

BY WILLIAM L. BAILY

BLACK SKIMMER

RIGHT out on the sandy beach, just above high tide, the Black Skimmer risks her set of eggs, and, while apparently unprotected, they are so much the color of the sand and the surrounding shells and seaweed that they would not be noticed unless you were especially looking for them.

The Skimmers are gull-like in form, with long, slender body and long wings, spreading almost three feet. They have a glossy black back, white breast, orange feet, and a most curiously shaped orange bill, which is almost as thin as a knife, the thin edges closing vertically together. This peculiarity has given the bird the name of 'Razor Bill.'

Their graceful and regular flight can hardly be mistaken for that of any other bird. They skim just over the surface of the water, following the contour of the waves, while the lower mandible of their

bill, which is longer than the upper, projects below the surface of the water, and when it comes in contact with a small fish, the latter simply slide up the narrow, inclined plane into the Skimmer's mouth.

Formerly they bred in great numbers along the eastern coast of our Middle and Southern Atlantic states, and only a few years ago

NEST AND EGGS OF BLACK SKIMMER

were abundant on the New Jersey coast. They have been crowded out, however, by encroaching civilization, and hunted down by the milliners' agents and the egg-collectors. In June, 1898, I found them on Cobb's Island, Virginia, to the number of about two hundred pairs, where, not long ago, they bred in thousands.

As the eggs are entirely exposed, the parents are relieved to some extent from the duty of incubation by the heat of the sun, and as soon as the young hatch they run about like chickens.

After getting two good pictures of the Skimmer and her eggs, I turned my attention to a Gull-billed Tern, and while standing over

GULL-BILLED TERN

her nest, which contained two eggs and one fuzzy young, just hatched, I obtained a rather remarkable picture of the parent bird flying straight at the camera, nicely illustrating what a small sectional area a bird occupies while flying.

The Cardinal at the Hub

BY ELLA GILBERT IVES

With Photographs from nature by Blanche Kendall

HIS range being southern, Cardinal Grosbeak seldom travels through New England; and, to my knowledge, has never established a home and reared a family north of Connecticut until in the instance here recorded. Kentuckians claim him, and with some show of right, since James Lane Allen built his monument in imperishable prose. But, soon or late, all notables come to Boston, and among them may now be registered the "Kentucky Cardinal."

Shy by nature, conspicuous in plumage, he shuns publicity; and, avoiding the main lines of travel, he put up at a quiet country house in a Boston suburb — Brookline.

Here, one October day in 1897, among the migrants stopping at this half-way house, appeared a distinguished guest, clad in red, with a black mask, a light red bill, and a striking crest; with him a bird so like him that they might have been called the two Dromios. After a few days, the double passed on and left our hero the only red-coat in the field. A White-throated Sparrow now arrived from the mountains, and a Damon and Pythias friendship sprang up between the birds. Having decided to winter at the North, they took lodgings in a spruce tree, and came regularly to the table d'hote on the porch. My lord Cardinal, being the more distinguished guest, met with particular favor, and soon became welcome at the homes of the neighborhood. With truly catholic taste, he refused creature comforts from none, but showed preference for his first abode.

It was March 5, 1898, when we kept our first appointment with the Cardinal. A light snow had fallen during the night, and the air was keen, without premonition of spring. It was a day for home-keeping birds, the earth larder being closed. The most delicate tact was required in presenting strangers. A loud, clear summons, — the Cardinal's own whistle echoed by human lips — soon brought a response. Into the syringa bush near the porch flew, with a whir and a sharp *tsip*, a bird. How gorgeous he looked in the snow-laden shrub! For an instant the syringa blossoms loaded the air with fragrance as a dream of summer floated by. Then a call to the porch was met by several sallies and quick retreats, while the wary bird studied the newcomers. Reassuring tones from his gentle hostess, accompanied by the rattle of nuts and seeds, at last prevailed, and the Cardinal flew to the railing and looked us over with keen, inquiring eye. Con-

vinced that no hostilities were intended, he gave a long, trustful look into the face of his benefactress and flew to her feet.

A gray squirrel frisking by stopped at the lunch-counter and seized an 'Educator' cracker.

The novel sensation of an uncaged bird within touch, where one might note the lovely shading of his plumage as one notes a flower, was memorable; but a sweeter surprise was in store. As we left the house, having made obeisance to his eminence the Cardinal, the bird

CARDINAL AND GRAY SQUIRREL

flew into a spruce tree and saluted us with a melodious "Mizpah." Then, as if reading the longing of our hearts, he opened his bright bill, and a song came forth such as never before enraptured the air of a New England March,—a song so copious, so free, so full of heavenly hope, that it seemed as if forever obliterated were the "tragic memories of his race."

As March advanced, several changes in the Cardinal were noted by his ever-watchful friends. He made longer trips abroad, returning tired and hungry. The restlessness of the unsatisfied heart was plainly his. His long, sweet, interpolating whistle, variously ren-

dering "Peace . . . peace . . . peace!" "Three cheers, three cheers," etc., to these sympathetic northern ears became "Louise, Louise, Louise!" Thenceforth he was Louis, the Cardinal, calling for his mate.

On March 26, a kind friend took pity on the lonely bachelor, and a caged bird, "Louise," was introduced to him. In the lovely dove-colored bird, with faint washings of red and the family mask and crest, the Cardinal at once recognized his kind. His joy was unbounded; and the acquaintance progressed rapidly, a mutual understanding being plainly reached during the seventeen days of cage courtship. Louis brought food to Louise, and they had all things in common except liberty.

April 12, in the early morning, the cage was taken out-of-doors and Louise was set free. She was quick to embrace her chance, and flew into the neighboring shrubbery. For six days she reveled in her new-

CARDINAL AND HOUSE SPARROWS

found freedom; Louis, meanwhile, coming and going as of old, and often carrying away seeds from the house to share with his mate.

April 16, he lured her into the house, and after that they came often for food, flying fearlessly in at the window, and delighting their friends with their songs and charming ways. Louis invariably gave the choicest morsels to his mate, and the course of true love seemed to cross the adage; but alas! Death was already adjusting an arrow for that shining mark.

April 25, Louise stayed in the house all day, going out at nightfall. Again the following day she remained indoors, Louis feeding her; but her excellent appetite disarmed suspicion, and it was thought that she had taken refuge from the cold and rain, especially as she spent the night within. The third morning, April 27, she died. An examination of her body revealed three dreadful wounds.

Louis came twittering to the window, but was not let in until a day or two after, when a new bird, "Louisa," had been put in the cage.

When he saw the familiar form, he evidently thought his lost love restored, for he burst into glorious song; but, soon discovering his mistake, he stopped short in his hallelujahs, and walked around the cage inspecting the occupant.

Louisa's admiration for the Cardinal was marked; but for some days he took little notice of her, and his friends began to fear that their second attempt at match-making would prove a failure. April 30, however, some responsive interest was shown, and the next day Louis brought to the cage a brown bug half an inch long, and gave Louisa his first meat-offering.

CARDINAL

The second wooing progressed rapidly, and May 7, when Louisa was set free, the pair flew away together with unrestrained delight. After three days of liberty, Louisa flew back to the house with her mate, and thenceforth was a frequent visitor.

May 21, Louisa was seen carrying straws, and on June 6 her nest was discovered low down in a dense evergreen thorn (*Cratægus pyracantha*). Four speckled eggs lay in the nest. These were hatched June 9, the parent birds, meantime and afterward, going regularly to market and keeping up social relations with their friends.

In nine days after their exit from the shell, the little Cardinals left the nest and faced life's sterner realities. A black cat was their worst foe, and more than once during their youth Louis flew to his devoted commissary and made known his anxiety. Each time, on following him to the nest, she found the black prowler, or one of his kind, watching for prey. On June 28, the black cat outwitted the allied forces, Señor Cardinal and his friends, and a little one was slain. The other three grew up and enjoyed all the privileges of their parents, flying in at the window and frequenting the bountiful porch.

July 25, Louisa disappeared from the scene, presumably on a southern trip, leaving the Cardinal sole protector, provider and peace-maker for their lively and quarrelsome triplet. A fight is apparently as needful for the development of a young Cardinal as of an English schoolboy, possibly due in both cases to a meat diet.

Over-feeding was but temporary with our birds. On the 8th of August the migratory instinct prevailed over ease, indulgence, friend-

ship, and the Cardinal with his brood left the house where he had been so well entertained, to return no more. No more? Who shall say of any novel that it can have no sequel? Massachusetts may yet become the permanent home of the Kentucky Cardinal, the descendant to the third and fourth generation of Louis and his mate.

A Catbird Study

BY DR. THOS. S. ROBERTS

Director Department of Birds, Natural History Survey of Minnesota.
With Photographs from nature by the Author.

THE subjects of this sketch had located their bark- and root-lined nest of coarse sticks, four feet from the ground, in a little oak bush surrounded by brakes, sunflowers, and hazel. Instead of being, as usual, in the midst of a dense, and, therefore, dark thicket, this nest was quite in the open, shaded by only a few

CATBIRD AND NEST

overhanging, leafy branches of small size. Its exceptionally favorable location and the apparent tameness of the birds suggested an attempt at avian photography, and the undertaking was entered upon at once, a very considerable fund of interest and enthusiasm having to take the place of any special previous experience in this line of work. After clearing away a little of the overhanging and intervening vegetation, the camera was placed with the lens not more than two feet

from the nest, this being necessary in order to secure an image of the desired size with the short focus lens at hand (a B. and L. Zeiss Anastigmat, Series 11 A, 6½ x 4¼, focal length 5⅜ inches). Fifty feet of rubber tubing, a large bulb, and a field-glass made it possible to watch developments and carry on operations from a safe distance. But, although the camera was nearly concealed with ferns and leaves, this day's proceedings were not rewarded with much success. The birds proved exasperatingly timid, and returned only after prolonged waits, to disappear instanter on the click of the shutter (a B. and L. iris diaphragm shutter). So we left the field, not disheartened but bent upon improving our paraphernalia. A day or two later found the camera again in position, but this time with tripod green-painted

CATBIRD ON NEST

and the whole unsightly top enveloped in a green hood with only a small aperture for the lens. This ruse succeeded fairly well, and during the three or four hours that the light was good on this day, and during a like period on a subsequent day, a number of exposures were made that resulted in an interesting series of negatives, giving good prints and still better lantern slides.

Only one of several time-exposures turned out perfect. It is here presented, not only as the prize picture of some three hundred negatives made during the summer of 1898, but as the sole and only entirely satisfactory outcome of some twelve or fourteen hours' work.

For Teachers and Students

On the Ethics of Caging Birds

BY OLIVE THORNE MILLER

BEFORE saying a few words on this subject, I should like to define my position. With all my heart do I disapprove of caging wild birds. I never had, and never shall have, the liberty of one bird interfered with for my pleasure or study, and if I had the power to prevent it, not one should ever be caged. Especially do I regard it as cruel in the extreme to confine an adult bird, accustomed to freedom and able to take care of himself.

The question of "rights" we will not enter upon here, further than to say that our moral right to capture wild creatures for our own use or pleasure is the same in the case of birds as of other animals — horses, for example.

But birds *are* caged, and we must deal with circumstances as we find them. If a bird-lover should worry and fret himself to death, he could not put an end to their captivity. So it would appear to be the part of wisdom to see if there are not mitigating circumstances, which may comfort, and perhaps, in a slight degree, even reconcile one to their imprisonment.

The case of Canaries is different from that of all others. Hatched in cages, descended from caged ancestry, and accustomed to be cared for by people, they know no other life, and are utterly unfitted for freedom. So far from being a kindness to set one of these birds free, it is absolute cruelty. It is like turning a child, accustomed to a luxurious life, into the streets, to pick up a living for himself.

But a young bird, taken from the nest before he has learned the use of his wings, I believe, can be made perfectly contented and happy in a house — *if he is properly cared for!*

It is unfortunately true that not one in a thousand *is* properly cared for, but we are not considering the shortcomings of people. At this moment we are considering the possibility of making a bird's life happy.

For several years I kept birds in captivity, and closely studied their ways and their characters, and I say, without hesitation, that most birds can be made so contented and happy that they will prefer

their captivity, with its several advantages, to freedom without them. The advantages of captivity to a bird are three; viz., abundant food supply, protection from enemies, ease of life — without labor or concern about weather.

The conditions, therefore, necessary to his happiness are: Never-failing care as to his physical comforts — such as a proper situation of the cage, — neither in the hot sunshine nor in a draught; fresh and perfect food, with variety; plenty of fresh water; suitable and regular bath, etc. And secondly — though perhaps it should be first, as it is most important — treatment as if he were a sentient being, instead of a piece of furniture; talking to him, taking notice of him, making a companion and friend of him. And thirdly, the freedom of a room, at least part of every day.

Under these conditions, as I know from close and sympathetic observation, our little brothers can be made so happy, that, as I said, many of them will not accept their liberty. They choose between freedom, with hard labor and many anxieties, and comfortable captivity, with ease and security, and many decide — as do many of the human family — for the former.

There is another reason why I have become partially tolerant of the caging of birds. What first influenced me was the fact that every individual rescued from the discomforts of a bird store, where they are seldom well cared for and never cherished, is greatly benefitted, and I felt that to be a work of charity.

But there is one strong argument in favor of the custom. That is, their great value as a means of educating children. Nothing is more important than the training of our youth in humanity and respect for the rights of others. And in no way can this be so well accomplished as by giving to them the care of pets. By investigation of prisons and reform schools, it has been amply proved that nothing so surely keeps a boy from falling into a criminal life as the care of and kindness to the lower orders. The daily care of a pet bird is a daily lesson in altruism which never fails to bear fruit.

In those precious first years of the child's life, when the mother has the power of instilling lessons that will be a part of him, — the most indelible he will ever receive, — if she takes a little pains to do so she can implant, with the love of creatures dependent upon him, qualities that will go far to make him a true, manly man.

While these considerations do not, perhaps, make it right to deprive a fellow creature of his liberty, they do furnish a little consolation to those who love humanity as well as birds. At the same time I must admit, that of all pitiful sights on earth, that of a neglected captive is one of the most heartrending.

A May Morning

BY FRED. H. KENNARD

THERE is a bird pasture, as I call it, about a half hour's ride from Boston, and thither I went on May 30, 1898, to see if I could find the nest of a White-eyed Vireo that I had often hunted for in years gone by, but never yet succeeded in finding.

This bird pasture, on one side of which runs the road, consists of eight or ten acres of old, wet pasture land on a hillside surrounded on two other sides by fields and an orchard, and immediately above a marsh in which the sedges and grasses grow luxuriantly, and which is bordered by alders, birches and other swamp-loving trees. The pasture itself is very wet in one portion, and has been overgrown with birch, alders, oak and tangles of grapevines, wait-a-bits, poison ivy, etc. In another part it is more open, and is more sparsely covered with red cedars and white pines, while the ground is dotted with wild roses and hard-hack, interspersed with clumps of alders. This combination of hill and marsh, field and orchard, cover and open, as well as evergreen and deciduous growth, makes it an ideal place for birds and their breeding; and one that is hard to duplicate in any locality, combining also woods and civilization as it does, for there are houses and barns in the immediate vicinity. You probably cannot duplicate this pasture, but those of you who love birds, and who can find any spot approximating this in conditions, would do well to appropriate it, metaphorically speaking, as I have this.

But to return to the birds — I thought I would carefully note all those I saw or heard in the course of a short hour I had to spare, and with the following results: As I took down the bars in order to take my bicycle into the pasture, a Baltimore Oriole was singing on top of an elm close by, and I have no doubt that its mate was sitting on the nest that hung pendent from the next tree. A Catbird slunk off into the bushes to the right of me, from a thicket in which she last year raised a brood; and, while chaining my wheel, I heard the glorious notes of a Brown Thrasher singing, a little way off, on the top of a tall white oak. Several Red-eyed Vireos were there too, their steady, rippling song forming a soft accompaniment to the more conspicuous notes of the other feathered songsters. Next, I flushed a Quail, and, while watching its flight, I almost stepped on two more, which got up from the underbrush at my feet.

I started in now on my hunt for the White-eye's nest, and for

some time was so absorbed in that, and in listening for its expected song, that there was no time to make notes of the other birds heard, except that of a Wood Thrush, whose nest contained four eggs, and was saddled on the crotch of a grape-vine, where it crossed through the crotch of an alder.

To make a long story short, I did not find the Vireos, or even hear them, though for several years they had lived here throughout the summer. I finally went out into an open space, lighted a pipe as a mosquito preventive, and, seating myself on the soft side of a boulder, put down the names of the birds whose notes I could hear.

Below me, in the swamp, the most prominent notes were the 'concarees' of the Red-winged Blackbirds, while between them could be heard the songs of several Swamp Sparrows. Close beside me were a Chestnut-sided and a Golden-winged Warbler, both seemingly much disturbed by my presence, while just as near was a Maryland Yellow-throat, an old friend of mine, who did not seem to care whether I was there or not. This same friend is rather a curiosity, for, although his species usually build in or about the marshes or swamps, he always prefers the hillside, and I last year found his nest within forty feet of where I sat, and several hundred feet away from and above the swamp.

A few Cedar Birds were whispering from the tops of a couple of red cedars about fifty yards away, and I could hear a Yellow Warbler on the other side of the open space, where he sang, apparently for the benefit of a near-by barberry bush.

A Wood Pewee was uttering his plaintive note from the orchard immediately back of me; while just back of that, in the field by the top of the hill, could be heard the rollicking notes of a Bobolink and the occasional call of a Meadow Lark. While writing my notes, some kind of a large Hawk, which flew so fast that identification was impossible, but which I guessed to be a Cooper's Hawk, went off rapidly across the marsh, pursued by a pair of vociferous Kingbirds; and, as I watched them, I could see numbers of Chimney Swifts, from the neighboring chimneys, and Barn Swallows, from a barn close by, coursing about above the marsh after the insects that there abound, the Swallows low down and the Swifts above. While watching the Swallows, two Crows came out of the wood on the opposite side of the marsh, and flew, cawing, across and off into the distance; and a little Green Heron, who, like all fishermen, prefers quiet, flew off in another direction.

Down towards the edge of the swamp, in the outlying thicket, a Song Sparrow was singing, while, close by, a magnificent Rose-breasted Grosbeak, which every year builds in the birches which grow

in these thickets, was warbling his incomparable song. At first he had been giving vent to his very unmusical call of alarm, but, becoming used to my presence, and concluding that I meant no harm, he joined in the concert.

Off to one side, among the more scrubby deciduous growth, I could hear, and sometimes see, a Redstart, while the *tse-tse-tse*-ing of the Black-poll Warblers, which were migrating northwards, could be heard intermittently. Two Quails were now calling loudly for Bob-White, or Rob-ert-White, as their fancy dictated, and in the confusing medley I could make out the modest notes of a Black and White Warbler, which had for years nested somewhere in this pasture. Behind me, at the top of the hill, I could also hear the clear, cheery notes of a Field Sparrow, which always builds there.

Being limited as to time, and having already heard twenty-eight kinds of birds in the short space of about twenty minutes, and from one place, I started to depart, but even as I did so I heard the notes of another bird coming across the marsh, that of the Black-billed Cuckoo, and just as I was again taking down the bars to get out into the street, what should I hear, loud, clear and distinct, but the song of that plaguey little White-eyed Vireo, a song seemingly of thanksgiving that I was really going and that he had eluded me so well. I then reluctantly mounted my bicycle, but was forced to get off, to add two more birds to my increasing list; viz., a Cowbird, which was sitting on the fence opposite, and a pair of Yellow-throated Vireos, the female of which had evidently but just left her nest for a lunch, while the male followed twittering and whispering close by, stopping his song until she should have resumed her duties of incubation.

I had now seen thirty-two different species of birds in the short space of about twenty-five minutes' actual time spent in observation, after deducting the time spent in hunting the Vireo's nest, and departed for home well content, even though I knew I had seen only about three-fifths of the varieties of birds that are often to be found in the immediate vicinity.

On a previous occasion, when I had been lucky enough to be able to spend a whole morning in this pasture, I had seen forty-four different species, nineteen of which I had not seen to-day, and which, added to the thirty-two noted above, make a total of fifty-one species. Of these, there were only five that were merely occasional visitors. Of the remainder, I have found direct evidence of the breeding of thirty-two species, while on various accounts I feel sure that fourteen others breed there, although I have never actually found their nests.

For Young Observers

A February Walk (Prize Essay)

BY MILDRED A. ROBINSON

(Aged 14 years)

WE had planned to walk over to the pond to see if the recent thaw had spoiled the skating. As we passed the foot of the hill, the little brook splashed and tumbled down from its icy framework, eddying around the brown goldenrod stalks, and then rushed on at topmost speed across the opposite meadow.

We were standing on the little bridge, watching the ever fascinating current, when an odd bird-note called our attention to a little gray-backed, white-breasted bird who was running up and down a neighboring tree.

All thoughts of skating instantly vanished from our minds; we climbed the fence, and in a moment more were noiselessly following our obstinate little bird, who would keep so high up in the tree-tops that it was almost impossible to see anything but his breast.

Finally, he descended, head downward, along one of the lower branches of the tree, and we saw that it was a White-breasted Nuthatch. Evidently he thought he had stayed quite long enough for examination, so, after a few parting pecks at the rough bark, trying to secure one more hidden insect, he flew off.

We were slowly following the course of the little stream, when suddenly a great rustle of the dead leaves near the water's edge caused us to pause and listen. All was silent, with the exception of a few distant Chickadees, then, with a whir and a clatter, we saw a bushy tail disappear into the thicket; a moment more and out came a beautiful gray squirrel. Like a flash he was up the tree, jumping from limb to limb, frisking about in the sunshine, then down onto the ground again, and away. His visit was even shorter than that of the Nuthatch, but not less enjoyable.

And now, where were those noisy little Chickadees who had been calling to us from the alder bushes for the last half-hour? It was easy enough to find these confiding little creatures; they were feeding on the ground, and seemed quite unconcerned at our presence, although we approached very near to them. One little fellow seemed

to be asleep; he sat all puffed up on one of the alder branches, but as I came nearer to him I could see that his bright little eye was on me, and at the next step he flew away.

It was now late in the afternoon, and, as we looked toward the west, the last rays of the sun were just tinting the distant hills with a mellow, golden hue; the birds had flown away, leaving the woods silent, so we reluctantly turned our footsteps towards home.

ROBIN ON NEST
Photographed from nature by T. S. Hankinson

Robin Rejoice

BY GARRETT NEWKIRK

Among the first of the spring,
The notes of the Robin ring;
With flute-like voice,
He calls "Rejoice,
For I am coming to sing!"

To any one gloomy or sad,
He says, "Be glad! be glad!
Look on the bright side,
'Tis aye the right side;
The world is good, not bad."

At daybreak in June we hear
His melody, strong and clear:
"Cheer up, be merry,
I've found a cherry;
'Tis a glorious time of the year!"

Notes from Field and Study

Inquisitive Magpies

I was collecting specimens of natural history in the northern part of the state of Washington, a few miles from the Canadian border. At the time the incident which I am about to relate occurred I was stopping at a ranch at the southern end of Okonogan lake.

The owner of the building was cramped for room, so, as it was during the heat of the summer, I spent the nights rolled up in my blankets under a haystack. One morning, as the sun was rising, I was awakened by shadows crossing my face, and opening my eyes saw a flock, possibly a family, of Magpies perched on the stack and ends of poles that had been thrown over it to keep the hay from blowing away. I watched them as they peered inquisitively at me from their perches, until finally one flew to the ground, then another and another, until at last several were gathered about me, but a few feet away. I lay on my side, with my arms under the blankets, and watched their actions. At last one jumped on the blankets at my feet. I could feel him hopping slowly upward. I did not move for fear of frightening him. Finally he reached my shoulder, and, after perching there a few seconds, flew to my cheek. I closed my eyes slowly, fearing he might peck them. After testing my cheek lightly with his bill, he began to get in some uncomfortably heavy blows, so I thought it time to stop him. Without opening my eyes, or moving, I said in a low tone. "Here! Here! That will do!" He hesitated, as if to make sure his ears had not deceived him, and then flew to the stack. Another took his place, after working up in the same manner; he was quietly asked to move on. When the next one hopped on the blankets, I slowly raised my hand under them, making a tempting elevation, of which he was not slow to take advantage. He lighted squarely in the palm of my hand, which I closed at once, and held him prisoner. With the other hand I caught him by the legs from the outside, whereupon he flopped his wings, cried out with anger, and pecked at my wrist savagely. The remainder of the flock, which, in the meantime, had flown to the haystack, scolded and jabbered away at a great rate.

Evidently they had taken me for a corpse, but I think it was the liveliest one they ever saw.—J. Alden Loring, *Owego, N. Y.*

Songs of Birds

The songs of birds have attracted a good deal of attention in recent years, and observation seems to confirm the theory that each generation of birds learns the song characteristics of its species by association with its own kind.

This fact was brought quite clearly to my mind several years ago, when in a western town I was taken to a neighbor's to see his birds. Four cages swung in the shelter of a commodious porch. One contained a Red-winged Blackbird, that had been taken from its nest when very young, and brought up by hand. His associates were a Canary, a Blue Jay and an Oriole. The Canary had been purchased at a bird store, and had there learned its song. The Blue Jay and Oriole had been taken from neighboring nests, and had, no doubt, picked up the characteristic notes of their species from the many other members of their kind that inhabited the vicinity, but it was many miles to the nearest swamp or low land where one might find a Red-winged Blackbird. This Red-wing had learned perfectly the notes of his caged companions, and had picked up some notes of other birds in the neighborhood, but not one note of the Red-winged Blackbird did he know.—Frank E. Horack, *Iowa City, Ia.*

Book News and Reviews

BIRDS. By A. H. EVANS, M.A. The Cambridge Natural History, Vol. IX. London: Macmillan and Co., Limited. New York: The Macmillan Company. 1899. 8vo, pages xvi + 635. Numerous woodcuts in text. Price, $3.50.

The author of this compact volume has essayed what he himself recognizes as the "difficult and apparently unattempted task of including in some six hundred pages a short description of the majority of the forms in many of the families, and of the most typical or important of the innumerable species included in the large Passerine order."

The book opens with a "Scheme of the Classification Adopted," based on the system proposed by Gadow, in which the *Archæopteryx* stands at the bottom of the list, followed by the Ostriches, Rheas, and other struthious birds, while the Finches are placed at the top. An introduction of twenty-two pages treats of feathers, color, the molt, the skeleton, digestive organs, etc., classification, terminology, geographical variations, and migration, the handling of the last two subjects being far from satisfactory.

The remainder of the book is devoted to a consideration of the birds of the world. The matter is selected with excellent judgment and is admirably put together, the text having an originality and freshness not often found in compilations. The author, however, is handicapped by lack of space, and, except in monotypic families, is, as a rule, obliged to generalize to such an extent that the seeker for information concerning certain species will usually find only the characteristic habits of its family given. But if the author has not achieved entire success, he has, perhaps, more nearly approached it than any of his predecessors, and in his work we have for the first time an authoritative handbook of the birds of the world, which is sold at a low enough price to be within the reach of every student.

The illustrations, with the exception of a comparatively few, which were taken from duly credited sources, are by Mr. G. E. Lodge, who, at his best, is, in our opinion, one of the foremost of bird artists.—F. M. C.

THE FEEDING HABIT OF THE CHIPPING SPARROW, AND THE WINTER FOOD OF THE CHICKADEE. By CLARENCE M. WEED, New Hampshire College, Agricultural Experiment Station.

In the first of these interesting papers, Dr. Weed has introduced us directly into the domestic life of a family of Chippies. We have a view, for one day, of all their affairs, both personal and domestic; and to many it must be a wonderful revelation. It is fortunate for the birds that their period of infancy is so short, as otherwise their parents must utterly break down with the task of filling their ever-open mouths. Beginning at about 3:57 in the morning, these devoted parents worked almost without cessation till 7:50 in the evening, bringing food to their four young on an average of twelve times an hour; or once every five minutes.

What would human parents think of such work? The question arises: When do the old birds eat? In the case of a nest of this species watched by the writer on July 11, 1898, feeding of the young ceased at 7:25 in the evening, when both parents flew away. In twenty-five minutes, that is, at 7:50, the female parent (presumably) returned and settled on the nest for the night. At that time it was so dark that all other birds had disappeared. It seems probable that in this last twenty-five minutes the parent birds filled their own stomachs for the night.

The second of these papers is of a more prosaic character, but not the less interesting or useful. We have here a record in detail of the winter food of the Chickadee, showing how largely it consists of those minute insects, or their still more minute

eggs, that injure the trees and baffle the efforts of man for their extermination.

In both papers we are shown the unpoetical but useful side of bird-life. These two confiding little birds have endeared themselves to their human neighbors by their gentle ways and familiar habits; but in these papers Dr. Weed has shown us that they should be no less dear to us when viewed entirely from an economic standpoint. We hope he will give us more of this kind of literature.—F. E. L. Beal.

Check List of British Columbia Birds. By John Fannin, Curator of the Provincial Museum, Victoria, B. C.

This list forms a part—pages 13–55—of the 'Preliminary Catalogue of the Collections of Natural History and Ethnology in the Provincial Museum.' It enumerates 339 species and subspecies, with notes on their distribution, and will prove exceedingly useful to students of the bird-life of this interesting region, for a knowledge of the fauna of which we are so greatly indebted to Mr. Fannin.—F. M. C.

A Preliminary List of the Birds of Belknap and Merrimack Counties, New Hampshire, with Notes. By Ned Dearborn, Biological Laboratories, New Hampshire College, Durham.

The author here presents the more important results of ten years' observation, including also such information as he has gathered from other naturalists concerning the 187 species recorded from the region of which he writes. Mr. Dearborn's notes, we are glad to say, are not restricted solely to statements concerning the rarity or abundance and manner of occurrence of a given species, but often contain valuable remarks on habits which show him to be a discriminating student of the living bird.—F. M. C.

Book News

The origin of the present widespread interest in ornithology is so largely due to the influence of Dr. Coues' classic 'Key to North American Birds,' that we are sure bird students throughout the world will welcome the news that its author is engaged in a thorough revision of his epoch-making work. The new edition, which will be expanded to fill two volumes, will be richly illustrated by Mr. Fuertes, and while the advance made in the science of ornithology in the fifteen years which have elapsed since the publication of the second edition naturally leads us to expect some improvement in this forthcoming edition, our credibility in the powers of human achievement is severely taxed when Dr. Coues asks us to believe that the new 'Key' will be as far ahead of the second as the second was beyond the first.

The Wisconsin 'Arbor and Bird Day Annual' for 1899, issued by L. D. Harvey, State Superintendent of Public Instruction (Madison, Wis.), is a most attractive and useful pamphlet of forty-five pages, containing original and selected contributions well suited to interest and instruct children in both the value and beauty of trees and birds. It may well stand as a model for publications of this nature.

D. C. Heath & Co. have in preparation an elementary bird book by Fannie Hardy Eckstorm. The book is designed for use as a supplementary science reader, and it is the author's object to teach children what to see and how to see it; and, at the same time, to provide them with something to do.

The May issue of 'Primary Education' (Educational Publishing Co.) is a 'Bird Day Number,' and contains numerous contributions of value to teachers and students of birds.

'Our Dumb Animals,' the vigorously edited organ of the Massachusetts Society for the Prevention of Cruelty to Animals, says of Bird-Lore: "We recommend this publication to ex-Presidents Cleveland and Harrison. *It would have much interested President Lincoln.*"

'By the Way-Side' is the name of a bright little four-page bi-weekly issued by Helen M. Boynton, 118 Michigan, street, Milwaukee, Wisconsin, at one cent a copy. It is devoted to "birds, butterflies, trees, flowers, insects and fishes, and deserves the support of everyone interested in popularizing the study of these subjects.

