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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XIII

JANUARY—FEBRUARY, 1911

No. 1

Birds and Seasons in My Garden

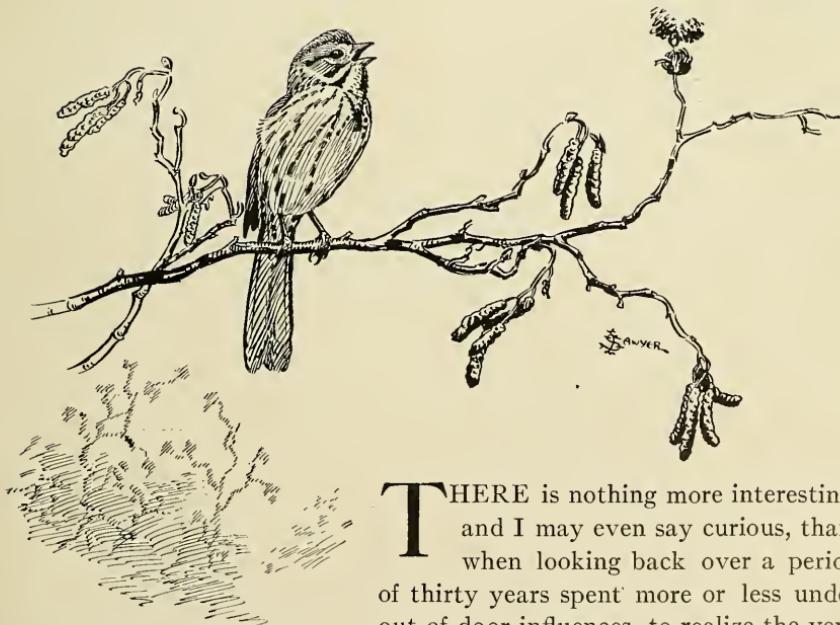
I. FEBRUARY AND MARCH

By MABEL OSGOOD WRIGHT

In the dark silence of her chambers low,
March works out sweeter things than mortals know.

For all the sweet beginnings of the spring,
Beneath her cold brown breast lies fluttering.

—MAY RILEY SMITH.



THREE is nothing more interesting, and I may even say curious, than, when looking back over a period of thirty years spent more or less under out-of-door influences, to realize the very

different emotions called forth by the same happenings in very much the same surroundings.

In my garden plot covering, in cultivated, open field and wild, not

quite ten acres, it would seem that the coming and going of the seasons in flower and bird-life would bear a certain defined stamp not untinged by monotony, yet it is quite otherwise. In New England at least, there always chances the element of tantalizing uncertainty that is the salt and spice of pursuit.

Then, too, there are added the different phases born of the seven ages of man, and the seventy times seven changes of mood and temperament. At first, birds were simply two-legged, feathered things, that sang more or less well, and would usually discover the ripe side of every strawberry and cherry at least half an hour before the human picker appeared on the scene. Spring and summer brought birds, how they lived in the absent interval one didn't know, and any sort of systematic aid in solving the feeding problem, other than shaking the table-cloth out of the window, did not trouble one. Neither did the matter of housing, to any practical extent. Bird-houses were mostly impossible vaudeville constructions, with many doors and little privacy within, and certain to be draughty.

Then came the "want to know period," when birds were things to be listed, identified with deadly certainty upon insufficient evidence, and treated in the precise manner of the multiplication table. These were days of wonderful discoveries. When the Chat seen at a new angle was recorded as a Prothonotary Warbler, causing one's really scientific friend to smile indulgently and yawn, but quite politely, behind his hand.

Then a reasonable familiarity with the common birds settled over me, and their personalities became the prime factors. (Not but what I shall always be hazy about certain Sparrows and fall-coated Warblers when seen in the bush.)

I no longer strove frantically to count every Robin in a flock, or filled pages in my note-book to prove that a flock of Bluebirds seen on a certain February 11, at 10 A.M., was not the same as a flock of the identical birds seen the same afternoon just before sunset. There is always a time when most students waste much vital force in trying to prove the unprovable and absolutely unimportant.

In fact, it is not until the days of the spirit and ethical enjoyment supplement the dusty days of dry-as-dust note-book record that the real meaning of the birds, the birds about home, the birds of the garden, and above all, the birds of one's *own* garden, are revealed. When this once happens, the full chord is struck, combined not only of their meaning to us, but also of the new relation in which we stand to them. In this relationship lies the full reward that comes to those of middle years to whom the bird has ceased to be a bit of anatomy, a step in the ascending creative ladder, but is a personality, a voice that joins past to present so imperceptibly that the transition to the future is an assured finality.

Enough! So comes February again, the discouraged and discouraging

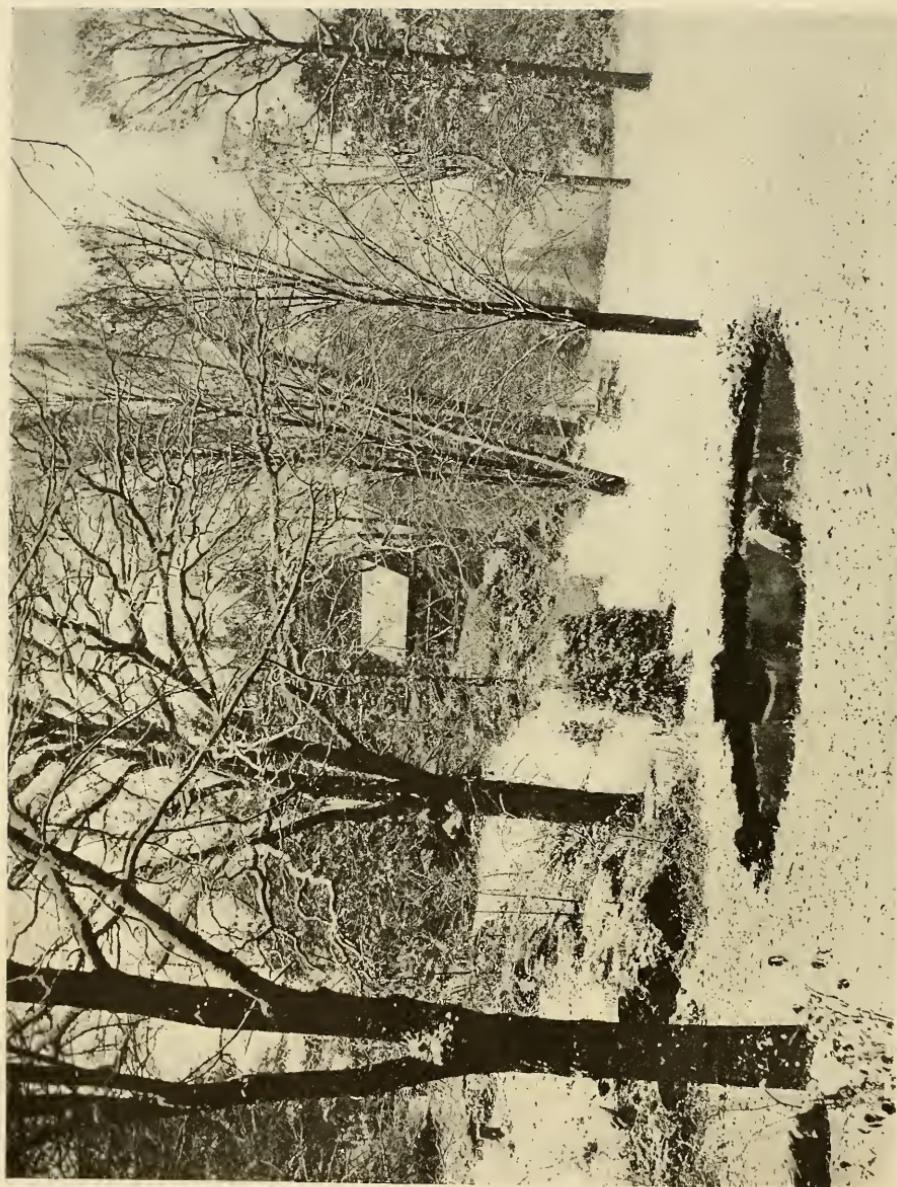
long-short month of the year, and yet no two Februaries are precisely alike. Twelve only of these months of which I have record have been absolutely snow-and ice-bound, while all the others have varied from *largo* to *capricioso* and *allegro con fuoco* in their movements. But, there is mostly a *but* to times of trial. If the birds are fewer than in December and January,—which is the hightide of resident, transient and wind-blown visiting bird-life,—we have more than an hour longer at night and, before the month ends, an hour in the morning, in which to see those birds we have, and, a significant fact, the sun rises full upon the old apple-tree feeding-place, that has lain under the black shadow of the house-cover these two months gone. This may seem a very slight happening, but it makes an earlier call to breakfast; for, even if suet be still as solid as low temperature can make it, it is certainly more palatable if the Downy, Chickadee or Nuthatch that visits it has the sun on his back. In this lies a hint to the placers and maintainers of either bird-houses, winter-shelters or feeding-stations; location has more to do with success than is usually supposed. For feeding-stations, a top-shelter from snow and rain, with side wings or some other sort of wind-break, is absolutely necessary, together with the selection of a spot that lies in the sun all of the brief winter days.

Nesting-houses should have a reasonable degree of protection from the sun and, especially should the doors be protected from the noon and afternoon rays; but, on the other hand, houses for winter shelter should also be sun-baths.

Of the forty species of birds that I once recorded as having nested in the home garden some fifteen years ago, a number have dropped away for lack of suitable nesting-sites; though, on the other hand, some eight or ten have added themselves to the original list, bringing it up to fifty.

I am now trying, by supplying certain of the deficiencies, to make it possible for these to return; and, in one instance, the success was positively startling.

For many years we had a Screech Owl brood as a matter of certainty; then certain old trees and nooky out-buildings disappeared, and with them the Owls. This autumn in making some Bluebird boxes of old shingles, with top and bottom of strong new wood, I had a length of pine plank an inch and a half thick to spare. This was roughly fashioned into a couple of boxes one foot square with a hole three and a half inches in diameter rather nearer the top than the bottom. A single shingle fastened on the roof was so angled as to keep rain or snow from the opening. In looking for a suitable spot for the houses, two Norway pines seemed promising. Each had lost twenty feet of the top by wind and lightning, and the branches, in one instance, had stretched up as if to hide the scar. The boxes were placed on the tree-tops, the twelfth of December, to the



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tune of very skeptical remarks by the man who did the climbing, to the effect that I might get a gray squirrel to look at the box, but, as for anything as leery as an Owl, it would look like a trap—new wood too. Here a sniff came in for punctuation. But then, the box was of an awkward shape to get between the thick branches, and it was a sticky rough bit of climbing which may be considered as tinging his opinion.

Box No. 2, on the taller tree, stood out well from the branches and caught every possible ray of sunlight, while the other was in a thickly wooded place shadow, except for a short time in the afternoon.

Three days later, the doubting Thomas called me. He was chopping wood under box No. 1, to which he called my attention by an upward jerk of his thumb. There, completely filling the doorway, was the head of a rust-red Screech Owl, eyes apparently closed, yet evidently sufficiently awake to enjoy his sun-bath to the full. Every bright day until the present found him at his post, but on cloudy days he was absent, and also toward dusk, but if he was inside the box or in more secluded quarters I do not know.

Perhaps he goes to tell the news to a mate in other woods. If so, when they set up housekeeping in which box will it be? In sun or shade? The winter hollow will be a bake-house before the owlets, who take plenty of time to grow, leave the nest. On the other hand, the box in the grove will be chilly in early April. The matter is quite a pretty problem, well worth watching, and brings one to thoughts of the nesting season even before there is a single wing-flutter of the spring migration.

“Spring migration,” you echo in amazement, “with a fresh fall of snow last night, Redpolls at the feeding place this morning, and the ranks of winter residents and visitors still unbroken?”

Yes, in spite of many signs, and the fact that even in southern New England February and March are often the most rigorous of winter months, a sunny February day holds up the promise of spring, at least to the mental vision, as clear as if reflected by a Claude mirror.

The thaw of last week freed the pool of ice, and, where the light snow that fell for an hour last night edges the water, there is a greenish tinge to the overhanging grass. Yes, and the ripple on the water is made by a Song Sparrow drinking. True, he may be a winter bird, but then again he may be a pioneer of the first upward flight. I have seen Red-wings, Robins and Bluebirds that I knew to be migrants all drinking in this pool, which is a natural spring, the last week in February. And what a bird-lure is this pool in and out of season! For, when an August drought dries many a merry stream, there is always water here; and, even when ice freezes to an inch-depth every night, this little spring held, as it seems to be, in the warm palm of a particular bit of Mother Earth, feels her warm heart-

beats and offers, by a sort of magic, the first refreshment and spring cheer to the winged wanderers.

It is here, in spite of its proximity to the house, that I am sure to see the first and last of the Green Herons and Black-crowned Night-Herons; though of the latter there is no "last," as usually we have a pair or two with us all winter, going by day to feed in the tide pool of the salt marshes, and returning by night to the thick shelter of the spruces, where they will have a nest or two later on.

In the bit of meadow beyond the spring, any time from middle February to middle March, I shall see the first glistening flock of Purple Grackles, working industriously among the grass roots, drinking, perhaps, if the day is mild and windless, taking a fluttering, hasty bath and then mantling the big red oak in iridescent hues, akin to the reflections in deep black water, while they preen and call to one another, "Here we are at last, and, thank our lucky stars, these house people *haven't* drained our pond or cut down our club-tree since we left, and they *have* thoughtfully plowed up an old bit of meadow below in the Bluebirds Apple-tree Land, from which we will pick all the big bugs and slugs and things as soon as we are a bit rested."

February was a week old when I looked out, a little after sunrise, at the apple-tree feeding-place below my bedroom window. I rubbed my eyes the more clearly to see what was at first a confused mass of deep red and bright blue.

The red proved to be a handful of waste cranberries, put out upon the principle of giving all the variety possible, or the chance attraction of novelty. The blue was not of the Jays that, as usual, were conspicuous winter residents, though several of these boisterous, beautiful cowards were lurking nearby, and making disagreeable remarks, in which the presence of the little Owl in the box had its place.

No, the blue was soft, rich, and unmistakably the color worn only by Bluebirds in at least "near-spring." Three of them were there attacking the tart fruit with all the vigor of Catbirds at the beginning of the berry season. I could not prove it by any scientific axiom, and yet I know that those birds had come in the night, how far one may not guess; for, in spite of their joy in the succulent food, there was a sort of lassitude about their general actions that did not belong to the roving flock of a dozen that had turned up at intervals all winter.

With bills dyed red, they presently paused, cleaned the juice off by polishing on the wooden shelf with a deft sidewise motion, and then they attacked the suet with as much relish as the Chickadees.

"Go down to the farm and see the new boxes I've put up for you," I said, opening the window, and quite forgetting our different methods of speech: "They may not be so pleasant as the holes in the apple-trees, but

they have mostly toppled over since you left in the fall, and my shingle houses are quite as good as the fence-post and telegraph-pole lodgings of which you are so fond."

The Bluebirds fluttered over to a lilac bush and, with backs toward the sky and breast to earth, instantly merged in their surroundings, and became practically invisible as they settled for a rest. Then, as I looked and listened, a Song Sparrow piped up down by the spring and the clear call "Spring o' the Year" came up from the Grackle-plowed meadow, where some old stalks of buckwheat still dangled seeds about the edges.

"Mother Earth is surely turning over in bed," I said, "even though she is not quite ready to throw off her covers and awake." The Bluebirds have come to us, and tomorrow, perhaps, the Brown Creepers, Tree Sparrows and White-throats, that have been with us since December, will move on, and some one to the northward will look out of the window, and, taking heart even as I did, say, "See, the spring migration has begun!"

Yet, without the birds, February would be only the disagreeable long-short month of broken promises. Surely, at this time of year in my garden, the birds make the season worth the living.



The Record of 1910

By T. S. PALMER

THE year just closed has been marked by considerable activity in various lines of ornithological work. New facts about rare or little-known species have been published, field investigations have been pushed into new regions, a new check list and several new state lists have brought our knowledge of distribution down to date, and the protection of birds has received much attention.

Among the discoveries of the year, the finding of the eggs of the Gray-crowned Leucosticte (*Leucosticte tephrocotis tephrocotis*) by Milton S. Ray deserves special mention. Although the bird was described by Swainson, nearly eighty years ago, and the color and size of its eggs could be surmised from what we knew of related species, the eggs had never been actually collected until the discovery of the nest on Pyramid Peak, California, at an altitude of nearly ten thousand feet, on June 22, 1910. Of scarcely less interest was the evidence collected by Job and McAtee regarding the abundance of the Blue Goose (*Chen cærulescens*) in southern Louisiana, particularly in the Mississippi delta and in the region west of Vermillion Bay. This fact, though known to local observers, was not generally appreciated, and it is gratifying to learn that the Blue Goose, usually considered one of the rarest of our Geese, is still found in flocks of thousands in certain parts of its winter habitat. The year may fairly be considered as marking the passing of the Passenger Pigeon. Special efforts made under the direction of Prof. C. F. Hodge failed to bring to light a single authentic nest of the bird, although the vigilance of the observers was stimulated by the offer of a series of substantial rewards. Moreover, the flock of captive pigeons in the Cincinnati Zoölogical Gardens, which had been gradually decreasing in numbers, was reduced to a single bird, a female eighteen years of age, by the death last June of its mate, a male twenty-two years old. So far as known, this is the sole survivor of this species in the United States.