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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.

IT has recently been remarked that the field ornithologists of to-day are of two kinds: first, those who collect; second, those who observe. The status of these two types of ornithologists, and the parts they play in the advancement of the science of ornithology, is a subject of the utmost importance to every one interested in the study of birds.

A consideration of it leads us to review briefly the progress which has been made in our knowledge of North American birds during the past twenty-five years. At the beginning of this period the Smithsonian Institution contained the only large collection of North American birds in the world, and our data concerning the exact distribution and relationships of even our commonest species was of the most meager character. Since that date the publication of Baird, Brewer and Ridgway's 'History of North American Birds', of Coues' 'Key' and Ridgway's 'Manual'; the organization of the American Ornithologists' Union and of the Biological Survey of the Department of Agriculture, and the establishment of several natural history museums, have given a wonderful impetus to the collecting of birds. Naturalists have explored every corner of the eastern United States, and, with almost equal thoroughness, the western states, and the fruits of their labors are shown in the large series of birds now possessed by our leading museums. In fact, we have now reached a point where only a thoroughly trained ornithologist or his personally directed assistants can make collections which will be of real scientific value. Indiscriminate collecting, therefore, particularly in the eastern United States, in ninety-nine cases out of a hundred will only result in the duplication of material already existing.

Not only has there been a great advance in the requirements of collecting, but in the study of the specimens collected, and the systematic ornithologist who would hope to add anything to our knowledge of the distribution and relationships of any group of North American birds, must possess advantages which can be afforded only by well-equipped museums.

Turning, now, to the other class of ornithologists, the collectors of facts, we find that they have been far less active than collectors of skins. Thus, while we rarely or never refer to Wilson or Audubon or Nuttall for information concerning the systematic position of a species, these early writers are still authorities on facts connected with the life histories of many of our birds.

This subject has been brought very forcibly to our mind by two papers published in this number of BIRD-LORE, and, without going into details, we wish collectors of birds and their eggs would read carefully the articles entitled 'The Cardinal at the Hub' and 'Home-Life in a Chimney,' and then tell us frankly whether they do not think that the facts therein set forth constitute a more valuable contribution to the science of ornithology than a Cardinal's skin and five white egg-shells. If they are both discriminating and sincere, we believe they will admit the truth of BIRD-LORE'S motto.

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.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries.

New Hampshire.....MRS. F. W. BATCHELDER, Manchester.
Massachusetts.....MISS HARRIET E. RICHARDS, care Boston Society of Natural History, Boston.
Rhode Island.....MRS. H. T. GRANT, JR., 187 Bowen street, Providence.
Connecticut.....MRS. HENRY S. GLOVER, Fairfield.
New York.....MISS EMMA H. LOCKWOOD, 243 West Seventy-fifth street, New York City.
New Jersey.....MISS ANNA HAVILAND, 53 Sandford Ave., Plainfield, N. J.
Pennsylvania.....MRS. EDWARD ROBINS, 114 South Twenty-first street, Philadelphia.
District of Columbia.....MRS. JOHN DEWHURST PATTEN, 3033 P street, Washington.
Wheeling, W. Va. (branch of Penn. Society)..ELIZABETH I. CUMMINS, 1314 Chapline street, Wheeling.
Ohio.....MISS CLARA RUSSELL, 903 Paradrome street, Cincinnati.
Indiana.....AMOS W. BUTLER, State House, Indianapolis.
Illinois.....MISS MARY DRUMMOND, Wheaton.
Iowa.....MISS NELLIE S. BOARD, Keokuk.
Wisconsin.....MRS. GEORGE W. PECKHAM, 646 Marshall street, Milwaukee.
Minnesota.....MRS. J. P. ELMER, 314 West Third street, St. Paul.
Texas.....MISS CECILE SEIXAS, 2008 Thirty-ninth street, Galveston.
California.....MRS. GEORGE S. GAY, Redlands.

A Bird Class for Children

One of the most frequent questions asked by those seeking to win children to an appreciation of birds is, "How, when we have awakened the interest, can we keep it alive?"

The only way to accomplish this, to my thinking, is to take the children out-of-doors and introduce them to the 'bird in the bush,' to the bird as a citizen of a social world as real in all its duties and requirements as our own.

There is a group of people with ultra theoretical tendencies, who insist upon considering the bird merely as a feathered vertebrate that must not be in any way humanized, or taken from its perch in the evolutionary scheme, to be brought to the plane of our daily lives. In teaching children, I believe in striving to humanize the bird as far as is consistent with absolute truth, that the child may, through its own love of home, parents, and its various desires, be able to appreciate the corresponding traits in the bird. How can this best be done? By reading to children? That is one way; and good, accurate, and interesting bird books are happily plentiful. But when the outdoor season comes, little heads grow tired of books, and anything that seems like a lesson is repugnant.

Then comes the chance to form a bird class, or a bird party, if the word class seems too formidable. A dozen children are quite enough to be easily handled. The ages may range from six to twelve. Arrange to have them meet outdoors once a week, in the morning, during June and July. A pleasant garden or a vineclad piazza will do for a beginning; it is inadvisable to tire children by taking them far afield until they have learned to identify a few very common birds in their natural surroundings.

Children who are familiar with even the very best pictures of birds must at first be puzzled by seeing the real bird at a distance, and perhaps partly screened by foliage. The value of the outdoor bird class is, that to be successful it must teach rapid and accurate personal observation.

"Very true," you say, "but the birds

will not stay still while the children are learning to observe." Yes; yet this difficulty may be met in two ways. If you are so situated that you can borrow say twenty-five mounted birds from a museum or the collection of a friend, you will have a very practical outfit.

Choose four or five birds, not more for one day, take them outdoors, and place them in positions that shall resemble their natural haunts as much as possible. For example, place the Song Sparrow in a little bush, the Bluebird on a post, and the Chippy on a path. Let the children look at them near by and then at a distance, so that a sense of proportion and color value will be developed unconsciously.

After this, the written description of the habits of the birds, which you must read or tell the children, will have a different meaning. This method may be varied by looking up live specimens of the birds thus closely observed.

"True," you say again, "but I cannot beg or borrow any mounted birds."

Then take the alternative. Buy from the Massachusetts Audubon Society, 234 Berkeley St., Boston, for a dollar, one of its Audubon Bird Charts. This chart is printed in bright colors and is accompanied by a little pamphlet describing the twenty-six common birds that are figured. These are the (1) Downy Woodpecker, (2) Flicker, (3) Chimney Swift, (4) Ruby-throated Hummingbird, (5) Kingbird, (6) Bluejay, (7) Bobolink, (8) Red-winged Blackbird, (9) Baltimore Oriole, (10) Purple Finch, (11) American Goldfinch, (12) Chipping Sparrow, (13) Song Sparrow, (14) Scarlet Tanager, (15) Barn Swallow, (16) Cedar Bird, (17) Red-eyed Vireo, (18) Black and White Warbler, (19) Yellow Warbler, (20) Catbird, (21) House Wren, (22) Chickadee, (23) Golden-crowned Kinglet, (24) Wood Thrush, (25) American Robin, (26) Bluebird. Cut the birds carefully from the chart, back them with cardboard, and either mount them on little wooden blocks, like paper dolls, or arrange them with wires, so that they can be fastened to twigs or bushes.

You will be surprised to find how this scheme will interest the children, who may be allowed sometimes to place the birds themselves.

For those too old for the cut-out pictures, the teachers' edition of 'Bird-Life', with the colored plates in portfolios, will be found invaluable. The separate pictures may be taken outdoors and placed in turn on an easel behind a leaf-covered frame, with excellent effects—a few natural touches and the transition from indoors out often changing one's entire point of view.

One thing bearing on the question of bird study. If children ask you questions that you cannot answer, as they surely will, do not hesitate to say "I don't know." Never fill their minds with fables guised as science, that they must unlearn.

Now a material point. When you have entertained your class for an hour, never more, lend the affair a picnic ending and give them a trifling lunch before they go; something very simple will do—cookies and milk, or even animal crackers!

The young animal of the human species, as well as many others, is a complexity of stomach and brain, and it is well to administer food to each in just proportion.

M. O. W.

Reports of Societies

WISCONSIN SOCIETY

Mrs. Elizabeth W. Peckham, secretary of the Wisconsin Society, sends to Mr. Stone the first annual report of that body, from which we extract the following:

"This society was organized April 20, 1897. The first efforts of the executive board were in the direction of securing the coöperation of the press in this city and throughout the state. The response was most generous, and it is probable that more effective work has been done through this agency than in any other way.

"The next appeal was to clergymen of all denominations, who were asked to preach upon the fashion of wearing wild bird feathers. Here, again, they received valuable aid and encouragement.

"In May, 100 circulars were sent to Milwaukee milliners, asking their assistance in the work of reform, and announcing that there would be held, in the fall, an Audubon millinery opening. This opening, which took place in October, was well attended, and served its purpose in calling attention to the existence and meaning of the society.

"The coöperation of the State Superintendent of Public Instruction, and also of the Board of School Directors of this city, has been secured. The response of the Milwaukee School Board was especially cordial and encouraging. Talks upon the subject of bird protection have already been given in several of the city schools, and it is intended that the main work of the society for the coming year shall be done among the teachers and school children of the state.

"The society is much to be congratulated in that, before it came into existence, Bird Day had been established in Wisconsin. We can only appreciate our good fortune in this respect by noting the difficulties that are thrown in the way of the Audubon societies of other states when they attempt to win the consent of their legislatures to this step. We owe this great advantage to Mr. J. E. Morgan, of Sauk county.

"Although our Audubon Society is one of the largest in the United States, we are working under great disadvantages, since we have, so far as we can discover, the smallest income of them all. In order that no one may be excluded, we have made our life membership fee exceedingly small, so that it brings in an amount quite insufficient to meet the expenses of printing, buying and distributing literature. We therefore make an earnest appeal to intelligent men and women to become members of the society, or to send us contributions of money. We are especially anxious to increase the number of our associate members, who pay one dollar a year, and thus provide us with a steady income."

Mrs. Peckham reports a total membership of 5,141, and writes that since the publication of the report from which we have just quoted, "through the coöperation of our State Superintendent of Public Instruction, our society has formed 175 branches among the school children. These branch societies include over four thousand members, including teachers and children."

NEW HAMPSHIRE SOCIETY

On the 6th day of April, 1897, at the call of Mrs. Arthur E. Clarke, a meeting was held at her residence in Manchester, for the purpose of organizing the New Hampshire Audubon Society, which was duly accomplished.

The work of the society throughout the state is carried on by means of branch societies, the presidents of which act as vice-presidents of the state society; or, when this is not practicable, local secretaries are appointed to carry on the work, and such secretaries have already been appointed in more than twenty places.

Special pains has been taken to influence the children in the public schools. A junior Audubon society was early formed, and a very interesting meeting was held in June, 1897, at which about three hundred school children were present. A similar meeting was held in June, 1898, and it is proposed to hold others from time to time.

With the same end in view, an 'Outline of Bird Study' was prepared for use in the schools.

At the suggestion of the society, extracts from the game laws of the state, relating to penalties for the destruction of song birds and their eggs, have been posted in conspicuous places, thanks to the prompt and energetic action of the street and park commissioners. Similar action has been taken in various other cities and towns.

Lectures were given by Mrs. Orinda Hornbrooke, Mrs. Alice Freeman Palmer, on 'The Educational Side of Bird Protection,' and by Mrs. Harriet E. Richards, secretary of the Massachusetts

society, on the general work of the Audubon societies.

The society has distributed nearly 7,000 leaflets and circulars, several of them having been procured of the United States government, through the kindness of our members of Congress.

An additional circular has recently been issued in which prizes are offered to the school children of New Hampshire on the following conditions: Two prizes, one of ten dollars and one of five dollars to children over twelve and under seventeen years of age; and two more, one of five dollars and one of three dollars to children under twelve years of age. These prizes are to be awarded for the best compositions on 'Birds,' the compositions to be written as the result of personal observation, the contest to close January 1, 1900.

The society has adopted the bird chart lately published by the Massachusetts Society, and is introducing it as rapidly as possible into the schools of the state.

ANNIE V. BATCHELDER, *Sec'y.*

A Message from Madame Lehmann

At the second annual meeting of the New York State Audubon Society, Madame Lilli Lehmann, whose love of animals is perhaps even greater than her love of music, made an eloquent appeal to women to cease from feather-wearing, which she characterized as a form of barbarism, and to aid the Audubon Societies in their efforts to protect the birds.

Through the editor of BIRD-LORE, she sends to the Audubon Societies the following message, the tenor of which, it will be noticed, is in close accord with the views of the editor of this Department, as expressed in the last issue of this Journal.—F. M. C.

Madame Lehmann writes: "Tell the Societies that I take the greatest interest in their work, that I do everything I can, and every minute, if the occasion offers, to protect the birds.

"Tell them, also, that it is the duty of everyone to *speak* and to *do* something every day for the cause; that it is not sufficient to give a dollar or two—that alone will never help us. It is the living word, the reasons given, the good example and the *teaching* to everyone that can bring us further in civilization."

Two New Audubon Societies

We announce with pleasure the formation of Audubon Societies in Texas and in California. The Texas Society was organized on March 4, at Galveston, with Miss Cecile Seixas as secretary. The organization of the California Society was lately completed at Redland, with Mrs. Geo. S. Gay as secretary. The addresses of the secretaries of these societies are given in our 'Directory,' and we trust that they will receive the coöperation of all bird-lovers in their respective states.

American Society of Bird Restorers

A report of the work of the American Society of Bird Restorers, prepared by Mr. Fletcher Osgood, its organizer and manager, will appear in BIRD-LORE for August.

Birds and Farmers

It is pleasing to know that some farmers are awakening to the fact that birds are an important factor in agriculture. At the last monthly meeting of the Farmers' Club of the American Institute of New York, the subject for discussion was "Birds and Their Relation to Agriculture." The subject was introduced by Mr. N. Hallock, who presented a well prepared paper giving much valuable information regarding birds as insect destroyers. These statistics were from publications of the U. S. Dept. of Agriculture and from his own observations. He strongly urged the protection of all birds from the farmer's standpoint. The paper was then discussed by the members present. Mr. William Dutcher, of the Executive Committee of the New York Audubon Society, who was present, addressed the Club, elaborating some of the statements in the paper under discussion and emphasizing the fact that every bird an agriculturist permitted to be killed on his farm was a direct loss to him in money value.

NESTING SITE OF CLIFF OR EAVE SWALLOWS, LITTLE MEDICINE RIVER, CARBON COUNTY, WYO.

Photographed from nature by H. W. Menke, July 4, 1898

Bird-Lore

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. 1 AUGUST, 1899 No. 4

Photographing Shy Wild Birds and Beasts at Home

BY R. KEARTON, F. Z. S.

Author of "Wild Life at Home: How to Study and Photograph It;" "With Nature and a Camera," etc.

MY brother and I were both delighted to see the first number of BIRD-LORE, and take the opportunity of congratulating our naturalist and photographic chums across the Atlantic upon having such a practical and highly interesting magazine to help them in their enchanting pursuits. Such a publication would have been a veritable godsend to us when we started our natural history photography.

As we have had a good deal of experience in circumventing the cunning and timidity of the majority of wild creatures living in the British Isles, and the same characteristics in this respect are common to wild animals all the world over, I propose to tell by what means we have secured some of our rarest pictures.

First of all, I ought to explain that we never use anything but a strongly built, half-plate stand camera, fitted with a Dallmeyer stigmatic lens, and an adjustable miniature on the top, which is used as a sort of view-finder when making studies of flying birds and mammals in motion. When fixed in position, and its focus has been set exactly like its working companion beneath it, both are racked out in the same ratio by the screw dominating the larger apparatus which, when charged with a dark slide and stopped down according to the requirements of light and speed of exposure, needs no further attention. When the combination is in use, the photographer focuses with his right hand, and, holding the air ball or reservoir of his pneumatic tube in his left, squeezes it quickly and firmly directly he has achieved a sufficiently clear and strong definition of his object upon

the ground glass of the miniature camera. This enables the operator to focus up to the last instant, and to select the best attitude of his "sitter."

We have a silent time-shutter built in behind the lens, and for very rapid work, such as flying bird studies, use a Thornton & Pickard focal plane shutter working up to the thousandth part of a second.

Good apparatus, that will work under almost any conditions with precision and certainty, must be possessed for the achievement of successful natural history work. We use the quickest plates made in the old country for the greater part of our work, although, of course, for still objects full of color, we cannot beat Ilford chromatic plates.

IN THE TREE-TOPS

From Kearton's 'Wild Life at Home,' copyrighted by Cassell & Co., Ltd.

We soon discovered that it was absolutely impossible to figure many timid birds at close quarters without some natural contrivance in which the camera and its operator could be effectually hidden. For the study of wood birds at home, we built an artificial tree trunk of sufficient internal capacity to contain either of two broad-shouldered Yorkshiremen. This is how we made it. Purchasing three pieces of stout bamboo, each 7 feet in length, I split them down the center and lashed each piece to three children's bowling hoops, the topmost and center ones being 24 inches in diameter, and the bottom one 27, so as to represent the base of a tree and give the legs of our camera a greater stride. We then covered the whole with galvanized wire and a coat of green American cloth, which my wife painted to resemble the bark of a tree. After this we stuck bits of lichen and moss on to it, and then passed a number of bits of strong grey thread from the inside to the out. With these we tied on several pieces of ivy stripped from adjoining tree trunks, so as to make our contrivance look as natural as possible. How far we succeeded in deceiving the feathered folks of Britain may be judged, when I state that one day a Chaffinch alighted on the broken top of our artificial forest monster and began to rattle off its song just over the unseen photographer's head.

We should much like to hear of this device being tried by some-

one on American wood birds. Whoever makes and gets laced up inside an artificial tree trunk will discover that a peculiarly dizzying sensation attends the first attempt or two to stand for any length of time so encased.

For some birds we fix up a mock camera near their nests or feeding haunts a few days before we attempt to make a picture. This can be easily done with a small wooden box and tin canister with its lid or bottom blackened to represent a lens.

For photographing ground builders, such as Larks, Plovers, and so on, we built an artificial rubbish heap, such as farmers rake up off their grass land before laying it down to grow for hay time, and cart off to form rick bottoms.

This we made from an old umbrella, to the ribs of which we lashed pieces of bamboo four feet in length. The whole was then covered with brown holland. To the outside we tied innumerable wisps of straw and rubbish, and as some sort of testimony to its efficacy, I need only mention that we have succeeded in photographing a Lark at her nest bang in the middle of a bare field, and one of our very shyest British Plovers, quite recently, sitting on its nest within a few feet of the lens.

We next come to a consideration of how to photograph the eyries, eggs and young of such birds of prey as Eagles, Falcons and Ravens, that breed, at any rate so far as Britain is concerned, in the most inaccessible cliffs.

The first business is to secure a couple of climbing ropes. We had ours specially manufactured for us, from the best manila hemp, by a London rope-maker of good repute. They are each two hundred feet in length. The guide rope is an inch and a half in circumference, and the descending rope, which has three loops at one end for the photographer to sit in, is two inches in circumference. It will thus be seen that both ropes are pretty stout, some folks might say unnecessarily stout, but it is better to be on the safe side, as a break and a fall of three or four hundred feet onto jagged crags or into the sea would be likely to send the photographer into perpetual retirement.

It is a curious thing, but nevertheless true, that fictionists have fixed one idea in the mind of the public in regard to the danger attending a man hanging over a precipice on the end of a rope; viz., that all his danger comes from a probability of one or two of the strands of his rope getting chafed in two over some sharp rock. I am frequently asked, after my lectures, the question: "Has your brother ever had a narrow escape from the rope nearly getting chafed in twain?" They seem genuinely disappointed because he has not

been hauled up on the last faithful strand of a rope, with his hair standing on end, his face o'erspread with an unspeakable horror, and then fainted dead away on reaching *terra firma*.

I have heard a lot of terrible tales about chafing ropes, but as

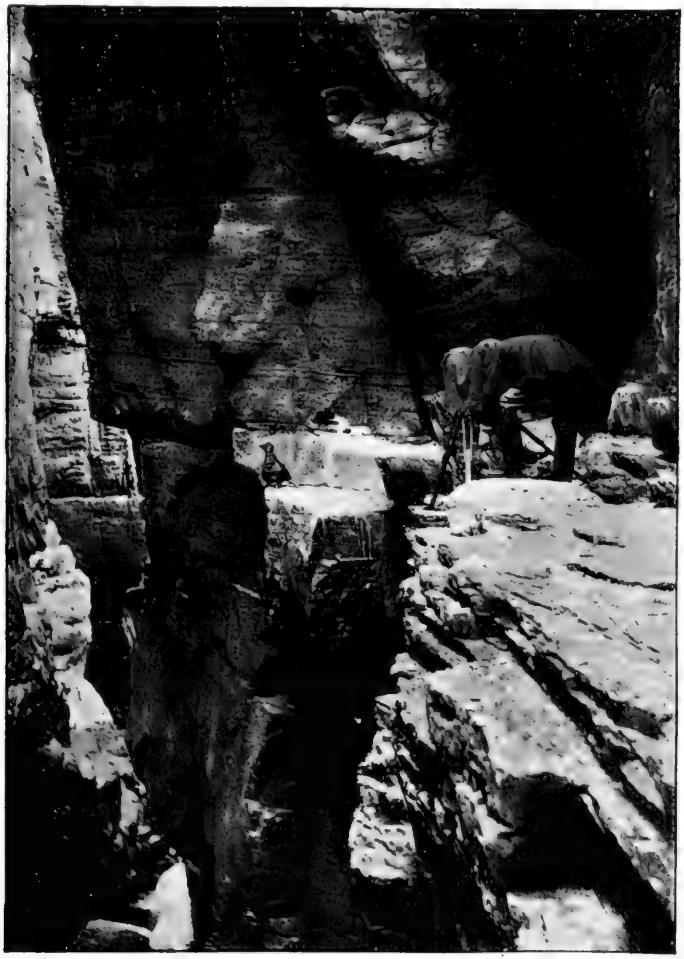
DESCENDING AN OVERHANGING CLIFF

From Kearton's 'Wild Life at Home,' copyrighted by Cassell & Co., Ltd.

a matter of fact, there are dangers a thousand times greater if less picturesque; such, for instance, as a prosaic little stone, no bigger than an orange, being dragged out of its bed by one of the ropes when the

photographer is being hauled up a cliff, and, after dropping a hundred feet or so, alighting plump on the head of the unsuspecting camera man. My brother has had one or two narrow escapes of this kind, though never the shadow of one from a chafing rope.

Upon setting forth to photograph the eyries of cliff-breeding



PHOTOGRAPHING A CORMORANT

From Kearton's 'Wild Life at Home,' copyrighted by Cassell & Co., Ltd.

birds, we equip ourselves with (1) our ropes; (2) a stout crowbar; (3) a good, strong, level-headed assistant (nervous or careless assistants should be studiously avoided, as the one kind of man is as dangerous as the other), that can be relied upon; (4) a revolver; (5) a camera; (6) a photographer who, in addition to being a good athlete

and gymnast, possesses no nerves at all, and can, in consequence, stand on the very lip of a cliff a thousand feet sheer, as he would do on the gutter edge of a sidewalk, and look straight below him.

I would advise all who do not possess the above qualities, more or less, to leave cliff photography severely alone, as walking backwards into a yawning abyss, even on the end of a good, stout rope, feels uncommonly like stepping into eternity, and I would not like to have the blood of any American cousin on my head.

Upon reaching the edge of any precipice wherein we suspect, say an Eagle, to be breeding, we step as close to the lip of the crag as possible. I hold the revolver over my head, fire, and watch to see where a bird flies out. Should one do so we mark the spot, drive our crowbar into the ground above it, tie one end of the guide rope securely to it and fling the rest down into the chasm below. The photographer lashes his camera to his back, dons the three loops at the end of the descending rope round his hips, the rope is then passed once round the crowbar, and the assistant pays it out from behind, whilst the photographer, steadying himself by means of the guide-rope, literally walks backwards down the cliff. Before going down, however, he takes good care to clear away all the loose stones and rubble, for if he did not do so they would be sure to be dislodged by the rope when he comes up.

Upon reaching an eyrie, if it is situated on a ledge wide enough to set the tripod of the camera on, he does so and makes his studies, taking good care not to let go his ropes.

If the nest should be on a ledge too narrow to set the apparatus upon, my brother passes two of the legs of his tripod through a belt round his waist and the third into any convenient crevice he can find, and with his body practically at right angles to the face of the crag and his camera almost resting on his chest, focusses and takes his picture.

I feel that I have barely touched the fringe of my subject in this short article, but I have no doubt that to the man equipped with a decent camera and a genuine love of nature, the hints I have given will be sufficient to set him to work natural history picture-making, and, as an old farmer, I know enough of American ingenuity in tool-making to convince me that there is no bird or beast living in the western world that cannot be photographed, living, loving, and laboring in its free, open-air home. Any way, every reader of Bird-Lore has the best wishes of the brothers Kearton.

Two Nova Scotia Photographs

BY C. WILL BEEBE

With photographs from nature by the author.

THE slate-colored Junco or Snowbird breeds very abundantly in the fields of Digby county, Nova Scotia, and its neat nests are often so artistically placed that they are a continual temptation to the naturalist photographer. One nest, in particular, with four eggs, was especially beautiful, seen through the ground glass of the camera, the contrast between the eggs and the waxy green leaves and scarlet fruit of the bunch-berries near it making one long for color photography. This nest was in a field, five feet from a road, and partly protected by a tiny bank of turf.

NEST AND EGGS OF JUNCO

Five days after the photograph was taken the eggs hatched, and four balls of long, jet-black fuzz appeared. Daily twelve-hour meals of green measuring-worms, provided by the parents, wrought marvels in the appearance of the young birds, and in a surprisingly short time a second suit of streaked black and brown was assumed. In this, perhaps, the facsimile of their ancestors' plumage, they left the

nest, and apparently lost individuality among the large flocks of their species.

Another abundant summer bird of this part of Nova Scotia is the Night-hawk, the name being almost a misnomer, as they are visible in numbers, flying all day. But all do not depart from their usual custom of sleeping during the day, as is shown in the accompanying photograph, taken about 11 A. M. one August day, 1898.

NIGHT-HAWK ASLEEP

While walking along a railroad track, I noticed this bird resting in a fallen trunk about four feet from the track. I focused my camera and made the exposure without disturbing the bird in the least. A train had passed not long before, so it could hardly have been asleep more than an hour. The characteristic longitudinal position assumed by this bird in perching is well shown, and its protective coloring makes it appear a mere excrescence on the bark.

When it awoke what a dream it might relate to its companions of being approached by a horrible one-eyed, three-legged creature, which at a glance made it immortal!

The photograph of the Junco's nest and eggs was made with a 128 opening and a 4-second exposure, while that of the Night-hawk was stopped at 64, with an exposure of two seconds.

In the Spartina with the Swallows

BY O. WIDMANN

MAPLE LAKE, in St. Charles county, Mo., is one of a series of lakes situated between the bluffs and the Mississippi River. The bluffs are four to five miles from the river bank, thus leaving a wide stretch of alluvial land, lowest toward the bluffs, forming an extended, nearly level marsh, mostly too wet and poor for cultivation, and covered with square miles of cord-grass (*Spartina cynosuroides*). In dry summers or on higher levels it reaches only a height of three or four feet, but in wet summers, as for instance in 1898, it attains the stately height of six to eight feet, with such a dense growth of rigid leaves that it is hard work to walk or even drive through. As a commercial article it is worth very little, though it will make good paper. When young it is liked by horses and cattle, and when two feet high it makes pretty good hay, which is sometimes baled and sold as prairie hay.

But while man does not yet know how to make good use of it, birds do, especially some species of the families Hirundinidæ and Icteridæ—the Swallow and Blackbird families—who find in the spartina the material for a good and safe dormitory. Hundreds of acres of this grass cover the region about Maple Lake, and as they are within the confines of one of the best managed club grounds, where neither plow nor cattle, neither drainage nor fire are allowed, they serve many kinds of birds for a roosting place at all seasons of the year, but especially in fall migration.

Of Swallows, the most numerous frequenters are the Eaves, the Tree or Whitebreasts, and the Roughwings, and they show their appreciation of this rare place of security and peace by coming early in the season and staying late. When the Eaves have become strangers at their breeding stations for a long time, the marsh is the place to find them in plenty. Here is the place to look for the first Whitebreast of the year as early as the second week of March, and for the last, in the third week of October. For two months, from the middle of August to the middle of October, a cloud of Swallows may be seen every evening, just before dark, hovering over the most remote and inaccessible part of the immense spartina waste, and wherever you are in the marsh in the late afternoon, you cannot fail to notice innumerable Swallows skimming the grassy ocean and the adjacent lakes. If toward sunset you watch them closely, you will find that, though they may linger long on some favorite hunting ground, the general

trend is toward one particular region, and if you will wait long enough, you will find that they have all disappeared in that direction and that, when almost dark, belated parties passing by go in a straight line direct for the same unknown destination. Certainly a most interesting sight for the naturalist to see so many of these lovely, lively, likely creatures passing over, about and around you,

TREE OR WHITEBREASTED SWALLOWS
Photographed from nature by Edward Van Altena, Alpine, N, J., September, 1898

all governed by one idea, all driven by one common impulse, all eager to reach the same aim, the common roost! Where is the roost? Where do all these birds spend the night? How do they retire in the evening, and what is their conduct when they leave their night-quarters in the morning?

In spite of their large numbers and generally unconcealed activity, the answer to these questions is not quite easy. Otherwise confiding creatures, Swallows are careful to keep the exact location of their roost as much as possible a secret from the outer world. Neither the persons who live in the neighborhood of the marsh, nor the hunters who desecrate its sanctity, could tell you where

the Swallows roost. It requires the persistent efforts and full attention of the naturalist to show you where and how his favorite bird goes to rest and how it sets out and enters upon the duties and pleasures of another day. You have to be after nightfall, alone with the mosquitos and other pests, in the wide, wet and pathless marsh, and again before the faintest glimmer announces the approach of day.

But select a day in the latter part of August or the first half of September, and follow me. We are up early, to be on the grounds before 5 A. M.; the stars are vanishing, one after the other, and the first dawn appears on the eastern horizon; the air is cool and misty, the grass loaded with heavy dew, but we have to plow our way through as best we can. By previous observation we have located the whereabouts of our birds, and we are now fast approaching their sanctum, all alive and alert for the expected disclosures.

Before this, only the hooting of the Barred Owl in the distant woods had broken the silence, but now comes from the depth of his private retreat, the sleepy 'seewick' of the Henslow's Sparrow, and at the same time the weak but lively 'chip chip churr' of the Short-billed Marsh Wren. 'Pink, pink, pink' exclaims the Bobolink, whom we have startled from his slumber of repose, and, as we advance, up go some Swallows, one by one, to the right, to the left, in front of us, not in masses or bunches, but singly, every few yards one or two flying up, silent, and on wings heavy with dew.

Dawn has been making fast progress the last few minutes, and we can see quite a little distance through the misty air. Now is the time when the Swallows begin of their own accord to leave their perch down in the depths of the spartina and fly with heavy wing through the cool and foggy layer below into the clearer atmoshere above, where the sun's first rays will soon dispel the chilly dampness of their plumage.