The year has been noteworthy for field work in distant regions. The Roosevelt Expedition has returned from British East Africa with a wonderfully rich series of birds, which is now being worked up by Dr. E. A. Mearns. A large collection of birds has also been received by the United States National Museum from the Bryant Expedition to western Java, where Mr. William Palmer has been collecting for a year and a half. The Stefansson-Anderson Expedition, despatched to Arctic America by the American Museum in 1908, has recently sent back several hundred bird skins and many nests and eggs. The American Museum Expedition to eastern Mexico returned May 1, with data and material collected by Messrs. F. M. Chapman and L. A. Fuertes for a habitat group, represent-

ing the bird life of the tropical parts of Vera Cruz and the various life zones of Mt. Orizaba. In continuation of the work of the Musem in securing material to represent the avifauna of tropical America, Mr. W. B. Richardson is now collecting in western Colombia. The Kuser Asiatic Expedition, under the auspices of the New York Zoölogical Society, has spent the year in Ceylon, and India, where Mr. C. W. Beebe and Mr. Bruce Horsfall have been making detailed studies of wild Pheasants and Jungle Fowl in their native haunts. On the Pacific Coast, the parties placed in the field by Miss Alexander have visited Vancouver Island, northeastern California, and the valley of the lower Colorado River, bringing back rich collections for the Museum of Vertebrate Zoölogy, at Berkeley, California. Recently the Smithsonian Institution has undertaken a comprehensive biological survey of the Canal Zone and adjoining region on the Isthmus of Panama, which will include a study of the bird life of this wonderfully rich region. The Field Columbian Museum has sent Mr. W. H. Osgood, with an assistant, to northern Venezuela, and the Academy of Natural Sciences of Philadelphia has commissioned Mr. Stewardson Brown to collect on Trinidad and in British Guiana.

Among the publications of the year, the work of most general interest is probably the third edition of The A. O. U. Check List of North American Birds. As a result of the labors of the committee in charge of the work, the nomenclature has been brought down to date, and the ranges of the twelve hundred species and sub-species carefully revised. Shortly after the appearance of the Check List, Beck published a list of Water Birds of the Vicinity of Point Pinos, California, which added one more species to North America and several important records of the range or abundance of species on the west coast. Several important local lists, or manuals, have been published, among which should be mentioned Eaton's 'Birds of New York,' Wayne's 'Birds of South Carolina,' MacSwain's 'Catalogue of the Birds of Prince Edward Island,' Carriker's 'Birds of Costa Rica,' Scott's 'Ornithology of Patagonia (Part II),' McGregor's 'Manual of Philippine Birds,' and Clarke's 'Report on a Collection of Birds' made by P. L. Jouy in Korea. In systematic work, the publication of the fifth part of Godman's 'Monograph of the Petrels' marks the completion of this great work. Cooke's 'Migration of Shorebirds,' Beal's Relation of Birds to the Fruit Industry of California (Part II), and Thayer's 'Concealing Coloration in the Animal Kingdom,' each stands alone in its special field. Of general interest was the announcement that arrangements had been made by the Smithsonian Institution with Mr. A. C. Bent for completing Major Bendire's 'Life Histories of North American Birds.'

The record of bird protection is marked both by success and disaster. In legislation, notable progress was made in the establishment of preserves

by the passage of the Act of Congress of May 11, creating the Glacier National Park in the Rocky Mountains, and a few months later by the action of the Louisiana Legislature in establishing two large state game preserves. Massachusetts has provided for the publication of an extended work on the game birds of the state, and has extended complete protection to Upland Plover for five years; New Jersey closed the season on Wood Duck for five years; New York abolished Brant shooting in the spring, and enacted the so-called 'Shea plumage bill' which will prohibit the sale of aigrettes after July 1, 1911; Ohio corrected a defect in the statute which for a time threatened the successful enforcement of the plumage provision; South Carolina provided a close season for Willets, Doves, and Grackles, previously unprotected; and late in the year, Vermont extended protection to the Wood Duck for five years, and established the office of State Ornithologist. In educational work, important progress was made, particularly in California, where Finley has arranged for coöperative demonstration work between the University of California and the Fish and Game Commission. Through the liberality of Mrs. Russell Sage, the National Association of Audubon Societies has been enabled to undertake more extended work in the South, especially among the schools. Considerable attention has been given to the enforcement of plumage laws in the West, and in connection with this work the game warden of Missouri has appointed a special deputy as 'millinery expert,' the first official of the kind in the United States. In the broader field of international bird protection the United States was represented at the Fifth International Ornithological Congress, held in Berlin, at which a committee on bird protection was appointed. This committee comprised representatives from fourteen countries, the representatives of the United States being the President and Vice-President of the National Association of Audubon Societies.

Early in January, the revenue cutter 'Thetis' arrived at Honolulu, having on board twenty-three Japanese poachers and the plumage of some 259,000 birds killed on Laysan and Lisiansky islands in the Hawaiian Bird Reservation. The total number of birds destroyed by the poachers was probably not less than 300,000. The poachers were later tried, sentenced to pay a nominal fine and deported to Japan. Action against the person responsible for the expedition failed, except to deprive him of the profits of the expedition and to cause him heavy expense in defending the case. Reports of Robin shooting in the South in the spring, particularly in Tennessee, received much attention from the press, and aroused protests in various parts of the country. In Louisiana, the complete protection formerly accorded Gulls and Robins was modified, and a short open season was placed on these birds. On October 19, the cause of bird protection received a severe blow: Mr. Wm. Dutcher, President of the National Association of Audubon Societies, suffered a stroke of apoplexy,

that probably marks the termination of his active work in bird protection, which has extended over a period of twenty-five years.

Among those who died were: Feb. 11, John F. Ferry of the Field Columbian Museum, an associate of the American Ornithological Union, who had collected in Illinois, California, and Venezuela, and published several papers on the birds of these regions.

April 10, A. O'D. Taylor, of Newport, R. I., President of the Newport Natural History Society and for several years a member of the Rhode Island Commission of Birds.

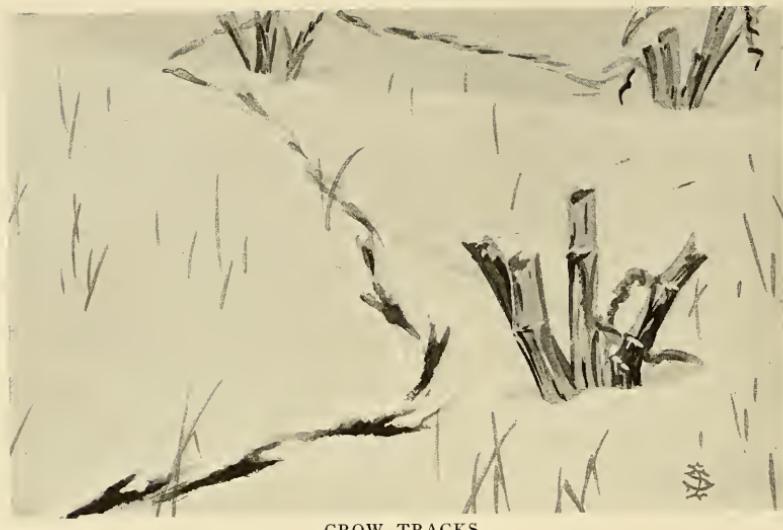
Aug. 23, W. E. D. Scott, of Princeton, for many years curator of the department of ornithology at Princeton, but better known by his field work in Arizona and Florida and his graphic account of the destruction of plume birds in the latter state, and in recent years by his experimental work with birds in captivity.

Dec. 6, Dr. C. O. Whitman, of Chicago, eminent in research work in zoölogy, and best known to ornithologists by his investigations in connection with pigeons.

Dec. 9, Manly Hardy, of Brewer, Maine, a well-known naturalist and student of Maine birds.



RUFFED GROUSE AFTER DRUMMING
Photographed by S. S. S. Stansell, Edmonton, B. C.



CROW TRACKS

Tracks in the Snow

By EDMUND J. SAWYER, Black River, N. Y.

Illustrated by the author

AFTER all that has been published about animal signs, particularly tracks in the snow, tracks little and tracks big, tracks more or less instructive and interesting, tracks exceedingly commonplace and non-committal, tracks profoundly unsuggestive—there is danger of losing sight of the significance of these things, and regarding them as chiefly interesting in and for themselves.

It is well to felicitate oneself over Crow-tracks, to 'rave' over a flock of Snow-bunting foot-prints, and to dance for joy on discovering a fresh Grouse trail. It is also well, and possibly more sane, to reflect quite as often on one's ill-luck for having come along too late after all. When you go to see a fine equipage, how provoking to find it has passed by and left you only its wheel-tracks in the roadway.

On every visit to the woods, that is almost daily, I find one or more trails in the snow or mud, a bit of fur or a tuft of feathers on a stump, perhaps the remains of some midnight feast, a preening- or a dusting-place, an interesting wing-feather, a nest abandoned without evident cause—according to the season and place; some evidence of things not seen; one more hint that I know comparatively little of what goes on in the teeming woods.

You may walk miles on a winter night in picked territory; you may go out on your back porch, being near the woods, and look and listen till your ears begin to freeze, for night after night; and you will hear, or fancy

you hear, a mouse squeak or an Owl hoot, and see nothing. Next day while you cut across lots to the village post-office, you find where a Grouse has left his bed in the snow. A little farther along, a trampled, bloody place, with a bit of fur here and there, all being in the center of a network of tracks, shows where a fox has caught and killed a Rabbit. Rabbit, squirrel and mouse-tracks, Snow Bunting, Tree Sparrow and Crow tracks are numerous along your way. Again the inevitable thought: What a wealth of observations awaits the man who will, for several whole winter nights and days, be a stump—a seeing and hearing stump—in a corner of the wooded swamp. But now “signs and wonders” are all that is left you, in summer perhaps not even these.

The most interesting trail I find in the winter woods is that of the Ruffed Grouse. I love to follow the little path among the saplings and alders, and under evergreens where I must be careful, or else a bough will discharge its load of snow down the back of my neck. I find where the bird spent the night under the snow, and the exit whence he passed along to find a breakfast of sumach berries and wintergreen leaves, scratching down to the latter through the snow. Now the trail is close and leisurely, now open and hurried; here he came out to sun himself in a roadway; then he crossed a brook on thin ice where his tread was evidently hesitating and gingerly.

These, and other still more interesting things of the same sort, indicate how much I have missed; they are so many *signs* that I have come too late, have even been out-generalized. Sometimes the trail ends in a way to show that a fox has sprung at the wary Grouse, getting for his pains perhaps a



TRACKS OF RUFFED GROUSE

mouthful of feathers. I, too, came looking for a feast (to the eye), but the platter is licked clean; my feast has literally taken wings, and there is left me not even an eyeful of feathers.

Then there are the tracks of Horned Larks and Snow Buntings among the stubble. What bird-student has not pored over these little trails, noting how they twisted and wound and ramified and criss-crossed! Here they gather interestingly about a particular weed-stalk, then spread out aimlessly, or hurry along more or less parallel across a little barren reach of snow; again, they will focus on a sheltered corner of an old rail-fence, about which the flock has spent the past night.



TRACKS OF HORNED LARKS

What meaning you read into those tracks—what freedom, good-fellowship, intelligence! You congratulate yourself; what good fortune! How near you are to nature! Yes, you are even in one of nature's very banquet halls and ball-rooms. But what is a banquet-hall and a ball-room when the revelry is over, the guests gone, and the music hushed?

What misconceptions our feeble human vision gives rise to! Unless we read these signs, nature's eternal wakefulness, we are apt to forget that the real day is twenty-four hours long, begins at moonrise with the matins of Owls, and the unfolding of the primrose, in its season. While the sun shines, nature is really taking a cat-nap, though with one eye open. Why is the Owl so solemn and sage, staring us out of countenance with those great, unfathomable, wise eyes of his? What a world of knowledge, indeed, he must have—knowledge which we little suspect! What if nature-lovers and nature-writers are all this while spending their enthusiasm and superlatives on the least interesting portion of the day!

The Migration of North American Sparrows

EIGHTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by Louis AGASSIZ FUERTES

(See frontispiece)

SMITH'S LONGSPUR

Smith's Longspur winters on the plains from Kansas to Texas, and breeds far north beyond the tree limits on the barren grounds of northern central Canada.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Onaga, Kans.	4	February 16	February 1, 1892
Fayetteville, Ark.			February 28, 1885
Keokuk, Ia.	3	April 7	March 15, 1903
Grinnell, Ia.			March 9, 1887
Carlinville, Ill.			March 17, 1890
Quincy, Ill.			March 14, 1889
Chicago, Ill.	4	April 18	March 30, 1875
Harrisburg, N. D.			April 2, 1904
Hay River, Saskatchewan			May 12, 1908
Fort Simpson, Mackenzie			May 18, 1904

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Chester, S. C.			February 9, 1889
Gainesville, Tex.	3	March 8	April 8, 1885
King's Lake, Mo.			April 12, 1894
Keokuk, Ia.	2	April 18	April 20, 1897
Lincoln, Nebr.			April 20, 1901
Grinnell, Ia.			April 30, 1888
Chicago, Ill.	4	May 3	May 5, 1893
Carberry, Manitoba			May 17, 1884
Fort Simpson, Mackenzie			May 21, 1904

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Aweme, Manitoba			August 30, 1901
Chicago, Ill.			October 3, 1896
Grinnell, Ia.	3	October 20	October 18, 1888
Onaga, Kans.	5	November 5	October 31, 1895
Keokuk, Ia.	4	November 12	November 7, 1899
Bonham, Tex.	2	November 11	November 10, 1885
Gainesville, Tex.	4	November 16	November 10, 1877
Chester, S. C.			December 1, 1880

FALL MIGRATION, continued

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Aweme, Manitoba	2	October 13	October 16, 1900
Grinnell, Ia.	3	October 27	November 4, 1889
Keokuk, Ia.			November 28, 1899
Chicago, Ill.			November 29, 1906
Onaga, Kans.	3	November 14	November 19, 1893

MCCOWN'S LONGSPUR

McCown's Longspur is the westernmost in its breeding range, of the plains-breeding Longspurs, finding its center of abundance just east of the foothills of the Rocky Mountains and breeding thence from southern Wyoming east to western Minnesota and north to central Alberta and southern Saskatchewan; winters from Colorado south to Texas and northern Mexico.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Grinnell, Iowa			March 3, 1887
Cheyenne, Wyo.	2	April 7	March 12, 1889
Valentine, Nebr.			March 28, 1894
Badger, Nebr.	2	April 18	April 18, 1901
Southeastern South Dakota	3	April 21	April 6, 1888
Laramore, N. D.	3	April 24	April 4, 1894
Terry, Mont.	9	April 26	April 22, 1894
Big Sandy, Mont.	4	May 2	April 28, 1904
Flagstaff, Alberta	2	May 3	April 28, 1908

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Fort Union, N. M.			March 22, 1892
Allaire's Ranch, Ariz.			April 6, 1895
Gainesville, Tex. (near)	3	April 3	April 9, 1885
Springfield, Colo.			April 26, 1905
Callaway, Nebr.	2	May 4	May 7, 1902

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
White Mountains, N. M.			September 12, 1902
Fort Lyon, Colo.	2	November 1	September 29, 1886
Gainesville, Tex.			October 27, 1885
Bonham, Tex.	2	November 10	November 9, 1889

FALL MIGRATION, continued

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Big Sandy, Mont.			September 5, 1905
Terry, Mont.	2	September 23	September 23, 1906
Cheyenne, Wyo.			October 20, 1888

Notes on the Plumage of North American Sparrows

SEVENTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

McCown's Longspur (*Rhynchophanes mccownii*, Figs. 1-3). McCown's Longspur has the central pair of tail-feathers without white; all the rest are white, and all but the outer pair are conspicuously tipped with black. The outer pair is sometimes wholly white, but usually has a small brownish shaft-streak near the tip. The juvenal plumage resembles that of the Chestnut-collared Longspur, the breast being buffy streaked with blackish, the back having the same ringed appearance as in that species. In first winter plumage (Fig. 3) the black of the breast and crown is masked by the grayish and brown tips of the feathers. In the adult at this season the black breast-patch is apparently more exposed. Breeding-plumage is evidently acquired, largely, if not entirely, by wear, which unveils the black of breast and head, and in much-worn mid-summer specimens changes the lower breast and sides to gray.

The female (Fig. 2) undergoes no marked seasonal changes in plumage. Adult and juvenal are apparently alike in winter, and differ from adults in summer only in being browner.

Smith's Longspur (*Calcarius pictus*, Figs. 4-6). This is not a common bird in collections, and the small number of specimens in the American Museum do not permit of a description of its plumage changes. At all seasons, however, it may be known by its buffy-ochraceous underparts, without black markings. Apparently the juvenal male is to be distinguished from the adult male in winter by having the lesser wing-coverts brownish, instead of black, conspicuously bordered with white, and this difference appears to persist to the first nuptial plumage, a breeding bird in the American Museum agreeing with the adult male (Fig. 4) in every respect except in regards the wing-coverts, which resemble those of the young male (juvenal) in winter.

The adult female has the lesser wing-coverts black, the median wing-coverts being broadly tipped with white, but in juvenal females (Fig. 6, labeled only "female") these coverts are brownish and the white is not conspicuous.

Bird-Lore's Eleventh Bird Census

IT IS evident from the returns that interest in Bird-Lore's Annual Census increases each year. We have before pointed out what appears to us to be the value of a census of this kind; but it will not be out of place to repeat our reasons for proposing it, and for giving space in BIRD-LORE to the returns.