While we are still absorbed in the astounding spectacle, daylight is stealing quietly into the novel scene, and discloses the presence of greater and greater numbers of Swallows as far as the eye can reach. Many have gained enormous heights, and are soaring majestically in the sun-kissed zenith. Not so voiceless as the Swallows do the Bobolinks leave the roost. Their *pink* is continually in the air, and numerous parties are seen passing over, drifting into all directions of the compass. Some alight again, all in their yellow traveling suits, with the exception of one who has a little song for us and wears a somewhat mottled garb with whitish rump. Long-stretched flocks of Redwings pass in one direction, troops of Frackles in another; but, on the whole they do not

present anything like the grand spectacle they will later in the year, when migration sends millions of them to this marsh.

The sun is up now, and a little wind is stirring and dispels the clammy dampness of the air. Shortbills sing on all sides, and a few Marylands and Henslows are also heard to sing. Great Blue Herons are on the move, and the Marsh Hawk is at work. A Bittern wings its way across the marsh, attended by a committee of inquisitive young Eaves. There is a peculiar movement now among the Swallows. They seem to concentrate their forces. Let us follow them, and be treated to an unexpected sight.

Fifty thousand Eave Swallows are seated on the protruding tops of sunflowers, which grow here among the spartina in restricted areas, covering a few acres in the middle of the marsh! They sit, several on one plant, as close together as the branches and their weight allow. We draw nearer, until we are within twenty yards of the assembly. The birds must see us, but do not mind, and we have excellent opportunity to watch them. Their numbers are still swelling. The long, narrow, ridge-like stretch of sunflowers is filling up more and more. From the north comes a steady flow of Eaves, all bound for the convention.

It is now 6 A. M.; the influx of arrivals from the north has ceased, and all seem ready for the opening of the session; but they do not look as if they were going to transact important business. Some fly up from time to time, draw a few circles and sit down again. Most of them look tired, as if they had already performed a most fatiguing task. The majority are young fellows, all Eaves, in pale attire, some so small as if not fully grown; but there are also many adults in high dress among them. All are enjoying their rest, some are preening their feathers, others half close their eyes and puff up their plumage, as if going to sleep. There are still some high up in the ether enjoying their enviable wing power; others are hunting low over the marsh, in company with Whitebreasts.

Although the two species hunt, fly and roost together, they do not hold their meetings together. The Whitebreasts' assemblages are held over water. They betake themselves to a pond or lake, and find a perch on the pods, stalks and projecting leaves of the lotus (*Nelumbo lutea*), with which some of these shallow waters of the marsh are literally covered. There is a small pond only a quarter of a mile from the sunflower patch, and this is now just full of Whitebreasts. Now and then a little cloud of them rises from the pond, and after a few evolutions settles down again. There are only a few hundred; the height of their autumnal wandering is several weeks behind that of the Eaves. These are most numerous in late

August and early September : but, as their number decreases, that of the Whitebreasts increases, reaching the height at the time the Eaves depart.

In summer the roost belongs almost entirely to the Eaves, who flock here from the surrounding country. So do the Roughwings, a few hundred only, and some Barn Swallows and Whitebreasts, which two species are not numerous breeders in this region.

As soon as migration begins, about the middle of August, the

TREE OR WHITEBREASTED SWALLOWS

Immature birds on the ground gathering nesting material, which they drop after carrying a short distance, thus apparently giving a premature exhibition of the nest-building instinct

Pnctographed from nature by Frank M. Chapman, Leonia, N. J., August, 1897

Eaves are greatly reinforced, and for the next four weeks enormous numbers are present, but it is probable that they are not always the same individuals, as their numbers vary from day to day. It seems they perform their migrations by stages, from roost to roost, employing mainly the first hour of the morning for their flights, spending the day resting and feeding in the region surrounding the roost. The substitution of arriving Whitebreasts for departing Eaves is in the beginning almost imperceptible, but at last we see that the one has taken the place of the other entirely. The Roughwings become

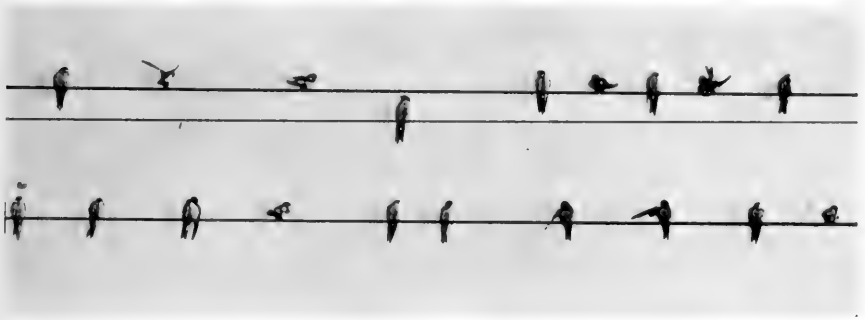
more numerous in early September, and many remain, with a few Barn Swallows, into October, but the latter are never conspicuous at this roost. Martins and Bank Swallows are only accidental visitors to this roost. The Whitebreasts remain numerous to the middle of October, and small detachments linger even a week longer.

Most of the Eaves that have been gathering on the sunflowers before 6 A. M. are still there at 8 A. M., and the Whitebreasts are also on the lotus yet; but an hour later, when the sun has heated the marsh and started the winged insects on their aërial mission, the time for activity has arrived, and the meetings are adjourned, the birds dispersed. We, too, will adjourn, with the promise to be back for another meeting in the evening. When migration is well under way, the collecting of the Eaves and Whitebreasts begins early in the evening; in fact, large droves are met at all hours of the day, playfully gyrating in the blue heavens above, or describing endless curves upon the glittering marsh beneath. The Roughwings are seldom seen in the marsh in daytime. As soon as they leave the roost at early dawn, they hurry away to their accustomed haunts along the water courses in the timber, where they collect on the branches of a dead tree on the bank, if possible over water. There they sit, soon after daybreak, fifty to one hundred together, silent and lost in meditation, patiently awaiting the dissipation of the vapory dimness, the signal for activity. They are greatly attached to these meeting-places, and resort to them often in daytime as well as in the evening. Indeed, these gatherings of Roughwings on certain dead trees along our woodland lakes and streams are quite a feature of the landscape from July till October. Often their ranks are considerably swelled by an admixture of other Swallows—oftenest the Bank Swallows, who join them on their entomologizing excursions, and find it congenial to spend some time on the same perch with their gentle cousins.

In fall migration, the different kinds of Swallows like to mix, hunt and rest together, and it is nothing rare to find four or five species sitting side by side. To be sure of a full view of the whole performance, we are in the marsh as early as 5 P. M., and take a stand west of the roost to have a good light, and also to be in a position where we can overlook part of Maple Lake, over which a large number of Swallows take their way. Indeed, we find them already plentiful, and watch their actions. A few dozens are sitting on the plant stalks projecting from the water, mostly Whitebreasts. From the west comes a pretty steady stream of Eaves. When they reach the spot where the Whitebreasts are gathering now, they pause a moment, and, hovering, take a drink, several at once, after which

they continue their course. Is it not strange that they seem to think that this is the only place for Eaves to drink, though the lake is half a mile long?

Bobolinks also arrive in the marsh; small parties pass over, and their *pink* is often in the air. It is now 5.30 P. M. More Eaves come, drink, and move on. We move, too, following them through the high spartina until we see in the distance an oasis of black dots in the yellow sea of grasses. While we are still advancing, a



'BIRD NOTES'—TREE SWALLOWS
Photographed from nature by Frank M. Chapman

Pigeon Hawk darts over our heads, going straight for the oasis. In less than no time the black dots take wing and up goes the whole congregation of Eaves, up, up, scattering to all winds, and disappearing for several minutes. But the disturber is gone, and the frightened birds find courage to return and sit down again on their favorite weeds, from which they can overlook the marsh for miles around.

The Bobolinks, for whose special benefit the Hawk's visit was this time meant, are still hovering in the air, but new troops arrive, and after some aimless drifting all settle down to roost amongst the grasses.

The sun is down now, and perfect streams of Swallows are flowing from all sides toward the oasis in the center. This is the moment when the Whitebreasts, who for the last hour have been congregating on the lotus of the neighboring lakes, mingle with the passing Eaves and accompany them to the common roost. The Roughwings, too, have left their haunts and are appearing in the marsh.

The light of day is waning fast, and the smoky air gets dim and misty. The assembled Eaves are now seen to rise in clouds from their oasis, mix their forces with the invading army, and the grandest

spectacle ensues. At first it looks as if confusion reigned, but soon the hosts of fleet-winged birds no longer whirl aimlessly through space. All mass and muster, and perform strange evolutions with amazing swiftness and precision. Now we see them scattering and spreading over the whole area on which they intend to roost, apparently to make sure that no danger lurks beneath the grasses. Here they come, skimming, almost touching, the spartina, pass by, and speed onward until lost to sight for a few moments, when all at once a great cloud of moving specks is visible in the distant sky. The specks are Swallows, and the cloud has life; it moves, it rolls, it swells, it comes, it breaks and, like a torrent of wing-borne arrows, darts upon us, scattering and spreading out, as it descends for another wild dash low over the spartina.

The same wonderful maneuvers repeat themselves as long as the evening twilight lasts, and, though with each descent the cloud does shrink in size, it does not cease to rise again until black night has fully settled down, and even after dark small droves of bewildered birds rush madly by our side. Being well within the range of the now settled birds, we cannot go away without disturbing some in their repose; although they are dispersed over a large area, every now and then one will be seen to scamper out and vanish in the darkness.

YOUNG EUROPEAN MARTINS AND NEST

Photographed from nature by "C. R."

Watching the Bittern 'Pump'

BY BRADFORD TORREY

SINCE I printed, in 'The Auk' (Vol. vi, p. 1), a description of the Bittern's vocal performances, I have witnessed a repetition of them on three occasions; and the story of my successes, such as they are, may be encouraging to the younger readers of BIRD-LORE.

The remarkable sounds, sometimes likened to those of an old-fashioned wooden pump, sometimes to those made by a man driving a stake in wet soil (and the likeness is unmistakable, not to say perfect, in both cases), must have attracted attention, we may suppose, ever since the settlement of the country. The dullest person could not hear them, it would seem, without wondering how and by what they were produced. But up to the time of my 'Auk' article, there was only one authentic record, so far as I am aware, that the bird had ever been seen in the act of uttering them. For my own part, having never lived near a meadow adapted to the Bittern's purposes, I had never so much as heard his famous 'boom,' though references to it here and there, in the writings of Thoreau especially, had given me a lively desire to do so. It was a strange accident, surely, that the first Bittern I had ever heard should show himself so openly and for so long a time. Beginners' luck, we may call it, and be thankful that such providential encouragements are not so very uncommon. As the Scripture says, "The last shall be first."

On the 2d of May, 1889, a year after the observations recorded in 'The Auk' article, I was lying upon a cliff on the edge of a cat-tail swamp, listening for Rail notes or a Least Bittern's *coo*, when a Bittern, very much to my surprise, pumped almost at my feet. By good luck a small wooded peninsula jutted into the swamp just at that point (the swamp, I regret to say, has since been converted into a town reservoir), and, keeping in the shelter of rocks and trees, I stole out to its very tip unobserved. Two or three times the notes were repeated, but I could get no sight of the performer. Then, all in a flash, he stood before me — as no doubt he had been doing all the while — in full view, just across a narrow space of open water against a patch of cat-tails. He had taken no alarm, and pumped six or eight times while I stood, opera-glass in hand, watching his slightest motion. Then he stalked away into the reeds, pumped twice, — behind the scenes, as it were, — and fell silent.

Two days later I went to the Wayland meadows, where I had

seen my bird of the year previous, and there, seated upon the railroad embankment, as before, I watched a Bittern pump at short intervals for more than an hour. Most of the time he was more or less hidden by the low grass, through which he was slowly traveling down the meadow; but once, coming near the remains of a last year's haycock, he went a little out of his way, mounted it, and boomed in full sight. The Bittern is a wader and a recluse, but once in a while, it appears, he has no objection to a clear platform and dry feet.

I felt myself highly favored. Twice within three days I had been admitted to "assist" at mysteries of which Thoreau, who spent his life in the best of Bittern country, had never obtained so much as a glimpse.

Exactly a year afterward (May 4, 1890) I was strolling along a road near home, when from a meadow beside it came the now familiar pumping notes. I made toward the spot, and by the help of a clump of alder bushes approached within a very short distance of the bird, who stood in short grass, quite unconcealed. A migratory visitor only, he must have been, for I am certain that no Bittern ever summered in that place during my years of residence near it. I watched him at his work till I was tired. Then, bethinking myself of a friend and neighbor who knew nothing about birds, but had once expressed to me a curiosity about the 'Stake-driver,' I walked to the village, rang his doorbell, and invited him to go back with me to see the show. The showman was still rehearsing, and we stole upon him without difficulty, and saw as much as we wished of his doings. Though it was Sunday morning, and the bird was as serious as any parson, we took the liberty of laughing a little at his absurd contortions.

Since then I have heard the Bittern's music on sundry occasions, but never have found it possible to come within sight of him in the act of making it. Once, I remember, I was sitting upon a roadside fence, reading, when a carriage stopped and an unrecognized feminine voice said: "Do you see that Heron behind you, Mr. Torrey?" The "Heron" was *Botaurus lentiginosus*, in a bit of low ground close by a house. I shut my book and gave him my attention, which he presently rewarded by catching and swallowing a snake. This was in autumn, when Bitterns, like lesser birds, are liable to turn up in unexpected quarters. The reader may take the incident, if he will, as a warning against the reading of print out of doors. As a general thing, we may safely say, Nature's page is better than a book.

One season a friend and myself became much interested in the question as to the relative 'carrying power' of the three notes or

syllables of which the Bittern's music is composed. The discussion began by our hearing a single far-away note, repeated at the proper intervals, at a time when we could not well follow it up. Later investigation, to our no small surprise, compelled us to settle down upon the conclusion that the first note was the one last to be lost as we traveled away from the bird. We were surprised, I say, for the second note is the one which bears, or seems to bear, the accent. *Plum-pud-d'n,* the creature appears to say, with an emphasis fairly to be called violent upon the middle note. Why, then, should not the middle note be heard farthest? What *is* emphasis, anyhow, if not, as the dictionary says, a "special force of voice." Could there be something peculiar, we asked ourselves, in the *quality* of the first syllable, which made it carry beyond the others? We discussed the matter eagerly, trudging to and fro to make certain of the fact itself, and agreed, if I remember rightly, upon a plausible explanation. As I review the case, however, I am so much in doubt as to the correctness of our theory that it seems quite as well not to state it, but to leave the question to any BIRD-LORE reader who may some day have nothing better to do than to investigate it for himself.

For Teachers and Students

Hints to Young Bird Students*

IT has always been our experience that young bird students who have just crossed the threshold of ornithology are glad to turn for a word of advice and assistance to their older brethren, who have already made some progress in the science; and it has always been a pleasure for us to give such aid. In view of these facts, we take this opportunity of offering a few words of counsel for the benefit of those who are beginning the study of birds.

Doubtless every beginner looks upon the formation of a collection as necessarily the first step on the ornithological ladder; and probably a collection of eggs is preferred to a collection of birds, because the specimens can be prepared much more readily.

*From a leaflet prepared under the initiative of Mr. Witmer Stone, Conservator Ornithological Section, Acad. Nat. Sci., Philadelphia. These "hints" are addressed to students who desire to become scientific ornithologists and to whom specimens are a necessity. They show, however, how few specimens are required, and how much more there is to learn from living birds than from dead ones.

Soon you meet complaints from well meaning persons who object to robbing birds' nests, and you reply that you are collecting for scientific purposes. Very good; science has need of you all, but do you know what scientific ornithology — real ornithology — is?

Are you not influenced, to some extent, at least, by "oölogical" magazines and dealers' price-lists of eggs, from which you learn that it is important to secure *series of sets*, — which means hundreds and thousands of eggs, — and wherein you also learn the market price of this or that egg, and value your specimens accordingly, — just as you do your postage stamps? This is not science, and the men who advocate this sort of collecting, and who have the largest collections of eggs, rarely contribute anything to our knowledge of birds, and are not advancing the science of ornithology.

If you must have a collection, a few sets of eggs (often a single set) of each species of bird will answer all your purposes. There is nothing to be gained by the collecting of a series, except the extermination of the birds, which is surely not your object.

On the other hand, there is a vast amount of bird work that you can do to help the science of ornithology and gain a reputation for yourself.

There are hundreds of facts regarding the distribution of birds, their habits, etc., which are still unknown, and you should make it your aim to become an authority on the birds of your region, and keep records of all your observations as to migration, habits, abundance, etc. You will find ample opportunity for work, as every year will bring to light new facts, and the more you contribute to our knowledge of the birds the more you will see what an insignificant matter the formation of an egg collection is in comparison with real ornithology.

In the case of birds, it is justifiable to shoot specimens which are new to you for purposes of identification, but you should make the best use of the bird *before* you kill it, so that it will not be necessary to shoot more of the same kind in order to tell what they are. Your aim should be to learn to recognize birds at sight and by their notes, and you will find you will learn more of value by a study of the living bird than by collecting skins.

The exact knowledge that we now possess of the coloration, etc., of North American birds, and the large collections available for study in the museums, render it entirely unnecessary for *every* bird student to form a collection. Those who undertake any special line of study will soon learn what specimens are required and collect accordingly, instead of amassing a large number of specimens with no particular object in view.

These suggestions are not made with a faultfinding or sentimental feeling, but in a friendly spirit, for the purpose of counteracting the effect of the advice of egg dealers and traders, who seem bent upon developing our budding students into "egg hogs" instead of ornithologists.

We have all killed birds and collected eggs, but not to a useless excess, and have always, we believe, made real use of our collections in adding to the knowledge of birds and advancing the science of ornithology.

As active members of the American Ornithologists' Union, we are only too glad to encourage the study of birds and aid the beginner, but unless some steps be taken against this useless egg collecting, the extermination of some at least of our birds will soon be effected.

We ask your earnest consideration of these points, and trust you will aid us by your influence and example in advancing true ornithology, and in discouraging the waste of bird-life occasioned by this "fad" of egg collecting.

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JOHN H. SAGE,
Secretary American Ornithologists' Union, Portland, Conn

Fall Migration at Portland, Conn.

BY JOHN H. SAGE

I. AVERAGE DATES OF DEPARTURE OF THE COMMONER SUMMER RESIDENT BIRDS

SEPTEMBER 1 TO 10

Least Bittern, Black-billed Cuckoo, Least Flycatcher, Baltimore Oriole, Veery

SEPTEMBER 10 TO 20

Kingbird, Cliff Swallow, Purple Martin, Warbling Vireo, White-eyed Vireo, Prairie Warbler, Wood Thrush.

SEPTEMBER 20 TO 30

Spotted Sandpiper, Whip-poor-will, Humming-bird, Rose-breasted Grosbeak, Bank Swallow, Yellow-throated Vireo, Nashville Warbler, Yellow Warbler, Redstart, Oven-bird, House Wren.

OCTOBER 1 TO 10

Green Heron, Nighthawk, Chimney Swift, Wood Pewee, Scarlet Tanager, Red-eyed Vireo, Black and White Warbler, Parula Warbler.

OCTOBER 10 TO 20

Virginia Rail, Black-crowned Night Heron, Cooper's Hawk, Yellow-billed Cuckoo, Phœbe, Bobolink, Indigo Bunting, Barn Swallow, Catbird, Brown Thrasher, Short-billed Marsh Wren.

OCTOBER 20 TO 31

American Bittern, Sharp-shinned Hawk, Red-winged Blackbird, Meadow Lark, Field Sparrow, Vesper, Savanna and Chipping Sparrows, Towhee, Tree Swallow, Black-throated Green Warbler, Maryland Yellow-throat, Long-billed Marsh Wren.

NOVEMBER 1 TO 30

Woodcock, Mourning Dove, Marsh Hawk, Kingfisher, Flicker, Bronzed Grackle, Cowbird, Song Sparrow, Swamp Sparrow, Robin.

II. DATES OF ARRIVAL OF MIGRANTS FROM THE NORTH

AUGUST 15 TO 31

Great Blue Heron, Small-billed Water Thrush.

SEPTEMBER 1 TO 10

Yellow Rail, Least Sandpiper, Solitary Sandpiper, Osprey, Blackburnian Warbler, Yellow Palm Warbler, Canadian Warbler*.

SEPTEMBER 10 TO 20

Pied-billed Grebe, Blue-winged Teal, Wilson's Snipe, Pigeon Hawk, Yellow-bellied Sapsucker, Rusty Blackbird, White-throated Sparrow, Philadelphia Vireo, Bay-breasted Warbler, Black-poll Warbler, Connecticut Warbler, Red-breasted Nuthatch, Grey-cheeked Thrush.

SEPTEMBER 20 TO 30

Loon, Black Duck, American Coot, Pectoral Sandpiper, Semi-palmated Sandpiper, Greater Yellow-legs, Nelson's Sparrow, Junco, Lincoln's Sparrow, Black-throated Blue Warbler*, Myrtle Warbler, Magnolia Warbler*, Pine Warbler, Wilson's Warbler*, American Pipit, Winter Wren, Ruby-crowned Kinglet, Olive-backed Thrush.

OCTOBER 1 TO 10

Green-winged Teal, Pintail, American Scoter, White-winged Scoter, Short-eared Owl, White-crowned Sparrow, Blue-headed Vireo, Brown Creeper, Golden-crowned Kinglet, Hermit Thrush.

OCTOBER 10 TO 20

Red-throated Loon, American Scaup Duck, Old-squaw, Surf Scoter, Ruddy Duck, Canada Goose, American Golden Plover, American Goshawk, Fox Sparrow.

OCTOBER 20 TO 31

Hooded Merganser, Baldpate, Lesser Scaup Duck, Ring-necked Duck, Buffle-head, Snowflake, Tree Sparrow, Northern Shrike.

NOVEMBER 1 TO 20

Red-breasted Merganser, Mallard, Snowy Owl, Pine Siskin.

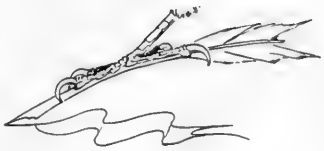
*Generally noted at Englewood, N. J., between August 20 and 31.—F. M. C.

For Young Observers

Mr. Flicker Writes a Letter

BY GARRETT NEWKIRK

People:
Tell me where you scare up
Names for me like 'Flicker,' 'Yarup,'
'High-hole,' 'Yucker,' 'Yellow-hammer'—
None of these are in my grammar—
'Piquebois jaune,' (Woodpick yellow),
So the Creoles name a fellow.
Others call me 'Golden-wings,'
'Clape,' and twenty other things
That I never half remember,
Any summer till September.



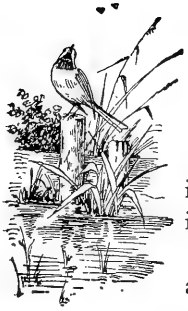
Many names and frequent mention
Show that I receive attention,
And the honor that is due me;
But if you would interview me
Call me any name you please,
I'm 'at home' among the trees.
Yet I never cease my labors
To receive my nearest neighbors,
And 'twill be your best enjoyment
Just to view me at employment.

I'm the friend of every sower,
Useful to the orchard grower,
Helping many a plant and tree
From its enemies to free,—
They are always food for me.
And I like dessert in reason,
Just a bit of fruit in season,
But my *delicacy* is *ants*,
Stump or hill inhabitants;
Thrusting in my sticky tongue,
So I take them, old and young.

Surely we have found the best
Place wherein to make our nest—
Tunnel bored within a tree,
Smooth and clean as it can be,
Smallest at the open door,
Curving wider toward the floor.
Every year we make a new one,
Freshly bore another true one;
Other birds, you understand,
Use our old ones, second-hand,—
Occupying free of rent,
They are very well content.

To my wife I quite defer,
I am most polite to her,
Bowing while I say, 'kee-cher.'
Eggs we number five to nine,
Pearly white with finish fine.
On our nest we sit by turns,
So each one a living earns;
Though I think I sit the better,
When she wishes to, I let 'er!

—*Flicker.*



Zip and Phoebe (A Cat-Bird Story)

BY FLORENCE A. VAN SANT

EARLY each spring I watch for the return of a Phœbe bird, which usually gladdens my heart by his appearance about sundown of some bright day. He is alone, because, according to most authorities, he travels in advance of his mate; and when I ask with wonder, "Well Peter, where is Phœbe?" with a quick dip of his tail and an expressive twitter, he seems to say, "She will arrive on the next train."

For several years they have returned to the same nest beneath the roof of my veranda, each spring re-lining the inside and brightening the outside with green moss. They always raise two broods. They are very tame, and from year to year do not seem to forget their confidence of the previous summer, and will perch on the cedar tree close to the porch, or light on the rope of the hammock only a few feet away from me.

I have so trained my cat, Zip, that she thinks it is as wicked to look at a bird as she does to climb on the table, and never does either. Peter and Phœbe seemed to know that they had nothing to fear

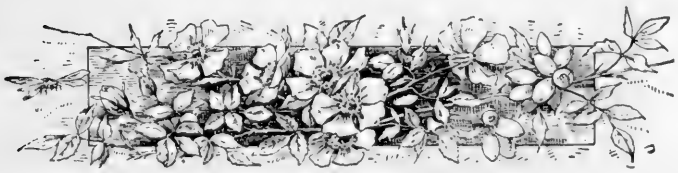
'ZIP'

from her; and, when sitting on the little white eggs, their bright eyes would peep over the nest at Zip, sitting or napping in the easy chair below. When the young birds arrived, the parents would fly back and forth feeding them, without showing any more fear of the cat than they did of me.

While busy in the house one day, my attention was attracted by a loud tapping at the window, and on looking up I saw Phœbe apparently in great distress. She would fly at the window, striking the glass with her bill, circle round, fly back again, and tap, as though trying to attract my attention. Upon my appearance at the door, she flew toward the nest and, pausing on the wing, as a Kingfisher will poise over the water when seeing a fish, uttered sharp cries, fluttering her wings all the while, and telling me in bird language of her trouble. There sat a cat on the chair just below the nest, but it was not Zip. She had taken no other cat into her confidence, hence her alarm. When I drove the strange cat away, she quieted down and administered to the wants of her family as usual.

This little incident seems to show that birds become so accustomed to their environments that they know each member of the family, even to the dog and cat, and that they possess a certain degree of reasoning power.

One day later in the season, when they were raising the second family, my attention was again attracted by the same cries. A pair of my tame Pigeons, looking for a place to build, had lighted on the cornice over the door not far from the nest, and both Peter and Phœbe were trying to drive them away. They would dart almost up to them, all the while snapping their bills vigorously, as though catching a succession of insects, but before the Pigeons could strike with their wings, would dart away, and like a flash be back again. They did not seem to be calling on me for assistance, but were themselves fighting for what they considered their rights, and evidently did not think Pigeons "as harmless as Doves." The warfare continued at intervals for several days, until the Pigeons decided it was an unpleasant locality for a future home, and retired to the barn.



Notes from Field and Study

Birds Through a Telescope

The season is approaching when the migration of birds may be studied to advantage through a telescope. A 2-inch hand glass may be used, though a higher power is preferable. It should be focused on the moon, across the surface of which the bird is seen passing.

September 3, 1887, at Tenafly, N. J., Mr. John Tatlock, Jr., and myself, using a 6½-inch equatorial, saw 262 birds cross the moon's disc between the hours of eight and eleven (The Auk, V, p. 37), and we have since repeated the observation.

Studies of this nature should throw much light on the question of 'highways of migration,' and at the same time furnish an idea of the number of birds passing through a given space during a given time; and, more particularly, they should tell us the height at which birds perform their nocturnal journeys.

Mr. Tatlock and myself solved this latter problem by a hypothetical assumption of the inferior and superior distances at which a bird would be visible. In this way we arrived at the conclusion that the birds seen were between one and three miles above the earth.

Until recently this theory has lacked confirmation, but I now learn from Dr. William R. Brooks, Director of Smith Observatory, at Geneva, N. Y., that during the evening of May 23, 1899, while observing the moon through his 10⅛-inch refracting telescope, using a power of 100 diameters, he saw some forty birds cross the field of vision. Dr. Brooks states that from the distinctness of the image and the fact that from three to five seconds were required by each bird to cross the segment of the moon in the field of the telescope, he estimates the birds to have been distant about seven and a half miles, and further calculation, based on this estimate, places them about two miles above the earth.—Frank M. Chapman.

The Cardinal in Maine

This incident is vouched for by Mrs. L. M. N. Stevens, National President of the W C. T. U.

Several years ago, after the first snowfall at Stroudwater, Maine, Mr. Stevens hurried into the house one morning to ask his wife to come and see a handsome, but cold and hungry-looking, red bird, in a shrub near the door. Mrs. Stevens saw that it was a Cardinal Grosbeak, and, placing some food in a large cage, she set it near the bush. The Cardinal soon hopped inside, and was safely convoyed indoors under cover of a blanket. A happy season began. He was given the freedom of the room, and became very tame and companionable.

In the spring, as soon as the red bird grew restless and the weather mild, he was let loose, and flew away.

In the fall, with the first cold snap, came the Cardinal, to spend his second winter in the old home.

Again in the spring, when the restlessness re-appeared, Mrs. Stevens wanted to let the bird fly, but yielded to the judgment of her husband, who advised delay, lest cold and hunger overtake the little wayfarer. Nature, however, avenged the violation of instinct; in a few days the Cardinal drooped, refused to avail himself of liberty, and died.—Ella Gilbert Ives, *Dorchester, Mass.*

A Useful Bird

In speaking of the economic value of certain of our birds, a lecturer, quoting Professor Beal, said that in Iowa the Tree Sparrow was estimated to destroy 875 tons of the seeds of noxious weeds annually.

As reported in a local paper, this statement read: "The Tree or Chipping Sparrow destroyed, as discovered by scientific observation, 640,000 tons of the eggs and young of harmful insects."

Book News and Reviews

WILD LIFE AT HOME: HOW TO STUDY AND PHOTOGRAPH IT. By RICHARD KEARTON, F. Z. S. Fully Illustrated by Photographs taken Direct from Nature by C. KEARTON. Cassell & Company, Ltd., London, Paris, New York, and Melbourne, 1898. 12mo., pp. xiv + 188. Numerous half-tones. Price, $1.50.

In this book, Mr. Kearton and his brother show that their patience and ingenuity, as well as their field of work, are inexhaustible. It differs from 'With Nature and a Camera' chiefly in being addressed more especially to photographers, the opening chapters being devoted to a description of the outfit required, with practical suggestions as to its use. These are followed by chapters on 'Birds,' 'Mammals', 'Insects,' and the life of 'Pond, . River and Seashores.' The illustrations are fully up to the standard of previous work by the same authors, which we have before had occasion to praise so highly, and continued experience with a camera leads us to appreciate more fully than ever the truly marvellous pictures they have secured. Mr. Kearton's paper in this number of BIRD-LORE admirably illustrates the practicability of his advice to naturalist-photographers, who, in 'Wild Life at Home' will find both instruction and encouragement. The book should be in every naturalist's library, whether or not he uses a camera.

F. M. C.

BIRDS. By ANNIE M. GRANT. Report of the R. I. Board of Agriculture, 1899.

THE BIRDS OF ONTARIO, IN RELATION TO AGRICULTURE. By CHAS. W. NASH, ONTARIO DEPARTMENT OF AGRICULTURE, TORONTO.

In Mrs. Grant's paper we have an epitome of a great amount of useful information. The horticultural and agricultural societies are doing a good work in publishing such papers in their reports, thus ensuring to them a wide circulation among the class who most need this kind of literature.

In that portion of her paper devoted to the 'Decrease in Bird-life,' Mrs. Grant puts her finger on some very sore spots. There can be no doubt that much harm has been done through egg-collecting by pseudo-naturalists, who make no use of their collections except to boast of their size and rarity, and who gather thousands of extra sets for purposes of exchange. Another element of bird destruction is seen in the South, where our common singing birds are so generally offered for sale in the market as food. A campaign of education is needed here. The time wasted in shooting these useful creatures would, if properly applied, produce more and better meat in the shape of domestic poultry, or other equally palatable food. We hope Mrs. Grant will continue her good work.

In Mr. Nash's paper we have another concise statement of the facts with regard to the usefulness of birds from an agricultural point of view. The case of the birds of prey is very clearly and forcibly presented. When these birds do harm — as when they pick up a stray chicken — the evil is open and apparent to everybody; but the good work they are constantly doing is only appreciated after the most careful and systematic observation. The depredations of the vast hordes of small mammals is a constant menace to the interests of husbandry, and more especially to horticulture. Without question, the Hawks and Owls are the most efficient checks upon the increase of these creatures, and it cannot be too often or too forcibly impressed upon the farmers that these birds should be rigorously protected.

With regard to the other birds, the case is equally well put, and illustrated by many interesting and valuable observations and experiments. There can be no question that this is a valuable paper, and that it deserves a wide circulation among agricultural people.

As to the merits of the illustrations

with which it is embellished, there may be differences of opinion.— F. E. L. Beal.

On the Birds' Highway. By Reginald Heber Howe, Jr. With Photographic Illustrations by the Author, and a Frontispiece in color from a Painting by Louis Agassiz Fuertes.

This is a contribution to the class of literature which John Burroughs and Bradford Torrey have made so deservedly popular. It cannot, however, be said that the author has reached the standard of his prototypes. His observations were made in the Atlantic states from Virginia to Maine, and his descriptions bear evidence of sympathy with his subject. The illustrations include an admirable frontispiece of Chickadees by Louis Fuertes, thirteen full-page half-tones, for the most part illustrating the localities described, and numerous half-tone 'thumb-nail pictures' in the text, largely taken from mounted birds. Some of the latter are effective; others are too small or too indistinct to be of value to those who would need them.

An appendix gives nominal lists of the birds observed at Bristol, R. I.; Washington, D. C; Chevy Chase, Md; Hubbardstown, Mass., and Chateaugay Lake, N. Y.— F. M. C.

The Danger of Introducing Noxious Animals and Birds. By T. S. Palmer. Yearbook of the Department of Agriculture for 1898, pp., 87–110; 1 half-tone plate and 6 cuts in the text.

Birds as Weed Destroyers. By Sylvester D. Judd. Yearbook of the Department of Agriculture for 1898, pp., 221–232; 1 half-tone plate and 7 cuts in the text.

Economic Relations of Birds and Their Food By F. E. L. Beal. Reprinted from the Proceedings of the Twenty-fourth Annual Meeting of the New Jersey State Horticultural Society, January 4 and 5, 1899

As long as man's attitude toward nature is the standpoint of dollars and cents, bird-lovers will welcome every fact which places them in possession of a fresh argument to be used where appeals to sentiment are of no avail. It is, therefore, with great satisfaction that we receive these sound, convincing papers on economic zoölogy.

Dr. Palmer's paper has long been needed and, fortunately or unfortunately, so unanswerable are the facts which he presents, that one would imagine universal knowledge of them would be all that was necessary to avert further danger from the introduction of exotic species. The subject, however, should receive the prompt attention of legislators, in order that it may be duly placed under the control of the proper authorities — obviously the officials of the Biologic Survey of the United States Department of Agriculture.

In giving us the results of his studies of the food of certain seed-eating birds, Dr. Judd at the same time places their economic importance so far beyond dispute that we trust every agriculturist in the land may become familiar with his facts and figures. None of the many valuable papers issued by the Biological Survey has had a more obvious value than this one.

In his lecture before the New Jersey Horticultural Society, Professor Beal discusses unprejudicedly birds' power for good or evil. He shows that while insects, especially certain noxious species, have greatly increased since the settlement of this country, birds have decreased, and that in order to restore the balance disturbed by man, an increase in the number of our birds is greatly to be desired.— F. M. C.

Book News

Every lover of animals must rejoice in the phenomenal success achieved by Ernest Seton Thompson's 'Wild Animals I have Known.' Although published only last October, over 14,000 copies have been sold, and the book's popularity increases as its charm becomes more widely known. Mr. Thompson has done more to bridge the gap between human life and animal life than any writer we have known. One has only to read his work to become convinced of one's kinship with the lower forms of life.

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. 1 AUGUST, 1899 No. 4

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Bird-Lore's Motto:
A Bird in the Bush is Worth Two in the Hand.

THE advice of a prominent ornithologist to beginners to collect all the birds of a species they can get, has so long misrepresented the necessities of the case and, at the same time, brought legitimate collecting into disrepute, that every one having the interests of the science of ornithology at heart will read with great satisfaction the circular entitled 'Hints to Young Bird Students' which we reprint on another page. Signed by a majority of the professional ornithologists of this country, representing the institutions where ornithology is most actively studied, it may be accepted beyond thought of dispute as representing the true attitude of scientific ornithologists toward the question of collecting. And in place of the advice to kill all the birds "you can get," what do we find? Virtually a plea to abstain from all egg-collecting, to take birds only for purposes of identification, and a statement that the student "will learn more of value by a study of the living bird than by collecting skins."

To our mind, the importance of this circular cannot be over-rated. It marks an epoch in the history of North American ornithology. The future ornithologist is not to be a mere hoarder of birds' skins, but a student of bird-life whose researches, we predict, will prove an invaluable aid in the solution of that most difficult and most important of all biologic problems, the relation of animals to their environment.

THE paper by Mrs. Olive Thorne Miller on 'The Ethics of Caging Birds,' published in the last number of BIRD-LORE, has been both commended and condemned. Some correspondents have considered it a most rational and unprejudiced treatment of the subject, others have written that as its general tenor might encourage the caging of birds, it was not to be endorsed. Particularly do they deplore what Mrs. Miller feels to be "a work of charity,"—the rescuing of birds "from the discomforts of a bird-store" for, they say, that the dealer replaces the sold bird with another, and the final result is to encourage the trade in birds. Of this there can be no doubt, and the question, therefore, becomes one for debate, as to whether the pleasure to be derived from the companionship of a caged bird, the humanizing influence which may be exerted by association with a creature dependent on us, and the knowledge we may acquire of its habits, justify us in depriving it of its liberty —assuming, of course, that it receives proper care. We shall be glad to receive the opinions of our readers on this subject.

'The Century' for July has an illustrated article on Bird Rock, in the Gulf of St. Lawrence, by the Editor of this journal, which, it should be said, would have appeared in BIRD-LORE had it not been disposed of before this magazine was established. This statement will also apply to an article on Pelican Island, Florida, which will appear in 'St. Nicholas' for September.

DR. COUES having retired from the Editorship of 'The Osprey,' Dr. Gill, who had withdrawn his name from recent numbers, assumes control.

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.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries.

New Hampshire.....MRS. F. W. BATCHELDER, Manchester.
Massachusetts.....MISS HARRIET E. RICHARDS, care Boston Society of Natural History, Boston.
Rhode Island..... MRS. H. T. GRANT, JR., 187 Bowen street, Providence.
Connecticut ....MRS. WILLIAM BROWN GLOVER, Fairfield.
New York.....MISS EMMA H. LOCKWOOD, 243 West Seventy-fifth street, New York City.
New Jersey.....MISS ANNA HAVILAND, 53 Sandford Ave., Plainfield, N. J.
Pennsylvania.....MRS. EDWARD ROBINS, 114 South Twenty-first street, Philadelphia.
District of Columbia.....MRS. JOHN DEWHURST PATTEN, 3033 P street, Washington.
Wheeling, W. Va. (branch of Penn. Society)..ELIZABETH I. CUMMINS, 1314 Chapline street, Wheeling.
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Indiana.....AMOS W. BUTLER, State House, Indianapolis.
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Iowa.....MISS NELLIE S. BOARD, Keokuk.
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Minnesota.....MRS. J. P ELMER, 314 West Third street, St. Paul.
Tennessee.....MRS. C. C. CONNER, Ripley.
Texas.....MISS CECILE SEIXAS, 2008 Thirty-ninth street, Galveston.
California.....MRS. GEORGE S. GAY, Redlands.

The Responsibility of the Audubon Society

Now that the Audubon Society is recognized as a factor in the higher civilization of the day, it may be well to ask how far it realizes its responsibility as a public educator.

"For the Protection of Birds," is a most reasonable and tangible declaration of motive, but what next?

The male and female public is straightway asked to give up certain habits that it has regarded as inherent rights,—in the cause of humanity and agricultural economy.

So far so good; but should not these would-be teachers of good will to animals, themselves be educated in consistent humanity, in order to keep their doctrines above the ridicule level?

Upon the discrimination of its humanity depends the future of the Audubon Society. A discrimination that shall render its workings logical, and make it able to see that it must at least give as much as it takes. A breadth of knowledge to realize that if the Society restricts the hat trimmings of women, the egg-collecting habits of boys, and the "just to see if I can hit it" proclivities of both boys and men, it is bound to give them something beside "the consciousness of rectitude" in return. The very least it can do is to help them to become as intimately acquainted with "the bird in the bush" as they were with the egg in the pocket and the feather on the hat.

It is here that the educational responsibility of the Audubon Society lies. Instead of issuing tracts simply to decry feather-wearing, and to say that something should be done, I would have each Society send out one or more illustrated bird lectures to the remoter corners of its range, where people do not have the privilege of hearing professional ornithologists. Also to the groups of remote country schools whose scholars have no "key to the fields" that lie so close at hand. I would have the Societies send small circulating libraries of bird books in the same way. To introduce people to the bird in the bush is the way to create a public sentiment to keep it there, and to

make it possible to obtain legislative authority for the enactment and keeping of good bird laws, which are the backbone of protection.

Again, there should be no sort of conflict between ultra bird protectionists and legitimate scientific ornithology. That many of the best known ornithologists occupying public positions in the United States favor the restriction of egg-collecting, etc., is amply proved by a leaflet issued in May, by Witmer Stone,* called "Hints to Young Bird Students," and signed by such men as J. A Allen, Robert Ridgway, C. Hart Merriam, A. K Fisher, Wm. Brewster, F. M. Chapman, John H. Sage, C. W. Richmond, T. S. Palmer, and Wm. Dutcher.

The Audubon Societies are responsible for meeting these liberal-minded and progressive scientists half way. There must be anatomists and embryologists to study the human body, why not then, also, of the feathered brotherhood, *only* it is not necessary for mankind in general to keep skeletons of either birds or people in their closets for this purpose, and the random collecting of either should be regarded as equally reprehensible.

I would see humanity and science allied in this matter. If the Audubon Societies confess that this is impossible, they are taking the responsibility of harnessing humanity with ignorance,—a horse that will drag any companion into the ditch.

Let "For the Protection of Birds" be the banner motto under which the Audubon Society shall go out, as it is bound, to teach (not to preach) the 'bird in the bush,' but the teaching need be none the less humane, and will be far more effectual if, instead of 'dicky-bird' platitudes of uncertain sex and species, it deals out good, sound, popular ornithology

M. O W.

The So-called Sparrow War in Boston

In the month of March, 1898, a committee organized by the American Society of Bird Restorers presented to the Mayor of Boston in person the following petition, signed by a host of representative Bostonians:

"*To Hon. Josiah Quincy, Mayor of Boston.*

"The undersigned petitioners hereby respectfully represent that the presence in Boston of hosts of the noxious imported Finch, known as the English Sparrow, has come to be a public nuisance, general expense and serious esthetic injury, imperatively calling for prompt municipal abatement.

"Your petitioners would, therefore, most earnestly request that, as the Chief Executive Officer of the city, you direct the immediate reduction and suppression of this pest in such places (instancing the Common and, conditionally, the cemeteries of Boston) as may now be under, or may with this purpose in view be brought under, municipal control."

Under the law of 1890, the Mayor proceeded at once to take such measures as seemed advisable for clearing the Common, Public Garden, and city squares, of the Sparrow pest.

The work was done under the general oversight of the Committee on the English Sparrow, of which Mr. Fletcher Osgood, manager and organizer of the Bird Restorers, was and is the chairman. Five men, with Foreman Kennedy, proceeded to clear English Sparrow nests from the Common, by removing them from orifices in the trees, from openings in the Sanitary Building, and from electric hoods. The nest-boxes, put up years ago by misguided persons to accomodate the English Sparrow were all removed, and the Sanitary Building on the Public Garden was cleared.

In the progress of this work, thousands of small orifices in the trees of the Common (all known to exist) were cleared out and effectively closed with wooden stoppers, and much dead wood, inviting the breeding of the Sparrow, was removed. As a whole, great good in the way of arresting decay and generally improving the trees of the Common was done by Foreman Kennedy and his force, even if we leave out of account the checking of the breeding of the Sparrow. The work began on March 15, and ended April 5. During that period about 5,000

*See page 125 of this number of BIRD-LORE.

nests and 1,000 eggs were destroyed. No young birds were found. The protest against the work, based mainly on sentimental grounds, which Mr. Angell, of the S. P. C. A., put forth, resulted in two picturesque hearings at the City Hall. An account of these hearings, with some of their informal adjuncts, would certainly entertain and instruct the readers of BIRD-LORE were it possible to embody it here.

Let it suffice to say, that the weight of common sense, of real humanity, and of economics, as well as of science in overwhelming measure, was, in the judgment of the best informed, wholly with those who would reduce the Sparrow. The Mayor, however, decided to suspend the work, assigning as a reason the difficulty and expense of continuing it. The committee sent to the Mayor a letter expressing its regret that the work should thus be brought to an untimely close, and fully outlining plans for its continuance At the present writing, no definite prospect is in sight of the resumption of the work. The committee proposed, after the closure of the nesting orifices, to pull down by means of hooked poles such nests as were built by the Sparrows in the branches of the trees on the Common and Garden, timing visits so as to destroy nests and eggs only, thus preventing the hatching of young. With the onset of cold weather it was proposed to trap and destroy the Sparrow by devices which were already proved at once efficient and merciful. These two methods, aided, perhaps, by others, carefully planned to avoid cruelty, were the ones much relied on by the committee to do the needed work of clearance.

After the stoppage of the work the Mayor wrote to Chairman Osgood, asking his opinion as to the advisability of putting up bird-houses on the Common, so built, without perches, as to keep out the Sparrow and admit the White-bellied Swallow, Bluebird and House Wren. Mr. Osgood replied in effect that perchless bird-houses, judging from recent evidence, would probably invite and shelter the breeding of the Sparrow, and, with the Common still uncleared, would hardly aid in restoring any native bird. He was willing, under certain strict conditions, that the experiment should be tried purely as an experiment, provided that every box should be instantly removed upon proof that these perchless devices sheltered the Sparrow. He, however, expressed little hope that any good would come of such a measure beyond the absolute demonstration, once for all, and publicly, that perchless boxes were not Sparrow-proof. The "Sparrow committee" could not advise the putting up of bird-boxes under existing circumstances, and if any are erected the responsibility for the trial will not rest in any way with this committee. At this writing, the Sparrows shut out from the tree orifices are building to some extent in the branches of the trees upon the Common. To note how extensively this breeding is carried on this season, and to attain general information as to the presence of any native birds upon the Common and Garden, a patrol of the Boston Branch of the American Society of Bird Restorers has been assigned to observation work through the spring and summer.

Results will be officially reported to the National Biological Survey (U. S. Department of Agriculture) at Washington, D. C.

FLETCHER OSGOOD,
Organizer and Manager of the American Society of Bird Restorers.

Reports of Societies

MASSACHUSETTS SOCIETY

In February and March, Mr. Ralph Hoffmann gave a course of eight lectures on birds, under the auspices of the Society. These were well attended, and not only increased the interest in bird study, but informed the public more fully of the work of the Society, and also added materially to the treasury.

March 22nd, the Society held a 'Hat Show' at the Vendome, which was a success. Many of the best milliners exhibited, and it served the purpose of interesting both milliners and public in the work of bird protection. In spite

of bad weather, the room was crowded all day, and many hats were sold. The newspapers reported it with illustrations; the milliners were pleased; and the Audubon Society was talked about with renewed interest.

The Society has purchased the publisher's stock of the Audubon Calendar colored plates, without the Calendar numbers, and are offering them for sale at 25 cents for the set of twelve.

The large sale of the chart is very satisfactory, about 1,200 having been sold since Christmas. Appreciative letters are daily received, and the school teachers especially commend it.

New circulars have been purchased for distribution, from the University of Nebraska and Cornell University; also "A Letter to the Clergy," republished by the Wisconsin Society.

HARRIET E. RICHARDS, *Sec'y.*

CONNECTICUT SOCIETY

The second annual meeting of the society took place on June 1, in the United Church Chapel, New Haven Conn., and was largely attended. It being part of the policy of the Society to hold its public meetings each year in different parts of the state.

The president made a short address, outlining the work for the coming season, which will include: (1) the consideration of a practical method for destroying the English Sparrow, as a bird distinctly injurious to song birds and others having agricultural value; (2) an effort to obtain legislation to stop the spring shooting of shore and water birds; (3) the addition to the societies' equipment of several small libraries of bird books, to be circulated free throughout the state where there are no public libraries, after the manner of the lecture outfits; (4) the addition of an illustrated lecture suitable for small children.

The report of the corresponding secretary-treasurer showed a membership in the various classes of 814; also, receipts of over $500 during the year, no debts, and a balance in the treasury.

The chairman of the committee on free lectures reported the great success of the undertaking. The two lectures, "Birds about Home," by Mrs. Wright, and "Some Facts about Birds that Concern the Farmer," by Willard G. Van Name, having been out over fifty times since early spring. These lectures, accompanied by sets of colored slides and oil-lanterns, are loaned free to any responsible person within state limits, and the Granges have lately taken them up with results most gratifying to the Society.

A few changes were made in the management at the election of officers. Mrs. H. S. Glover, the first corresponding secretary and treasurer, having resigned, received a hearty vote of thanks for her work, and Mrs. Wm. Brown Glover was elected as general secretary in her stead, Mrs. Howard H. Knapp being elected treasurer.

The event of the meeting was the lecture by Mr. F. M. Chapman, upon Photography as an Aid to Bird Study, all the beautifully colored slides used as illustrations having been photographed from life.

The detailed annual report of the Society's work will be mailed upon application. HELEN W. GLOVER, *Sec'y.*

TENNESSEE SOCIETY

It is with great satisfaction that we report the organization in the court house at Ripley on May 26, of the Audubon Society of the State of Tennessee. Without the assistance of the southern states, the work of the northern section of the country must necessarily be hampered by the inability to protect the birds in their winter haunts and during the migrations.

It is also gratifying to note the common sense basis upon which the society is founded, the president, having stated in his initial address, that "the society had for its leading object the creation of a public opinion that would secure legislation in the interest of bird protection, that would spare our birds from threatened extinction."

NATURE STUDY FOR GRAMMAR GRADES

A Manual for the Guidance of Pupils below the High School, in the Study of Nature

BY

WILBUR S. JACKMAN, A.B.

Dep't of Natural Science, Chicago Normal School

Author of "Nature Study for the Common Schools," "Nature Study and Related Subjects," "Nature Study Record," "Field Work in Nature Study," etc.

REVISED EDITION

In preparing this Manual, it has been the author's aim to propose, within the comprehension of grammar school pupils, a few of the problems which arise in a thoughtful study of nature, and to offer suggestions designed to lead to their solution.

That pupils need some rational and definite directions in nature study, all are generally agreed. But to prepare the outlines and suggestive directions necessary, and to place these within the reach of each pupil, is more than any ordinary teacher has time to do, even granting that she is fully prepared for such work. The utter futility of depending upon oral suggestions during the class hour, when the pupils are supposed to be doing individual work, is easily apparent on a moment's reflection. With a manual of directions in hand, each pupil may be made strictly responsible for a certain amount of work, either in the field or in the laboratory. This removes all occasion for that interruption in his work, which is, otherwise, due to the pupil's attempt to *think* and at the same time *hear* what the teacher says.

"Practical, complete, and, all in all, is the best manual we know to fit the student to do really effective science work in the high school. . . . Altogether both teacher and pupils who use this book are to be congratulated, for we are sure that through its use the whole field of nature study will assume new definiteness, practicality and interest."

—*Southern Educational Journal.*

"It is decidedly practical, and will be welcomed by many teachers who wish to respond in an intelligent way to the demand for nature study."

—*Inland Educator.*

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FOUNDERS OF THE AMERICAN ORNITHOLOGISTS' UNION, 1883.

T. McIlwraith. J. B. Holder. D. G. Elliot. Chas. Aldrich. J. M. Wheaton.
E. A. Mearns. H. W. Henshaw. S. F. Baird. Geo. N. Lawrence. A. K. Fisher.
Nathan C. Brown. Robert Ridgway, *Vice Pres.* J. A. Allen, *Pres.* William Brewster. Elliott Coues, *Vice Pres.* C. F. Batchelder.
R. W. Shufeldt. C. B. Cory. C. Hart Merriam, *Secy.* M. Chamberlain. D. W. Prentiss.
H. A. Purdie. C. E. Bendire. E. P. Bicknell. H. B. Bailey.

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The American Ornithologists' Union

BY J. A. ALLEN

(First President of the Union)

DURING the sixteen years that have passed since the founding of the American Ornithologists' Union, in August, 1883, the study of North American birds has advanced with constantly accelerated strides. That this progress has been due largely to the founding of the Union is beyond denial, as will become evident from the following brief history of its work and the causes that led to its formation.

In all lines of human endeavor, the union of kindred interests and individual effort toward a common end is the key to success. Before the founding of the American Ornithologists' Union, its nucleus existed in a local organization of bird students in Cambridge, known as the Nuttall Ornithological Club. At first its meetings were informal, and its membership was limited to a few individuals living in the immediate vicinity of Cambridge. Later it became regularly organized as a club, with both resident and corresponding members, the latter embracing most of the leading ornithologists of this country. The papers presented at its meetings were often of permanent value, and were later published in scientific journals. In 1876 these had become sufficiently numerous and important to warrant the club in establishing its own medium of publication, the first number bearing date April, 1876, with the title 'Bulletin of the Nuttall Ornithological Club.' As years passed it served not only as the official organ of the club, but as a medium of communication between American ornithologists at large.

This led to the consideration of the desirability of organizing a national society of ornithologists as a means of bringing the workers

in this field into more intimate association and more thoroughly consolidating their interests. The advantages of such consolidation seemed so evident that a call was issued August 1, 1883, dated Cambridge and Washington, for "a convention of American Ornithologists, to be held in New York city, beginning September 26, 1883." The call was signed by the editor of the 'Nuttall Bulletin' (J. A. Allen), associate editor of the 'Nuttall Bulletin' (Elliott Coues), and the president of the Nuttall Club (William Brewster). The response to the call, sent to forty-eight of the more prominent ornithologists of the United States and Canada, was most cordial; twenty-five expressed their intention to attend the convention, and twenty-one were actually present, including several who came a thousand miles or more to attend the convention. Not only were by-laws adopted and officers duly elected, but, as will be noticed later, important lines of work were laid out and assigned to committees, the principle of coöperation being applied in a broad sense.

The Nuttall Ornithological Club is still an active and widely known organization, although upon the founding of the Union, it generously voted to discontinue its 'Bulletin' and to place its subscription list and good will at the service of the Union, which was already considering the desirability of establishing an official medium of publication. As a result, the 'Nuttall Bulletin' became 'The Auk,' which, in recognition of the generous action of the Nuttall Club, was officially designated as the *second series* of the 'Nuttall Bulletin.'

Between isolated workers in any field, jealousies and misunderstandings arise which personal contact tends to obliterate. Such was the case with our ornithologists for some years prior to the founding of the Union. There were two rival check-lists of North American birds, each perhaps equally authoritative though differing in important details, which led to confusion, and a tendency to array our ornithologists into two somewhat hostile camps. This being recognized as a threatening evil of considerable gravity, one of the first acts of the Union was to appoint a committee on the Classification and Nomenclature of North American Birds, so constituted as to include the most competent authorities on the subject and at the same time safeguard all conflicting interests. The work of this committee long since became a matter of history. It was conducted with the utmost conscientiousness and care; personal interests and personal bias were generously waived, differences of opinion were settled by appeal to facts and the evidence, with a result that agreement was established in respect to all points of nomenclature and other technicalities, and a new impetus given to systematic investigation. Thus,

through the work of this committee alone one of the primary objects in view in founding the Union was most happily accomplished. Not only a new check-list of North American birds was substituted for all previous check-lists, but a new 'Code of Nomenclature' was devised and adopted as the basis for determining the names to be used in the check-list. After more than two years of work by the committee the check-list, with its code of nomenclature, was given to the world in 1886, and became at once the accepted standard of authority with all American writers on North American birds; the 'Code' included important innovations in respect to certain principles of nomenclature, which have since become very generally accepted the world over. It is, therefore, to be regretted that a small faction has recently arisen in the ranks of the Union, that, objecting to certain rules of the 'Code,' is seeking to foment a break in the good feeling and harmony that have marked the last ten or twelve years of the history of American ornithology.

A second purpose of the Union was, as already intimated, to bring into coöperation and into personal acquaintanceship as many as possible of the workers in ornithology. In effecting this, the appointment at the first congress of the Union of a Committee on the Migration of North American Birds proved a most efficient means. This committee, with Dr. C. Hart Merriam at its head, began at once to issue circulars of instruction and schedules for the return of data to all bird observers known to the committee, whether members of the Union or not. Thousands of circulars were thus issued annually, reaching hundreds of earnest bird students who had before been working alone and without contact with the leaders in the science, who were thus not only stimulated and encouraged to fresh endeavor, but were placed in communication with a central bureau ever ready to aid their efforts. In a short time the work of this committee outgrew the financial resources of the Union, and led to the founding of a distinct division of the United States Department of Agriculture, designated the Division of Economic Ornithology and Mammalogy, of which the chairman of this committee was invited to become the official head, and which has since become the United States Biological Survey. The data on the migration and geographical distribution of North American birds gathered by this committee was turned over to this new Division of the Department of Agriculture for collation and publication, and the work of collecting further data was continued on an increased scale by the Chief of the Division of Economic Ornithology and Mammalogy. This has resulted in the accumulation of an immense amount of valuable material, but little of which has as yet been published. In 1888 a preliminary report

on 'Bird Migration in the Mississippi Valley,' prepared by Prof. W. W. Cooke and Mr. Otto Widmann, under the direction of the chief of the division, was published, forming one of the most important contributions to the subject of bird migration that has yet appeared. A second report on 'The Land Birds of the Pacific District,' by Mr. Lyman Belding, was published in 1890, and, though issued by the California Academy of Sciences, was the outcome of the work of this committee. Eventually all of the vast accumulation of data inaugurated by the Union, and later carried on under the auspices of the United States Department of Agriculture, relating not only to the migratory movements of birds but to their distribution, will doubtless be published, with proper map and other graphic illustrations.

To another important committee appointed at the first congress of the Union was delegated the investigation of 'The Status of the European House Sparrow in America.' This committee issued circulars of inquiry, and made an elaborate preliminary report to the Union, which report was later, as in the case of the data accumulated by the Migration Committee, turned over to the Division of Economic Ornithology and Mammalogy of the United States Department of Agriculture. Under Dr. Merriam, the investigation was prosecuted with renewed activity, and a final and authoritative report was issued by the Department of Agriculture in 1889. It is needless to say that this impartially conducted report was strongly condemnatory of this burdensome pest.

At the second congress of the Union it appointed a Committee on Protection of North American Birds, which has been continued to the present time, and has been the guiding influence in this great economic and humanitarian work. It has done much to arouse and enlighten public opinion respecting the enormity of the destruction of birds for millinery purposes, and to guide legislation for the better protection of our birds. It early published two important 'bulletins' on the destruction of birds, and was the origin of the original Audubon Society, whose president, Dr. George Bird Grinnell, was long one of the most active members of this committee; through this society, with chapters throughout the country, the cause of bird protection was for several years immensely aided. Of late it has become practically the advisory committee of the existing Audubon Societies which have recently multiplied so gratifyingly throughout the country, and it publishes in 'The Auk' an annual report summarizing the work of bird protection for the year.

In extending a helping hand to casual and isolated observers, the Union has had a marked influence upon the recent progress of ornithology in America, as shown by the increase in the number of observers

who have become contributors to 'The Auk,' and the constantly increasing number who have allied themselves to the Union by membership therein. The constitution of the Union provides for four classes of members; namely, (1) Active Members, limited to fifty, and to include only those who have distinguished themselves as original investigators in ornithology, and who reside in the United States or Canada; (2) Honorary Members, limited to twenty-five, and consisting of the most eminent of foreign ornithologists; (3) Corresponding Members, limited to one hundred, and consisting mainly also of eminent foreign ornithologists; (4) Associate Members, unrestricted as to number, but limited to residence in the United States or Canada. This class includes not only a large number of experienced field workers, but many college professors, educators, and persons eminent in other scientific fields, but who are not expert ornithologists. It is open to all reputable persons whose interest in ornithology is sufficient to prompt them to seek such a congenial alliance.

At the first congress forty-seven ornithologists were elected to active membership—presumably all of the satisfactory candidates available. Of these forty-seven original members, twenty-four were either present or took a prominent part in the organization of the Union, and are thus termed 'Founders.' (The accompanying photograph is a picture of these founders, made up from separate photographs, it being impracticable for the members to assemble to be photographed as a group.) This has remained about the average number, but, as years have passed, the choice for the few coveted places has become harder and harder each year to fill, through the rapid increase of not only available but desirable candidates; so that attainments that would in the earlier days of the Union have proved ample credentials for admission have now less weight, in the effort to select the best from a large otherwise desirable candidacy. The honor of the position has thus become enhanced through competition of merit. The two foreign classes have remained practically unchanged as regards numbers. But the class of Associate Members has increased from about one hundred in 1886 to nearly six hundred in 1898.

The revenue of the Union is derived entirely from the annual dues from members ($5 for active members and $3 for associate members) and subscriptions to 'The Auk.' As the ordinary running expenses of the Union are but a trifle, all of the proceeds from these sources of revenue are devoted to the publications of the Union. These include, besides 'The Auk,' now in its sixteenth volume, the original Code and Check-List of North American Birds (1886), an Abridged Check-List (1889), a separate reprint of the Code alone (1892), the second edition of the Check-List (1895), and nine Supple-

ments to the Check-List (1889–1899), varying in size from about 8 to 36 pages.

'The Auk,' issued quarterly, consists on the average of about 420 pages per year, with at least four fine colored plates, and a greater or less number of text figures, including of late numerous half-tone illustrations of birds in life. As practically all of the funds of the Union are devoted to its publications, and mainly to 'The Auk,' its prosperity as regards its size, the frequency and character of its illustrations, and its influence in promoting the study of ornithology, is limited only by the proceeds from memberships and subscriptions. As it aims to meet the interests and the necessities of both the scientific and the non-scientific reader and contributor, the general articles, comprising more than half of each number, are about equally divided between popular and technical papers, while its department of General Notes (embracing some 15 pages in each number), is about equally acceptable to both classes, as with more or less technical matter for the benefit of the expert are blended notes on the habits and distribution of the lesser known species of our fauna, often of a highly popular character. The department of Recent Literature gives more or less extended notices of the current literature of ornithology, including general works, popular and technical, and of all the principal writings relating to American birds, whether faunal, economic, popular, or technical.