Primarily, acting through the spirit of competition, the census arouses that personal interest which gives a new and more intimate point of view. Every contributor to the census reads the returns from other observers with far closer attention, and consequently with more lasting results, than if he had not this personal view-point. The census is therefore of educational value. Again, the census encourages exactness in methods of observing and recording, and the conditions imposed emphasize the importance of accuracy.

Further, while it is not for a moment supposed that the record of a few hours' walk will give one a complete list of the winter birds of a certain locality, it will more nearly do so at this season than at any other, while, as a matter of fact, few species escape the man who knows his ground and just what parts of it the birds of his locality are frequenting. It is, however, a series of censuses, rather than the single census, which gives us a conception of the winter bird-life of a given region, and tells us whether there has been an invasion of such irregular species as Pine Grosbeaks, Crossbills or Redpolls.

For example, the present census shows that Redpolls are present in unusual numbers this year, while Crossbills are reported from only three localities.

Other facts in distribution may be ascertained by summarizing and plotting the returns for a given species. Thus it follows that the census, as a whole, gathers value, cumulatively, as we compare the data of various years. How eagerly we of today would scan a similar census made during the time of Audubon! But this privilege of turning to past records, while denied to us, we are bequeathing to others.

Finally, if more reasons be needed, the census brings field workers into touch with each other, and frequently leads to those associations which mean so much to persons of kindred tastes.—F. M. C.

London, Ontario (Hyde Park, Thames River and Cemeteries).—Dec. 24; 2.30 to 5 P.M. Cloudy; about sixteen inches of snow; wind west, moderately strong; temp., 26°. American Merganser, 15; Crow, 57; Pine Grosbeak, 3; Junco, 3; Brown Creeper, 1; Chickadee, 6; Golden-crowned Kinglet, 10. Total, 7 species, 95 individuals. A visiting Cardinal, here since November, was last seen on December 18.—C. G. WATSON, M. DALE and J. F. and E. W. CALVERT.

Millbrook, Ontario.—Dec. 24. Clear; fourteen inches of snow on ground; wind southwest; temp., 30°. Pine Grosbeak, 1; Snow Bunting, in many flocks and unusual numbers on weedy hillside, extending for upwards of a mile, probably 1,600 birds; Chickadee, 4. Total, 3 species, 1,605 individuals.—SAM HUNTER.

Clarendon, Vt.—Dec. 25; 10.30 A.M. to 1.45 P.M. Cloudy; snowed P.M., one foot of snow on ground; wind southwest, light; temp., 18°. Ruffed Grouse, 1; Hairy Wood-

pecker, 2; Blue Jay, 7; Crow, 1; Redpoll, 38; Tree Sparrow, 6; Chickadee, 2; Golden-crowned Kinglet, 1. Total, 8 species, 58 individuals.—L. H. POTTER and D. E. POTTER.

Bethel, Vt.—Dec. 26; 8 A.M. to 4 P.M. Cloudy; snow falling in afternoon; six inches of snow on ground; wind northeast, still; temp., zero to 15°. Downy Woodpecker, 1; Redpoll, 2; Northern Shrike, 1; White-breasted Nuthatch, 2; Chickadee, 4. Birds all seen near the house. Total, 5 species, 10 individuals.—ELIZA F. MILLER.

Essex Junction, Vt.—Dec. 24; 11 A.M. to 2 P.M. Rain; six inches of snow; wind east; temp., 40°. Blue Jay, 2; Crow, 1; Goldfinch, 12; Snow Bunting, 20; Tree Sparrow, 14; Red-breasted Nuthatch, 2; Chickadee, 2. Total, 7 species, 53 individuals. Saw first flock of Snow Buntings on Nov. 15.—CARLTON D. HOWE.

Woodstock, Vt.—Dec. 26; 9 A.M. to 12.30 P.M. Cloudy; eight inches of snow; wind north; temp., 10°. Ruffed Grouse, 1; Barred Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 2; Pileated Woodpecker; Pine Grosbeak, 2; White-winged Crossbill, 30; Redpoll, 8; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 5; Golden-crowned Kinglet, 7. Total, 12 species, 64 individuals.—RICHARD M. MARBLE.

Tilton, N. H.—Dec. 26; 10 A.M. to 2.45 P.M. Cloudy; ground covered with snow; wind none; temp., 13°. American Merganser, 37; American Golden-eye, 32; Canadian Ruffed Grouse, 5; Downy Woodpecker, 1; Blue Jay, 1; Redpoll, 36; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 37. Total, 9 species, 155 individuals.—EDWARD H. PERKINS and ERNEST R. PERKINS.

Belmont, Mass. (Forest and Field Club Reservation).—Dec. 27; 8.30 A.M. to 12.30 P.M. Cloudy; ground coated with snow; no wind; temp., 32° to 40°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Blue Jay, 9; Crow, 15; Redpoll, 100; Pine Siskin, 2; Brown Creeper, 3; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 2; Chickadee, 32; Golden-crowned Kinglet, 20; Robin, 2. Total, 12 species, 190 individuals.—SAMUEL DOWSE ROBBINS and FRANK CONKLING SEYMOUR.

Berkshire, Mass.—Dec. 25; 11 A.M. to 1 P.M. Cloudy and snowing; ground half bare; light northeast wind; temp., 25°. Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 2; Pine Grosbeak, 1; Goldfinch, 7; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 8. Total, 8 species, 24 individuals.—ANNE H. WHITING.

Boston, Mass. (Leverett's Pond, Olmsted Park and Arnold Arboretum).—Dec. 20; 9.35 A.M. to 12.25 P.M. Cloudy to clear; ground partly covered with snow; wind southwest, light; temp., 34°. Herring Gull, 1; Black Duck, 1; Red-legged Black Duck, 9; Baldpate, 2; Pheasant, 1; Downy Woodpecker, 1; Flicker, 8; Blue Jay, 13; Crow, 12; Redpoll, 1; Goldfinch, 3; Tree Sparrow, 1; Junco, 6; Song Sparrow, 1; White-throated Sparrow, 6; Northern Shrike, 2; Myrtle Warbler, 1; Brown Creeper, 1; Red-breasted Nuthatch 1; White-breasted Nuthatch, 2; Chickadee, 21; Golden-crowned Kinglet, 11; Robin, 36. Total, 23 species, 131 individuals.—BARRON BRAINERD.

Boston, Mass.—Dec. 23; 10 to 10.30 A.M. **Chestnut Hill Reservoir and Fresh Pond**, 1.30 to 4 P.M. Cloudy; ground lightly covered with snow; temp., 18 to 34°. Herring Gull, 25; American Merganser, 16; Black Duck, 150; Ring-necked Pheasant, 3; Barred Owl, 1 (King's Chapel Burying ground); Flicker, 2; Blue Jay, 6; Crow, 3; Meadowlark, 5; Tree Sparrow, 2; Northern Shrike, 2; Chickadee, 12; Robin, 22. Total, 13 species, 249 individuals.—MRS. WM. M. LEVEY and W. CHARLESWORTH LEVEY.

Brookline and Jamaica Plain, Mass.—Dec. 25; 9 A.M. to 1 P.M. Fair; ground bare; wind northwest, moderate; temp., 35°. Herring Gull, 1; Baldpate, 3; Green Heron, 1; Ring-necked Pheasant, 5; Flicker, 8; Blue Jay, 7; Crow, 21; Purple Finch, 1; Redpoll, 6; Goldfinch, 15; White-throated Sparrow, 2; Tree Sparrow, 3; Junco, 16; Song Sparrow 4; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 14; Golden-crowned Kinglet, 2; Robin, 7. Total, 19 species, 118 individuals. The Green Heron was observed within 30 feet for several minutes.—H. L. BARRETT.

Boston, Mass. (Arnold Arboretum).—Dec. 26; 10.30 to 11.30 A.M. **Swampscott**

and Marblehead, Mass., 2 to 4:15 P.M. Cloudy; ground bare; wind southwest, moderate; temp., 24°. Horned Grebe, 1; Black Guillemot, 1; Herring Gull, 126; Red-breasted Merganser, 2; American Scaup Duck, 6; Golden-eye, 33; White-winged Scoter, 9; Bob-white, 8; Flicker, 4; Blue Jay, 3; Crow, 8; Purple Finch, 6; Goldfinch, 3; White-throated Sparrow, 1; Tree Sparrow, 7; Song Sparrow, 2; Chickadee, 27; Golden-crowned Kinglet, 6. Total, 18 species, 253 individuals.—W. L. CARLTON and H. L. BARRETT.

Cambridge, Mass. (Fresh Pond and vicinity).—Dec. 25; 2:30 to 5 P.M. Fair; ground bare; wind northwest, fairly stiff; temp., 41° Herring Gull, 3; Black Duck, 80; Mallard, 3; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 2; Crow, 4; Tree Sparrow, 15; Song Sparrow, 8; Chickadee, 7; Robin, 4. Total, 11 species, 128 individuals.—CARLYLE MORRIS and ELLISON MORRIS.

Cohasset, Mass. (Entire coast line and adjacent woods).—Dec. 22; 9:45 A.M. to 1:45 P.M. Clear; ground covered with snow; wind northwest, strong; temp., 16°. Loon, 1; Black-backed Gull, 3; Herring Gull, 175; Red-breasted Merganser, 5; American Scaup, 1; Golden-eye, 3; Downy Woodpecker, 1; Flicker, 16; Blue Jay, 3; Crow, 18; Redpoll, 8; Greater Redpoll, 1; Goldfinch, 2; Tree Sparrow, 10; Junco, 11; Song Sparrow, 3; Myrtle Warbler, 45; Brown Creeper, 2; White-breasted Nuthatch, 1; Chickadee, 27; Golden-crowned Kinglet, 2; Robin, 33. Total, 22 species, 371 individuals.—LIDIAN E. BRIDGE.

Dighton, Mass.—Dec. 25; 9 A.M. to 12 M. Partly cloudy; ground nearly bare, wind north, light; temp., 30°. Downy Woodpecker, 1; Flicker, 2; Blue Jay, 12; Crow, 10; Bronzed Grackle, 8; Redpoll, 1; Goldfinch, 50; Savannah Sparrow, 1; Tree Sparrow, 40; Field Sparrow, 1; Junco, 12; Song Sparrow, 6; Myrtle Warbler, 25; Winter Wren, 1; Chickadee, 6. Total, 15 species, 176 individuals. The Savannah Sparrow and Field Sparrow are late records; the birds were taken.—F. SEYMOUR HERSEY and CHARLES L. PHILLIPS.

Gloucester, Mass. (Eastern Point to Rockport).—Dec. 24; 9:35 A.M. to 2:35 P.M. Rain; heavy sea; wind south to southeast storm (50 miles per hour); temp., 46°. Holboell's Grebe, 2; Loon, 6; Black Guillemot, 1; Dovekie, 1; Kittiwake, 4; Iceland Gull, 3; Kumlien's Gull, 1; Great Black-backed Gull, 12; Herring Gull, 300; Red-breasted Merganser, 11; Golden-eye, 8; Eider Duck, 1; Surf Scoter, 1; Flicker, 9; Horned Lark, 30; Crow, 40; Pine Siskin, 5; Tree Sparrow, 6; Song Sparrow, 2. Total, 19 species, 453 individuals.—JAMES L. PETERS, JOSEPH KITTREDGE, JR., BARRON BRAINERD and H. G. MORSE.

Ipswich, Mass.—Dec. 29; 10 A.M. to 5:15 P.M. Cloudy and light fog; ground bare; wind variable, light; temp., 45°. Great Black-backed Gull, 46; Herring Gull, 183; Red-breasted Merganser, 191; Golden-eye, 12; Old Squaw, 19; White-winged Scoter, 3; Surf Scoter, 14; Ring-necked Pheasant, 1; Saw-whet Owl, 1; Flicker, 5; Horned Lark, 53; Crow, 203; Redpoll, 100; Hoary Redpoll, 1; Pine Siskin, 1; Snow Bunting, 38; Lapland Longspur, 1; Ipswich Sparrow, 1; Tree Sparrow, 12; Song Sparrow, 1; Myrtle Warbler, 8; Chickadee, 1; Robin, 15. Total, 23 species, 900 individuals.—BARRON BRAINERD and JAMES L. PETERS.

Ipswich, Mass.—Dec. 25; 2:30 to 4 P.M. Wind northwest; temp., 34°. Canada Goose, 5; Hawk, 1; Flicker, 1; Crow, 14; Tree Sparrow, 5; Chickadee, 3; Robin, 8. Total, 7 species, 37 individuals.—FRANCIS C. and JESSE H. WADE.

Ipswich, Mass. (Argilla Road, beach and dunes).—Dec. 27; 9:40 A.M. to 4:30 P.M. Partly cloudy; ground partially covered with snow; wind west, light; temp., 40° Horned Grebe, 1; Great Black-backed Gull, 17; Herring Gull, 78; Red-breasted Merganser, 108; Old Squaw, 1; American Scoter, 2; Downy Woodpecker, 1; Flicker, 1; Horned Lark, 6; Crow, 398; Redpoll, 15; Snow Bunting, 10; Tree Sparrow, 10; Myrtle Warbler, 1; Chickadee, 7; Robin, 1. Total, 16 species, 657 individuals.—EDWARD P. WARNER.

Leominster, Mass.—Dec. 25; 8.30 A.M. to 3 P.M. Partly cloudy; wind moderate, northwest; temp., 30°. Generally by bare ground except in woods, where about two inches of snow. Pheasant, 2; Downy Woodpecker, 1; Blue Jay, 4; Crow, 25; Redpoll, 1; Goldfinch, 1; Tree Sparrow, 6; Northern Shrike, 1; White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, 6; Golden-crowned Kinglet, 1; Robin, 1. Total, 13 species, 47 individuals.—EDWIN RUSSELL DAVIS.

Lunenburg, Worcester Co., Mass.—Dec. 25; 9 A.M. to 2 P.M. Partially cloudy; ground partially bare; wind northwest; temp., 30°. Ruffed Grouse, 4; Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 15; Crow, 7; Pine Grosbeak, 1; Goldfinch, 7; Tree Sparrow, 12; Junco, 8; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 20; Golden-crowned Kinglet, 2. Total, 15 species 74 individuals. (The solitary Pine Grosbeak has been about our place since December 3.)—CLAYTON E. STONE.

Magnolia, Mass.—Dec. 23; 10.40 A.M. to 3.30 P.M. Clear to cloudy; ground partly bare; wind southwest; temp., 30°. Horned Grebe, 9; Loon, 1; Black Guillemot, 2; Brünnich's Murre, 2; Herring Gull, 277; Red-breasted Merganser, 29; Golden-eye, 4; White-winged Scoter, 1; Partridge, 1; Ring-necked Pheasant, 3; Flicker, 6; Blue Jay, 1; Crow, 347; Redpoll, 20; Goldfinch, 2; Tree Sparrow, 4; Junco, 12; Song Sparrow, 6; Fox Sparrow, 1; Myrtle Warbler, 56; Chickadee, 5; Robin, 3. At Boston, Barred Owl, 1. Total, 23 species, 683 individuals.—JAMES L. PETERS and BARRON BRAINERD.

Marshfield, Mass.—Dec. 25; 2 to 3.40 P.M. Fair; ground bare; wind northwest, brisk; temp., 42°. Herring Gull, 1; Crow, 12; Meadow Lark, 12; Tree Sparrow, 1; Chickadee, 20; Myrtle Warbler, 15. Total, 6 species, 61 individuals.—MRS. GEORGE L. MASON and GEORGE A. MASON.

Marshfield, Mass.—Dec. 27; 6.00 A.M. to 6.00 P.M. Cloudy at first; clearing later; inch of snow on ground; wind south, very light; temp., 35° to 45°. Holboell's Grebe, 15; Horned Grebe, 6; Loon, 7; Herring Gull, 250; American Golden-eye, 8; Old Squaw, 40; Bobwhite, 14; Flicker, 3; Horned Lark, 18; Blue Jay, 3; Crow, 150; Redpoll, 20; Goldfinch, 45; Snow Bunting, 3; Junco, 12; Cedar Waxwing, 7; Myrtle Warbler, 35; Chickadee, 9; Robin, 4. Total, 19 species, 617 individuals.—ARCHIE HAGAR.

Needham, Mass.—Dec. 20; 9 to 10.30 A.M. Cloudy; ground partly covered with snow; no wind; temp., 30°. Blue Jay, 5; Crow, 3; Tree Sparrow, 6; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 7; Golden-crowned Kinglet, 2; Robin, 1. Total, 9 species, 28 individuals. Five Robins seen on December 14.—CHARLES E. HEIL.

Newtonville, Mass.—Dec. 25; 12.30 to 3.30 P.M. Fair; ground bare; wind west, light; temp., 38°. Downy Woodpecker, 1; Flicker, 2; Blue Jay, 4; Crow, 3; Goldfinch, 15; Song Sparrow, 1; Brown Creeper, 2; Chickadee, 9; Golden-crowned Kinglet, 5. Total, 9 species, 42 individuals. On Dec. 23 four Robins were seen.—MRS. J. C. HAGAR and ARCHIE HAGAR.

North Grafton, Mass.—Dec. 26; 10 A.M. to 2 P.M. Cloudy; ground snow-covered; wind northwest, strong; temp., 30°. Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 4; Crow, 9; Redpoll, 20; Tree Sparrow, 1; Chickadee, 8; Golden-crowned Kinglet, 3. Total, 8 species, 47 individuals.—HENRY HARGRAVES.

Oxford, Mass.—Dec. 21; 9.20 to 10.20 A.M. Sky clear; ground covered with snow, wind west, light; temp., 21°. Crow, 3; Pine Grosbeak, 1; Chickadee, 4. Total, 3 species, 8 individuals.—G. M. WHEELOCK.

Rockport, Mass.—Dec. 27; 11.15 A.M. to 1.30 P.M. Cloudy; ground lightly covered with snow; wind southwest, light; temp., 34°. Loon, 2; Dovekie, 5; Black-backed Gull, 2; Herring Gull, 37; Red-breasted Merganser, 6; Flicker, 7; Blue Jay, 2; Crow, 18; Tree Sparrow, 1; Song Sparrow, 1; Robin, 4. Total, 11 species, 85 individuals.—ANNA K. BARRY and LIDIAN E. BRIDGE.

Scituate, Mass. (To the Glades).—Dec. 28; 9:55 A.M. to 4 P.M. Clear to cloudy; frost and a little snow on the ground; wind east, changing to southwest, light; temp., 33°. Horned Grebe, 9; Northern Loon, 9; Red-throated Loon, 1; Black Guillemot, 3; Dovekie, 1; Black-backed Gull, 27; Herring Gull, 300; Red-breasted Merganser, 40; Black Duck, 2; Scaup Duck, 1; American Golden-eye, 6; Old Squaw, 2; Scoter, 2; White-winged Scoter, 1; Surf Scoter, 18; Bob-white, 8; Flicker, 12; Horned Lark, 5; Crow, 19; Meadowlark, 2; Redpoll, 5; Goldfinch, 2; Pine Siskin, (heard); Snow Bunting, 4; Tree Sparrow, 14; Junco, 6; Song Sparrow, 3; Myrtle Warbler, 31; Chickadee, 21; Robin, 3. Total, 30 species, 557 individuals.—NORFOLK BIRD CLUB, (5 members).

Spencer, Mass.—Dec. 25; 9:30 to 10:30 A.M. Sky cloudy; ground snow-covered; strong north wind; temp., 30°. Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 7; Crow, 1; Brown Creeper, 2; Chickadee, 14; Golden-crowned Kinglet, 3. Total, 7 species, 29 individuals.—B. A. HUTCHINS.

Spencer, Mass.—Dec. 27; 9:30 A.M. to 12:30 P.M., 3 to 4:30 P.M. Clear; ground partly covered with snow; wind west, light; temp., 40°. Ruffed Grouse, 3; Downy Woodpecker, 1; Blue Jay, 6; Crow, 2; Pine Grosbeak, 11; Redpoll, 75; Tree Sparrow, 13; Brown Creeper, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Chickadee, 8; Golden-crowned Kinglet, 4. Total, 12 species, 126 individuals.—HAROLD H. BLANCHARD.

Stoneham, Mass.—Dec. 26; 8:30 to 11:30 A.M. Clear; ground bare; very little wind; temp., 28°. Sharp-shinned Hawk, 1; Crow, 10; Redpoll, 150; Junco, 35; Northern Shrike, 1; Brown Creeper, 6; Red-breasted Nuthatch, 15; Chickadee, 28; Golden-crowned Kinglet, 16; Robin, 150. Total, 10 species, 412 individuals.—HORACE O. GREEN.

Stoughton to Canton, Mass.—Dec. 28; 9:15 A.M. to 3:30 P.M. Fair; ground mostly bare; temp., 31°. Ruffed Grouse, 3; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 8; Crow, 5; Goldfinch, 2; Tree Sparrow, 1; Junco, 18; Myrtle Warbler, 2; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 15; Golden-crowned Kinglet, 7; Robin, 10. Total, 14 species, 76 individuals.—SIDNEY F. BLAKE.

Sturbridge, Mass.—Dec. 25; 8 A.M. to 12 M. Cloudy; ground partly bare; light northwest wind; temp., 26°. Hairy Woodpecker, 1; Blue Jay, 6; Tree Sparrow, 1; Junco, 8; White-breasted Nuthatch, 2; Chickadee, 5. Total, 6 species, 28 individuals.—MISS J. HAYNES and H. H. STONE.

West Gloucester, Mass. (To Coffin's Beach).—Dec. 17; 9:45 A.M. to 4 P.M. Clear; six inches of snow on ground; wind northwest; temp., 14° to 26°. Great Black-backed Gull, 2; Herring Gull, 100; Red-breasted Merganser, 7; Black- and Red-legged Black Ducks, 48; Scaup Duck, 5; Golden-eye, 8; Old Squaw, 2; Scoter, 15; White-winged Scoter, 15; Surf Scoter, 36; Canada Goose, 1; Pheasant, 1; Sharp-shinned Hawk, 1; Rough-legged Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 3; Flicker, 5; Horned Lark, 1; Blue Jay, 5; Crow, 600; Redpoll, 4; Goldfinch, 9; Pine Siskin, 2; Snow Bunting, 8; White-crowned Sparrow, 1; Tree Sparrow, 30; Junco, 25; Song Sparrow, 5; Myrtle Warbler, 30; Red-breasted Nuthatch, 1; Chickadee, 15; Golden-crowned Kinglet, 12; Hermit Thrush, 2; Robin, 21. Total, 35 species, 1,022 individuals.—JOSEPH KITTREDGE JR., BARRON BRAINERD and JAMES L. PETERS.

West Medford, Mass. (To Wyoming, through Middlesex Fells).—Dec. 25; 8:15 to 11:45 A.M. Partly cloudy; ground bare; wind northwest, moderate; temp., 34°. Ring-necked Pheasant, 7; Sharp-shinned Hawk, 1; Rough-legged Hawk, 1; Flicker, 3; Blue Jay, 7; Crow, 23; Pine Grosbeak, 1; Redpoll, 25; Goldfinch, 7; Junco, 3; Cedar Waxwing, 1; Northern Shrike, 1; Brown Creeper, 5; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 2; Chickadee, 12; Golden-crowned Kinglet, 2; Robin, 24. Total, 18 species, 126 individuals.—EDMUND and LIDIAN E. BRIDGE.

Glocester, R. I.—Dec. 25; two half-hour walks in forenoon. Partly cloudy; snow in patches; wind northwest, brisk; temp., 30°. Blue Jay, 2; Crow, 3; Goldfinch, flock

of 10; Northern Shrike, 1; Chickadee, 5. Total, 5 species, 21 individuals.—J. IRVING HILL.

Manville, R. I.—Dec. 28; 10 A.M. to 2 P.M. Bright sun; no wind, hazy; snow melted away in patches; temp., 29°. Downy Woodpecker, 1; Flicker, 1; Blue Jay, 4; Crow, 15; Goldfinch, 6; Tree Sparrow, 1; Junco, 4; Brown Creeper, 1; Chickadee, 1. Total, 9 species, 34 individuals.—ANNA P. C. MOWRY.

Pawtuxet, R. I.—Dec. 20; 10 A.M. to 12 M. Cloudy; ground nearly bare; wind southwest, light; temp., 40°. Herring Gull, 10; Ducks (unidentified) 170; Flicker, 1; Blue Jay, 2; Crow, 2; Meadowlark, 1; Redpoll, 8; Goldfinch, 120; Tree Sparrow, 9; Junco, 15; Song Sparrow, 4; Myrtle Warbler, 40; White-breasted Nuthatch, 1; Chickadee, 12; Golden-crowned Kinglet, 3. Total, 15 species, about 398 individuals. I saw a Robin December 17.—CHARLES H. ABBOTT.

Woonsocket, R. I.—Dec. 25; 9.45 A.M. to 12 M. Mostly cloudy; ground bare, except in woods; wind northwest, strong; temp., 31°. Hairy Woodpecker, 1; Blue Jay, 3; Crow, 1; Goldfinch, 10; Pine Siskin, 1; Tree Sparrow, 20; Junco, about 50 (flock); White-breasted Nuthatch, 1; Chickadee, 4; Golden-crowned Kinglet, 4. Total, 10 species, 95 individuals.—CLARENCE M. ARNOLD.

Bristol, Conn.—Dec. 25; 8.15 A.M. to 12.45 P.M. Cloudy; ground practically bare; wind northeast, light; temp., 22°. Began to snow at 1.30 P.M. Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 9; Crow, 5; Goldfinch, 10; Tree Sparrow, 8; White-breasted Nuthatch, 4; Chickadee, 20; Golden-crowned Kinglet, 1; Total, 9 species, 59 individuals. A Robin was seen on December 8 and reported again about one week later.—FRANK BRUEN.

Hartford, Conn. (Near Elizabeth Park).—Dec. 26; 7.30 A.M. to 3 P.M. Cloudy; ground bare; light snow in afternoon; wind, northeast, light; temp., 30 to 35°. Seen from our windows all species regularly visiting our feeding-places, except Crow and Hawk. Sharp-shinned Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 2; Crow, 8; Brown Creeper, 2; White-breasted Nuthatch, 2; Chickadee, 5; Golden-crowned Kinglet, 3. Total, 10 species, 27 individuals.—MRS. EUSTACE L. ALLEN and EDITH ALLEN.

Hartford, Conn.—Dec. 26; (seen from window). Cloudy; ground bare; temp., freezing. Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 1; Nuthatch, 11. Total, 4 species, 14 individuals.—MRS. H. R. WILLIAMS.

Hartford, Conn. (West Hartford and Talcott Mountain).—Dec. 26; 7.30 A.M. to 5 P.M. Dull day with light snow late in afternoon; ground bare except in woods; moderate southwest wind; temp., 18° at start. Ruffed Grouse, 7; Red-tailed Hawk, 1; Kingfisher, 1; Hairy Woodpecker, 4; Downy Woodpecker, 5; Flicker, 1; Blue Jay, 13; Crow, 394; Starling, 10; Goldfinch, 3; Pine Siskin, 75; Tree Sparrow, 98; Junco, 40; White-breasted Nuthatch, 4; Chickadee, 104; Golden-crowned Kinglet, 13. Total, 16 species, 773 individuals.—EDWARD P. ST. JOHN.

Hartford, Conn.—Dec. 25; Hairy Woodpecker, 1; Blue Jay, 2; Crow, 52; Tree Sparrow, 25; Junco, 5; Fox Sparrow, 8; Brown Creeper, 2; Chickadee, 5. Total, 8 species, 100 individuals.—MISS M. O. ENGEL and MISS B. T. MULCAHY.

Hartford, Conn.—Dec. 26; 7.30 to 9.30 A.M. Cloudy; ground bare; no wind; temp. 6°. Flicker, 1; Blue Jay, 10; Crow, 3; Redpoll, 24; Tree Sparrow, 12; Junco, 2; Song Sparrow, 2; Myrtle Warbler, 15; White-breasted Nuthatch, 4; Chickadee, 25; Total, 10 species, 98 individuals.—ARTHUR G. POWERS.

Hartford, Conn.—Dec. 25; 8 A.M. to 12.30 P.M. Clear; ground mainly bare; wind northerly, strong; temp., 29°. Red-breasted Merganser, 2; Rough-legged Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 2; Crow, 203; Starling, 12; Goldfinch, 33; White-throated Sparrow, 2; Tree Sparrow, 38; Song Sparrow, 2; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 38; Golden-

crowned Kinglet, 1; Ruby-crowned Kinglet, 3. 52 Redpolls were observed on December 26. Total, 17 species, 349 individuals.—MYRON T. SMITH.

Middletown, Conn.—Dec. 21; 2.30 to 4.30 P.M. Clear; a little snow on ground; wind north, strong; temp., 20°. Blue Jay, 1; Crow, 1; Starling, 8; Junco, 10; Tree Sparrow, 9; White-throated Sparrow, 1; Chickadee, 14; Golden-crowned Kinglet, 2. Total, 8 species, 46 individuals. A pair of Myrtle Warblers were seen on December 2.—EDWARD H. PERKINS.

New Canaan, Conn.—Dec. 22; 10 A.M. to 12.30 P.M. Clear; little snow on ground; wind west to north; temp., 15°. Downy Woodpecker, 2; Blue Jay, 4; Crow, 3; Goldfinch, 8; Redpoll, 2; Tree Sparrow, 12; Song Sparrow, 1; Myrtle Warbler, 2; White-breasted Nuthatch, 2; Chickadee, 8; Brown Creeper, 1; Robin, 1; Bluebird, 4. Total, 13 species, 50 individuals.—H. E. JONES.

New London, Conn.—Dec. 27; 9 A.M. to 4 P.M. Clear; ground nearly bare; wind southwest, very light; temp., 34°. Pied-billed Grebe, 10; Great Black-backed Gull, 2; Herring Gull, 144; Red-breasted Merganser, 3; Buffle-head, 2; American Golden-eye, 66; unidentified Ducks, 100 (estimated); Horned Lark, 6; Crow, 36; Blue Jay, 1; Meadowlark, 9; Song Sparrow, 12; Tree Sparrow, 1; Myrtle Warbler, 1; Chickadee, 5; Robin, 1. Total, 15 species, 399 individuals.—FRANCES M. GRAVES.

New Haven, Conn. (Edgewood Park to Lake Burton).—Dec. 25; 10.15 A.M. to 3.20 P.M. Cloudy; ground bare; wind brisk northwest; temp., 30°. Herring Gull, 1; Kingfisher, 1; Downy Woodpecker, 1; Flicker, 4; Blue Jay, 9; Crow, 18; Starling, 5; Goldfinch, 10; White-throated Sparrow, 1; Tree Sparrow, 30; Field Sparrow, 1; Song Sparrow, 10; Myrtle Warbler, 5; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 9; Golden-crowned Kinglet, 3; Robin, 1. Total, 18 species, 114 individuals.—ALBERT W. HONYWILL, JR.

New Haven, Conn. (East Haven, and Momauguin).—Dec. 26; 9.30 A.M. to 3.15 P.M. Cloudy; ground bare; no wind; temp., 26°. Horned Grebe, 1; Herring Gull, 25; Old Squaw, 2; White-winged Scoter, 30; Kingfisher, 1; Downy Woodpecker, 1; Flicker, 3; Blue Jay, 23; Crow, 6; Starling, 78; Meadowlark, 6; Goldfinch, 1; Tree Sparrow, 35; Junco, 6; Song Sparrow, 6; Northern Shrike, 1; Myrtle Warbler, 2; White-breasted Nuthatch, 5; Chickadee, 2. Total, 19 species, 234 individuals.—DWIGHT B. PANGBURN, CLIFFORD H. PANGBURN and ALBERT W. HONYWILL, JR.

Ridgefield, Conn.—Dec. 26; 9 A.M. to 12 M. Cloudy; ground bare in open fields, two to four inches crusted snow in woods; wind light, southwest; temp., 18 to 24°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Flicker, 3; Blue Jay, 9; Crow, 8; Redpoll, 11; Goldfinch, 18; Tree Sparrow, 31; Junco, 2; Myrtle Warbler, 2; White-breasted Nuthatch, 4; Chickadee, 12; Bluebird, 16. Total, 13 species, 119 individuals.—ELBERT E. SMITH.

Southington, Conn.—Dec. 25; 8 A.M. to 12 M. Clear, ground partly bare; wind northwest light; temp., 30°. Crow, 1; Starling, 4; Goldfinch, 8; Junco, 2; Nuthatch, 2. Total, 5 species, 17 individuals.—RUSSEL G. ANDREWS.

South Norwalk, Conn.—Dec. 26. Fair; snow equal; no wind; temp., 26°. Distance covered, eight miles. Herring Gull, 200; Old Squaw, 40; Golden-eye, 6; Black Duck, 6 American Scaup Duck, 40; Hairy Woodpecker, 1; Downy Woodpecker, 7; Horned Lark, 20; Blue Jay, 2; Crow, 20; Starling, 50; Meadowlark, 1; Goldfinch, 4; Tree Sparrow, 10; Junco, 6; Song Sparrow, 7; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 7. Great Blue Heron seen December 22. Mourning Dove seen December 19. Kingfishers about all winter. Total, 19 species, 430 individuals.—WILBUR F. SMITH.

West Hartford, Conn. and Reservoirs.—Dec. 26; 9.30 A.M. to 1.30 P.M. Cloudy, ground bare; temp., 18°. Hairy Woodpecker, 1; Flicker, 2; Blue Jay, 5; Crow, 13; American Crossbill, 1; Redpoll, 6; Goldfinch, 1; Tree Sparrow, 3; Junco, 25; Brown Creeper, 1; Chickadee, 9. Total, 11 species, 67 individuals.—MRS. F. C. NEILSON, MRS. WM. M. LEVEY, and W. CHARLESWORTH LEVEY.

West Hartford, Conn.—Dec. 26; 9.30 A.M. to 3. P.M. Clear in morning; snow in afternoon; light, east wind; temp., 19°. Ruffed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Crow, 2; Junco, 12; Brown Creeper, 1; White-breasted Nuthatch, 7; Chickadee, 33; Golden-crowned Kinglet, 4. Total, 9 species, 64 individuals.—F. C. GLEASON.

West Hartford, Conn.—Dec. 25; 7 A.M. to 12 M. Fair to cloudy, with one short snow-squall; ground bare; brisk northwest wind; temp., 27 to 32°. Downy Woodpecker, 2; Blue Jay, 16; Crow, 76; Starling, 6; Goldfinch, 34; Tree Sparrow, 18; Junco, 2; White-breasted Nuthatch, 2; Chickadee, 8; Golden-crowned Kinglet, 2. Total, 10 species, 166 individuals.—N. C. WARDELL and H. P. MEECH.

West Hartford, Conn.—Dec. 25; 12.30 to 4.30 P.M. Fair; ground bare; brisk northwest wind; temp., 31° to 24°. Downy Woodpecker, 1; Crow, 800; Starling, 2; Goldfinch, 40; Tree Sparrow, 4; White-breasted Nuthatch, 1; Chickadee, 4; Golden-crowned Kinglet, 2. Total, 8 species, 854 individuals.—MR. and MRS. H. P. MEECH.