The meetings of the Union occur in November of each year, and heretofore have been held alternately in New York, Washington, and Cambridge or Boston. The present year the meeting, which will be the seventeenth congress of the Union, will be held in Philadelphia, Nov. 13–17, 1899. As usual, the public sessions, beginning on the 14th, will be open to the general public, to which all who are interested in birds are cordially invited.

AMERICAN BITTERNS

Two of a brood of four birds about one week old, at which age they showed no fear of man

Photographed from nature by E. H. Tabor, Meridian, N. Y., May 31, 1898

AMERICAN BITTERNS

The four members of the brood, of which two are shown above, about two weeks old, when they showed marked fear of man

Photographed from nature by F. M. Chapman, Meridian, N. Y., June 8, 1898

The Angler's Reveille

BY HENRY VAN DYKE

What time the rose of dawn is laid across the lips of night,
And all the drowsy little stars have fallen asleep in light;
'Tis then a wandering wind awakes, and runs from tree to tree,
And borrows words from all the birds to sound the reveille.

This is the carol the Robin throws
Over the edge of the valley;
Listen how boldly it flows,
Sally on sally:

Tirra-lirra, down the river,
Laughing water all a-quiver.
Day is near, clear, clear.
Fish are breaking,
Time for waking.
Tup, tup, tup!
Do you hear? All clear.
Wake up!

The phantom flood of dreams has ebbed and vanished with the dark,
And like a dove the heart forsakes the prison of the ark;
Now forth she fares through friendly woods and diamond-fields of dew,
While every voice cries out "Rejoice!" as if the world were new.

This is the ballad the Bluebird sings,
Unto his mate replying,
Shaking the tune from his wings
While he is flying:

Surely, surely, surely,
Life is dear
Even here.
Blue above,
You to love,
Purely, purely, purely.

There's wild azalea on the hill, and roses down the dell,
And just a spray of lilac still abloom beside the well;
The columbine adorns the rocks, the laurel buds grow pink,
Along the stream white arums gleam, and violets bend to drink

This is the song of the Yellowthroat,
Fluttering gaily beside you;
Hear how each voluble note
Offers to guide you:

Which way, sir?
I say, sir,
Let me teach you,
I beseech you!
Are you wishing
Jolly fishing?
This way, sir!
Let me teach you.

Oh come, forget your foes and fears, and leave your cares behind,
And wander forth to try your luck, with cheerful, quiet mind;
For be your fortune great or small, you'll take what God may give,
And all the day your heart will say, "'Tis luck enough to live."

This is the song the Brown Thrush flings
Out of his thicket of roses;
Hark how it warbles and rings,
Mark how it closes:

Luck, luck,
What luck?
Good enough for me!
I'm alive, you see.
Sun shining, no repining;
Never borrow idle sorrow;
Drop it! Cover it up!
Hold your cup!
Joy will fill it,
Don't spill it!
Steady, be ready,
Love your luck!

The Prairie Horned Lark

BY ROBERT W. HEGNER

With photographs from nature by the author.

AT intervals throughout the winter, but more often after the first of February, flocks of hardy little brown birds may be seen about Decorah, Ia., wandering from place to place in search of food. They are the Prairie Horned Larks, harbingers of approaching spring. Some weeks later, when the snow has melted, they seek their favorite haunts in the pasture lands, select a slight elevation from the surrounding surface, and proceed to build their nests. They first dig a hole three inches wide and three inches deep in the softened ground, and then line it on the bottom and sides to the depth of an inch with dry grasses, making a warm nest, level with the surface. I accidentally discovered the first one this season on April 9. It was nicely lined with vegetable down in addition to the usual lining of dry grasses, and was finished ready for the eggs. I returned in a week, but, as the mother bird was not at home, had to content myself with a photograph of the three finely spotted eggs which it then contained. Some children who observed my movements may be held responsible for the destruction of the nest, as

NEST AND EGGS OF HORNED LARK

two days later I could find nothing but the hole from which it had been torn. After a short search another Lark flushed from a nest of three eggs almost identical with the first and about 300 yards from it. Unless incubation is far advanced they seldom flush from

directly under foot, nor do they run along the ground first, after the manner of a great many of the ground builders, but keep a good look out, and fly straight from the nest when anyone comes within fifty feet of them. It is needless to say that it takes sharp eyes to discover their exact position.

At my arrival on the bright, sunny morning of April 24, the Lark was at home, and I had another opportunity of trying to

HORNED LARK AT NEST

photograph her. I focused the camera three feet from the nest and retired to the end of my 60-foot rubber tube. The gophers seemed to be less afraid of me than the Lark, and several of them played together some ten feet away. One little striped rascal began gnawing at the rubber tube, and I was forced to frighten him away. This tube greatly puzzled the Lark, for in running around the camera she always came to a halt upon reaching it, and it was only after repeated trials and much excitement that she screwed up courage enough to hop over. Twenty minutes seemed to be sufficient time to reassure her, and with head lowered she hastened to the nest, looked in, and settled down upon the eggs. An exposure of one twenty-fifth of a second with stop 16 shows her as she was looking into the nest. While I reset my shutter and put in a new plate the Lark left the nest, but this time it took her only two minutes to return. A photograph of a young bird was taken on May 7. The pair of birds that were feeding this young one had already built a second nest, thinner and more loosely put together than the first, and were incubating four eggs.

The enemies of the Prairie Horned Lark seem to be very numer-

ous. The nest and four eggs mentioned above were plowed under to facilitate corn planting, while innumerable nests are destroyed earlier in the season, when the farmers 'break sod.' The first nests in March and April are often subject to great changes of temperature. Although they may be built in warm, sunny weather, a sudden cold wave often covers them with snow and imbeds them in ice.

While waiting for the Lark to become accustomed to the camera, I had an excellent opportunity of observing its song flight. Lying there on my back, I enjoyed a splendid exhibition of one of this bird's peculiar traits. From a point a hundred yards from where I lay a happy songster suddenly arose, flying upward at an angle of 45 degrees, not continuously, but in short stretches. When at a great elevation he began to sing, taking short, quick wing strokes, and singing while he sailed. In this way a circle 300 yards in diameter was crossed and recrossed until fully five minutes had passed, when, suddenly closing his wings, he shot downward like a bullet, slowly catching himself on nearing the ground and curving outward to his starting point. Several similar exhibitions were carried on in exactly the same manner, the time not varying by half a minute. Though the song lacks many of the fine qualities of other birds, it clearly expresses the joy and happiness of the singer. With thrills of pleasure we hear it echo over the hills, and bless the little creature, hoping that in the 'struggle for existence' he may thrive and wax exceeding strong.

SCREECH OWL
Photographed from life by A. L. Princehorn

A Pleasant Acquaintance with a Hummingbird

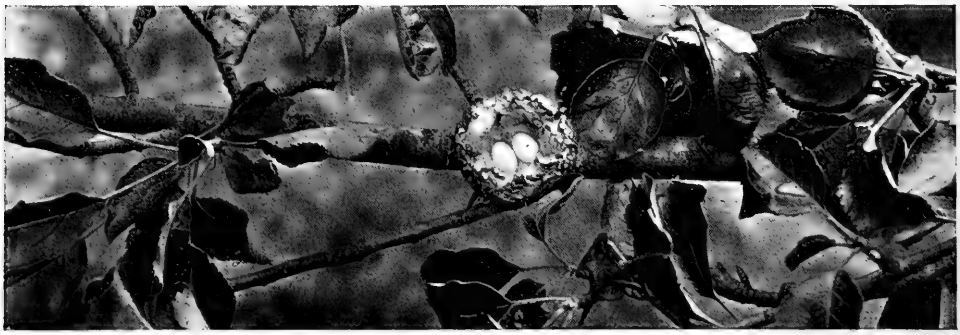
BY C. F. HODGE

Clark University, Worcester, Mass.

IN the Nature Study course of the Summer School, a little time was devoted to the honey bee, life of the hive, care and management, and especially the work of bees in cross-pollination of flowers and fruits. The closing "laboratory exercise" in the subject consisted in a honey spread, the honey being removed from the glass hive in the window of the laboratory, in the presence of the class, and distributed with hot biscuits and butter, cream and fresh milk. The spread was pronounced the most enjoyable "laboratory work" ever done by members of the class, but to crown the event in the most exquisite way possible, a Hummingbird flew into an open window, and darting, unafraid, in and out among the noisy groups of fifty or more busy people, it rifled the various flowers with which the laboratory was decorated. In closing the windows for the night it was accidentally imprisoned, and on visiting the room next morning (Sunday), I found it still humming about the flowers. Thinking that it might be a female, with nestlings awaiting its return, I gently placed an insect net over it with the intention of passing it out of the window. It proved, however, on closer inspection, to be a young male, so I thought it could do no harm to keep it a day or two for aquaintance sake. No sooner was my finger, with a drop of honey on it, brought within reach, than it thrust its bill and long tongue out through the net and licked up the honey with evident delight. Releasing it from the net, I dropped honey into a number of the flowers, sprinkling water over them at the same time, and it immediately began feasting and drinking. As it flew about it taught me its bright little chirp, evidently a note of delight and satisfaction. When I visited the laboratory again at noon, I took in my hand a few heads of red clover and a nasturtium with its horn filled with honey. On giving the chirp a few times, it flew straight to the flowers in my hand, probed each clover tube, drank its fill from the nasturtium, and, perching contentedly on my finger, wiped its bill, preened its feathers, spread out its tail, scratched its head, and for the space of a minute or two looked me over and made himself the most delightful of tiny friends. The next time I entered the room, about two hours later, he flew to the door to meet me, and this time I took him home, the better to care for him during the afternoon and evening. In the course of the afternoon about a dozen friends called. Each one was provided with a nas-

turtium into which a drop of honey had been placed, and nearly the whole time the little bird was flying from one to the other, perching on fingers or sipping from the flowers held in the hand or buttonhole, to the delight of everybody, none of the company having ever seen a live Hummingbird so close by.

In the evening he went to roost high up on a chandelier, and in trying to catch him with the net to put him in a safe cage for the night, he fell like a dead bird to the carpet. I held him warm in my hand, thinking that he was about to breathe his last, but anxious to save the precious little life if possible, I very gently opened the bill and inserted a pellet of crushed spiders' eggs as large as a good-sized sweet pea, following it with a drop of water. He had been feigning, probably, as they are known to do; at any rate, in a minute he was as bright and lively as ever. His room for the



NEST AND EGGS OF HUMMINGBIRD SEEN FROM ABOVE
Situated in an apple tree 8 feet from the ground
Photographed from nature by E. G. Tabor, Meridian, N. Y., June 16, 1897

night was a large insect cage of wire screen filled with convenient twigs and a large bowl of flowers. At five in the morning I fed him honey and young spiders, and again at six. At eight I had a lecture, the subject of which happened to be the taming of wild birds and attracting them about our homes. Removing all flowers from his cage to let his appetite sharpen for the two intervening hours, I set the cage on a table by my side on the lecture platform. I had taken pains to have two fresh nasturtiums in my buttonhole, one well loaded with honey, the other filled with the juices of crushed spiders and spiders' eggs. On reaching the topic of approaching birds in the right way, appealing to them along the lines of their tastes and appetites, appealing to the "right end" of a bird, I had only to open the door, give the familiar chirp, and the little charmer was probing the flowers. Then, as if anxious to show off, he again

perched on my hand and went through his *post prandial* toilet, thus giving the class an idea of bird-taming which no amount of books or anything I might have said could have possibly equaled. Many expressed themselves as never having seen so successful a "demonstration." Some said that I must be in league with higher powers, and it all must have been "providential." This may be true, for anything I know to the contrary. But it may have been simply improving the opportunities of a happy accident; and 'accidents,' we know, "never happen among the Hottentots." If flowers and honey can do it, at any rate, such accidents shall be more frequent about my home in the future.

A Peculiarity of a Caged Skylark

BY H. M. COLLINS

DO birds reverse the usual order of things, and from a serious and stolid youth develop mature playfulness? I have been led to ask myself this question by observing the extraordinary playfulness exhibited by a pet Skylark in extreme old age. Upon hearing the owner of the bird declare, "Dickie has reached his dotage, and, is now in a state of second childhood," it occurred to me that birds have no season of youthful frivolity such as Mother Nature accords to her other children. We are accustomed to associate the idea of youth with playfulness: we picture to ourselves the lamb frisking in the meadows, the frolicsome kitten playing upon the hearth, and we groan inwardly when we meditate upon the destructive propensities of our pet puppies, but we think of our young feathered friends as lying inert in their nests, gaping wide open their yellow-edged beaks incessantly for food, and apparently interested in nothing else.

A caged Skylark is a deplorable object generally, but the Lark of which I am about to write was a bird 'with a history,' and one, whose cage was not a prison but a home. While his native meadow (in Ireland) was being mowed, one of his wings was struck by the mowing-machine and the last joint terribly mutilated. One of the workmen picked up the poor little sufferer and gave him to a little boy whose father was something of a naturalist and a great lover of birds. Examination of the shattered wing revealed the fact that amputation of the last joint would be necessary if the bird's life was to be preserved. The operation was performed, and the little patient was placed in a very large cage carpeted with fresh, green sods. He was well supplied with food and water; the injured wing healed

rapidly; he became surprisingly tame, and soon appeared to enjoy life thoroughly. Occasionally, he was permitted to enjoy his freedom in a large room, but after running about awhile, always seemed glad to return to his cage, the door of which was left open, so that he might go home when he pleased.

He was a beautiful singer, and used to stand in the long grasses and fresh clover of his sod, quiver the poor pinions that could never again soar skyward, and burst into the glorious carol with which he had been wont to salute the sunrise, when, high up among the fleecy clouds, he had appeared an almost invisible speck of personified melody to the enchanted listeners below.

As the years sped by, this much-indulged bird craved petting and attention to an abnormal degree, could be coaxed at any hour into singing, and formed the strange habit of trilling a low, sweet carol at ten o'clock every night, which his mistress called his "good-night song." When he had been caged for twelve or thirteen years he become as playful as a kitten, and was particularly fond of going through what his mistress called the "jungle tiger act," which consisted of crouching down out of sight in the grasses of his sod, and then springing suddenly forward to bite in a gentle way a finger poked between the wires of his cage. He never wearied of this game so long as he could induce a child or grown person to engage in it with him, and before he died, a year or so later, he developed a degree of playfulness that almost amounted to imbecility.

For Teachers and Students

'On the Ethics of Caging Birds.'

[As stated in our last issue, Mrs. Miller's paper on 'The Ethics of Caging Birds,' in BIRD-LORE for June, brought us numerous letters, from which we have selected two, representing both sides of the question, for publication. As a further contribution to this discussion we publish in this number of BIRD-LORE several papers describing experiences with caged birds.—ED.]

TO THE EDITOR OF BIRD-LORE,

Dear Sir:—I have always been such an admirer of Mrs. Miller's writings that I confess to a feeling of great disappointment in her article concerning caged birds, which appeared in your June number of BIRD-LORE. Will you allow me to comment on it briefly?

Mrs. Miller starts out with the position that while she disapproves

with "all her heart" of caging wild birds, yet since "birds are caged we must deal with circumstances as we find them."

Undoubtedly Mrs. Miller is right in sounding a note of warning for those who keep birds as pets, by impressing upon them the care that should be given these utterly helpless little creatures. She says, "Not one bird in a thousand is properly cared for," and she might add to that the fact that thousands die every year of hunger, thirst, lack of care,—forlorn prisoners, utterly unable to help themselves. These facts being true, the inconsistency of her position is that she gives the slightest encouragement to the bird traffic which results in so much cruel suffering. She says that the discomfort they suffer in the bird stores is so great that she feels it to be "a work of charity to purchase them," yet she does not seem to see that every purchaser is in a measure accountable for this suffering. If no one would buy the birds, the traffic would soon cease.

But Mrs. Miller appears to be utterly hopeless as to the cure of this evil, for she says: "If a bird-lover should worry and fret himself to death he could not put an end to their captivity." It is exceedingly fortunate that there have been, and still are, and probably always will be, a few men and women in the world who believe with Emerson that "Nothing is impossible to the man who can will," and who, in spite of the perplexing outlook, go forward, and bring about the world's great reforms.

The first step in repressing any wrong is for some individual to take a firm stand, even in the face of the greatest discouragement. Another will follow, and then another, and by and by, when we have hardly begun to believe anything has been done, a wave sweeps over the country, and the wrong is righted. This, however, can never be brought about unless by individual action and the abiding faith that every one counts.

Mrs. Miller advances as her "strong argument" the great value of caged birds as pets in the education of the child, and upsets her own argument by saying: "Nothing is more important than the training of our youth in humanity, and respect for the rights of others." "Respect for the rights of others" means justice to all the dumb or helpless creation. Even a child can reason out for himself that a bird was created for freedom in the upper air, not for confinement in a cage, and that, even if it is bred in a cage, it is no more just or right to put it to such purposes than it would be to keep a dog chained all day, or a horse tied in a stable all his life, or a man confined within the narrow limits of prison walls.

Children have ample opportunity to be taught kindness, and, what is even better than kindness, justice to the animal creation by having

the care of cats or dogs, yet how few mothers or teachers take pains to teach the right care of these common animals, which are to be found everywhere, and are dependent on man for their happiness. A child will not discriminate between the bird bred in a cage and the bird taken from the mother's nest for the purpose of being brought up in a cage, and while birds are given as pets to children, not only the traffic in canaries is encouraged, but the snaring, or the capturing by other means, of our own song birds will continue. It seems to me there is but one lesson to teach children in relation to birds,— that they were made to be free, and to have space to use the wings that surely cannot have proper exercise even in the confined space of a house.

Let those who already have birds take good care of them, by all means; give them the right food and plenty of fresh water, and as much freedom as possible in the limits of the house; but let those who are true bird-lovers discourage the traffic in birds in every way possible, no matter how hopeless it may seem just now to endeavor to put a stop to it, for the influence of every individual counts.

ANNA HARRIS SMITH.

TO THE EDITOR OF BIRD-LORE.

Dear Sir:—In the main Mrs. Miller's statement of the case is the one that I have come to adopt. In fact, my prejudices against the practice of caging birds were entirely banished and the whole subject revealed in a new light by reading Mrs. Miller's 'Bird Ways.' Such wonderful possibilities of bird happiness, child culture and education, and bird study were opened up by this little book that, from being opposed to caged birds, I was converted to believe that the cage might be made one of the most important factors in the great new field of bird study, and, I hope, actual bird culture, which seems to be dawning before us.

The subject has a number of ethical bearings which Mrs. Miller does not touch upon, two of which I may point out.

First: We may not only have a "right" to confine a bird, but it may become a duty which we owe not only to the bird itself, but to the community as well. The moment before beginning to write this a young Robin was sitting warmly in my hand gulping down earthworms and blackberries. He is now sleeping quietly in a cage by my side. I picked him up this noon on the ground under the nest, unable to fly, and I love to think of him safe and cosy instead of fluttering in the jaws of some miscreant cat. Some days ago a boy came and told me that a neighbor's wife had taken a young Robin away from her cat "and put it on top of the shed" (to fall down into the cat's mouth again). At my request he brought the bird, but

it was so lacerated that it died that night. Of two nests of Robins I have known this season, in spite of me, the cats got seven of the young, and the eighth would have gone the same way were it not sleeping safely in another of my cages. In all, I have three young Robins, all picked up from the ground, unable to fly, all, without the shadow of a doubt, saved from the cats. None have died in my hands, the one killed by the neighbors cat not counted, and they seem to be fairly happy little birds, though it is to be hoped that they will grow happier as they grow wiser. My point is simply that in the present exigency of our rapidly decreasing bird life, every child should learn how to care for fledglings of different species and have suitable cages where they may be kept until, at least, they are able to fly. This may often be done by hanging the cage near the nest, where the parents will feed it. Our children owe this work to the community, to themselves and to the birds. I am aware some will say that this will lead to the death of more fledglings than now go to feed the cats. And under present conditions, I regret to say, there is a good deal of truth in it. In trying to get children interested in this work, I have been surprised to find so many who say, "Oh yes, I would like to have some tame Robins so much; but you can't keep them alive. I have tried it, and they all died." "What did you feed them?" "Oh, bread crumbs;" now and then one will say "worms and berries." "Did they eat?" "No, I never saw them eat anything." "Did you give them any water to drink?" "No, I didn't think of that." "How often do you feed them? Do you know that birds are flying appetites? Did you feed them regularly about every hour?" "No, I put in some stuff generally about once

FEEDING A PET CEDAR WAXWING

Which lives out of doors, all over the house, and in his cage

Photographed from nature by C. F. Hodge

a day." And so it goes. But shall we be content with this state of things when any bright child can be given the necessary instruction in an hour by which he can succeed in keeping alive and taming practically all the fledglings that fall in his way?

Second: We owe it as a duty to both the birds and ourselves to learn the facts of bird life. We do not adequately know the life story of a single one of our most common species. Every fact that can be discovered as to the good or the harm that birds do *ought* to be found out. Every fact so discovered will act as just so much more motive force to bring about proper relations with our birds. A few birds have been killed, and the stomach contents analyzed, to obtain facts about bird foods which have changed our sentiments and even legislation. Somebody owed this as a duty to both birds and community. But this method is not well adapted for use in elementary schools, and its results might be infinitely extended and the subject of bird foods made a matter of practical public education, by having classes in nature study throughout our schools make feeding tests with tame birds of different species. Cages will have to play at least a temporary role in work of this kind. More than this, a knowledge of bird ways, habits, methods of feeding and caring for their nests and young, their songs and calls, "their manners for the heart's delight," are great æsthetic and educational values. These might all be developed and enhanced by a proper use of caged birds. Instead of collections of stuffed birds, the ethics and educational value of which I wish might be discussed in BIRD-LORE, each city might have, possibly maintained by some ornithological society, a fine collection of pairs of a few of our most valuable species. These could make the rounds of the schools each year. This, too, need only be a temporary expedient, useful until sufficient general interest and knowledge is developed so that we may have, properly appreciated and protected, an abundance of our native birds tamed sufficiently to come close about our homes.

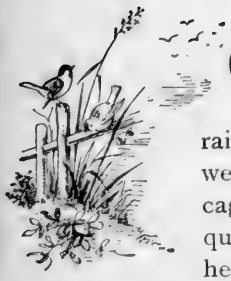
The above are but two points among many, and I bring them forward to bespeak a little intelligent favor for the proper use of the cage. We owe the birds duties of protection and acquaintance, and the cage may help us in the performance of both.

C. F. HODGE, *Clark University.*

For Young Observers

Oliver Twist, Catbird

BY ISABELLA McC. LEMMON



ON July 9, 1898, we caught a young Catbird. He had left the nest the day before, and had then eluded all our efforts, but by morning a pouring rain had removed his objections to captivity, and a very wet, bedraggled little Catbird was established in the big cage. He soon stopped trying to get out, and seemed quite contented — except occasionally when the old birds heard him calling for food and came to the rescue. But that was carefully guarded against, and as his voice lost its baby tone they left him in peace.

A name was quickly given, the frequency and great size of his meals promptly gaining for him the title of 'Oliver Twist.' Worms, currants, goose-, rasp-, black-, and huckleberrries, bits of bread soaked in milk, all went down, but the fruit seemed somewhat more acceptable. On July 16, the amount of food was greatest: 43 earthworms and 81 berries between 7 a. m. and 6.50 p. m.

As the different berries ripened he gave up the early kinds and accepted the new ones most eagerly, elderberries especially. These last he ate by the bunch — indeed one need only walk past a patch of the bushes when the fruit is ripe, to appreciate a Catbird's fondness for them.

By the 16th Oliver had taken his first bath, and for the first time I saw him drink. Four days later, when he must have been about four weeks old, we heard him trying to sing — queer little chirps and gurgles in the lowest of tones, but evidently intended for a song. He stopped as soon as he saw me, raising his wings and begging for food, and for some time we were obliged to enjoy his musical efforts by stealth.

By August 1, he was pretty well feathered; the tail was almost full length, and even the little feathers over the nostrils had started to grow. He was also able to feed himself then, but greatly preferred being fed; often, when I offered him more than he wanted, giving a low 'chuck' very like the old birds' call.

As August progressed worms were refused, and though bread and milk and all sorts of berries were eaten, the bird evidently missed something. He was molting a little — if the loss of so few feathers

could be called a molt—but became more and more droopy, refusing or indifferently eating the various things we tried, till some one gave him a fly! Then all went well; he ate all the flies we could catch, sometimes twenty at a meal, and also wasps and bees. When he saw somebody bringing one of the latter dainties he would jump about in great excitement, then, snatching the insect, kill it with a few quick pinches and swallow it, poison and all. He also learned the motion made in catching a fly, and was on the alert as soon as he saw me snatch for one.

Towards the end of the month I let him out of doors—though he had often been out in the house—and after that he had exercise nearly every day, flying about a little, coming readily to me when I whistled, and generally returning to the cage quickly enough for a few flies. He evidently regarded the cage as home, for let any large bird pass at what he considered too close quarters and in he went like a flash, there to remain till the danger was past. On one occasion, when he was hopping among the plants in the house, I saw him carefully watching a Crow that was fighting his way against a heavy wind. Suddenly the Crow gave way, making a swoop almost to the window, and in far less time than it can be told the Catbird was in the cage and up on a perch, so terrified that it was some minutes before he was himself again.

About the middle of September Oliver Twist caught the migration fever, and when no one was in sight was very uneasy in his cage, not only during the day but at night as well. In the evening the bird was always moved to a dark back hall, where he usually settled down at once; now he was most restless, chucking and mewing sometimes for nearly an hour, and not until late in October did he finally become quiet. Cool days, also, made him more uneasy.

During the fall months Oliver ate every sort of berry I could find, from dogwood to Boston ivy, with two exceptions: those of the wild rose and the catbriar. The seeds of the ivy berries he always ejected, perfectly clean and free from pulp, beginning about half an hour after swallowing them; he would work the bill a little, as if the seed were in his mouth, a moment later pushing it out with the tongue. At first they appeared quite rapidly—two or three or even more in a minute—then more slowly, and continued for at least three-quarters of an hour.

As the house flies disappeared, the big blue and green species, that during the summer were simply scorned, grew quite tempting; but even these gave out, and it became very difficult to find proper food for the little fellow. Figs for a time supplied the place of berries, but he tired of them at last, and bits of meat never passed for

flies or for the worms that even in the greenhouse went down beyond reach of the trowel.

The cage now stood among the plants in a sunny window of the dining-room, and the conversation at meal times generally started Oliver singing; yet it was always a low version of the usual Catbird song, for he invariably sang with the bill nearly closed. Often in the dark December mornings he was scarcely awake when breakfast began, but in a few minutes we would hear his cheerful little song — the first thing in his day — before he even left his night's perch. Then, as the sun touched him there came a great arranging of feathers and a good shake to put each one in place again, and then breakfast.

The bath was almost never omitted from the time the bird was about a month old, and often he bathed twice a day if the first were given him early in the morning; and how he enjoyed it! shuffling up the water with his wings, ducking his head, and spattering in every direction till he was soaked through, then going to the perch and flicking wings and tail and ruffling the feathers until dry.

To some extent Oliver showed affection by coming most readily to me, who generally fed him, and by an odd little greeting he usually gave when I offered him my finger, gently pinching it or giving a slight peck, too mild ever to be mistaken for anger. Unfortunately this was broken up by the teasing of another member of the family, and the pecks became too severe to be altogether agreeable.

He was growing more wild and more unwilling to return to his cage, and I intended to let him go when spring came, but long before that time he got sickly and sluggish, eager for the berries and insects that were not to be found, and in spite of everything I tried in their stead, he died late in December.

But though Oliver Twist lived so short a time he taught me many interesting lessons, one of which, in particular, I shall long remember: never try to keep a fruit- and insect-eating bird through the winter, for no amount of willingness and care can supply him with proper food. Take nature's word for it — she knows quite well what she is about when she sends them all off to the south.

Notes from Field and Study

Birds and Caterpillars

Last year, at Brandon, Vermont, the tent-caterpillars were so abundant as to be a serious injury and annoyance. They lay in close rows, making wide bands on the tree trunks. They spun down from the upper branches and fell upon the unfortunate passers-by. They crawled through the grass in such numbers that it seemed to move in a mass as one looked down upon it. Under these circumstances, birds might be expected to do strange things,—and they did.

The pair of Downy Woodpeckers which lived near us were frequently seen on the ground picking up the crawling tent-caterpillars. They seemed to prefer taking them from the ground to taking them from the trees, though there were more on the tree-trunks than on the ground eyen. And the Woodpeckers seemed to have no difficulty in moving on the ground, though they moved more slowly than when dodging around a tree.

Two mountain-ash trees on the place were infested by borers, though only slightly and only near the ground, and at the foot of one of these trees the Downy Woodpeckers made many a stand, while they probed the borer-holes with their bills.

The Cuckoos came boldly into the village and fed and fed, flying about quite openly. The Nuthatches flew to a band of caterpillars on a tree-trunk, and were so busy and absorbed in devouring the crawlers that I could put my hand on them before they started to fly, and then they merely flew to another tree close by, and attacked another mass of caterpillars.

Blackbirds waddled over the grass by the sides of the streets picking up the crawlers, and even a Woodcock spent several hours in the garden and on the lawn, *apparently* feasting on tent-caterpillars, but I could not get near enough to be sure.

The Vireos—White-eyed, Red-eyed, and Warbling—the Cat-birds, Cedar-birds, and Rose-breasted Grosbeaks did good service to the trees and human beings, but the most evident destruction was done by the Chipping Sparrows when the moths emerged late in the summer. The moths were very abundant after four o'clock in the afternoon, flying about the trees to lay their eggs, and then the Chippies became fly-catchers for the time, and flew straight, turned, twisted, dodged, and tumbled 'head over heels and heels over head' in the air, just as the course of the hunted moth made necessary. A quick snap of the beak, and four brownish wings would float down like snowflakes, and their numbers on the walks, roads and grass showed how many thousands of moths were slain. In spite of the unwonted exercise the Chippies waxed fat, but not as aldermanic as the Robins, which, earlier, gorged themselves on the caterpillars until, as one observer said, "their little red fronts actually trailed on the ground."—CAROLINE G. SOULE, *Brookline, Mass.*

An Odd Nesting Site.

I have never seen an account of a House Wren taking up his abode in another bird's nest. It seemed, therefore, at first incredible when, early this summer, we saw a Wren frequenting a deserted Baltimore Oriole's nest and apparently start housekeeping in it. This nest was in one of the outermost branches of a large sugar maple about twenty feet from the ground and the same distance from the farm-house, and was completely filled with twigs by its tenants. The little Wren's choice was the more remarkable, in that a number of bird houses had been placed about the grounds for their special accommodation. I believe none of these were occupied, and this pair deliberately preferred the Oriole's nest.—L. H. SCHWAB, *Sharon, Conn.*

Book News and Reviews

THE FIRST BOOK OF BIRDS. By OLIVE THORNE MILLER. With 8 colored and 12 plain plates and 20 figures in the text. Boston and New York, Houghton, Mifflin & Co. 1899. 12mo, pp. viii+149.

Text-books based on successful experiences in teaching generally prove to be of value, and the present volume is no exception to the rule. It contains what its author has found to be the most adequate definition of the bird in her talks on this little-known creature to boys and girls. It is well-named a 'First Book of Birds,' Mrs. Miller's aim being to arouse an intelligent interest in bird-life before confronting the inquirer with 'keys' and discouraging identification puzzles. She, therefore, begins with the nest, and outlines the development of the bird, following this section by chapters on the bird's language, food, migration, intelligence, etc., and concluding with sections on 'How He is Made,' and 'His Relations with Us.' The matter is well chosen, and so admirably arranged that no attentive reader can fail to receive a clear and logical conception of the chief events in a bird's life.—F. M. C.

FIELD KEY TO THE LAND BIRDS. By EDWARD KNOBEL. Boston, Bradlee Whidden. 1899. 16mo, pp. 55, numerous cuts in the text and 10 colored plates.

This is an attempt to make plain the way of the field student, to whom every aid is welcome. One hundred and fifty-five land birds are divided into four groups, according to their size, and are arranged on nine colored plates, in the preparation of which the publishers have evidently struggled with the evils of cheap lithography, or some inexpensive color process. Experience in this direction makes us a lenient critic, and our standard has been reduced from the level of perfection to that of recognizability; that is, if a plate is sufficiently good to unmistakably represent a certain species, even crudely, we view it solely from a practical standpoint, and admit that it doubtless serves its purpose. Applying this test to the plates under consideration, we are forced to state that, although fairly familiar with the species figured, we are in many cases unable to name the figures.

The text is condensed and to the point, and the pen and ink illustrations liberally scattered through it will be found useful by beginners, to whom the book may be commended.—F. M. C.

OUR COMMON BIRDS. Suggestions for the Study of Their Life and Work. By C. F. HODGE, Ph.D., Clark University, Worcester, Mass. Food-chart and Drawings by Miss HELEN A. BALL. 8vo, pp. 34, 3 half-tones, 8 line cuts in text. 10 cts. per copy, $6 per 100 copies.

This is a contribution to the pedagogics of ornithology which cannot fail to interest every one desirous of seeing bird studies introduced in our schools. It opens with a chapter on the 'Biology of Our Common Birds,' which shows the importance of becoming acquainted with them, giving, in fact, the reasons which have actuated Professor Hodge in his work in the schools of Worcester.

The nature of this work and the success which has attended it are set forth in the succeeding pages, whose contents are indicated by the sub-titles 'The Bird Census,' 'The Food Chart' (A very useful compilation by Miss Helen A. Ball, showing graphically the food of our commoner birds), 'Bird Study in the Schoolroom,' 'Taming Our Wild Birds and Attracting Them to Our Houses,' and a 'Life Chart of Our Common Birds.' Lack of space prohibits a description of the methods of bird-study given under these headings. Some of the results of their practical application, however, are to be found in the concluding chapter on the 'Ten-to-One Clubs' formed in the Worcester schools, which were joined by

"not less than 5,000 children," who signed the club constitution, which opens by stating that "the object of the club shall be to use every means possible to increase the number of our native wild birds by providing them, when necessary, with food, water, shelter and nesting places."

The pamphlet gives other and equally striking proofs of the enthusiasm with which the children welcomed the opportunity of becoming familiar with birds, and indeed is the most convincing proof of the educational value of bird-study which has come to our attention.—F. M. C.

Book News

With its August issue 'Our Animal Friends,' the organ of the American Society for the Prevention of Cruelty to Animals, concludes its twenty-sixth volume. This magazine is edited with a breadth of view which must result in winning many supporters for the cause it represents. In its columns we find no senseless tirades against the inhumanity of partly civilized man, but sane, logical discussions of the rights of animals and the manner in which they may best be secured; of the habits of animals, including many interesting papers on birds,—of animals and their value to man, all of which are calculated to arouse sympathy or interest in them and respect for the journal which so ably champions their welfare.

'Wilson Bulletin,' No. 26, issued May 30, 1899, has an extremely interesting paper by its editor, Lynds Jones, recording the number of species observed by him on May 8, in Lorain county, Ohio. Work was begun about Oberlin at 3.30 a. m, and continued at 11 a. m. at Lorain on the shore of Lake Erie, resulting, finally, in a record of 112 species identified with the aid of an "Eight Power Bausch & Lomb" field-glass during one day. This number speaks volumes for the observer's activity and the richness of his field; we doubt if it has ever been exceeded in the same period of time in North America.

Mr. C. Barlow publishes in the May–June issue of the Bulletin of the Cooper Ornithological Club, of which he is editor-in-chief, an eloquent appeal to ornithologists to take only such birds as they may require for their own use, and not to collect birds at all during the nesting season. Particularly does he condemn collecting for profit, saying with equal force and truth, "Every naturalist owes it to science to protect the natural beauties with which the Creator has blessed the earth, and how can the collector, with never a twinge of conscience, quiet the sweet voices of the woodland in a fashion little less than barbarous, for pecuniary gain."

We congratulate Mr. Barlow on the stand he has taken, and we congratulate all bird-lovers on the fact that his declaration of principles adds another journal to the list of those in which the egg-thief cannot boast of his exploits.

The Chautauqua Literary and Scientific Circle, appreciating the significance of the widespread and constantly increasing interest in birds, has decided to introduce a volume on ornithology into its course of 'Required Reading,' Miss Merriams' 'Birds Through an Opera-glass,' one of the first, as it is one of the best text-books for beginners, having been selected for this purpose. Implying, as it does, the formation of a class of several thousand bird students, this may be considered a step in educational ornithology of unusual importance.

'The American' for August 26, commenting on the 'Hints to Young Bird Students,' published in Bird Lore for August, says: "This paper deserves the most serious consideration from all. It is well meant, it is timely, it is sensible; the friendly advice it tenders should be accepted and observed."

A writer on the slaughter of birds for millinery purposes, in 'The New Illustrated Magazine' for September, whose zeal for the cause of bird protection exceeds his knowledge of ornithology, makes, among others, the remarkable statement that "Florida is now the only country in which Hummingbirds are found, except as rarities" He also gives a unique bit of information in regard to the Toucan, which is said to use its "big beak" to trim its "primary tail-feathers"!

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.

AT first thought there seemed to be little connection between the 'closet' ornithologist, minutely examining his series of specimens and describing differences which, to the untrained eye, do not exist, and the bird-lover in the fields and woods with heart atune to nature's songsters. But one has only to read Dr. Allen's article on the American Ornithologists' Union in order to appreciate the close relationship existing between scientific and popular ornithology. The organization of the Union brought isolated bird students throughout the country in touch with the leaders in ornithology and, perhaps, for the first time, made them aware that there were successors to Wilson and Audubon.

This result was due largely to the work of the Union's Committee on Migration, which, under the direction of its chairman, Dr. C. Hart Merriam, sent out thousands of circulars calling for observers to supply it with data on migration. Circumstances have thus far permitted the publication of only a small portion of the vast amount of information secured by this committee, but even if not another word is set in type, it can be said to have created a new era in the history of American ornithology. It asked for assistance, but it gave far more than it received. Its chairman and his superintendents of districts became, as it were, instructors in ornithology, with pupils in nearly every state in the Union and throughout Canada. The value of the advice they gave to students who had been plodding in the dark, prompted only by an innate love of birds, cannot be overestimated, but we believe it to be a demonstrable fact that the popularity of bird-study in this country to-day is due more to the aid and encouragement given students by the members of the American Ornithologists' Union's Committee on Migration than to any other influence.

IN connection with the publication of a plate of 'Quills to Avoid,' we would add to Mrs. Wright's plea for the Eagle an appeal for the preservation of the Brown Pelican. The feathers of this bird are now worn so commonly — hundreds may be seen in New York City daily — that every one knowing of the ease with with the bird may be killed and its comparatively restricted range, must feel that at the present rate of destruction its early extinction, at least in the United States, is assured.

From Texas reports come to us of the slaughter of Brown Pelicans in large numbers, and we have also heard rumors that they are being killed for their feathers in Florida. If the residents of the last-named state could be made to realize how infinitely more valuable to them a live Pelican is than a dead one, we do not for a moment doubt that its destroyers would speedily receive their deserts.

This apparently ungainly, but in reality singularly graceful bird is the most picturesque element in the life of Florida's coasts, where its size and familiarity render it conspicuous to the least observing. To the tourist it is as much an object of interest as the alligators or cabbage palms. It is distinctly strange and foreign, and its presence lends a character to the view given by no other bird in Florida. Its loss would, therefore, be irreparable, and we appeal to every lover of Florida to aid in its protection.

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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Consistency.

Audubonites may be divided into two classes as regards their attitude toward the wearing of feathers,—the moderates and the total abstainers.

The moderates hold that they violate none of the interests of bird protection in its fullest sense by wearing the plumes of game or food birds, or those of the Ostrich, which is as legitimately raised for its feathers as a sheep for its wool. In short, they see the necessity of keeping feather-wearing within conservative bounds, and elect to take the individual responsibility of so doing.

The total abstainers say: "Let us break ourselves altogether of the feather wearing habit. We shall be more conspicuously consistent as bird protectionists, and we shall not be called upon to settle fine points and follow difficult boundaries. We need not know anything about plumage, and never have to decide whether the wings used by milliners are really those of food birds, or the pinions of song birds disguised with dye. Or if the fearfully manufactured confections are the heads of real Owls and Parrots twisted out of all semblance to nature, or merely compounds of Chicken feathers and celluloid." Both of these attitudes are equally useful to the cause if they are maintained consistently, but inevitably the way of the total abstainers is the easier of the two. The total abstainers need not, to quote Hamlet, "know a hawk from a handsaw." While, in order to be consistent, the moderates must be bird students of no mean intelligence if they would keep safely on the exceedingly narrow pathway that divides the feathers that may be, from those that *must not* be worn, not alone by Audubonites, but by any woman who has either sense or sensibility. A pathway? A slack wire is the better simile, so treacherous is the footing.

What is it that causes the downfall of many of the moderates, who know the common birds fairly well, and could not be hoodwinked into buying Egret's plumes or dyed swallow wings?

QUILLS TO AVOID

1. Inner wing quill of Bald Eagle; length, 10–13 inches; brownish black, more or less white at the base
2. Outer wing quill of Bald Eagle; length, 15–24 inches; black, often whitish or brownish at the base, the broader web of the five outer quills notched, this notch being absent from the remaining quills.
3. Outer wing quill of Brown Pelican; length, 15–17 inches; black, the quill, or midrib, white for about two-thirds its length.
4. Inner wing quill of Brown Pelican; length, about 10 inches; blackish brown, the outer margins, particularly of the narrower web, frosted with silver-gray.

You can guess easily, for you have seen the tempter protruding above and behind the up-to-date outing hat the entire season, and unless you are unusually lucky it has poked you reproachfully in the eye, as if calling your attention to its plight.

"The Quill of course!"

Yes, the Quill is the mischief-maker. At its introduction many years ago, the Quill was at first the harmless feather of a Crow, or a Goose quill sedate enough make a pen for a judge. After awhile it took on dabs of color and even spangles, but all this time it was a good safe outing and rainy day ornament.

Then a change came, the Quill grew suddenly longer with a curl to its tip that made one wonder, if natural, how its original wearer had lived with it. This Quill, however, did not stay well in curl, and less than a year ago it was displaced by the reigning favorite, a Quill as aggressively impertinent as any that decks the cap of the operatic Mephisto, but not half as becoming to the wearer.

Now comes the inconsistency of the moderates. They wear these Quills blindly, because they have not studied birds thoroughly enough to distinguish between plumages except when aided by decided color. The sentence, "It is only a Quill," covers deadly sins of omission. I have cornered several women who are what might be called aggressive Audubonites: "Do you know that the notched Quill in your hat is a pinion of the American Eagle?" "Oh no, you must be mistaken, it surely is only a Goose, or perhaps a Turkey feather, and besides,"—drawing herself up with superior wisdom, "Eagles are very rare birds, that fly so high it is very difficult to shoot them, and I know at least fifty people who are wearing these Quills."

Rare? yes, pinion of peerless flight! But what bird can fly so high or find so eery a resting place as to escape the 'desire of the eye' of fashion? Pause a moment, well-meaning sisters of 'little knowledge.' Hold a Quill class and lay your outing hats on the dissecting table! Study out the things you have been wearing, and you will be wiser, and I hope sadder also, resolving either to join the total abstainers, or to devote enough time to bird study to be consistent in your actions.

"But," you may say, "We are consistent even now. The Eagle is neither a song bird, an insect eater, nor a game bird, and from an economic standpoint it can only be considered as a bird of prey and an eater of wastage."

Yes, this is all true, and yet, in the higher view of life, the poetic value of things must take rank with the practical. And what bird expresses wild grandeur and poetry of motion in so great a degree as the Eagle? What has Burroughs recently said of it?—"The days on which I see him are not quite the same as the other days. I think my thoughts soar a little higher all the rest of the morning; I have had a visit from a messenger of Jove. The lift or range of those great wings has passed into my thought."

Pegasus harnessed to a plow or 'Cæsar dead and turned to clay,' stopping a hole 'to keep the wind away,' would not be a greater misuse than thus plucking the pinions of our national Bird of Freedom to act as rudders to women's hats.

M. O. W.

Audubon's Seal

(From a granddaughter of Audubon)

Audubon's seal was made from a pen-and-ink sketch of the Wild Turkey, being the portrait of a bird weighing forty pounds. The painting from which the seal was reduced measured about thirty-six by twenty-eight inches. A lady friend in Liverpool having seen the painting, was talking, with others, to Audubon about it, and said to him, "Now you ought to have this Turkey for your coat-of-arms." Audubon said that he was too much of an American to use a crest, or coat-of-arms, but that the picture could be easily reduced to the size of a fob seal, then all the fashion for

gentlemen's watch chains. Some surprise was expressed by the company present at this statement, particularly by the "Lady Rathbone," as Audubon was want to call her. No more was said then, but in due time a tiny pen-and-ink sketch, perfect in every detail, with the motto, "America my Country," was sent to Mme. Rathbone, with Audubon's signature and compliments. Not long after, Audubon received, to his amazement, a beautiful fob seal, cut in topaz, which he wore on his watch chain as long as he lived. It is now a valued possession held by his family. The accompanying cut is made from a die of this seal, and exactly reproduces it in size, etc.—D. T. A. Tyler.

Report of the Audubon Society of the District of Columbia

For the District of Columbia the Secretary has a most encouraging report.

On Saturday, March 25, a very successful exhibit of spring millinery was given at the Hotel Corcoran, the ladies' parlors being kindly loaned for the occasion. About 300 women attended the exhibit in spite of a pouring rain, lasting the whole afternoon. Quite a number of bonnets and hats were sold, and every person attending left well supplied with Audubon literature.

In April, a free lecture by Mr. Henry Olds, entitled "Some Familiar Birds," was given at the First Baptist church, which was also kindly loaned for this most interesting talk. The lecture was fully illustrated by colored lantern slides, and was made doubly entertaining by Mr. Olds' clever imitations of the notes of the various birds explained. About 400 persons attended this lecture.

The Rev. Mr. Leasitt explained the aim and objects of the Audubon Society, Dr. C. Hart Merriam introducing the lecturer in the unavoidable absence of the President of the Society, Surgeon General George M. Sternberg. Audubon literature was again distributed, and some copies of Mrs. L. W. Maynard's valuable book 'Birds of Washington and Vicinity,' were sold.

The Audubon Society has started an Audubon collection of books in the new Free Library. This collection is designed primarily to be books of reference, large and expensive works, more especially for the use of teachers.

For the work in the public schools, Dr. T. S. Palmer and Miss Elizabeth V. Brown have been untiring and most successful. In the spring of 1898, two classes were arranged, one for teachers in the Normal School, in charge of Dr. Palmer, and one for teachers in the Second and Fourth grades, in the hands of Mr. H. C. Oberholser. The classes were limited to 12 members each, and work extended over ten weeks in 1898–9. Specimens were kindly loaned by the Biological Survey, and the classes were enabled to handle, compare, and identify skins of 175 species of the 290 birds recorded for the vicinity of Washington. These specimens included nearly all the land birds from this vicinity. Hints were given concerning the classification of birds, the characters of the principal groups, and the use of keys.

Short talks were also given on especially interesting topics, such as the 'Relation of Birds to other Vertebrates,' 'Feathers and Feather Structure,' 'Flight,' 'Migration,' 'Food,' and 'Nesting Habits.'

The Society this spring purchased 1,000 Audubon buttons from the Society of the State of Wisconsin, Miss Elizabeth V. Brown taking charge of their sale. A large number were sold to children in and outside the schools, and while not strictly members of the Society, they became more interested in the birds through the wearing of this attractive button.

Miss Florence A. Merriam has given several valuable talks this past spring, notably one at the Washington Club, before an audience of about 200 women, which created great enthusiasm and brought the Society an increase in membership. The Secretary has been untiringly busy in trying to get societies organized in the South and in some western states.

Jeanie Maury Patten, *Sec'y.*

GOLDEN EAGLE

Photographed from life by H. W. Nash, Pueblo, Colorado

Bird-Lore

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Vol. 1 DECEMBER, 1899 No. 6

A Search for the Reedy Island Crow Roost

BY WITMER STONE
Curator of Birds, Academy of Natural Sciences, Philadelphia.

AMERICAN CROW
Photographed from life by W. Gordon Smith

IN the Delaware river, just where it begins to widen out into the bay, and midway between the shores of Delaware and New Jersey, lie two long, low islands, known as 'The Pea-patch' and 'Reedy Island.'

Early in the century the former of these was selected by the government as the site of Fort Delaware, and its importance advanced proportionately in the popular mind. Later on, the lower island, which already boasted of a light-house, became further dignified by the establishment of a quarantine station on its banks.

Although of little importance before the government claimed them, these islands were by no means uninhabited, but were, in fact, well-known as a winter resort. The early inhabitants, though much less imposing than the soldiers and health officers who have superseded them, did not fail to attract attention — even newspaper notoriety; not from their individualities, but from their countless numbers. In fact they were nothing more than ordinary, despised black Crows, but Crows in such countless numbers that they could not fail to be noticed.

Every evening they came at dusk by thousands and tens of thousands, winging their way in long lines from all points of the compass, and settling down on the reed-covered islands in a solid black phalanx. This winter roosting habit of the Crows is well-known, and many roosts have been located, but the habit seems still to lack a satisfactory explanation. Why should these birds fly back and forth every day over miles and miles of country to roost in some definite spot which, so far as we can judge, is no better suited for roosting purposes than hundreds of other places which they pass by? And why should they gather together every night in such numbers as to attract general attention and invite slaughter by thoughtless gunners, when, by roosting in small numbers wherever they happen to be feeding, they would escape notice? These are questions I shall not attempt to solve.

Estimates placed the number of Crows in these two island roosts at half a million, and they held possession of the islands undisturbed until about the time of the establishment of Fort Delaware. They did not relish this intrusion, and determined to desert the ancestral Pea-patch roost; being also influenced, no doubt, by a storm which flooded the island at night and drowned thousands of the unfortunate birds.

The Reedy Island roost continued in use until the establishment of the Quarantine Station, at a much later day; then it, too, was deserted, and the famous island roosts were no more.

I have long been interested in the winter gatherings of the Crows, and made inquiry of the light-keeper at Reedy Island to ascertain whether any Crows at all remained there at the present time. I was informed that they came across from Delaware as of old in long flights from the west, northwest and southwest, but all passed over the island into New Jersey, where he judged they had established new winter quarters.

The location of this new roost at once became a matter of interest. By further inquiry I learned that Crows at Salem, N. J., nearly opposite the Pea-patch, flew southwards at evening, and by plotting this flight line with those given by the light-house keeper, on a map, I found that they joined some four or five miles below Salem, and here I felt sure the roost was to be found.

I had little trouble in impressing an ornithological friend, who resided at Salem, with the importance of locating this roost, and one cold afternoon in January found us driving off in the direction taken by the Salem Crow flight.

When we neared the point at which we thought the roost ought to be, we noticed a scattered line of Crows coming up from the

south, evidently from feeding grounds on the shores of the bay. They came along in twos and threes, and alighted in a corn-field on our left, from which the farmer had neglected to haul in all of the ears. Here was a rare feast, and about a thousand birds were already assembled, to whose numbers constant additions were being made. This, we thought, must be the beginning of the evening assemblage, but, strange to say, no Crows were coming in from the west; these were all southern Crows, and, furthermore, they showed no signs of settling for the night, but were simply intent on the grain.

Driving further on, we inquired of a man where the Crows roosted, and were assured that they made use of a long strip of woods lying between us and the river. Investigation, however, showed not a Crow in the wood, and we were inclined to believe that we had been purposely misled. Passing through the trees, we had an unobstructed view of the river. The sun was just setting, a round, red ball of fire in the west, and in the yellow light we could see the lines of Delaware Crows crossing towards us, while in the fields before us were hundreds of Crows lazily flapping about much as the others were in the corn-field to the east.

Here, again, we were directed back to the same wood and assured that the birds would repair there when ready. It was just dusk as we hitched our horse and entered the woods; there was still no sign of Crows, but as we emerged on the farther side we found that an immense flight was just beginning to pass overhead from the westward; evidently the river Crows had concluded that bedtime had come. They did not, however, alight in the trees, but passed over and dropped noiselessly into the low fields just before us, seeming to select a black, burnt area on the far side. To our amazement this "burnt" patch proved to be a solid mass of Crows sitting close together, and in the gathering gloom it was difficult to see how far it extended. Four immense flights of the birds were now pouring into the fields, in one of which we estimated that 500 Crows passed overhead per minute, during the height of the flight.

It was now quite dark, and we began to think that the birds had no intention of retiring to the woods, so determined to vary the monotony of the scene and at the same time warm our chilled bodies. We, therefore, ran rapidly toward the nearest birds and shouted together just as they first took wing. The effect was marvellous; with a roar of wings the whole surface of the ground seemed to rise. The birds hovered about a minute, and then entered the woods; we soon saw that but a small portion of the assemblage had taken wing. Those farther off had not seen us in the darkness, and doubtless thought that this was merely the begin-

ning of the regular nightly retirement into the trees. The movement, once started, became contagious, and the Crows arose steadily section by section. The bare branches of the trees which stood out clearly against the western sky but a minute before seemed to be clothed in thick foliage as the multitude of birds settled down.

After all had apparently entered the roost, we shouted again and the roar of wings was simply deafening; another shout brought the same result in undiminished force, and even then, probably not half the birds took wing.

They soon settled down again, and we were glad to leave them in peace. So far as we could learn they are but little molested, and let us hope that this may continue. Many of the large roosts farther north in Pennsylvania and New Jersey, seem to be rapidly decreasing in size, owing to thoughtless persecution, and eventually the poor birds may be driven to roost in scattered detachments, as would, indeed, seem best for their preservation; but if this comes to pass, one of the most impressive phenomena of our bird-life will have disappeared.

Winter Bird Notes from Southern New Hampshire

BY WILLIAM EVERETT CRAM

Illustrated by the author

JANUARY 1, 1898. Northern birds have, as a rule, been decidedly rare this winter. In November, Goshawks were quite abundant, and a few Snowy Owls were also to be seen at that time. As I was returning from a tramp just at dusk one evening, one of the great white fellows came sailing by only a few yards from the ground. His manner of sailing and something in the set of his wings reminded me strongly of an Eagle flying before the wind; there were evident the same power and swiftness without visible effort. He came from the northeast on the wind of a rising storm, and had evidently but just arrived, being in much more perfect plumage than is usual in November, appearing, at the distance of only a few yards, absolutely white, with his big yellow eyes burning among his snowy feathers.

Snow Buntings were also common in November, and Horned Larks during the first part of the month. I noticed a large flock of the latter one morning feeding in the stubble and, observing that they were moving towards me, crouched motionless until they came up and surrounded me, gathering seeds in the earnest, industrious

manner of domestic Pigeons, and exhibiting but little more alarm at my presence. On the 27th a Shrike alighted in the top of the elm near the house, and, after reconnoitering for a few moments, started down into the orchard, but apparently missed whatever it struck at and, turning upward, alighted in a smaller elm by the road, when it at once began tearing to pieces an old bird's nest, behaving exactly as if in anger at its disappointment.

For some time I was unable to discover what it had at first been after, but finally caught sight of a Downy Woodpecker clinging motionless to the underside of a small branch in an apple tree, with

SNOWY OWL.

every feather drawn down close to its body, just as an owl does when trying to escape notice.

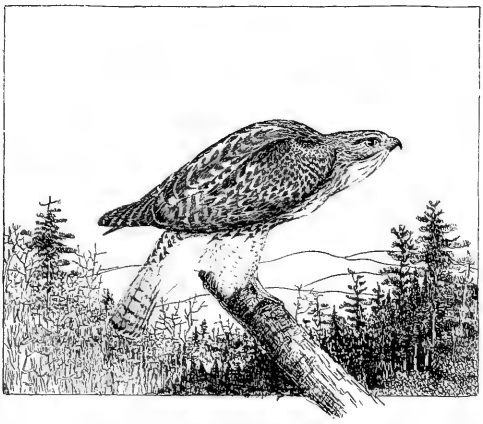
After a while it began turning its head from side to side, as if to make sure its enemy had disappeared. When I attempted to make it fly, it merely crept mouse-like about the branches until perfectly certain that the Shrike had gone, when it took wing and flew to another tree, where it presently went to work as if nothing had happened.

Throughout December the only birds to be found were Crows, Blue Jays, Downy Woodpeckers, Black-capped Chickadees, Nuthatches, Golden-crowned Kinglets, Brown Creepers, and Partridges, with an occasional Bald Eagle or Rough-legged Hawk and a very few Flickers. A large flock of Wild Geese passed over on the 7th, and I saw a few Tree Sparrows and a Winter Wren about the last of the month. The Sparrows lingered about until the first week in January, when a large flock of Snow Buntings made their appearance. A few days later, however, neither Sparrows nor Buntings were to be found anywhere.

JANUARY 6. Going through the woods I heard the small birds making quite a fuss in the young growth, and on looking for the cause, discovered a Saw-whet Owl in a little hemlock. When I first caught sight of him he was sitting on one of the smaller branches ten feet from the ground, apparently asleep, with his back to the trunk and his head tipped back. On being closely approached, he seemed to awake suddenly with a start, at once turning his great round eyes in my direction, and after that, never removed them from me for an instant, though I walked around his tree several times. He had a partly eaten white-footed mouse slung across the branch beside him, probably the remains of his breakfast.

Most of the small birds contented themselves with chirping at him from the surrounding trees, occasionally approaching to inspect him more closely and then flying off again, but one Red-breasted Nuthatch remained from the first on a twig close to the Owl's head, and kept up a continual harsh rasping cry, as if having some especial cause of complaint against him. A Flicker and some Blue Jays alighted in the neighboring trees, but not seeing anything of importance, soon flew away again.

When I shook the tree the Owl merely fluttered a few yards, and lit on a maple sapling just out of my reach. The next time he tried to hide by alighting on the further side of the stem of a pine several inches in diameter, but finding this of no avail, at last took a longer flight off through the woods, where I was unable to follow him.



RED-TAILED HAWK

JANUARY 28. Heard what I at first took to be the song of a Ruby-crowned Kinglet today, but it proved to be a Black-capped Chickadee, uttering what was to me an entirely new note; like the Kinglet's, only fainter and shorter, with just a little of the ring of the Canary's song in it. He was sitting all alone under the dark evergreens, singing to himself in a manner wholly out of keeping with the general disposition and taste of the Chickadee. When I at last disturbed him, he flew to another tree and began searching for insects, uttering the familiar note of his species.

FEBRUARY 3. There is a little Junco hopping about the path today, in spite of the fact that the mercury has been very near zero most of the time for the last fortnight, and that the snow is drifted eight or ten feet deep in places. He appears to spend a consid-

GREAT HORNED OWL.

erable portion of his time in the woodshed, poking about among the chips, etc., and I fancy sleeps somewhere about the building.

There are also a few Flickers and at least one Meadowlark in this vicinity, and since the last heavy snowfall they have become unusually tame and familiar, coming close about the house for food. Goldfinches and Tree Sparrows are still quite abundant, and there is a flock of fifty or sixty Pine Grosbeaks, mostly in young plumage, in the woods about a mile to the west of us, the first I have seen this winter.

FEBRUARY 6. About five o'clock this evening a large Goshawk in rather dark plumage came flying across the field only a few yards above the snow. As he neared a tall elm he rose in the air and alighted near the top of the tree, and after sitting there for a few moments, turning his head in all directions, he opened his wings and tumbled from his perch, falling several yards down among the branches before regaining his balance, when he flew rapidly off toward the west and disappeared among the pines. Just a week ago I noticed where a Goshawk, judging from the tracks in the snow, had killed a rabbit, so that it would seem that they have not been entirely absent at any time this winter.

FEBRUARY 7. Have just seen a Goshawk, apparently in young plumage, flying west at a height of perhaps sixty or seventy yards from the ground.

FEBRUARY 13. The Great Horned Owls began hooting nearly an hour before sunset this evening. It is remarkable how loud their cry sounds at a distance of half a mile or even a mile. I am convinced that they can be heard distinctly two miles away, for I have often heard them in the day time from a direction in which the nearest woods were at least as far as that. There are always several pairs dwelling in a certain dark hemlock swamp about a mile and a half away, and sometimes in the evening, or by moonlight, they come hunting across the meadows and pastures, hooting at intervals as they come. When they get within one hundred yards or so their cry is loud enough to arouse everyone in the house.

FEBRUARY 18. Followed the track of a Hawk, apparently a Goshawk, twenty or thirty rods through the birch woods west of the cove. From the appearance of the tracks the bird must have walked much after the manner of a Crow, though dragging its claws more. Occasionally it hopped for a few feet. There was no sign of its having killed any game near there and having eaten so much as to be unable to fly at once, as is sometimes the case. At times it followed in the tracks of rabbits for some distance. I have often known them to do this, and am inclined to think that they occasionally hunt rabbits in this manner where the under-brush is too dense to allow them to fly through it easily. I have sometimes followed their tracks through the brush until I came upon the remains of freshly killed rabbits which they had been eating. On coming out into an opening, I saw a beautiful male Goshawk in full blue plumage perched on the the top of a dead maple in a swamp. When I tried to approach, he took wing and flew off toward the north.

How the Central Park Chickadees Were Tamed

BY A. A. CROLIUS*

IN the early part of the winter of 1898–9 Chickadees were unusually abundant in Central Park, New York City, and a friend and myself saw them come down and get some of the nuts we were feeding to White-throated Sparrows. We were, of course, much interested, and determined to see if we could tame them. They would take the nuts to a limb, eat all they wished, and hide the rest in crevices in trees or bushes, where, I think, they seldom found them again, for the impudent and ever wide-awake English Sparrow watched and got the pieces almost as soon as they were deposited. After feeding them in this way for some time, we tried to get them to eat from our hands, and finally succeeded by first placing our hands on the ground with a nut about a foot from our fingers, then a little nearer, then on the ends of our fingers, and lastly in the palms of our hands. There was a great shout when they hopped on our hands the first time, our delight being indescribable.