Westville, Conn.—Dec. 25. Clear; ground bare; temp., 30°. Hawk, 1; Partridge, 1; Downy Woodpecker, 1; Crow, 8; Blue Jay, 5; Starling, flock; Meadowlark, 6; Purple Finch, 7; Goldfinch, 8; White-throated Sparrow, 3; Tree Sparrow, 9; Junco, 25; Song Sparrow, 3; Vesper Sparrow, 1; Fox Sparrow, 4; Northern Shrike, 1; Myrtle Warbler, 1; Winter Wren, 1; Brown Creeper, 1; Chickadee, 10; Golden-crowned Kinglet, 3; Robin, 8; Bluebird, 3. Total, 23 species, 120 individuals.—MRS. C. A. DYKEMAN.

Windsor, Conn.—Dec. 25; 10 A.M. to 12 M. Cloudy; ground bare; no wind; temp., 22°. Herring Gull; Black Duck, 3; Downy Woodpecker, 1; Blue Jay, 6; Crow, 2; Redpoll, 9; Goldfinch, 12; Tree Sparrow, 27; Junco, 24; Cedar Waxwing, 8; Shrike, 1; White-breasted Nuthatch, 2; Chickadee, 28; Golden-crowned Kinglet, 1. Total, 14 species, 125 individuals.—MRS. L. A. CRESSY.

Brooklyn, N. Y. (Prospect Park).—Dec. 26; 9.30 A.M. to 12.30 P.M. Overcast; ground partly covered with snow; light southwest wind; temp., 30°. Herring Gull, 31; Black-crowned Night Heron, 2; Pigeon Hawk, 1; Screech Owl, 1; Downy Woodpecker, 1; Starling, 21; Redpoll, 1; Goldfinch, 2; White-throated Sparrow, 28; Junco, 11; Song Sparrow, 1; Fox Sparrow, 1; Brown Creeper, 1; Chickadee, 1; Golden-crowned Kinglet, 2. Total, 15 species, 105 individuals.—KATE P. VIETOR.

Brooklyn, N. Y. (Prospect Park).—Dec. 25; 8.30 to 10.30 A.M. Overcast and clearing later; ground partly covered with snow; westerly wind, brisk; temp., 32°. Herring Gull, 32; Black-crowned Night Heron, 2; Downy Woodpecker, 2; Starling, 4; Goldfinch, 2; White-throated Sparrow, 31; Junco, 7; Fox Sparrow, 7; White-breasted Nuthatch, 1; Hermit Thrush, 1; Robin, 2. Total, 11 species, 91 individuals.—E. W. VIETOR.

Brooklyn, N. Y. (Fort Hamilton).—Dec. 25; 11 A.M. to 1 P.M. Clear; ground mostly bare; wind west, strong; temp., 30°. Herring Gull, 100; Goshawk, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Starling, 175; Meadowlark, 1; White-throated Sparrow, 1; Tree Sparrow, 12; Song Sparrow, 3; Chickadee, 1; Robin, 3. Total, 11 species, 300 individuals.—EDWARD FLEISCHER.

Brooklyn, N. Y. (Prospect Park).—Dec. 26; 10 A.M. to 12 M. Cloudy; ground mostly bare; wind northeast, light; temp., 25°. Herring Gull, 36; Pigeon Hawk, 1; Downy Woodpecker, 5; Starling, 45; Goldfinch, 2; White-throated Sparrow, 25; Song Sparrow, 4; Fox Sparrow, 13; Brown Creeper 2; White-breasted Nuthatch, 5; Chickadee 6. Total, 11 species, 144 individuals.—LEWIS F. BOWDISH and EDWARD FLEISCHER.

Buffalo, N. Y. (River Front).—Dec. 26; 12 M. to 2.30 P.M. Cloudy; ground snow-covered; wind southwest, strong; temp., 36°. Herring Gull, 33; Old Squaw, 5. Total, 2 species, 38 individuals.—GEORGE M. TURNER.

Buffalo, N. Y.—Dec. 26. Cloudy; ground covered with snow; wind southwest; temp., 36°. Herring Gull, 3; Sparrow Hawk, 1; Downy Woodpecker, 1; Horned Lark, 1;

Crow, 4; Goldfinch, 1; Snow Bunting, one flock; Brown Creeper, 1; White-breasted Nuthatch, 2. Total, 9 species, 14 individuals.—TALMAN VAN ARSDALE.

Buffalo, N. Y. (Delaware Park).—Dec. 18. Clear; ground covered with snow; wind southwest; temp., 28°. Downy Woodpecker, 1; Crow, 6; Northern Shrike, 1; White-breasted Nuthatch, 5; Chickadee, 3; Golden-crowned Kinglet, 2. Total, 6 species, 18 individuals.—MRS. G. M. TURNER.

Far Rockaway, L. I., N. Y.—Dec. 25; 9.45 A.M. to 12 M. Clear; ground bare; marshes covered with ice; wind fresh northwest; temp., 31°. Herring Gull, 5,000; (estimated); Old Squaw, 55; Horned Lark, 34; Crow, 3; Starling, 3; White-breasted Nuthatch, 1. Total, 6 species, 5096 individuals.—CHARLOTTE BOGARDUS.

Geneva, N. Y.—Dec. 25; 9 A.M. to 3.30 P.M. Four inches of snow on ground; wind northwest, high; temp., 16 to 20°. Horned Grebe, 9; Canvasback, 4; Redhead, 7; Greater Scaup, 65; Golden-eye, 10; Buffle-head, 8; Old Squaw, 4; Ring-necked Pheasant, 3; Downy Woodpecker, 2; Prairie Horned Lark, 2; Crow, 200; Redpoll, 5; Goldfinch, 1; Tree Sparrow, 10; Nuthatch, 6; Chickadee, 10. Total, 16 species, 340 individuals.—OTTO MCCREARY.

Groton, N. Y.—Dec. 26; 11 to 11.40 A.M. and 1.30 to 2.50 P.M. (Birds lunched at window-sill). Cloudy; one foot of snow; wind southwest, light; temp., 31°. Hairy Woodpecker, several; Downy Woodpecker, several; White-breasted Nuthatch, several; Chickadee, many. Total, 4 species.—ALICE MORTON.

Hamburg, N. Y.—Dec. 25; 9 A.M. to 1 P.M. Clear; six inches of snow; wind southwest; temp., 35°. Crow, 5; Junco, 8; White-breasted Nuthatch, 2. Total, 3 species, 15 individuals.—THOMAS L. BOURNE.

Long Beach, L. I., N. Y.—Dec. 18; 9.30 A.M. to 4 P.M. Clear; wind west, light; dunes and marshes covered with snow and ice; beach bare; temp., 25° to 33°. Holboell's Grebe, 1; Horned Grebe, 2; Red-throated Loon, 1; Kittiwake, 1 (im.) Great Black-backed Gull, 90; Herring Gull, 2000 (estimated); Ring-billed Gull, 32 (unusually common); Bonaparte's Gull, 3; Red-breasted Merganser, 8; Black Duck, 19; American Scaup Duck, 200; Old-Squaw, 500; American Scoter, 1; Marsh Hawk, 3; Rough-legged Hawk, 1; Sparrow Hawk, 1; Horned Lark, 100; Prairie Horned Lark, 2; Crow, 90; Fish Crow, 5; Starling, 6; Pine Siskin, 25; Snowflake, 2; Ipswich Sparrow, 4; Savanna Sparrow, 1; Tree Sparrow, 7; Junco 2; Song Sparrow, 2; Myrtle Warbler, 50; Pipit, 1. Total, 30 species, about 3161 individuals.—WILLIAM H. WIEGMANN, GEORGE E. HIX and LUDLOW GRISCOM.

Mt. Sinai, Long Island, N. Y.—Dec. 25; 9 A.M. to 5 P.M. Cloudy all day; a few patches of snow on the ground; high northerly winds during morning; temp., 30° to 38°. Country visited; Sound coast; harbor shores and wooded hills. Horned Grebe, 3; Loon, 3; Kittiwake, 30; Black-backed Gull, 5; Herring Gull, 1,000; Black Duck, 50; Old Squaw, 7; White-winged Scoter, 25,000; Bob-white, 25; Flicker, 3; Horned Lark, 2; Blue Jay, 3; Crow, 35; Meadowlark, 1; Junco, 5; Tree Sparrow, 18; Song Sparrow, 2; Chickadee, 16; Robin, 1. Total, 19 species, 26,216 individuals. Dense flocks of White-winged Scoters covering the water for long distances; could be seen all day from the sand cliffs on the beach.—ROBERT CUSHMAN MURPHY.

New York City (Borough of Bronx, Watson's Woods, Bronx Park, Hemlock Grove and Van Cortlandt Park).—Dec. 22; 9.30 A.M. to 12.15 P.M., 3 to 4.30 P.M. Clear; ground mostly covered with snow; wind northwest, very strong; temp., 15 to 25°. Herring Gull, 11; Bob-white, 7; Sparrow Hawk, 1; Downy Woodpecker, 8; Flicker, 1; Crow, 6; Starling, 100; Goldfinch, 4; White-throated Sparrow, 7; Tree Sparrow, 35; Junco, 4; Song Sparrow, 3; Fox Sparrow, 8; Brown Creeper, 2; White-breasted Nuthatch, 4; Chickadee, 1; Golden-crowned Kinglet, 8. Total, 17 species, 210 individuals.—STANLEY V. LADOW.

New York City (Staten Island, Saint George and Princes Bay to Oakwood Heights, thence to Richmond).—Dec. 26; 9.20 A.M. to 4.20 P.M. Sky overcast, light snow-fall

in the afternoon; ground mostly bare; wind, almost none; temp., at start 22° . Herring Gull, 576; American Scaup, 12; Golden-eye, 9; Old Squaw, 102; American Scoter, 7; Red-tailed Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; American Crow, 72; European Starling, 105; Meadowlark, 6; Pine Siskin, 15; Seaside Sparrow, 4; Tree Sparrow, 80; Junco, 25; Song Sparrow, 3; Swamp Sparrow, 1; Fox Sparrow, 1; Cardinal, 2; White-breasted Nuthatch, 1; Chickadee, 8; Robin, 7. Total, 23 species; 1,042 individuals. One of the Meadowlarks was with a flock of fifteen Starlings.—CLINTON G. ABBOTT and HOWARD H. CLEAVES.

The Battery, New York City (To and at The Farms, off Seabright, N. J. and back). Dec. 18; 8.20 A.M. to 4.20 P.M. Mostly clear; hazy; rather warm; wind light, variable. Grebe, 2; Loon, 2; Kittiwake, 20; Black-backed Gull, 2; Herring Gull, 5,000; Bonaparte's Gull, 600; Red-breasted Merganser, 13; Black Duck, 2; Old Squaw, 28; Crow, 35. Total, 10 species, about 5,700 individuals.—NOEMI PERNESSEN and C. H. ROGERS.

The Battery, New York City (To Atlantic Ocean ten miles off Seabright, N. J. and return).—Dec. 23; 8.20 A.M. to 4 P.M. Clear; wind south, very light; sea, calm and smooth; temp., 28° . Holboell's Grebe, 1; Loon, 4; Brünnich's Murre, 1; Kittiwake, 60; Glaucous Gull, 1; Great Black-backed Gull, 4; Herring Gull, 5,000; Ring-billed Gull, 7; Bonaparte's Gull, 100; Gannet, 1; Red-breasted Merganser, 4; American Scaup Duck 300; Old Squaw, 26; White-winged Scoter, 100; Crow, 5. Total, 15 species, about 5,600 individuals.—STANLEY V. LADOW and LUDLOW GRISCOM.

Orient, Long Island, N.Y.—Dec. 25; 7 A.M. to 4.30 P.M. Clear; wind, A.M. calm, P.M. light south to southeast; ground (woods) covered four to six inches with snow; (open) partly covered with two to four inches of crusty snow. Smaller bays; salt drains and all fresh water ponds and streams ice-bounded. Temp. 16° to 40° . Horned Grebe, 25 (note heard); Loon, 25; Red-throated Loon, 1; Great Black-backed Gull, 7; Herring Gull, 136; Bonaparte Gull, 1; Red-breasted Merganser, 32; Black Duck, 16; Scaup Duck, 1,005; Golden-eye, 379. (notes heard); Buffle-head, 57; Old Squaw, 942; Harlequin Duck, 1; Scoter, 1; White-winged Scoter, 141; Surf Scoter, 3200; Sharp-shinned Hawk, 2; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Long-eared Owl, 1; Short-eared Owl, 1; Screech Owl, 2; Kingfisher, 1; Downy Woodpecker, 6; Red-headed Woodpecker, 1; Flicker, 16; Horned Lark, 617; Crow, 239; Starling, 515 (rapidly becoming the most abundant land bird in winter); Cowbird, 2; Meadowlark, 831, (six singing); Goldfinch, 32; Pine Siskin, 31; Snow Bunting, 132; Lapland Longspur, 2; Savannah Sparrow, 1; White-throated Sparrow, 1; Tree Sparrow, 155; Junco, 8; Song Sparrow, 135 (one singing; one albino); Northern Shrike, 1; Myrtle Warbler, 310; Chickadee, 30; Golden-crowned Kinglet, 29; Hermit Thrush, 1; Robin, 69. Total, 46 species, 9,103 individuals. Bob-whites, Red Crossbills and Cedar-birds have occurred regularly this winter although missed in the census. On December 9 and 10 a Palm Warbler was recorded. The snow was deep at the time and the temperature low in the teens. A Red-breasted Nuthatch was observed on December 16 in the barn, where it had been continuously for five days and nights.—ROY, HARRY and FRANK LATHAM.

Port Dickinson, N. Y.—Dec. 25; 1 to 4 P.M. Cloudy; cold north wind; snowing; temp., 15° . Ruffed Grouse, 2; Downy Woodpecker, 2; Crow, 20; Snow Bunting, 50; Tree Sparrow, 1; White-breasted Nuthatch, 2; Chickadee, 9. Total, 7 species, 86 individuals.—JOHN M. ROGERS.

Rhinebeck, N. Y.—Dec. 25; 8 A.M. to 1 P.M. Cloudy to clear; ground bare; wind west to north, light to strong; temp., 31° . Marsh Hawk, 1; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Barred Owl, 1; Screech Owl, 2; Hairy Woodpecker, 3; Downy Woodpecker, 8; Blue Jay, 25; Crow, 16; Pine Grosbeak, 1; Purple Finch, 1; Redpoll, 5; Goldfinch, 2; Tree Sparrow, 27; Junco, 8; Brown Creeper, 2; White-breasted Nuthatch, 6; Chickadee, 22; Golden-crowned Kinglet, 4. Total, 19 species, 136 individuals. December 22, Northern Shrike, December 24, Starling.—MAUNSELL S. CROSBY.

Rochester, N. Y. (Bushnell Basin).—Dec. 26; 9 A.M. to 3 P.M. Cloudy; three inches of snow on ground; wind southeast, light; temp., 25° to 35°. Mongolian Pheasant, 8; Downy Woodpecker, 4; Blue Jay, 2; Crow, 5; Redpoll, 50; Tree Sparrow, 12; White-breasted Nuthatch, 4; Chickadee, 20. Total, 8 species, 105 individuals.—HARRY GORDON and OSCAR F. SCHAEFER.

Rochester, N. Y. (Drigway).—Dec. 25; 10 A.M. to 12 M. Cloudy; snow flurries; ground covered with snow; wind northwest, brisk; temp., 19°. Downy Woodpecker, 1; Crow, 2; Tree Sparrow, 6; Chickadee, 7. Total, 4 species, 16 individuals.—NETTIE SELLINGER PIERCE.

Seneca Falls, N. Y.—Dec. 28; 9.30 A.M. till dark. Cloudy, with snow at intervals, wind brisk, southeast; temp., 32°. American Merganser, 1; Hooded Merganser, 1; Black Duck, 2; Greater Scaup, 7; Lesser Scaup, 2; Golden-eye, 8; Ring-necked Pheasant, 3; Screech Owl, 1; Hairy Woodpecker, 8; Downy Woodpecker, 7; Crow, 100; Red-winged Blackbird, 1; Redpoll, 4; Tree Sparrow, 50; Song Sparrow, 3; Swamp Sparrow, 1; Brown Creeper, 3; White-breasted Nuthatch, 6; Chickadee, 40. Total, 19 species, 300 individuals.—OTTO MCCREARY.

Richmond, Staten Island, N. Y. City (To Princes Bay and Great Kills).—Dec. 26; 9.40 A.M. to 4 P.M. Black-backed Gull, 2; Herring Gull, 750; Scaup, 1; Golden-eye, 175; Red-shouldered Hawk, 1; Sparrow Hawk, 5; Downy Woodpecker, 7; Blue Jay, 2; Crow, 40; Starling, 10; White-throated Sparrow, 7; Tree Sparrow, 25; Junco, 8; Song Sparrow, 7; Cardinal, 2; White-breasted Nuthatch, 4; Tufted Tit, 7; Chickadee, 7; Robin, 1. Total, 19 species, about 1,060 individuals.—LUDLOW GRISCOM and C. H. ROGERS.