Finding that kneeling or bending over on the ground was rather hard work, we tried holding out our hands when standing, or while sitting on the benches, and they very soon came, no matter where we were or in what attitude. The little creatures never seemed to get tired if we remained hours at a time, and it was indeed difficult to tear oneself away. Just as I would make up my mind to be off one would fly over my head calling *chick-a-dee-dee* in such a bewitching way as to make it impossible to leave. I would say to myself, "Just one piece more," then throw a lot of nuts on the ground and make a 'bee line' for home, never looking back for fear the temptation would be too great, and I should find myself retracing my steps. After a time they would come to me and follow me anywhere in the park, whenever I called them, and getting better acquainted I found the birds possessed of so many different traits of character that I named each one accordingly. One I called the 'Scatterer,' because he stood on my hand and deliberately threw piece after piece of nut on the ground, looking down as they fell with the most mischievous twinkle in his eyes, as much as to say, "see what I've done," then take a piece and fly away. This he did dozens of times in succession. I thought at first he would rather pick them up from the ground, but

*In BIRD-LORE for April, pp. 55 and 58, there were given accounts of experiences with the remarkably tame Chickadees that passed the winter of 1898–9 in Central Park, New York City. The present paper solves the mystery of their surprising confidence in man.—ED.

he came directly back and waited for me to do it. Another I called 'Little Ruffled Breast,' on account of the feathers on the breast being rough and much darker than the rest. He was the most affectionate, had a sweet disposition, and, like human beings of the same character, was often imposed upon, many times being driven off by the others when he was just about taking a nut. He was very tame, and had perfect confidence in anyone who would feed him. The third I named the 'Boss,' because he took the lead and carried the day. He was a beauty, spick and span in his dress, not a feather out of place, and plump and perfect in form. The fourth, dubbed 'Little Greedy,' was very fascinating, and I must confess to loving him more than the rest, having had a most novel experience with him, and one never to be forgotten. He came to me one morning, and, lighting on my hand, sang *chick-a-dee-dee* two or three times, helped himself to a nut, and, perching on my forefinger, put the nut under his foot, as I have seen them do many a time on the trees, remaining there until he had eaten it. I was thrilled through and through with the sensation and the perfect trustfulness of the little creature, and was sorry when he had finished. But why was he called Greedy? Because he usually took two pieces instead of one, and, strange to say, knew that he must have both the same size or one would fall out. It was very funny to see him with a good sized piece, his bill stretched to its utmost capacity, trying to fit in another. He turned his bill first on one side then on the other, thinking he could wedge it in by forcing it against my hand, and he succeeded in this wonderful feat by his perseverance and indomitable will.

The Surprising Contents of a Birch Stub

BY FRANK M. CHAPMAN

AFTER seeing Dr. Roberts' interesting Chickadee photographs, published in the first number of BIRD-LORE, my ambition was aroused to discover a nest of this species so situated as to afford an opportunity to secure equally charming pictures of Chickadee life. Late in May the desire was gratified by the discovery, at Englewood, N. J., of a Chickadee's nest in a white birch stub, about four feet from the ground, a height admirably suited to the needs of bird photography.

I will not here present the results of my study of the parent birds during their period of incubation, but will pass at once to that part of my experience which relates to their progeny.

Returning to the nest on June 12th, nothing was to be seen of either parent, and I feared that they or their offspring had fallen victims to the countless dangers which beset nesting birds and their young. Looking about for some clue to their fate, I found on the ground, near the nest-stub, the worn tail-feathers of the female bird. The molting season had not yet arrived, nor would she have shed all these feathers at the same moment. There could, therefore, be only one interpretation of their presence. Some foe, probably a Sharp-shinned or Cooper's Hawk, since the predaceous mammals for the most part hunt at night when the Chickadee would be snugly sleeping in her nest, had made a dash and grasped her by the tail, which she had sacrificed in escaping. A moment later the theory was supported by the appearance of a subdued looking Chickadee, *sans* tail, and I congratulated her on her fortunate exchange of life for a member which of late had not been very decorative and of which, in any event, nature would have soon deprived her.

The young proved to be nearly ready to fly, and carefully removing the front of their log-cabin, a sight was disclosed such as mortal probably never beheld before, and Chickadee but rarely.

Six black and white heads were raised and six yellow-lined mouths opened in expressive appeal for food. But this was not all; there was another layer of Chickadees below, how many it was impossible to say without disentangling a compact wad of birds in which the outlines of no one bird could be distinguished. So I built a piazza, as it were, at the Chickadee threshhold, in the shape of a perch of proper size, and beneath, as a life-net, spread a

piece of mosquito-bar. Then I proceeded to individualize the ball of feathers; one, two, three, to seven were counted without undue surprise, but when an eighth and ninth were added, I marvelled at the energy which had supplied so many mouths with food, and at the same time wondered how many caterpillars had been devoured by this one family of birds.

Not less remarkable than the number of young — and no book I have consulted records so large a brood — was their condition. Not only did they all appear lusty, but they seemed to be about equally developed, the slight difference in strength and size which existed being easily attributable to a difference in age, some interval, doubtless, having elapsed between the hatching of the first and last egg.

This fact would have been of interest had the birds inhabited an open nest, or a nest large enough for them all to have had an equal opportunity to receive food, but where only two-thirds of their number could be seen from above at once it seems remarkable, that, one or more failing to receive his share of food — and a very little neglect would have resulted fatally — had not been weakened in consequence and crushed to death by more fortunate members of the brood. Nor was their physical condition the only surprising thing about the members of this Chickadee family; each individual was as clean as though he had been reared in a nest alone, and an examination of the nest showed that it would have been passed as perfect by the most scrupulous sanitary inspector. It was composed of firmly padded rabbit's fur, and except for the sheaths worn off the growing feathers of the young birds, was absolutely clean. Later I observed that the excreta of the young were enclosed in membranous sacs, which enabled the parents to readily remove them from the nest.

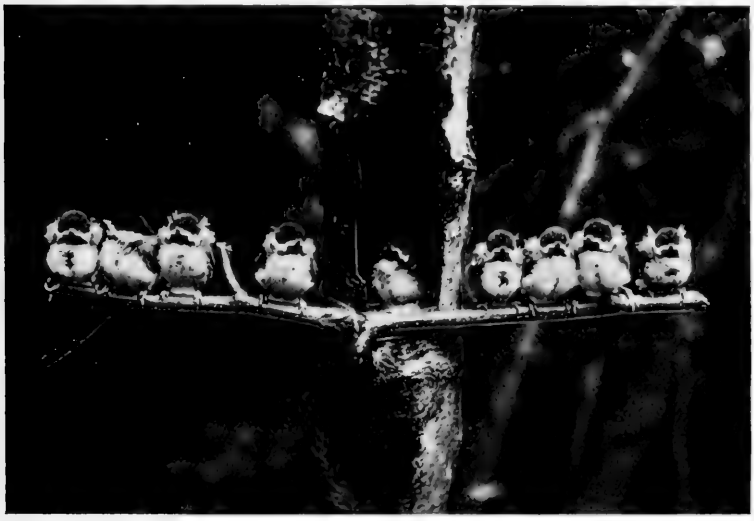
The last bird having been placed in the net, I attempted to pose them in a row on the perch before their door. The task reminded me of almost forgotten efforts at building card houses which, when nearly completed, would be brought to ruin by an ill-placed card. How many times each Chickadee tumbled or fluttered from his perch I cannot say. The soft, elastic net spread beneath them preserved them from injury, and bird after bird was returned to his place so little worse for his fall that he was quite ready to try it again. On several occasions eight birds were induced to take the positions assigned them, then in assisting the ninth to his allotted place the balance of the birds on either side would be disturbed and down into the net they would go.

These difficulties, however, could be overcome, but not so the

failure of the light at the critical time, making it necessary to expose with a wide open lens at the loss of a depth of focus.

The picture presented, therefore, does not do the subject justice. Nor can it tell of the pleasure with which each fledgling for the first time stretched its wings and legs to their full extent and preened its plumage with before unknown freedom.

At the same time, they uttered a satisfied little *dee-dee-dee*, in



A CHICKADEE FAMILY
Photographed from nature by F. M. Chapman

quaint imitation of their elders. When I whistled their well-known *phe-be* note they were at once on the alert, and evidently expected to be fed.

The birds were within two or three days of leaving the nest, and the sitting over, came the problem of returning the flock to a cavity barely two inches in diameter, the bottom of which was almost filled by one bird.

I at once confess a failure to restore anything like the condition in which they were found, and when the front of their dwelling was replaced Chickadees were overflowing at the door. If their healthfulness had not belied the thought, I should have supposed it impossible for them to exist in such close quarters.

A few days later I found their home deserted, and as no other pair of Chickadees was known to nest in the vicinity, I imagine them to compose a troop of birds I sometimes meet in the neighborhood.

Richardson's Owl

BY P. B. PEABODY

With photographs from nature by the author

ON the thirteenth of April last, at Hallock, Minn., while afield in the morning after Migration Report data, I stumbled suddenly upon a Richardson's Owl, in a willow bush, four feet up, on a brush-land side-hill, two hundred yards above the river. A strong wind was blowing, and kept the willow stems a-swaying and the feathers fluttering, while the dullness of an overcast sky made quick exposures impossible. Nevertheless, I hurried home, a mile away, and returned with camera and plates,—'Crown' and 'Stanley.' The bird was

RICHARDSON'S OWL

still *in situ*, and leaning, as before, against the upright stem nearest him, as a brace against the wind. With stop 16, or a little larger, and time $\frac{1}{5}$ to $\frac{1}{2}$ second, both according to the conditions of wind and sky, eight exposures were made, beginning at five feet distance,

and with waits for lulls in the wind. The bird seemed fearless, but I dared not try to put him on the alert, nor cause him to open his eyes. The eighth exposure was made at about two feet, the camera leisurely dismounted, and the bird then quietly caught

RICHARDSON'S OWL

about the back, with the left hand, while his attention was distracted with the right.

The little captive showed no fight nor did he try to escape so long as I held him by the feet, in an upright position. But when his body was clasped he would struggle vigorously. With all the handling I gave him in taking weights and measures, the only wounding he caused my hands was made in his attempts to secure a better grasp of my holding hand. While not actually tame, from the first he showed ecstatic delight in my stroking of the feathers on the back of his head,—chirping delightedly during the process, with much the manner and voice of a chicken when tucked under the maternal wing.

While spending his first night of captivity in my study, pending careful examination, he dropped upon my book-cases several casts, which are still awaiting analysis. At noon of the second

day he was placed in the garret, where he had a measure of darkness and plenty of wing room. Here he ate readily the heads of food that was left convenient, varying this occupation with the tearing to pieces of an old Cooper's Hawk skin. So far as I could judge, he ate only on alternate days.

During the eight days of his sojourn with me, no increase of tameness was shown; and he would fly when I came near, seeking the darkest cranny of the garret, scolding me often with the characteristic anger-note of all the smaller Hawks and Owls. Soon my captive found a permanent home in the family of the foster-father of Minnesota ornithology, where, I was soon informed, he became quickly domesticated,—eating bits of steak from a chop-stick, beheading English Sparrows with neat despatch, and drinking from a teaspoon.

For Teachers and Students

An 'Advisory Council'

IT gives us unusual pleasure to announce a plan, the fulfilment of which, already assured, will, we believe, be of great assistance to bird students and exert an important influence on the increase in our knowledge of North American birds.

Realizing from a most fortunate experience how greatly the past-master in ornithology may aid the beginner, we have felt that it would be an admirable scheme to form an 'Advisory Council,' composed of leading ornithologists throughout the United States and Canada, who would consent to assist students by responding to their requests for information or advice, the student being thus brought into direct communication with an authority on the birds of his own region.

The response to our appeal has been most gratifying. Without exception the ornithologists whom we have addressed have cordially endorsed the proposed plan, and signified their willingness to coöperate with us in this effort to reach the isolated worker. Nearly every state in the Union and province in Canada has been heard from, and we expect in our next number to publish the names and addresses of the more than fifty prominent ornithologists who will form BIRD-LORE'S 'Advisory Council.'—ED.

"Humanizing" the Birds

CAROLINE G. SOULE

IN the first number of BIRD-LORE the author of 'Bird Studies for Children' says: "Most bird stories will interest them [children], especially if the birds are humanized for them by the teller of the tale." Humanizing, in this connection, means endowing with human characteristics, and is a process much in vogue just now among writers of nature-study books and papers for the use of children and teachers. Let us see if it is worth doing—or even is justifiable.

Birds possess some characteristics or qualities which are also possessed by human beings, and by other animals. These qualities are not merely "human" then, but are common to many species of creatures. Since birds already have these qualities, there is no need of endowing them with them. To "humanize" the birds by ascribing to them human qualities which they do not and cannot possess, is only to misrepresent them, and stories which so humanize them are of no more value, as nature-study or bird-study, than so many fairy-tales. More than this — they are positively harmful because they give, as facts, statements about existing creatures which are not true. This is not bird-study; it is only telling stories which interest the children, and which have no value except in keeping them quiet. The children are not interested in the real birds, for they are not told about them. They are interested in the stories, invented for this end, about creatures which the story-teller *calls* birds but which are only human characteristics draped on bird forms. Very slight changes would be needed to make the same stories fit any humanized animal. The real nature of the bird is left out of these humanized bird stories and the loss is very great, as always when truth is left out.

To tell of "Mr. and Mrs. Robin" is well enough, for the titles merely mean the male and female. To represent them as talking is well enough, for they certainly communicate with each other and their young, and putting their communications into human speech is merely translating them. But to represent them as uttering highly moral speeches is all wrong, for these are beyond the power of the birds. The moment that the story humanizes them in any such way it becomes of no value, because it is false to nature.

The humanizing process is lavishly applied to all sorts of creatures, even to plants.

For instance, in a very popular book occurs the following:—

"And so the witch-hazel, knowing that neither boy nor girl, nor bird nor beast nor wind, will come to the rescue of its little ones, is obliged to take matters into its own hands, and this is what it does." This is an extreme case of humanizing. The writer states that this brainless plant *knows* that its seeds will not be scattered by children, animals or wind. This implies that the plant is conscious of its seeds; that it realizes the importance of their distribution; that it knows what boys, girls, birds, animals and wind are: that it knows how the seeds of other plants are distributed; and that it plans a method of scattering its own seed! This is certainly more mental power than we are warranted in ascribing to a plant. But children are much interested in the story, and think the witch-hazel very clever to plan so ingenious a way of distributing its seeds. That it is not true does not trouble them, because they do not know it, and I can learn of very few teachers using this book, who have thought enough about the subjects treated to realize that they are so humanized as to be untrue to their own natures. I quote this as an instance of the lengths to which humanizing may be carried without discovery by the average reader.

Humanizing the creatures takes them out of their own place in Nature, by endowing them with powers higher than they can really possess. It sets aside all the laws of evolution, and is not only untrue to the nature of the individual, but to the principles which underlie all Nature. Young children are not ready for these general laws and principles, but it cannot be good pedagogics to give them ideas in direct contradiction to all those laws which must be taught them a little later, and which will at once prove the falseness of this earlier teaching.

"Interest" is not everything in teaching children. Truth counts for more in the long run, and, especially in Nature study, may be made quite as interesting as "humanization."

'On the Ethics of Caging Birds'

To the Editor of 'Bird-Lore:'

I thank you for offering me an opportunity to be heard in my own defense. But controversy is — if possible — more distasteful to me than injustice. Therefore, while it is painful to be misrepresented, I will answer my critics only by saying that they have entirely — I do not say wilfully — misunderstood me, and that no one who knows me could for an instant believe me guilty of "favoring" or "encouraging," the caging, the wearing, or the eating of our little brothers, the birds.

Olive Thorne Miller.

For Young Observers

The Birds' Christmas Tree

THE BIRDS' CHRISTMAS TREE

From the painting of A. Tideman, published in 'Norwegian Pictures,' London, 1885.

HOW many of the younger readers of BIRD-LORE know that in Norway, birds, as well as children, have Christmas trees? Indeed, it is said that the children do not enjoy their own gifts until they know the birds have been provided for.

Concerning this beautiful custom of putting out a yule sheaf for the birds, Dr. Leonhard Stejneger, the eminent Norwegian ornithologist, writes us that the sheaves are usually of barley or oats, and are placed on high poles standing either in the yard or nailed to the gable end of one of the houses, preferably the storehouse or "stabbur," or on the stable, but always where they can be seen from the dwelling house. Dr. Stejneger adds that the origin of the custom is shrouded in the mystery of the mythological ages.

Here, then, is a country where, as far as anyone knows, the birds have always had a Christmas tree, while in America most birds, I imagine, consider themselves lucky if they chance to find a stray crumb on Christmas morning. So let us all be good Norwegians this coming Christmas and see that the birds are well supplied, if not with sheaves—at least with crumbs, seed, and grain for the Juncos and Sparrows, suet, ham-bones, and bacon rinds for the Woodpeckers, Chickadees, and Nuthatches. And then let us improve on the Norwegian usage by making every winter day Christmas for the birds, so that no matter how deep the snow, they may always be sure of a meal. Then, next March, write and tell BIRD-LORE of your winter guests, who they were, and what you have learned of their habits. To the boy or girl of fourteen years, or under, who sends us the best account of his or her experience in feeding the birds this winter, we will give a copy of Mrs. Wright's 'Citizen Bird' or 'Wabeno.'—ED.

The Little Brown Creeper

BY GARRETT NEWKIRK

"Although I'm a bird, I give you my word
That seldom you'll know me to fly;
For I have a notion about locomotion,
The little Brown Creeper am I,
Dear little Brown Creeper am I.

"Beginning below, I search as I go
The trunk and the limbs of a tree,
For a fly or a slug, a beetle or bug;
They're better than candy for me,
Far better than candy for me.

BROWN CREEPER

Photographed from a mounted specimen

'When people are nigh I'm apt to be shy,
And say to myself, 'I will hide,'
Continue my creeping, but carefully keeping
Away on the opposite side,
Well around on the opposite side.

"Yet sometimes I peak while I play hide and seek,
If you're nice I shall wish to see *you:*
I'll make a faint sound and come quite around,
And creep like a mouse in full view,
Very much like a mouse to your view."

Notes from Field and Study

An Interesting Phœbe's Nest

The accompanying illustration shows an interesting Phœbe's nest. It is well-known that this bird prefers to build close to some overhead protection, but I have never

NEST OF PHŒBE
Photographed from nature

seen, and have heard of only one other similar structure, showing such evidence of forethought by the builder; for this bird has constructed a pedestal by means of which her nest was raised to the desired height.

The location chosen was three feet or so back under the piazza roof of a lonely, unused summer cottage by the shore of Webster lake, in Franklin, N. H.

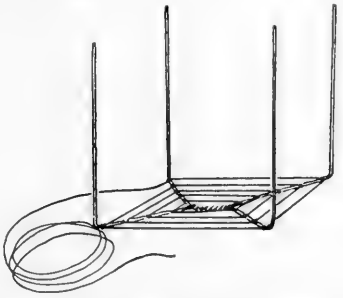
The foundations were begun on a door-cap to the left of, although almost in touch with, an upright cleat. Soon the builder made a turn to the right, that the pedestal might rest firmly against this cleat. From this point the work continued perpendicularly full twelve inches, with the breadth of about three inches and a thickness of one and one-half inches. Upon this the enlargement was made for the nest proper, which was destined to safely cradle her brood of four. — ELLEN E. WEBSTER, *Franklin Falls, N. H.*

[Two years ago John Burroughs showed us a nest similar to the one here described, built beneath the eaves, on a slight projection in the rough hewn rock of the railway station at West Park, N. Y.—ED.]

A Useful Nest-Holder

After the leaves fall many deserted birds' nests will be exposed to view. The larger number will still be found serviceable for study, and in collecting them a note of the site, height from the ground, if in a tree or bush, etc., should be made to aid in their identification.

The accompanying cut shows a very useful holder for such specimens. It was designed by Mr. George B. Sennett, and is made of annealed wire, about the bottom of which is tied hair wire, as shown. At this stage, the nest is placed in the holder, the four uprights are cut off to the required height, and bent in or out, in order to bring them closely to the sides of the nest; the wrapping with hair wire is then con-



tinued until the nest is firmly bound. In this way such loosely built nests as those of the Mourning Dove or Cuckoo may be held in shape without in the least concealing their structure.—ED.

A Singing Blue Jay

Not long ago, when the snow covered the ground several inches deep, I heard as sweet a little song as one could expect to hear from a Warbler in May, come from a clump of small plum trees in the back yard. Creeping softly in the direction of the sound, I could see nothing but a stately Blue Jay perched upon one of the upper limbs. I waited patiently, and soon the

song came again, sweet and mellow as before; this time I could plainly see the Jay's open bill and the muscular movements of his throat. I could hardly believe my eyes, as I had been accustomed to hear only harsh sounds from a Jay's throat. I raised to a standing posture, the Blue Jay flew away. I looked carefully all about, and no other birds were in sight. This Blue Jay remained in the neighborhood all winter, and several times I had the pleasure of hearing his sweet little song.—FRANK E. HORACK, *Iowa City, Iowa.*

To Hunt Southern Birds

Rockville Centre, L. I., November 9.—O. H. Tuthill and Robert T. Willmarth, of this village, Benjamin Molitor, of East Rockaway, and Coles Powell, of Seaford, started yesterday on a bird skinning and stuffing expedition to the Florida coast. The men went aboard of Mr. Molitor's little 28-foot sloop, Inner Beach, which is fitted with both sails and gas engine.

They take the inside route through bays, rivers and canals to Beaufort, N. C. From there on to their destination they will have to take their chances outside on the ocean. The men go to shoot all kinds of water birds, for which there is an unprecedented demand this season by millinery manufacturers. After being killed, most of the birds will be skinned and stuffed roughly with cotton, and every week shipments will be made to New York.

Mr. Tuthill is an old hand in the business. The last time there was a large demand for birds by the makers of women's headgear, about twelve years ago, he took an outfit to Florida and during the winter shipped 140,000 bird skins to New York.—*Brooklyn Eagle.*

[We met Mr. Tuthill in Key West in February, 1892, and heard him state that during a preceding winter his party had killed 130,000 birds for millinery purposes, and the information contained in the above clipping is doubtless, therefore, accurate. —ED.]

American Ornithologists' Union

The seventeenth annual congress of the American Ornithologists' Union convened at the Academy of Natural Sciences, in Philadelphia, on November 13, 1899. At the business meeting held on the night of that day the following officers were elected for the ensuing year: President, Robert Ridgway; vice presidents, C. Hart Merriam and C. B. Cory; secretary, John H. Sage; treasurer, William Dutcher; councilors, C. F. Batchelder, F. M. Chapman, Ruthven Deane, J. Dwight, Jr., A. K. Fisher, T. S. Roberts, Witmer Stone. Two corresponding and eighty-two associate members were elected.

The program for the three days' public sessions, on November 14-16, included the following papers:

Notes on the Flammulated Screech Owls, Harry C. Oberholser; Three Years' Migration data on City Hall Tower, Philadelphia, Wm. L. Bailey; A Quantitative Study of Variation in the Smaller American Shrikes, Reuben M. Strong; The Habits and Structure of Harris' Cormorant, R E. Snodgrass and F. A. Lucas; Bering Sea Arctic Snowflake (*Passerina hyperborea*) on its breeding grounds, C. Hart Merriam; On the Plumages of Certain Boreal Birds, Frank M. Chapman; On the Perfected Plumage of *Somateria spectabilis*, Arthur H. Norton; The Summer Molting Plumage of Eider Ducks, Witmer Stone; An Oregon Fish Hawk Colony, Vernon Bailey; Exhibition of a series of field sketches made from absolutely fresh birds, showing the true life colors of the soft parts, mostly in the breeding season, Louis Agassiz Fuertes; The Sequence of Plumages and Molts in Certain Families of North American Birds, Jonathan Dwight, Jr.; The Ranges of *Hylocichla fuscescens* and *Hylocichla f. salicicola*, Reginald Heber Howe, Jr.; On the occurrence of the Egyptian Goose (*Chenalopex ægyptiaca*) in North America, Frank C. Kirkwood; Notes on the Habits of the Great Mexican Swift (*Hemiprocne zonaris*), Sam'l N. Rhoads; Further remarks on the Relationships of the Grackles of the Subgenus *Quiscalus*, Frank M. Chapman; Audubon's Letters to Baird—compiled from Copies of the originals kindly furnished by Miss Lucy H. Baird, Witmer Stone; A Peculiar Sparrow Hawk, William Palmer; The Requirements of a Faunal List, W. E. Clyde Todd; Report of

the A. O. U. Committee on Protection of N. A. Birds, Witmer Stone; An account of the Nesting of Franklin's Gull (*Larus franklinii*) in Southern Minnesota, illustrated by lantern slides, Thos. S. Roberts; Bird Studies with a Camera, illustrated by lantern slides, Frank M. Chapman; Home Life of some Birds, illustrated by lantern slides, Wm. Dutcher; Slides—series of Kingfisher, Gulls, etc., Wm. L. Baily; The Effects of Wear upon Feathers, illustrated by lantern slides, Jonathan Dwight, Jr.; Exhibition of lantern slides of Birds, Birds' Nests and Nesting Haunts, from Nature, members; Language of the Birds, Nelson R. Wood; A New Wren from Alaska, Harry C. Oberholser; The Molt of the Flight-feathers in various Orders of Birds, Witmer Stone; Some Cuban Birds, Jno. W. Daniels, Jr.; On the Orientation of Birds, Capt. Gabriel Reynaud, French army; On the Habits of the Hoatzin (*Opisthocomus cristatus*), George K. Cherrie.

Book News and Reviews

A Dictionary of Birds. By Alfred Newton, assisted by Hans Gadow, and others. Cheap issue, unabridged. London, Adam and Charles Black, 1893–96. [New York, The Macmillan Co.] 8vo, pp. xii+1,088, numerous line cuts. Price, $5.

Bird students should be grateful to the publishers of this invaluable valuable work for issuing it in an edition which places it within the reach of all.

It is not necessary for us to add our meed of praise to what is universally conceded to be "the best book ever written about birds." To those of Bird-Lore's readers who have not had the fortune to examine this or the preceding edition, we may say that the work is based on Professor Newton's article 'Birds' in the Encyclopædia Britanica which, with the cooperation of eminent specialists, has been enlarged and augmented to make an ornithological dictionary of over 1,000 pages; an indispensable work of reference to every student of ornithology who will find in its pages an immense amount of information not elsewhere obtainable. — F. M. C.

Wabeno, The Magician. The Sequel to Tommy-Anne and the Three Hearts, by Mabel Osgood Wright. Illustrated by Joseph M. Gleeson. New York, The Macmillan Company, 1899. Price, $1.50.

This pretty green and gold covered book, with its mystical sign of three interlaced hearts, will be a treasure to the army of little folks who have so enjoyed its predecessor 'Tommy-Anne.' Not only will they meet in its pages the delightful Tommy-Anne herself, but several other old friends, Obi, the almost too-human Waddles, the unfortunate Horned Owl, and others. In this volume Anne — having dropped the Tommy from her name, pushes her "whys" into the several kingdoms of earth and air. She interviews the "Man in the Moon," learns the story of the red man from a talkative Indian arrow head, and the secrets of the hive from a friendly honey-bee. Through her magic spectacles life at the bottom of the sea becomes visible, and the past history of the earth comes to light. It may readily be seen that the author has not forgotten her own childish "wonderments," and is therefore eminently fitted to satisfy those of children today, and although the imagination has full play in the manner of conveying it— the "how" — the information given is trustworthy. The book, with all its charm of fantasy may be put into the hands of children with the assurance that it will let them into the secrets of many interesting things in Nature, and leave no sting of false statements to be corrected as the years pass on.

The book, as usual with the publications of the house of Macmillan, is fully illustrated, beautifully printed and altogether a pleasure to look at and handle.—Olive Thorne Miller.

THE BIRDS OF EASTERN NORTH AMERICA. Key to the Families and Species. By CHARLES B. CORY. Part I, Water Birds, pp. i–ix, 1–130; Part II, Land Birds, pp. i–ix, 131–387. 4to. Numerous illustrations. Special edition printed for the Field Columbian Museum, Chicago, Ill., 1899.

Mr. Cory has spared neither pains nor expense to lighten the labors of young ornithologists in the matter of identification. Arbitrary 'Keys' arranged on apparently the simplest plans, a careful use of distinguishing type, and numberless illustrations characterize this work, which will doubtless rank as its talented author's most valuable and important contribution to the literature of ornithology.

The present volumes contain only the analytical keys to families and species, and apparently are to be followed by others giving detailed descriptions of plumage and biographical matter. A list of the birds of Eastern North America, with the ranges of the species, is appended to the second volume.—F. M. C.

DICKEY DOWNY; the Autobiography of a Bird. By VIRGINIA SHARPE PATTERSON. Introduction by Hon. JOHN F. LACEY, M.C. Drawings by ELIZABETH M. HALLOWELL. Philadelphia, A. J. Rowland, 1899. 16mo, pp. 192, full-page colorotypes, 4.

In this little volume the Bobolink recounts the history of his life with particular reference to his experiences with man. Due regard has been paid to the known habits of the bird, and the book seems well designed to arouse the interest and enlist the sympathy of children in bird-life. The colored illustration of the Scarlet Tanager facing page 64 is wrongly labeled "Summer Tanager," but beyond this slip we notice no errors.

Congressman Lacey's introduction shows that its writer has an adequate conception of both the economic and æsthetic value of birds, of the evils of wantonly destroying them, and of the need for their protection. —F. M. C.

Book News

IN the October number of 'The Osprey,' the announcement is made that Dr. Gill, the editor-in-chief, will hereafter be assisted by the following associate editors: Robert Ridgway, Leonhard Stejenger, Frederic A. Lucas, Charles W. Richmond, Paul Bartsch, William Palmer, Harry C. Oberholser, and Witmer Stone. Surely here is "a multitude of counsellors" whose cooperation is an assurance that 'The Osprey' will not only return to its former high plane, but will doubtless reach a level of excellence before unknown. We note with pleasure that the somewhat too appropriate yellow cover, used during the preceding editorial administration, has been changed for one of BIRD-LORE'S hue.

FROM the announcement of the Massachusetts Audubon Society of the Audubon Calendar, issued by them for 1900, we quote the following: "The calendar consists of twelve large plates of exquisite drawings of birds, one for each month, reproduced in colors with all the spirit and fidelity of the original water-color paintings. Descriptive text of the birds on each plate. Frank M. Chapman, Olive Thorne Miller, Florence A. Merriam, Abbott Thayer, Mabel Osgood Wright, Wm. T. Davis, William Brewster, Ralph Hoffman, Bradford Torrey, M. A. Wilcox, Harriet E. Richards, H. E. Parkhurst, have contributed original paragraphs. Size 9½ by 12½ inches. In paper box. Price 75 cents. Address orders to Taber-Prang Art Company, Springfield, Mass."

THAT the editors of St. Nicholas realize the importance of developing childrens' interest in nature studies, is evidenced by the establishment in their magazine for 1900, of a department of 'Nature and Science.' It will be in charge of Mr. E. F. Bigelow, formerly editor of 'The Observer,' and now of 'Popular Science.'

LISTS of the birds of the Middle Gulf States are so few in number that bird students will welcome a fully annotated catalogue of the birds of Louisiana, by Prof. Geo. E. Beyer, of Tulane University, shortly to be published by the Society of Louisiana Naturalists.

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. 1 DECEMBER, 1899 No. 6

SUBSCRIPTION RATES.

Price in the United States, Canada, and Mexico, twenty cents a number, one dollar a year, postage paid.

Subscriptions may be sent to the Publishers, at Englewood, New Jersey, or 66 Fifth avenue, New York City.

Price in all countries in the International Postal Union, twenty-five cents a number, one dollar and a quarter a year, postage paid. Foreign agents, MACMILLAN AND COMPANY, LTD., London.

Manuscripts for publication, books, etc., for review, should be sent to the Editor at Englewood, New Jersey.