Municipal Ferry to St. George, Richmond, Great Kills and Annadale, Staten Island, N. Y.—Dec. 26; 8.30 A.M. to 4.30 P.M. Cloudy; ground bare, frozen; frozen snow and ice in crevices and hollows; no wind; temp., 26°. Great Black-backed Gull, 1; Herring Gull, 500; Double-crested Cormorant, 2; Red-breasted Merganser, 1; Golden-eye, 50; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Downy Woodpecker, 1; Flicker, 1; Crow, 36; Starling, 10; Goldfinch, 25; White-throated Sparrow, 1; Tree Sparrow, 100; White-breasted Nuthatch, 3; Tufted Titmouse, 5; Robin, 1. Total, 17 species, about 750 individuals.—GEORGE E. HIX.

Syracuse, N. Y.—Dec. 23; 6.30 A.M. to 12 M. One foot of snow on ground; wind south, strong; temp., 30°. Black Duck, 3; Lesser Scaup Duck, 1; Golden-eye, 3; Ruffed Grouse, 1; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Downy Woodpecker, 2; Crow, 7; Goldfinch, 20; Tree Sparrow, 1; White-breasted Nuthatch, 3; Chickadee, 9. Total, 12 species, 52 individuals.—JOHN WINTHROP PENNOCK.

Watkins, N. Y.—Dec. 27; 9.30 to 11 A.M. Clear; ground covered with about five inches of snow; wind south, light; temp., 32°. Calls made at window-shelf and at suet hung in tree nearby. Downy Woodpecker, 1; Blue Jay, 34; White-breasted Nuthatch, 11; Chickadee, 70. Total, 4 species, 116 individuals. The Junco and Tree Sparrows are numerous, but only occasionally visit the shelf, which is under a second-story window, but prefer to feed on the ground.—GRACE L. WHITE.

Woodmere, L. I., N. Y.—Dec. 25; 11 A.M. to 1.30 P.M. Clear; ground in woods covered with three to four inches of snow; in fields and meadows snow in spots; winds northwest, strong; temp., 29 to 32°. Herring Gull, 2; Red-tailed Hawk, 1; Downy Woodpecker, 1; Crow, 22; Starling, 11; Meadowlark, 1; Goldfinch, 2; White-throated Sparrow, 2; Tree Sparrow, 3; Junco, 1; Song Sparrow, 4; Fox Sparrow, 4; White-breasted Nuthatch, 1; Golden-crowned Kinglet, 3. Total, 14 species, 58 individuals.—CHARLES A. HEWLETT.

Bloomfield and Newark, N. J.—Dec. 25; 10 A.M. to 4 P.M. Cloudy at start, cleared at noon; ground bare, with the exception of spots where snow had drifted; wind southwest; temp., 28 to 36°. Barred Owl, 2; Red-headed Woodpecker, 2; Crow, 19; Starling;

White-throated Sparrow, 4; Junco, 5; Song Sparrow, 4; White-breasted Nuthatch, 2; Chickadee, 2; Golden-crowned Kinglet, 3. Total, 10 species, 43 individuals. A Fox Sparrow was found among the laurels in Branch Brook Park on December 18.—LOUIS S. KOHLER.

Bernardsville, N. J.—Dec. 26; 8.45 to 10.15 A.M., and 3.15 to 4.55 P.M. Cloudy until 10 A.M.; snowed rest of the day; ground partly snow-covered; wind, southwest, very light; temp., 19° at 8.45 A.M., 24° at 4.05 P.M. Downy Woodpecker, 1; Blue Jay, 1; Crow, 2; Redpoll, several; Tree Sparrow, 3; Junco, very common; Song Sparrow, 5; Winter Wren, 1; Nuthatch, 1; Chickadee, 1; Bluebird, 7. Total, 11 species, about 50 individuals.—JOHN DRYDEN KUSER.

Camden, N. J.—Dec. 25; 7 to 10 A.M. and 11 A.M. to 1 P.M. Cloudy at start, shortly clearing; wind northwest; ground mostly bare, patches of snow in woods; temp., 28°. Herring Gull, 2; Red-tailed Hawk, 3; Red-shouldered Hawk, 4; Sparrow Hawk, 2; Hairy Woodpecker, 3; Downy Woodpecker, 4; Red-headed Woodpecker, 2; Flicker, 1; Crow, 51; Starling, 65; Meadowlark, 11; Rusty Blackbird, 1; Redpoll, 1; White-throated Sparrow, 50; Song Sparrow, 8; Tree Sparrow, 6; Junco, 44; Cardinal, 6; Winter Wren, 4; Brown Creeper, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 4; Chickadee, 1. Total, 23 species, 277 individuals.—JULIAN K. POTTER

Demarest, N. J.—Dec. 25; 10.30 to 11.30 A.M., 1 to 2 P.M. Ground partially covered with snow; strong west wind; temp., 30°. Distance covered about three miles. Blue Jay, 18; Crow, 1; Goldfinch, about 50; Tree Sparrow, about 25; White-throated Sparrow, 1; Junco, 12; Song Sparrow, 1; Myrtle Warbler, 8; White-breasted Nuthatch, 1; Chickadee, 10; Robin, 1; Bluebird, 6. Total, 12 species, about 134 individuals.—C. E. BOWDISH.

Edgewater, N. J. (Up the river, through the Palisades Interstate Park, and back through Englewood, Coytesville, Leonia, and Overpeck Creek).—Dec. 21; 9.30 A.M. to 4.30 P.M. Clear; wind northwest, very strong and cold; ground mostly covered with snow and ice; temp., at start 22°, at noon, 28°; falling in P.M. to 15°. River full of ice. Great Black-backed Gull, 1; Herring Gull, 200; American Merganser, 44; Black Duck, 4; Red-tailed Hawk, 1; Bald Eagle, 3 (1 fine adult); Downy Woodpecker, 3; Crow, 13; Starling, 1; Meadowlark, 1; Purple Finch, 3; Pine Siskin, 10; White-throated Sparrow, 50; Tree Sparrow, 15; Junco, 28; Song Sparrow, 8; Cardinal, 2; Carolina Wren, 7; Winter Wren, 1; Brown Creeper, 2; White-breasted Nuthatch, 3; Chickadee, 30; Golden-crowned Kinglet, 4; Hermit Thrush, 2; Robin, 2. Total, 25 species, 437 individuals. Birds commoner than in many winters. The Interstate Park is protected from the cold winds, and furnishes fine shelter for winter birds.—LUDLOW GRISCOM.

Elberon, N. J. (About a mile from the ocean).—Dec. 27; 10 to 11 A.M. and 3 to 3.30 P.M. Clear; wind west, light; ground partly covered with snow; temp., 35° to 40°. (Feeding on poison ivy berries.) Downy Woodpecker, 1; Flicker, 2; Crow, 1; Goldfinch, 4; Pine Siskin, 2; Myrtle Warbler, 4; Golden-crowned Kinglet, 4. Total, 7 species, 18 individuals.—MARY T. ALLEN.

Hackettstown, N. J.—Dec. 23; 8.10 to 11.50 A.M., 2.15 to 4.50 P.M. Weather variable; five inches of snow; temp., 21°. Unidentified Hawk, 1; Downy Woodpecker, 4; Blue Jay, 4; Crow, 287; Starling, 4; Meadowlark, 5; Purple Finch, 2; Redpoll, 2; Goldfinch, 1; Tree Sparrow, 3; Junco, 10; Myrtle Warbler, 2; White-breasted Nuthatch, 2; Chickadee, 13; Golden-crowned Kinglet, 2; Hermit Thrush, 1; Robin, 1. Total, 17 species, 344 individuals.—MARY PIERSON ALLEN.

Mountainside, N. J.—Dec. 25; 9 A.M. to 1 P.M. Ground partly bare; wind keen, northwest; cloudy till near noon, then sunny; temp., 29 to 35°. Red-shouldered Hawk, 2; Downy Woodpecker, 2; Blue Jay, 11; Crow, 6; Starling, 63; Goldfinch, 7; Tree Sparrow, 7; Song Sparrow, 4; White-breasted Nuthatch, 2; Tufted Titmouse, 2; Chickadee, 5. Total, 11 species, 101 individuals.—J. WILLIAM LLOYD and DR. W. LLEWELLYN LLOYD.

Newfield, N. J.—Dec. 25; 10 A.M. to 3 P.M. Cloudy in forenoon, sunshine in afternoon; ground in fields generally bare, with small patches of crusted snow; in the woods generally snow-covered. Wind northwest, brisk; temp., 32°. Bob-white, 5; Blue Jay, 1; Crow, 14; Junco, about 50; Song Sparrow, 1; White-breasted Nuthatch, 1; Chickadee, 9; Golden-crowned Kinglet, 2. Total, 8 species, about 83 individuals.—W.M. W. FAIR.

The Palisades, N. J. (From Edgewater to Coytesville).—Dec. 25; 12.10 to 3.40 P.M. Clear; ground largely bare; wind northwest, brisk. Herring Gull, 40; Black Duck, 7; Hairy Woodpecker, 1; Downy Woodpecker, 2; Starling, 47; Goldfinch, 4; Tree Sparrow, 11; Junco, 31; Song Sparrow, 7; Cardinal, 2; Carolina Wren, 2; White-breasted Nuthatch, 2; Robin, 1. Total, 13 species, about 155 individuals.—CHARLES H. ROGERS.

Haddonfield, N. J.—Dec. 25; 7 A.M. to 12 M. Partly cloudy; wind north, rather strong; ground bare; temp., 30 to 36°. Sharp-shinned Hawk, 2; Downy Woodpecker, 7; Flicker, 8; Blue Jay, 3; Crow, 11; Goldfinch, 5; White-throated Sparrow, 25; Tree Sparrow, 18; Junco, 57; Song Sparrow, 15; Fox Sparrow, 8; Cardinal, 7; Carolina Wren, 3; Winter Wren, 3; Brown Creeper, 3; White-breasted Nuthatch, 4; Tufted Titmouse, 2; Chickadee, 7. Total, 18 species, 188 individuals.—EARLE RIDDLE.

Moorestown, N. J.—Dec. 26; 6.40 to 7.40 A.M., 8.15 A.M. to 5.50 P.M. Film of cloud over moon; day opening with red sunrise, and becoming dull gray; wind light from south; temp., (at start) 20½°. Cooper's Hawk, 3; Red-tailed Hawk, 8; Red-shouldered Hawk, 1; Sparrow Hawk, 5; Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 2; Horned Lark, 37; Blue Jay, 3; American Crow, 406; European Starling, 7; Meadowlark, 25; Goldfinch, 9; White-throated Sparrow, 6; Tree Sparrow, 103; Junco, 129; Song Sparrow, 34; Swamp Sparrow, 1; Fox Sparrow, 1; Cardinal, 7; Carolina Wren, 2; Winter Wren, 2; Brown Creeper, 5; White-breasted Nuthatch, 3; Red-breasted Nuthatch, 2; Tufted Titmouse, 2; Chickadee, 13; Golden-crowned Kinglet, 15; Hermit Thrush, 1; Bluebird, 15. Total, 30 species, 853 individuals.—WILLIAM B. EVANS and GEORGE H. HALLETT, JR.

Morristown, N. J.—Dec. 26; 10 to 11.30 A.M. Snowing part of the time; wind northerly, moderate; temp., 24°. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 16; Crow, 4; Starling, 2; White-throated Sparrow, 2; Tree Sparrow, 5; Junco, 20; Song Sparrow, 1; White-breasted Nuthatch, 2; Chickadee, 1; Robin, 1. Total, 13 species, 57 individuals.—ANNA A. and FRANK D. VOGT.

Morristown, N. J.—Dec. 26; 9.15 to 11 A.M. Cloudy at start; snowing on return; wind light, east; ground partly covered with snow; temp., 20°. Kingfisher, 1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Jay, 10; Crow, 4; Starling, 5; Purple Finch, 1; Goldfinch, 8; White-throated Sparrow, 3; Tree Sparrow, 7; Junco, 3; Song Sparrow, 2; Northern Shrike, 1; White-breasted Nuthatch, 5; Chickadee, 5; Bluebird, 3. Total, 16 species, 64 individuals. A Phoebe stayed here until December 10.—R. C. CASKEY.

Passaic, Clifton and Athenia, N. J.—Dec. 25; 9 A.M. to 3 P.M. Cloudy, a little snow on ground; wind northwest, light; temp., 25°. Downy Woodpecker, 3; Blue Jay, 11; Crow, 3; Starling, 115; Tree Sparrow, 73; Song Sparrow, 2; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 1; Bluebird, 5. Total, 10 species, 215 individuals.—LELAND EDWARDS, ROBERT EDWARDS, IRVING KIPP, PAUL MCQUILLEN, GILBERT H. TRAFTON, EDWARD UEHLING, DONALD VAIL, and CARL VAIL.

Plainfield, N. J.—Dec. 25; 11.30 A.M. to 6.25 P.M. Clear; ground mostly snow-covered; temp., about 28°. Sharp-shinned Hawk, 1 (im.); Downy Woodpecker, 2; Flicker, 1; Blue Jay, 5; Crow, 30; European Starling, 2; Purple Finch, 15; Goldfinch, 7; White-throated Sparrow, 3; Tree Sparrow, 20; Field Sparrow, 14 (flock); Song Sparrow, 3; Brown Creeper, 1; White-breasted Nuthatch, 1 (earlier in morning); Chickadee, 22; Golden-crowned Kinglet, 7; Hermit Thrush, 2; Robin, 12. Total, 18 species, 148 indi-

viduals. The absence of the Junco is exceptional, while only once or twice before have I found so large a flock of Field Sparrows here in winter.—W. DEW. MILLER.

Plainfield, N. J.—Dec. 26; 11 A.M. to 12 M. Cloudy; wind southeast; temp., 27°. Sparrow Hawk, 1; Downy Woodpecker, 1; Blue Jay, 3; Crow, 6; Starling, 5; Tree Sparrow, 6; Junco, 24. Total, 7 species, 46 individuals.—WILLIAM M. STILLMAN

Princeton, N. J.—Dec. 26; 12 M. to 1 P.M. and 3 to 4 P.M. A gray day; ground with patches of snow; wind east, light; temp., 30°. Large Hawk (unidentified), 1; Downy Woodpecker, 6; Flicker, 12; Blue Jay, 6; Crow, about 200; Meadowlark, 3; Goldfinch, 15; Tree Sparrow, 15; Junco, 40; Song Sparrow, 2; Chickadee, 40; Bluebird, 20. Total, 12 species, 360 individuals.—HAMILTON GIBSON and TERTIUS VAN DYKE.

Bristol, Bucks Co., Pa.—Dec. 25; 9 A.M. to 5 P.M. Cloudy; ground bare; wind northwest, brisk; temp., about 32° all day. Loon, 3; Herring Gull, 1; American Merganser, 9; Golden-eye, 5; Red-shouldered Hawk, 1; Bald Eagle, 1; Sparrow Hawk, 1; Downy Woodpecker, 7; Blue Jay, 6; Crow, 500; Meadowlark, 3; Tree Sparrow, 54; Junco, 58; Song Sparrow, 42; Cardinal, 1; Brown Creeper, 1; White-breasted Nuthatch, 7; Tufted Titmouse, 7. Total, 18 species, 707 individuals. On December 18, 1910, six Starlings paid us a visit. This is the first time they have been reported in our immediate vicinity.—SIDNEY V. MORRIS.

Chestnut Hill, Pa. (Along the Cresheim Creek).—Dec. 26; 10 to 11.45 A.M. Sky heavily overcast; thin covering of snow on the ground; light wind from the southwest; temp., 28°. Downy Woodpecker, 5; Crow, 15; White-throated Sparrow, 2; Junco, 20; Song Sparrow, 5; Cardinal, 9; Carolina Wren, 2; Brown Creeper, 1; Tufted Titmouse, 4; Chickadee, 3; Golden-crowned Kinglet, 1. Total, 11 species, 67 individuals. On December 10, I saw at Doylestown, Pa., two English Starlings.—GEORGE LEAR, 2ND.

Doylestown, Pa.—Dec. 26; 3 to 5 P.M. Cloudy; ground frozen; partly covered with snow; wind southeast; temp., 30°. Hairy Woodpecker, 1; Crow, 100; Junco, 12; Song Sparrow, 14; Cardinal, 4; Tufted Titmouse, 1; Robin, 1. Total, 7 species, 133 individuals.—ELIZABETH F. JAMES.

Concordville, Pa.—Dec. 31; 10 A.M. Clear; no wind; temp., 26 to 28°. Red-shouldered Hawk; Downy Woodpecker; Blue Jay; Crow; Goldfinch; Pine Siskin; White-throated Sparrow; Tree Sparrow; Junco; Song Sparrow (singing); Cardinal; Carolina Wren; White-breasted Nuthatch; Tufted Titmouse; Golden-crowned Kinglet; Bluebird. Total, 16 species.—KATHARINE R. and ELIZABETH P. STYER.

Harrisburg, Pa. (Crum Creek, Wallingford and Swarthmore, four miles).—Dec. 25; 10.30 A.M. to 12.30 P.M. Fair; wind strong, west; temp., 30°. Red-tailed Hawk, 2; Sparrow Hawk, 1; Downy Woodpecker, 3; Crow, 12; Meadowlark, 9; Purple Finch, 2; White-throated Sparrow, 6; Tree Sparrow, 5; Junco, 10; Song Sparrow, 1; Fox Sparrow, 3; Cardinal, 4; Winter Wren, 3; Brown Creeper, 4; White-breasted Nuthatch, 1; Tufted Titmouse, 6; Golden-crowned Kinglet, 3. Total, 17 species, 75 individuals.—ARTHUR C. COMEY.

Lititz, Pa. (Northern Lancaster County, Valley of the Hammer Creek).—Dec. 26; 8 A.M. to 5 P.M. Cloudy, with intermittent snow; ground covered with snow; wind east, light; temp., 25°. Bob-white, 1; Ruffed Grouse, 1; Turkey Vulture, 2; Red-tailed Hawk, 4; Sparrow Hawk, 2; Barn Owl, 1; Screech Owl, 1; Downy Woodpecker, 15; Flicker, 2; Horned Lark, 5; Blue Jay, 19; Crow, 90; Meadowlark, 8; Tree Sparrow, 35; Junco, 67; Song Sparrow, 5; Cardinal, 4; White-breasted Nuthatch, 11; Chickadee, 5. Total, 19 species, 278 individuals.—HERBERT H. BECK and ELMER E. KANTZ.

Pittsburgh, Pa.—Dec. 18; 2 to 3.30 P.M. Cloudy; ground covered with snow; no wind; temp., 38°. Downy Woodpecker, 2; Tree Sparrow, 30; Junco, 4; Song Sparrow, 6; Winter Wren, 1; White-breasted Nuthatches, 3; Tufted Titmouse, 4; Black-capped Chickadee, 6. Total, 8 species, 56 individuals. On December 20, we heard a Carolina Wren.—NAOMI WRIGHT.

Pittsburgh, Pa.—Dec. 30; 2 to 5 P.M. Cloudy; ground covered with snow; wind west, light; temp., 30°. Song Sparrow, 12; Cardinal, 2. Total 2 species, 14 individuals.—**MILO H. MILLER.**

Sayre, Pa.—Dec. 25; 3.30 to 5 P.M. Moderate west wind; temp., 24°. Screech Owl, 1 (in town on my return); Crow, 2; Tree Sparrow, 30. Total, 3 species, 33 individuals.—**H. E. BISHOP.**

Sayre, Pa.—Dec. 26; 2.30 to 5 P.M. South wind and snow flurries; temp., 27°. Crow, 6; Meadowlark, 2; Tree Sparrow, 50 (two flocks); Chickadee, 3. Total, 4 species, 61 individuals.—**E. D. HAMMOND and H. E. BISHOP.**

West Chester, Pa.—Dec. 25; 2.30 to 5.30 P.M. Clear; ground partially covered with snow, heavy in low and protected places; brisk west wind, snow melting slightly. Freezing at 5.30 P.M. Turkey Buzzard, 9; Red-tailed Hawk, 5; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 8; Crow, 88; Meadowlark, 1; White-throated Sparrow, 5; Tree Sparrow, 26; Field Sparrow, 1; Junco, 121; Song Sparrow, 16; Cardinal, 2; Brown Creeper, 3; Golden-crowned Kinglet, 6. Total, 15 species, 293 individuals.—**C. E. EHINGER.**

Baltimore, Md. (Druid Hill Park).—Dec. 25; 9 to 11 A.M. Clear, ground nearly covered with snow; wind north, moderate; temp., 29°. Turkey Vulture, 3; Hairy Woodpecker, 1; Crow, 29; Goldfinch, 1; Junco, 5; Cardinal, 1; Carolina Wren, 1; Brown Creeper, 3; Tufted Titmouse, 4; Chickadee, 4; Golden-crowned Kinglet, 7. Total, 11 species, 59 individuals.—**MR. and MRS. G. CLYDE FISHER.**

Baltimore, Md. (Windsor Hills, Valley of Gwynn's Falls, and vicinity).—Dec. 26; 10.20 A.M. to 12.45 P.M. Cloudy; snow about two inches deep, and with heavy crust, but ground bare on southern hillsides; wind south; temp., 32° to 35°. Bob-white, 14 (2 coveys); Turkey Buzzard, 8; Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 1; Crow, 7; Tree Sparrow, 3; Junco, 30; Song Sparrow, 1; Cardinal, 6; Carolina Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 3; Chickadee, 1; Golden-crowned Kinglet, 1. Total, 17 species, 86 individuals.—**JOSEPH N. ULMAN.**

Cambridge, Md.—Dec. 25; 7.45 to 11 A.M. Cloudy at start, shortly clearing, then bright and sunny; ground bare; wind northwest, moderate; temp., 38°. Turkey Vulture, 18; Cooper's Hawk, 1; Red-shouldered Hawk, 1; Downy Woodpecker, 1; American Crow, 65; Red-winged Blackbird, 2; Meadowlark, 35; Purple Grackle, 150, (flock); Goldfinch, 1; White-throated Sparrow, 1; Junco, 125; Song Sparrow, 2; Cardinal, 1; Loggerhead Shrike, 1; Carolina Wren, 1; Mockingbird, 2; Brown Creeper, 4; Tufted Titmouse, 1; Chickadee, 16; Golden-crowned Kinglet, 14; Robin, 1. Total, 21 species, 446 individuals.—**RALPH W. JACKSON.**

Jennings, Md.—Dec. 26; 8.15 A.M. to 1 P.M. and 2.15 to 4 P.M. Wind west; eighteen inches snow; temp., 33°. Hairy Woodpecker, 1; Downy Woodpecker, 2; Pileated Woodpecker, 1; Blue Jay, 1; Crow, 2; Junco, 11; Cardinal, 1; White-breasted Nuthatch, 9; Chickadee, 8. Total, 9 species, 27 individuals.—**HERMAN BEHR.**

Accotink, Va.—Dec. 25. On a drive of seven miles in the A.M. Time, one hour. Fair; ground partly covered with snow; wind northwest, moderate; temp., 28°. Turkey Buzzard, 4; Sharp-shinned Hawk, 1; Hairy Woodpecker, 1; American Crow, 17; Junco, 43; Cardinal, 1; Mockingbird, 1; Bluebird, 1. Total, 8 species, 69 individuals.—**DR. and MRS. WM. P. CATON.**

Bowers Hill, Norfolk Co., Va.—Dec. 25; 9.35 A.M. to 2 P.M. Clear; ground bare; strong northwest wind; temp., 33°. Mourning Dove, 4; Turkey Vulture, 5; Marsh Hawk, 1; Sparrow Hawk, 1; Flicker, 2; Crow, 5; Red-winged Blackbird, 13; Goldfinch, 14; Savannah Sparrow, 1; White-throated Sparrow, 12; Field Sparrow, 14; Junco, 1; Song Sparrow, 11; Swamp Sparrow, 6; Fox Sparrow, 15; Towhee, 4; Cardinal, 2; Pipit, 5; Mockingbird, 2; Catbird, 3; Brown Thrasher, 3; Carolina Wren, 11; Tufted Titmouse,

5; Chickadee, 3; Hermit Thrush, 3; Bluebird, 2. Total, 26 species, 148 individuals.—
MERRIAM G. LEWIS.

King William Co., Va.—Dec. 27; 9 to 10 A.M. Bright and sunny. Downy Wood-pecker, 1; Yellow-bellied Sapsucker, 1; Flicker, 1; Blue Jay, 2; Goldfinch; White-throated Sparrow; Junco; Winter Wren, 1; Tufted Titmouse; Chickadee; Kinglet; Bluebird, 4. Total, 12 species.—ELIZABETH HAWES RYLAND.

Pulaski, Va.—Dec. 25; 2:30 to 5 P.M. Clear; ground principally bare; wind west, light; temp., 48°. Killdeer, 2; Bob-white, 8; Turkey Vulture, 60; Meadowlark, 2; Savannah Sparrow, 14; Chipping Sparrow, 6; Junco, 18; Cardinal, 2; Pine Warbler, 1; Winter Wren, 1; Tufted Titmouse, 3. Total, 11 species, 117 individuals.—O. C. BREWER.

Louisburg, N. C.—Dec. 26; 8 A.M. to 2 P.M. Clear; ground bare; wind light; temp., 68°. Bob-white, 10; Turkey Buzzard, 20; Flicker, 3; Blue Jay, 4; Crow, 4; White-throated Sparrow, 40; Meadowlark, 15; Junco, 140; Bluebird, 20. Total, 9 species, 256 individuals.—JOSEPH C. JONES.

Charleston, S. C.—Dec. 23; 8 A.M. to 4 P.M. Cloudy and damp; ground bare; wind light, from the east. Horned Grebe, 1; Lesser Scaup Duck, 3; Great Blue Heron, 1; Louisiana Heron, 1; Clapper Rail, 4; Killdeer, 1; Bob-white, 3; Wild Turkey, 1; Mourning Dove, 100; Turkey Buzzard, 4; Black Vulture, 5; Red-tailed Hawk, 1; Sparrow Hawk, 1; Southern Hairy Woodpecker, 1; Southern Downy Woodpecker, 1; Yellow-bellied Sapsucker, 2; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 3; Flicker, 3; Phoebe, 5; Blue Jay, 12; Crow, 500; Red-winged Blackbird, 9; Meadowlark, 1; Boat-tailed Grackle, 4; Vesper Sparrow, 20; Savannah Sparrow, 1; White-throated Sparrow, 10; Field Sparrow, 100; Song Sparrow, 20; Towhee, 50; White-eyed Towhee, 1; Cardinal, 4; Cedar Waxwing, 25; Loggerhead Shrike, 4; Myrtle Warbler, 25; Pine Warbler, 3; Southern Yellow-throat, 1; Titlark, 60; Mockingbird, 10; Catbird, 1; Brown Thrasher, 6; Carolina Wren, 1; Winter Wren, 3; Ruby-crowned Kinglet, 3; Hermit Thrush, 1; Robin, 2; Bluebird, 1. Total, 48 species, 974 individuals.—EDWARD A. HYER.

Mt. Pleasant, S. C.—Dec. 29; 9:30 A.M. to 6 P.M. Day partly cloudy and warm. Herring Gull, 2; Great Blue Heron, 1; Clapper Rail, 10; American Coot, 1; Woodcock, 2; Killdeer, 4; Bob-white, 16; Mourning Dove, 50; Turkey Buzzard, 4; Black Vulture, 4; Marsh Hawk, 2; Bald Eagle, 1; Red-tailed Hawk, 1; Florida Red-shouldered Hawk, 3; Sparrow Hawk, 1; Kingfisher, 2; Southern Downy Woodpecker, 1; Red-cockaded Woodpecker, 4; Pileated Woodpecker, 2; Red-bellied Woodpecker, 3; Flicker, 5; Whip-poor-will, 1; Phoebe, 6; Blue Jay, 6; Common Crow, 200; Red-winged Blackbird, 40; Boat-tailed Grackle, 5; Meadowlark, 50; Goldfinch, 20; Vesper Sparrow, 100; Savannah Sparrow, 100; White-throated Sparrow, 200; Junco, 30; Song Sparrow, 400; Swamp Sparrow, 100; Chewink, 20; Cardinal, 5; Loggerhead Shrike, 1; Myrtle Warbler, 500; Southern Yellow-throat, 2; Pipit, 40; Mockingbird, 3; Catbird, 1; Brown Thrasher, 1; Carolina Wren, 10; House Wren, 3; Brown-headed Nuthatch, 2; Tufted Titmouse, 2; Ruby-crowned Kinglet, 12; Golden-crowned Kinglet, 3; Hermit Thrush, 6; Bluebird, 3. Total, 52 species, approximately 2,000 individuals.—FRANCIS M. WESTON, JR.

Coronado Beach, Fla.—Dec. 26; 7 to 9 A.M. and from 1 to 5 P.M. Clear; wind light, from northeast; temp., 60°. Laughing Gull, 1; Bonaparte's Gull, 1; Caspian Tern, 25; Royal Tern, 10; Forster's Tern, 50; Brown Pelican, 3; American Scaup Duck, 1; Wood Ibis, 1; Ward's Heron, 6; Louisiana Heron, 14; Little Blue Heron, 15; Wayne's Clapper Rail, 1; Sanderling, 15; Killdeer, 1; Ground Dove, 10; Turkey Vulture, 13; Black Vulture, 7; Marsh Hawk, 2; Florida Red-shouldered Hawk, 1; Bald Eagle, 1; Sparrow Hawk, 1; Osprey, 2; Belted Kingfisher, 7; Phoebe, 2; Florida Blue Jay, 1; Florida Jay, 3; Florida Crow, 2; Florida Meadowlark, 2; Scott's Seaside Sparrow, 5; Dusky Seaside Sparrow (positively identified), 5; White-eyed Towhee, 13; Florida Cardinal, 17; Blue-headed Vireo, 1; Myrtle Warbler, small flocks all over the district; Louisiana Water Thrush, 4; Florida Yellow-throat, 1; Mockingbird, 15; Catbird, 12; House Wren, 7;

Long-billed Marsh Wren, 1; Blue-gray Gnatcatcher, 30. Total, 41 species, 282 individuals, excluding the Myrtle Warblers, whose number we were unable even to approximate.—RAY H. VROOMAN and R. J. LONGSTREET.

Daytona Beach, Fla.—Dec. 27; 8.30 to 11.30 A.M. Clear; ground bare; wind east, light; temp., 60°. Bonaparte's Gull, 10; Brown Pelican, 20; Ward's Heron, 1; Little Blue Heron, 5; Killdeer, 18; Turkey Vulture, 100 (estimated); Black Vulture, 40 (estimated); Sparrow Hawk, 2; Belted Kingfisher, 3; Red-cockaded Woodpecker, 3; Red-bellied Woodpecker, 4; Flicker, 1; Phœbe, 8; Florida Blue Jay, 2; Florida Jay, 4; Florida Crow, 1; Meadowlark, 8; Florida Grackle, 12; White-eyed Towhee, many; Florida Cardinal, 7; Tree Swallow, 5; Loggerhead Shrike, 25; Myrtle Warbler, 1; Palm Warbler, 5; Pipit, 14; Mockingbird, 50; House Wren, 1; Brown-headed Nuthatch, 6. Total, 28 species, 356 individuals.—MISS SARAH A. BEACH and MRS. H. A. AINSWORTH.

Jacksonville, Fla.—Dec. 26; 10.30 A.M. to 1 P.M.; 2.30 to 5 P.M. Clear; ground bare; light northeast breeze; temp., 68°. Killdeer, 7; Bob-white (heard); Ground Dove, 4; Turkey Buzzard, 6; Black Vulture, 14; Blue Jay, 1; Meadowlark, 31; Vesper Sparrow, 6; White-throated Sparrow, 1; Chipping Sparrow, 7; Field Sparrow, 6; Song Sparrow, 3; Towhee, 1; Cardinal, 2; Tree Swallow, 1; Loggerhead Shrike, 6; Myrtle Warbler, 11; Palm Warbler, 8; Maryland Yellow-throat, 2; American Pipit, 19; Mockingbird, 6; Brown Thrasher, 2; Carolina Wren, 1; House Wren, 1; Ruby-crowned Kinglet, 1. Total, 25 species, about 150 individuals.—MRS. MARY GRANGER MILLS.

Jacksonville, Fla. (City Parks).—Dec. 25; 9.30 A.M. to 1 P.M.; 3 to 5 P.M. Clear; ground bare; light northeast breeze; temp., 55°. Pied-billed Grebe, 1; small Gull (species not determined), 6; American Golden-eye, 1; Killdeer, 11; Turkey Buzzard, 22; Black Vulture, 44; Belted Kingfisher, 1; Red-headed Woodpecker, 1; Flicker, 1; Phœbe, 1; Blue Jay, 5; Meadowlark, 4; Vesper Sparrow, 1; White-throated Sparrow, 6; Song Sparrow, 3; Towhee, 1; Tree Swallow, 7; Loggerhead Shrike, 5; Palm Warbler, 5; Maryland Yellow-throat, 1; American Pipit, 15; Mockingbird, 3; Carolina Wren, 2; House Wren, 2; Ruby-crowned Kinglet, 2; Blue-gray Gnatcatcher, 1. Total, 26 species, 152 individuals.—HERBERT R. MILLS.

Palma Sola, Fla.—Dec. 26; all day. Clear; calm; temp., 52°. Laughing Gull, 50; Royal Tern, 30; Florida Cormorant, 7; Brown Pelican, 50; Blue-winged Teal, 30; Lesser Scaup Duck, 25; Great Blue Heron, 5; Louisiana Heron 3; Spotted Sandpiper, 1; Killdeer, 5; Ground Dove, 12; Turkey Vulture, 10; Black Vulture, 3; Marsh Hawk, 1; Bald Eagle, 2; Sparrow Hawk, 1; Screech Owl, 1; Belted Kingfisher, 1; Red-bellied Woodpecker, 4; Flicker, 2; Phœbe, 1; Florida Blue Jay, 20; Florida Red-wing, 5; Goldfinch, 25; White-eyed Towhee, 5; Cardinal, 3; Loggerhead Shrike, 1; Myrtle Warbler, 50; Palm Warbler, 50; Prairie Warbler, 4; Southern Yellow-throat, 1; Mockingbird, 25; Marian Marsh Wren, 2; Ruby-crowned Kinglet, 2; Blue-gray Gnatcatcher, 2; Robin, 100. Total, 36 species, 536 individuals.—CARLOS EARLE.

Dublin, Ind.—Dec. 27; 7 to 7.30 A.M. Edge of village, from kitchen window, looking over feeding-ground and tray. Frosty, snow on ground; wind northwest, light; temp., 16°. Downy Woodpecker, 1; Blue Jay, 2; Junco, 4; Cardinal, 2 (a pair); Carolina Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 4; Chickadee, 2. Total, 8 species, 18 individuals.—ALICE H. CRULL.

Fort Wayne, Ind.—Dec. 30; 7.30 A.M. to 12.30 P.M. Cloudy; two inches of snow on ground; wind west, light; temp., 24°. Bob-white, 6; Cooper's Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 13; Crow, 15; Tree Sparrow, 62; Junco, 10; Song Sparrow, 2; White-breasted Nuthatch, 1; Black-capped Chickadee, 2. Total, 12 species, 116 individuals.—CHAS. A. S. STOCKBRIDGE and A. A. RINGWALT.