Advertisements should be sent to the Publishers at Englewood, New Jersey, or 66 Fifth avenue, New York City.

Bird-Lore's Motto:
A Bird in the Bush is Worth Two in the Hand.

WE have thus far avoided all mention of the financial side of the conducting of BIRD-LORE, nor do we now propose to adopt the course which circumstances, alas! have so often forced upon popular natural history journals, of turning the editorial page into a plea for subscriptions.

We trust, however, that in this concluding number of our first volume we may be permitted to make several statements in which we hope our subscribers will have a mutual interest.

In the first place, replying to the inquiry as to whether BIRD-LORE will not soon be issued at monthly instead of bimonthly intervals, let us say that the management of BIRD-LORE is with us an avocation to which we can devote only the margin of time left from fully occupied days. To publish it each month would involve greatly increased labor, which, under the circumstances, we cannot assume, and we have attempted to bridge this difficulty by printing as much matter in each number as is ordinarily contained in two numbers of any popular ornithological journal.

In the end, therefore, the subscriber receives quite as much for his money, and in support of this statement we may be pardoned for calling attention to the fact that the present volume of BIRD-LORE contains some 200 pages of text with over 70 illustrations, more, we believe, than is offered by any other bird magazine for the sum of one dollar.

To continue with this unpleasant subject: being perfectly familiar with the sad fate which has befallen so many of our predecessors — and of which when this journal was in contemplation our friends rarely failed to remind us! — we did not establish BIRD-LORE as a money making enterprise, but as a means of popularizing a study, the advancement of which is foremost in our desires, and as an aid to the cause of the Audubon Societies.

We believe, therefore, we may venture to say, that our relations with our subscribers are of a wholly different and more intimate nature than those which exist between the publishers and purchasers of magazines which yield an adequate money return for labor expended.

We have common interests to the furtherance of which we, for our part, are willing to devote no little time and thought, as we trust is shown by our announcements for 1900. To properly carry out our plans, however, it will be necessary to increase the size of BIRD-LORE, a step not as yet warranted by our subscription list. We would, therefore, ask the coöperation of every reader who has at heart the interests of bird study and bird protection. This coöperation may be shown in one or both of two ways: First, you may aid in increasing BIRD-LORE's circulation by securing new subscribers, by presenting a year's subscription as a Christmas gift to some friend who is interested, or whom you want to interest in birds, or by suggesting this course to others. Second, you may assist us by promptly renewing

your subscription when it expires, or in the event of your not caring to re-subscribe, we ask, as a means of regulating our edition, that you kindly send us a postal to that effect.

Bird-Lore for 1900

Bird-Lore for 1900 will, we think, reach a standard of excellence not before attained by a journal of popular ornithology. No effort has been spared to secure authoritative articles of interest to the general reader, as well as those of practical value to the teacher and student.

There will be papers by John Burroughs, recording the rarer birds he has observed about his home; by Bradford Torrey, describing his methods of attracting winter birds; by Robert Ridgway, on song birds in Europe and America; by Otto Widmann, on a visit to Audubon's birthplace; and also contributions from William Brewster, E. A. Mearns, C. Hart Merriam, T. S. Roberts, and other well-known ornithologists.

A valuable contribution to the study of bird migration will be a paper by Captain Reynaud, in charge of the Homing Pigeon Service of the French Army, who will write of his experiments in this branch of the service.

Attention will be paid to the bird-life of countries made prominent by recent events: L. M. McCormick, who has lately returned from the Philippines, writing of the birds of Luzon; H. W. Henshaw, of the birds of Hawaii, where he has long been a resident; Tappan Adney, who passed a year in the Klondike, of the birds of that region; and F. M. Chapman, of the birds of Cuba.

A. J. Campbell, the authority on Australian birds, will also contribute a paper on foreign birds, describing the remarkable habits of the Bower Birds, with photographs of their bowers from nature.

For teachers there will be a series of suggestive articles on methods of teaching ornithology, by Olive Thorne Miller; Florence A. Merriam; Marion C. Hubbard, of Wellesley; Lynds Jones, of Oberlin, and others, who have made a specialty of instruction in this branch of nature study.

Students will be glad to avail themselves of the assistance offered by Bird-Lore's Advisory Council, a new idea in self-educational work, the details of which are announced on another page. Among papers designed more especially for students will be Ernest Seton-Thompson's 'How to Know the Hawks and Owls,' illustrated by the author, F. A. Lucas' 'Tongues of Birds,' also illustrated by the author, and Professor Pinchot's 'A Method of Recording Observations.'

A paper of unusual value to those who study birds with the aid of a camera will be by John Rowley, of the American Museum of Natural History, who will describe a recently invented camera which opens new fields in bird photography.

For 'Young Observers' there will be articles by other young observers, and poems and jingles all designed to arouse and stimulate the child's interest in birds.

The illustrations will, if possible, be of even higher quality than those for which already Bird-Lore has become distinguished.

The Audubon Department, under Mrs. Wright's care, will, as heretofore, print reports of the great work which is being done in the interests of bird study and bird protection, and the series of helpful articles by its Editor will be continued

This outline of the leading features of Bird-Lore for the coming year will, we trust, be deemed sufficient warrant for the belief expressed in our opening sentence. It will be seen that our difficulty is not lack of material, but lack of space, and this difficulty we hope our subscribers will help us to overcome by seconding our efforts in their behalf.

The Audubon Societies

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

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

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries.

New Hampshire.....MRS. F. W. BATCHELDER, Manchester.
Massachusetts.....MISS HARRIET E. RICHARDS, care Boston Society of Natural History, Boston.
Rhode Island..... MRS. H. T. GRANT, JR., 187 Bowen street, Providence.
Connecticut ..... MRS. WILLIAM BROWN GLOVER, Fairfield.
New York.....MISS EMMA H. LOCKWOOD, 243 West Seventy-fifth street, New York City.
New Jersey.....MISS ANNA HAVILAND, 53 Sandford Ave., Plainfield, N. J.
Pennsylvania.....MRS. EDWARD ROBINS, 114 South Twenty-first street, Philadelphia.
District of Columbia.....MRS. JOHN DEWHURST PATTEN, 3033 P street, Washington.
Wheeling, W. Va. (branch of Pa. Society).....ELIZABETH I. CUMMINS, 1314 Chapline street, Wheeling.
Ohio.....MISS CLARA RUSSELL, 923 Paradrome street, Cincinnati.
Indiana.....AMOS W. BUTLER, State House, Indianapolis.
Illinois.....MISS MARY DRUMMOND, Wheaton.
Iowa.....MISS NELLIE S. BOARD, Keokuk.
Wisconsin..... MRS. GEORGE W. PECKHAM, 646 Marshall street, Milwaukee.
Minnesota.....MRS. J. P. ELMER, 314 West Third street, St. Paul.
Tennessee.....MRS. C. C. CONNER, Ripley.
Texas.....MISS CECILE SEIXAS, 2008 Thirty-ninth street, Galveston.
California.....MRS. GEORGE S. GAY, Redlands.

The Law and the Bird

During the past ten months BIRD-LORE has printed interesting statistics concerning the organization of the various State Audubon Societies, as well as significant reports of the progress of their work. So far so good. There are, of course, slight differences in the platforms of these societies regarding by-laws, methods, fees versus no fees, etc. Upon one point, however, they all agree — that while they deplore the use of the feathers of wild birds in millinery, the great point is the education of children to have the proper regard for bird life.

It is, however, necessary to go a step behind even this. *A priori* the bird must be given a legal status before it can be protected with any general success, even by those most willing so to do. In appealing to the average child of the public school, it should be remembered of how many races this average child is compounded,— races with instincts concerning what are called the lower animals, quite beyond the moral comprehension of the animal-loving Anglo-Saxon. To make this average school child respect the rights of the bird, the bird must be given a legal status to command, and not to beg respect. This child may be appealed to in other ways and may readily assent to all that you say, *while your personal influence is with him*, but he goes away and forgets; he does not feel the weight of a merely moral penalty.

Game birds have this legal status, in a greater or less degree, in all states, with perhaps the single exception of Mississippi, and sportsmen are always on the alert for infringement of the game laws.

It would seem to me wise for Audubonites to turn more attention to the legal status of the class of birds that they specially seek to protect.

Legislation in this respect is, of course, difficult to obtain, because many sportsmen are afraid of weakening the game laws by stirring up discussion regarding song birds, etc.; but much more can be made of the existing laws. That

these are by no means adequately enforced, is evident to anyone who notices the hordes of men and boys prowling, these autumn days, about woods and meadows, where legitimate game birds are unknown, and Robins, Flickers, and even the smaller migrants are the only game. It makes one feel that the song bird protectionists must often "pass by on the other side," not having the honesty of their convictions in as militant a degree as the sportsmen, even when they have the law to back the bird.

It will doubtless be interesting to open these 'pages,' during the coming year, to a presentation and discussion of this legal status. We should like to receive the condensed bird laws of every state possessing such, as well as opinions as to what birds should be excluded from protection in the best interests of the Commonwealth, to the end that there may be a federation of Audubon Societies regarding the best method of obtaining legislation for the protection of desirable birds not covered by the game laws.

Be the roads many — illustrated lectures to arouse public sentiment, birdless bonnets, leaflets, thousands of pledge cards signed by ready sympathizers — the goal must be conservative, well thought out legislation, free from any taint of emotional insanity. If we are to keep the bird it must be by the aid of the law, the only voice that *must* be listened to, speaking the only language understood by all the races that go to make up the people of the United States.—M. O. W.

Reports from Societies

RHODE ISLAND SOCIETY

An exhibition of birdless hats — 'Audubonnets' as they have been facetiously styled — was held in the parlors of the Narragansett Hotel, in Providence, on the 9th of October. The response to the invitations, which were sent by the society to the leading milliners, was very gratifying, nearly all of them entering cordially into the scheme. About one hundred and fifty hats were exhibited, and it is safe to say that such a beautiful and artistic display of millinery was never before seen in Providence. Most of the hats were especially designed for the occasion, and an endless variety of styles and trimmings was shown. The result proved conclusively that the plumage of wild birds can be easily discarded without violating the laws of fashion

The exhibition had been well advertised and, in spite of unpleasant weather, the parlors were thronged with visitors throughout the day. Many sales were made, the proceeds going to the exhibitors.

Four ribbon prizes were awarded, but it is the opinion of the committee in charge that prizes, even of that nature, were a disadvantage.

The 'Providence News' thus comments upon the exhibition: "It was only the other day that the 'News' was moved to remark from the evidence of the fashion plates, that bird plumage was to be more than ever the fashion this season. But there is evidence that the protest against it is a mighty one, and if the birds in other communities have supporters of the number and character that they find here in Rhode Island, the milliners who oppose the sentiment of the Audubons will at no early day be compelled to reform or to go out of business."

ANNIE M. GRANT, *Sec'y.*

PENNSYLVANIA SOCIETY

During the year that has followed the issuing of our second annual report the Society has spread to nearly every county in the State. The membership has grown from 3,300 to 5,000, and a steady increase of interest is shown in the letters received by the secretary.

Bird-Day was most successfully observed in a large number of schools, and both teachers and pupils seemed well pleased with the results. We owe thanks to many of our local secretaries for their good work among children, and for the

classes for bird study which they formed during the summer. This is a movement of the utmost importance, as with increasing membership it becomes more and more difficult for the secretary to conduct individual correspondence, and everyone who will band together local members and act as local secretary, will further the interests of the Society more than can be done in any other way.

We would like to call the attention of our members to the following:

1. When this Society was organized the quills used in millinery were all taken from large domestic birds. Lately the Brown Pelican, Eagles, Owls, and Turkey Vulture have been made to pay tribute to the fashions; and we wish most earnestly to protest against the use of these quills. A good illustration of the feathers to be avoided will be found in the October number of BIRD-LORE.

2. We would also call attention to the fact that this magazine is the official organ of the Audubon Societies, and is essential to anyone desiring to keep up with what is being done for the protection of birds.

3. As heretofore, we are dependent almost entirely upon voluntary subscriptions for carrying on the objects of the organization, and we therefore appeal again for assistance from those interested in furthering the cause of the protection of birds. Increased funds will, of course, enable us to reach a larger number of persons, and to issue a larger amount of literature, for which there is a constant demand. Donations should be forwarded to the treasurer, Mr. William L. Baily, 421 Chestnut street, Philadelphia.

For the coming year we have in view the usual course of lectures, by Mr. Stone, and also the furthering of bird study in the schools, to which end we hope to issue some educational circulars.

JULIA STOCKTON ROBINS, *Sec'y.*

THE WISCONSIN SOCIETY

Our busy season is in the spring of the year. At about Easter time our State Superintendent of Schools issued his 'Arbor and Bird-Day Annual,' which contained an invitation to teachers and children to join the Audubon Society. This invitation brought an almost overwhelming response, every day for several weeks bringing me ten or fifteen letters from would-be branches, and our school membership mounted rapidly to over 10,000. A prize offered to these children for the best personal observation on a Bird Family was won by a little country girl, who wrote a very good composition on the Ground Sparrow. We have tried, with varying degrees of success, in different places, to institute the work of the 'Bird Restorers' among these children.

We shall soon have a little library of bird books circulating among the schools, and we are trying to raise money for a set of lantern slides to accompany a lecture — lecture and slides to be sent from place to place.

I believe that the Audubon work has already made a deep impression in Wisconsin. The milliners' windows abound in Gulls and Birds of Paradise, but they are not finding a ready sale. As to wings, perhaps it is too much to expect that women will not believe their milliners when told that "These wings are all right, because they are made."

E. G. PECKHAM, *Sec'y.*

The Passing of the Tern

The surprising results which may follow Fashion's demand for a certain kind of bird have never been more clearly shown than in the case of the Terns or Sea Swallows of our Atlantic coasts.

Useless for food, the birds had escaped the demands of the hunter, and thousands nested in security along our beaches. The exquisite purity of their plumage and their unsurpassed gracefulness on the wing made them a particularly grateful element of the coast scenery to every lover of the beautiful, while to the prosaic fisherman they often gave welcome evidence of the direction of the land, as with unerring flight they

returned through the densest fogs, bearing food to their young.

Suddenly, as a result of causes too mysterious for the mind of man to comprehend, Fashion claimed the Terns for her own.

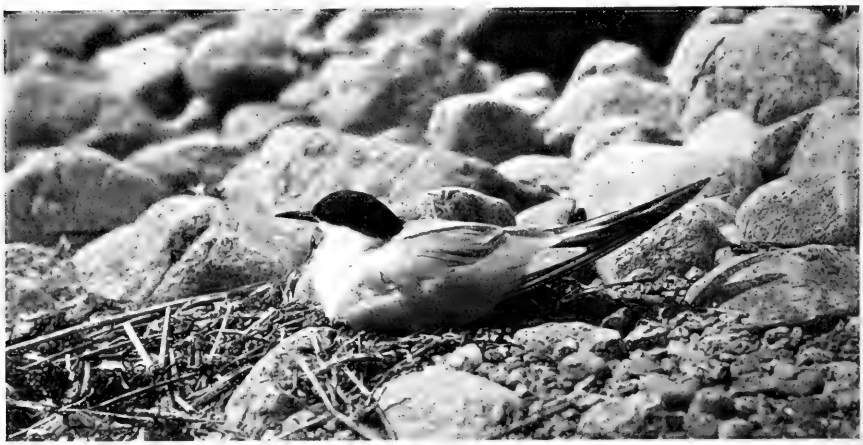
Up and down the coast word went forth, that Sea Swallows, or 'Summer Gulls,' were worth ten cents each, and the milliner's agent was there to confirm the report.

It was in June when the baymen were idle and, unrestrained by law, they hastened to the beaches in keen competition to destroy the birds which were nesting there

Never, in this country, at least, has there been such a slaughter of birds. A Cobb's Island, Virginia, bayman, whose conscience, even at this late date, urged him to a confession of shame for his part in the proceedings, told me recently that in a single day of that memorable season, 1,400 Terns were killed on Cobb's Island alone, and 40,000 are said to have been there shot during the summer. The destruction at other favorable places was proportionately great.

Two seasons of this work were sufficient to sweep the Terns from all their more accessible resorts, the only survivors being residents of a few uninhabited islands. Even here they would have succumbed had not bird-lovers raised a sum to pay keepers to protect them.

Then Fashion, as if content with the destruction she had wrought, found fresh victims, and the Terns, for a time, escaped persecution. Now, however, the demand for them has been revived, and again the milliners' agent is abroad placing a price on the comparatively few birds remaining. Before me is a circular issued by a New York feather dealer, asking for "large quantities" of "Sea Gulls, Wilson's Turns (*sic*), Laughing Gulls, Royal Gulls," etc., and this is only one instance among hundreds. In fact, the feather merchants themselves state that the demand for Terns and Gulls exceeds the supply.*



Photographed from nature by F. M. Chapman

WILSON'S TERN ON NEST

What will be the result? Is there no appeal from Fashion's decree? Woman alone can answer these questions, and the case is so clear she cannot shirk the responsibility of replying.

Aigrettes are decorative, quills difficult to identify, neither bespeak death, and ignorance may lead the most humane woman into wearing either. But with the Tern no such excuse exists, and the woman who places its always disgustingly mutilated body on her bonnet, does so in deliberate defiance of the laws of humanity and good taste.

FRANK M. CHAPMAN.

*See also note from 'Brooklyn Eagle' on page 198.

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FEBRUARY, 1899

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EDITED BY
FRANK M. CHAPMAN

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Bird-Lore

February, 1899

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*** *The Publication Office is in the Mount Pleasant Building, 208 Crescent Street, Harrisburg, Pa.*

*** *All communications in regard to contributions, etc., and all regular exchanges, should be addressed to the Editor, Frank M. Chapman, Englewood, New Jersey.*

*** *The subscription price is One Dollar per annum. Subscriptions and advertisements may be sent to the Publishers, The Macmillan Company, Harrisburg, Pa., or 66 Fifth Avenue, New York; or to the Editor, as above*

PUBLISHERS' ANNOUNCEMENT

The April number of BIRD-LORE will contain the conclusion of Dr. Roberts' interesting paper on 'The Camera as an Aid in the Study of Birds,' with photographs which surpass in merit even those presented in this issue; An article by Miss Merriam, entitled 'Oregon Jays and Clark's Crows on Mt. Shasta,' accompanied by photographs of the birds from life; A sketch of the home-life of Loons, by William Dutcher, illustrated by the author, and an illustrated account, by R. W. Hegner, of the manner in which he secured a unique picture of a Bluebird.

For 'Teachers and Students' Prof. Lynds Jones, of Oberlin College, will write on methods of bird-study, and a program suggesting appropriate exercises for Bird-day in the schools will be given.

Ernest Seton Thompson has written and illustrated some verses 'For Young Observers,' and there will be the usual departments.

VOL. I
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Bird-Lore

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FRANK M. CHAPMAN

The Macmillan Company

ENGLEWOOD, N. J.

NEW YORK LONDON

R. Weber

Bird-Lore

April, 1899

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PUBLISHERS' ANNOUNCEMENT

The unexpectedly large demand for the first number of BIRD-LORE has so nearly exhausted the edition it has been deemed advisable to reserve the few remaining copies for subscribers to the volume.

BIRD-LORE for June will contain an article by Olive Thorne Miller entitled, 'The Ethics of Caging Birds'; a poem by Edith M. Thomas; the conclusion of Miss Merriam's article; an account of a visit to Audubon's birthplace, by Otto Widmann; unusually interesting papers on the Cardinal and Chimney Swift, and some remarkable bird pictures, including one by Dr. Roberts.

VOL. I
No. 3

JUNE, 1899

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Bird-Lore

EDITED BY
FRANK M. CHAPMAN

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Bird-Lore

June, 1899

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PUBLISHERS' ANNOUNCEMENT

BIRD-LORE for August will contain an article by Bradford Torrey; A paper on How to Photograph Wild Birds, by Richard Kearton, the most successful of bird photographers; A poem by Garrett Newkirk; An account of a Mississippi Swallow Roost, by Otto Widmann (whose paper on a visit to the birthplace of Audubon is necessarily postponed); a report of the American Society of Bird Restorers, by the organizer, Fletcher Osgood, and other interesting articles.

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No. 4

AUGUST, 1899

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Bird-Lore

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FRANK M. CHAPMAN

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Bird-Lore

August, 1899

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PUBLISHERS' ANNOUNCEMENT

The most important paper in BIRD-LORE for October will be an illustrated article on the American Ornithologists' Union, by its first president, J. A. Allen, which will be of especial interest to all bird students.

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No. 5

OCTOBER, 1899

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Bird-Lore

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Bird-Lore

October, 1899

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*** *Bird-Lore is published on the first of the month, at Englewood, New Jersey, where all notices of change of address, manuscripts intended for publication, books, etc., for review, and exchanges should be sent.*

PUBLISHERS' ANNOUNCEMENT

BIRD-LORE for December will contain, among other interesting articles, 'The Story of a Pet Sea Parrot,' by E. W. Nelson; 'A Search for the Reedy Island Crow Roost,' by Witmer Stone; 'A Large Family,' by Frank M. Chapman, all illustrated. An account of How the Central Park Chickadees were Tamed by Anne A. Crolius, one of Garrett Newkirk's admirable bird poems for children, etc., and a detailed Statement of the Plans of the Magazine for 1900, including an announcement of special interest to all bird students.

VOL. I
No. 6

DECEMBER, 1899

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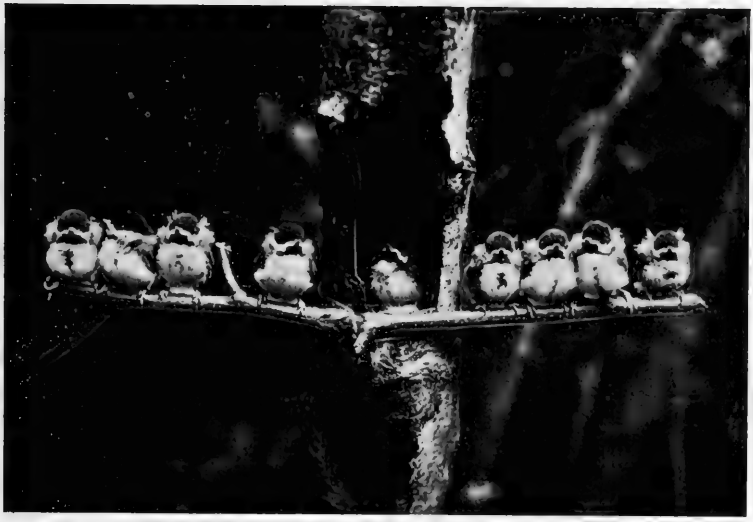
Bird-Lore



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R. Ilcher

Bird-Lore

December, 1899

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*** *Bird-Lore is published on the first of the month, at Englewood, New Jersey, where all notices of change of address, manuscripts intended for publication, books, etc., for review, and exchanges should be sent.*

IMPORTANT NOTICE TO SUBSCRIBERS

All subscriptions beginning with the first (February) number of BIRD-LORE expire with this issue. A blank is enclosed for the purpose of renewal, which it is requested be made at our Englewood, N. J., office, ten cents for exchange charges being added to checks on other than New York City banks. In this connection we would call attention to the editorial and announcements on pages 201 and 202 of this number.

PUBLISHERS' ANNOUNCEMENT

BIRD-LORE for February, 1900, beginning Volume II, will contain the details of the students' 'Advisory Council,' and, among other interesting contributions, an important and fully illustrated paper on 'The Tongues of Birds,' by F. A. Lucas, Curator of Comparative Anatomy in the U. S. National Museum; 'A Method of Recording Observations,' by Professor Pinchot, of Trinity College; 'Egret Farming,' by F. M. Chapman; and there will be some remarkable bird photographs.

'Bird-Lore' for Christmas

FTER reading Our Announcements for 1900, we trust it will be believed that no present could be more appropriate for a friend who is interested in birds, or a friend whom you wish to interest in birds, than **BIRD-LORE** for the coming year. As the first number of the new volume will not be issued until February 1, 1900, we have had prepared a BIRD-LORE Christmas Card. The face, printed in colors, bears BIRD-LORE'S cover design, with, in place of the usual illustration, the following inscription:

TO_____

WITH A VERY

Merry Christmas

I SEND YOU

Bird-Lore for 1900

[SIGNED]_____

NO. 1, VOL. II, TO BE ISSUED
FEBRUARY 1, 1900

On the reverse is placed the much admired, full-page portrait of John Burroughs, published in the first number of BIRD-LORE. A heavy plate paper will be used in making this card, it will be so packed as to insure its arrival in condition suitable for framing, and it therefore forms in itself a desirable Christmas remembrance.

On receipt of the subscription price to BIRD-LORE, and the name and address of the person to whom you wish the magazine sent, this card will be properly filled out and mailed in time to be received on Christmas day.

Or the subscription may be sent and we will forward the Christmas Card in blank, to be filled in and mailed by the donor of the Magazine.

For this occasion we will make a reduction in the subscription price to BIRD-LORE, and offer five subscriptions for the sum of $4.00.

Orders for these Christmas Cards should be sent at an early date, in order to ensure their delivery in due season.

In this connection we would call attention to the fact that, having reprinted the first (February) number of BIRD-LORE, we can now supply volume one complete, and, if desired, on receipt of two dollars, will deliver it with the Christmas Card to any address on Christmas day.

Address:

BIRD-LORE,

ENGLEWOOD, N. J.

BOOKS FOR THE COUNTRY

Nature Studies in Berkshire

By JOHN COLEMAN ADAMS. With 16 illustrations in photogravure from original photographs by ARTHUR SCOTT. 8°, gilt top, in a box, $4.50.

Landscape Gardening

Notes and Suggestions on Lawns and Lawn-Planting, Laying out and Arrangement of Country Places, Large and Small Parks, etc. By SAMUEL PARSONS, JR., Ex-Superintendent of Parks, New York City. With nearly 200 illustrations. Large 8°, in a box, $3.50.

Lawns and Gardens

How to Beautify the Home Lot, the Pleasure Ground, and Garden. By N. JÖNSSON-ROSE, of the Department of Public Parks, New York City. With 172 plans and illustrations. Large 8°, gilt top, in a box, $3.50.

Ornamental Shrubs

For Garden, Lawn, and Park Planting. With an Account of the Origin, Capabilities and Adaptations of the Numerous Species and Varieties, Native and Foreign, and Especially of the New and Rare Sorts Suited to Cultivation in the United States. By LUCIUS D. DAVIS. With over 100 illustrations. 8°, in a box, $3.50.

Our Insect Friends and Foes

How to Collect, Preserve and Study Them. By BELLE S. CRAGIN. With over 250 illustrations. 12°, $1.75.

Among the Moths and Butterflies

By JULIA P. BALLARD. Illustrated. 8°, $1.50.

Bird Studies

An Account of the Land Birds of Eastern North America. By WILLIAM E. D. SCOTT. With 166 illustrations from original photographs. 4°, leather back, gilt top, in a box, *net*, $5.00.

Wild Flowers of the Northeastern States

Drawn and carefully described from life, without undue use of scientific nomenclature. By ELLEN MILLER and MARGARET C. WHITING. With 308 illustrations the size of life. 8°, *net*, $3.00.

The Leaf Collector's Handbook and Herbarium

An aid in the preservation and in the classification of specimen leaves of the trees of Northeastern America. By CHARLES S. NEWHALL. Illustrated 8°, $2.00.

The Shrubs of Northeastern America

By CHARLES S. NEWHALL. Fully illustrated. 8°, $1.75.

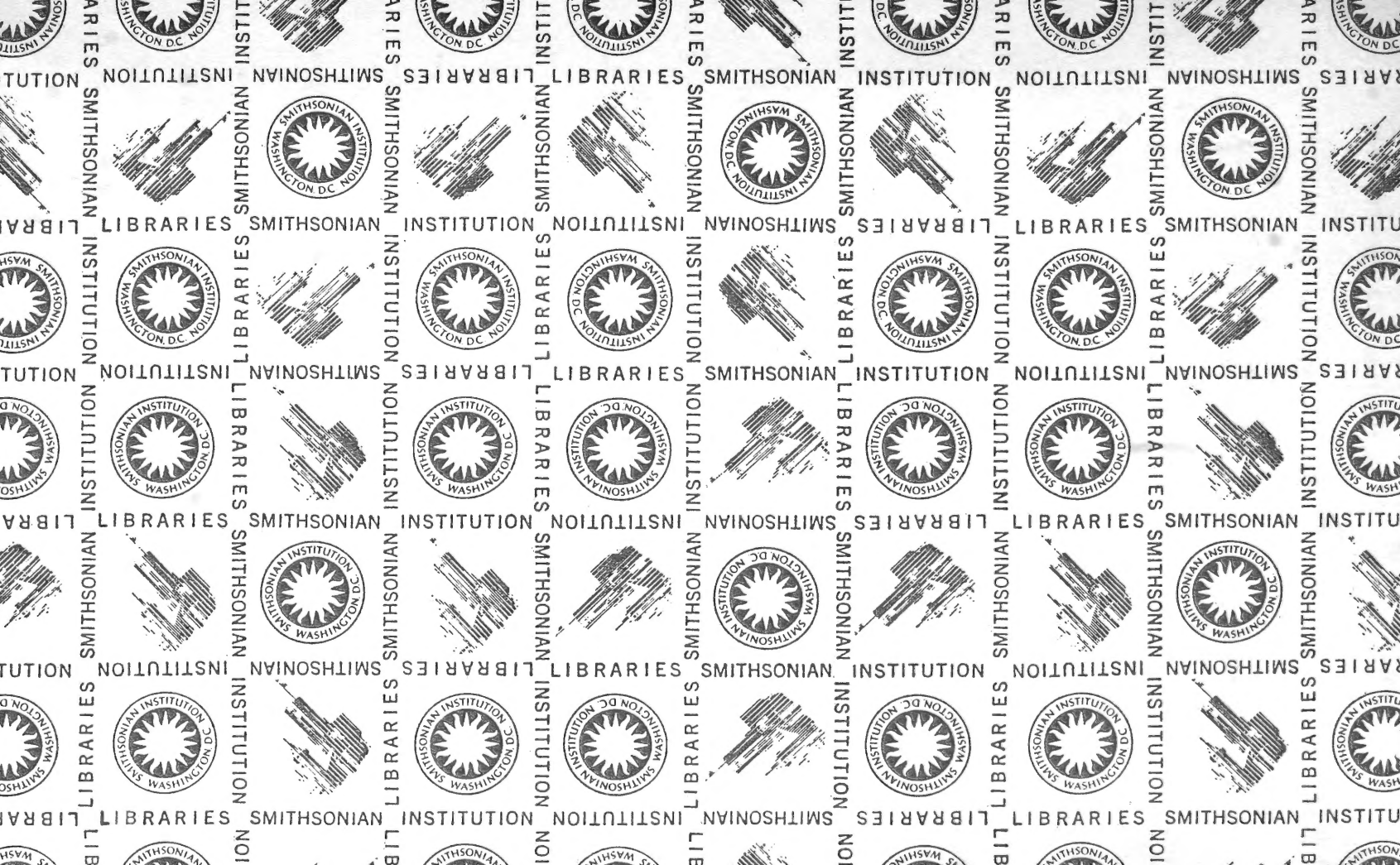
The Vines of Northeastern America

By CHARLES S. NEWHALL. Fully illustrated. 8°, $1.75.

The Trees of Northeastern America

By CHARLES S. NEWHALL. With illustrations made from tracings of the leaves of the various trees. 8°, $1.75.

G. P. PUTNAM'S SONS, New York and London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