Indianapolis, Ind.—Dec. 26; 9 to 11.30 A.M. Clear; ground covered with snow; wind brisk, southwest; temp., 35°. Red-tailed Hawk, 1; Downy Woodpecker, 1; Blue

Jay, 1; Crow, 8; Field Sparrow, 2; Junco, 36; Song Sparrow, 6. Total, 7 species, 55 individuals.—ELLIOTT R. TIBBETS.

Richmond, Ind.—Dec. 26; 9 A.M. to 12 M. Clear; ground covered with four inches of snow; wind light, northwest, sky cloudless; temp., 28 to 38°. Downy Woodpecker, 2; Yellow-bellied Sapsucker, 1; Blue Jay, 4; Crow, 26; Grackle, 8; Tree Sparrow (four flocks); Junco, 100; Song Sparrow, 5; Cardinal, 10; Brown Creeper, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 2; Chickadee, 40; Golden-crowned Kinglet. Total, 14 species, 205 individuals.—MR. and MRS. W. H. BAXTER, and MR. and MRS. P. B. COFFIN.

Attica, Ohio.—Dec. 24; 12 M to 4 P.M. Clear; ground covered with snow; wind south, brisk; temp., 32°. Bob-white, 40; Mourning Dove, 3; Hairy Woodpecker, 6; Red-bellied Woodpecker, 1; Flicker, 4; Blue Jay, 3; Song Sparrow, 8; White-breasted Nuthatch, 5; Tufted Titmouse, 8; Black-capped Chickadee, 10. Total, 10 species, 88; individuals.—ROLLA LOZIER.

Canton, Ohio.—Dec. 26; 7.30 A.M. to 12 M. Distance covered eight miles; snow on ground; wind south-southwest. Cloudy, clearing to bright sunshine; temp., 30° to 36°. Downy Woodpecker, 4; Blue Jay, 1; Tree Sparrow, 160; Junco, 50; Song Sparrow, 10; Cardinal, 60; White-breasted Nuthatch 11; Tufted Titmouse, 38; Chickadee, 58. Total, 9 species, 392 individuals.—JAMES A. CALHOUN and EDWARD JACOT.

Canton, Ohio.—Dec. 25; 7 A.M. to 3 P.M. Cloudy; two inches of snow; wind southwest, light in morning, growing rather strong in afternoon; temp., 20°. Downy Woodpecker, 6; Red-bellied Woodpecker, 1; Blue Jay, 5; Goldfinch, 1; Tree Sparrow, 150; Junco, 40; Song Sparrow, 8; Cardinal, 21; Brown Creeper, 1; White-breasted Nuthatch, 12; Tufted Titmouse, 27; Black-capped Chickadee, 14 (one singing his *phe-be* song); Golden-crowned Kinglet, 2. Total, 13 species, 288 individuals.—EDWARD D. KIMES.

Lisbon, Ohio.—Dec. 26; 10 A.M. to 1 P.M. Three mile walk; Cloudy, gradually clearing; ground icy; wind southwest, brisk; temp., 25°. Downy Woodpecker, 3; Blue Jay, 2; Tree Sparrow, 1; Junco, 20; Song Sparrow, 4; Cardinal, 3; White-breasted Nuthatch, 5; Tufted Titmouse, 2; Black-capped Chickadee, 4. Total, 9 species, 44 individuals.—C. A. WHITE and ROBERT J. HOLE.

Cadiz, Ohio.—Dec. 19; 9.40 A.M. to 1.40 P.M. Part cloudy to cloudy, with light rain; three inches of snow; wind southwest; temp., 37°, 40°, 37°. Bob-white, 3 (and tracks of others); Cooper's Hawk, 1; Red-tailed Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; Red-bellied Woodpecker, 3; Prairie Horned Lark, 50; Crow, 3; Tree Sparrow, 25; Junco, 25; Song Sparrow, 1; Cardinal, 4; White-breasted Nuthatch, 7; Tufted Titmouse, 15; Chickadee, 8. Total, 15 species, 153 individuals. This is my tenth consecutive Christmas Bird Census.—HARRY B. McCONNELL.

Cleveland, Ohio.—Dec. 26; 12.30 to 3.30 P.M. Wind northwest, brisk; six inches of snow; temp., 37° to 32°. Cloudy; distance walked, eight miles. Downy Woodpecker, 1; Crow, 1; Tree Sparrow, 16; Cardinal, 2; White-breasted Nuthatch, 1. Total, 5 species, 21 individuals.—SHERIDAN F. WOOD.

Delaware, Ohio.—Dec. 25. Clear; ground covered with snow; distance covered about two miles; temp., 22°. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Red-bellied Woodpecker, 2; Blue Jay, 1; Crow, 10; Goldfinch, 12; Tree Sparrow, 3; Junco, 2; Song Sparrow, 4; Cardinal, 8; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 6; Chickadee, 5; Tufted Titmouse, 5. Total, 17 species, 56 individuals.—H. H. HIPPLE.

Lockbourne, Ohio.—Dec. 25; 10.30 A.M. to 12 M. Cloudy; ground covered with snow and ice; brisk, cold, southwest wind; temp., 20°. Blue-tailed Hawk, 1; Blue Jay, 1; Crow, about 225 (flock); Song Sparrow, 6; Cardinal, 3; Marsh Wren, 4; Tufted Titmouse, 8; Golden-crowned Kinglet, 1. Total, 8 species, 249 individuals.—ALBERT R. SHADLE.

Madison, Lake Co., Ohio.—Dec. 25; 10 A.M. to 12 M. Cloudy; snow flurries; light southwest wind; ground covered by six to eight inches of snow; streams open; temp., 22° to 26°. Walked north from village over fields and woods in bottom land. Bob-white, 5; (flock); Sparrow Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 10; Red-bellied Woodpecker, 2; Flicker, 1; Junco, 1; Cardinal, 3; White-breasted Nuthatch, 8; Tufted Titmouse, 1; Chickadee, 15. Total, 12 species, 50 individuals.—CARL C. LAWSON

Madison, Lake Co., Ohio.—Dec. 26; 10.30 A.M. to 12.30 P.M. Cloudy early; clear until noon; cloudy P.M. Brisk southwest wind; temp., 30 to 38°. Bob-white, 6 (flock); Barred Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 4; Red-bellied Woodpecker, 1; Flicker, 1; Tree Sparrow, 9 (flock); Brown Creeper, 1; White-breasted Nuthatch, 5; Red-breasted Nuthatch, 1; Chickadee, 25. Total, 11 species, 55 individuals.—MR. and MRS. CARL C. LAWSON and MRS. A. W. FEACHOUT.

Millersburg, Ohio.—Dec. 27; 8.30 A.M. to 2.30 P.M. To a point three miles south of town and return. Cloudy and foggy in A.M., cleared up in P.M., wind from south, strong and raw in A.M., quieted down in P.M.; temp., 25° to 35°. Some snow and ice on ground. Hairy Woodpecker, 1; Downy Woodpecker, 11; Horned Lark, 3; Goldfinch, 3; Tree Sparrow, 11; Song Sparrow, 12; Cardinal, 35, (20 in a flock); Carolina Wren, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 25; Black-capped Chickadee, 7; Bluebird, 2. Total, 12 species, 216 individuals.—RUSKIN S. FREER.

New Paris, Ohio.—Dec. 26; 10 A.M. to 3 P.M. Clear; three inches snow; west wind, light; temp., 30°. Bob-white, 5; Mongolian Pheasant, 2; Sharp-shinned Hawk, 4; Red-shouldered Hawk, 2; Downy Woodpecker, 2; Horned Lark, 5; Blue Jay, 2; Pine Siskin, 2; Tree Sparrow, 6; Junco, 48; Song Sparrow, 23; Cardinal, 11; Black-capped Chickadee, 13; White-breasted Nuthatch, 6; Golden-crowned Kinglet, 2; Bewick's Wren, 2; Carolina Wren, 4; Tufted Titmouse, 8. Total, 18 species, 147 individuals.—W. H. WISMAN.

Salem, Ohio.—Dec. 25; 7 to 10 A.M. Cloudy; temp., 19 to 22°. Distance walked six miles. Hairy Woodpecker, 3; Downy Woodpecker, 4; Blue Jay, 3; Goldfinch, 6; Cardinal, 7; White-breasted Nuthatch, 9; Tufted Titmouse, 5. Total, 7 species, 37 individuals.—H. W. WEISGERBER.

Salem, Ohio.—Dec. 26; 7 A.M. to 12 M. Cloudy; ground covered with snow; wind south; temp., 30° to 38°. Miles walked, fifteen. The territory was divided between the observers and the several lists combined. Ruffed Grouse, 1; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 4; Goldfinch, 20; Tree Sparrow, 52; Junco, 17; Song Sparrow, 1; Cardinal, 6; White-breasted Nuthatch, 10; Tufted Titmouse, 2; Black-capped Chickadee, 4. Total, 14 species, 123 individuals.—MISS FIELD and MISS EDNEY'S, MR. COOPER and H. W. WEISGERBER.

Sidney, Ohio.—Dec. 25; 8.45 to 9.30 A.M. and 11.45 A.M. to 12.30 P.M. Drive of six miles through the country. Clear; still; heavy frost; three inches of snow; temp., at starting, zero; returning, 15°. Turkey Vulture, 7; Red-tailed Hawk (?), 1; Flicker, 1; Prairie Horned Lark, 23; Crow, (estimated) 400; Junco, 15; Song Sparrow, 4; Cardinal, 1. Total, 8 species, 452 individuals. (The Crows and Turkey Vultures were feeding close to a slaughter house).—FARIDA A. WILEY.

Xenia, Ohio.—Dec. 26; 7 to 11 A.M., 4 to 5 P.M. Clear; about two inches of snow; wind southwest; temp., 38°. Mourning Dove, 18; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 2; Blue Jay, 1; Crow, 5; Song Sparrow, 1; Cardinal, 2; White-breasted Nuthatch, 1; Tufted Titmouse, 2. Total, 10 species, 35 individuals. On December 17, a Robin and a Bronzed Grackle, and on December 25; two Carolina Wrens and two Brown Creepers were seen.—ETTA G. McELWAIN.

Youngstown, Ohio.—Dec. 26; 7 A.M. to 3.30 P.M. Partly clear; ground covered with snow; wind south, and later west; temp., 30 to 38°. Miles walked, about fifteen. Red-legged Black Duck, 2; Bob-white, 35; Ruffed Grouse, 2; Barred Owl, 1; Hairy

Woodpecker, 5; Downy Woodpecker, 5; Blue Jay, 15; Goldfinch, 12; Tree Sparrow, 8; Junco, 56; Song Sparrow, 4; Cardinal, 8; Carolina Wren, 2; White-breasted Nuthatch, 14; Tufted Titmouse, 3; Black-capped Chickadee, 15; Golden-crowned Kinglet, 7. Total, 17 species, 194 individuals.—GEO. L. FORDYCE.

Ann Arbor, Mich. to Chicago, Ill., via Interurban and Grand Trunk.—Dec. 21; 7.15 A.M. to 4 P.M. Snow flurries, becoming clear; northwest wind; temp., 16 to 30°. Southern Michigan.—Snow eight to fourteen inches deep. Red-tailed Hawk, 2; Hairy Woodpecker, 1; Blue Jay, 1; Crow, 95; Tree Sparrow, 4; White-breasted Nuthatch, 2. Northern Indiana.—Snow, locally one to six inches. Kingfisher, 1; Hairy Woodpecker, 1; Prairie Horned Lark, 215; Crow, 186; Goldfinch, 12. Total, 9 species, 510 individuals.—FRANK C. GATES.

Detroit, Mich.—Dec. 26; 9.40 A.M. to 12.30 P.M. Cloudy; ten inches of snow; wind westerly, light; temp., 20°. Territory covered, one and a half miles. Herring Gull, 3; Red-tailed Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 31; Crow, 500; Tree Sparrow, 2; White-breasted Nuthatch, 2; Chickadee, 1; Tufted Titmouse, 1. Total, 10 species, 545 individuals.—JEFFERSON BUTLER.

Grand Junction, Mich.—Dec. 27; 1 to 3.30 P.M. Fair, snow ten inches, drifted in many places to several feet; wind southwest, light; temp., 38°. Sleigh-ride and distance walked eight miles. Bob-white, 8; Hairy Woodpecker, 1; Crow, 25; Chickadee, 1. Total, 4 species, 35 individuals.—BERTHA E. SHAW.

Kalamazoo, Mich.—Dec. 26; 9 A.M. to 12 M. Cloudy; snow everywhere; wind west, strong; temp., 28°. Hairy Woodpecker, 2; Blue Jay, 1; Crow, 5; Tree Sparrow, 10; Junco, 30; White-breasted Nuthatch, 3; Chickadee, 12. Total, 7 species, 63 individuals.—WM. E. PRAEGER.

New Buffalo, Mich.—Dec. 26; 9 to 11.30 A.M. and 1.30 to 3.30 P.M. Cloudy in forenoon, clearing in afternoon; ground covered with three inches of snow; wind southwest, rather strong; temp., 24 to 28°. Herring Gull, 5; Ruffed Grouse, 1; Downy Woodpecker, 3; Blue Jay, 5; Crow, 8; Redpoll, about (flock); Tree Sparrow, 3; Cardinal, 6; Bohemian Waxwing, 28 (flock); White-breasted Nuthatch, 2; Chickadee, 1. Total, 11 species, 82 individuals. Bohemian Waxwings have been seen frequently this winter in localities around the south end of Lake Michigan.—F. A. PENNINGTON.

South Haven, Mich.—Dec. 27; 10 A.M. to 12 M. Clear; six inches snow; wind southwest, light; temp., 45°. Flicker, 1; Cardinal, 5; Chickadee, 4. Total, 3 species, 10 individuals.—MRS. A. D. WILLIAMS.

Baraboo, Wis.—Dec. 25; 11.30 A.M. to 2.30 P.M. Cloudy; ground snow-covered wind southeast, strong; temp., 15°. Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 6; Redpoll, 15; White-breasted Nuthatch, 2; Black-capped Chickadee, 3. Total, 6 species, 29 individuals.—DOUGLAS MABBOTT.

Cottage Grove, Wis.—Dec. 27; 7 A.M. to 5 P.M. Sky clear; wind southwest, six miles an hour; temp., 30° to 45°. Bob-white, 1; Downy Woodpecker, 1; Blue Jay, 2; Crow, 17; Pine Siskin, about 100; Tree Sparrow, about 30; Northern Shrike, 1; Red-breasted Nuthatch, 2; Chickadee, 4. Total, 9 species, 158 individuals.—JOHN E. MELLISH.

Elkhorn, Wis.—Dec. 26; 1 to 4 P.M. Clear; ground covered with snow; wind south; temp., 42°. Bob-white, 12; Hairy Woodpecker, 1; Downy Woodpecker, 5; Blue Jay, 1; Crow, 100; Redpoll, 23; Junco, 1; Northern Shrike, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 4. Total, 10 species, 150 individuals.—HELEN MARTIN and SARAH FRANCIS.

Elkhorn, Wis.—Dec. 27; 2 to 4 P.M. Clear; ground snow-covered, thawing; no wind; temp., 42°. American Coot, 1 (this bird had strayed into a farm yard two or three days previous to this date; did not seem to be disabled). Hairy Woodpecker, 2; Downy Woodpecker, 5; Crow, 12; Redpoll, 19; Bohemian Waxwing, 13; White-breasted

Nuthatch, 2; Chickadee, 2; Golden-crowned Kinglet, 1. Total, 9 species, 57 individuals.
 SARAH FRANCIS, MABEL BECKWITH, CORA HENDERSON and MRS. R. G. HOFFMAN.

Hartland, Wis. (Along wooded shores of Beaver Lake).—Dec. 24; 9 A.M. to 4 P.M. Partly cloudy; eight inches of snow; wind west; temp., 17°. Downy Woodpecker, 5; Blue Jay, 8; Crow, 4; Goldfinch, 9; Tree Sparrow, 5; White-breasted Nuthatch, 3; Black-capped Chickadee, 2. Total, 7 species, 36 individuals.—SUSIE L. SIMONDS.

Lake Geneva, Wis.—Dec. 23; early afternoon; wind light; ground snow-covered. Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Brown Creeper, 3; White-breasted Nuthatch, 2; Chickadee, 7; Ruby-crowned Kinglet, 5. Total, 7 species, 22 individuals. (The second time I have seen the Ruby crowns in winter).—EUGENIA CHAPMAN GILLETTE.

Mayville, Wis.—Dec. 25; 10 A.M. to 2 P.M. Clear; four inches of snow; wind northwest, light; temp., 25°. Kingfisher, 1; Downy Woodpecker, 1; Blue Jay, 2; Crow, 1; Meadowlark, 1; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 1; Chickadee, (heard). Total, 8 species, about 10 individuals.—MR. and MRS. E. A. ROSS, MISSES MYRTICE E. and VINNIE B. CLARK.

Milwaukee, Wis.—Dec. 25; 8 A.M. to 12 M. Ground snow-covered; wind brisk, northwest; temp., 16°. Herring Gull, 200; Merganser, 90; Red-breasted Merganser, 60, Old Squaw, 500; White-winged Scoter, 7; Horned Lark, 5; Redpoll, 7; Snow Bunting; 20; Lapland Longspur, 4. Total, 9 species, 891 individuals.—E. L. HAUERWAS.

Milwaukee, Wis.—Dec. 27; 9 A.M. to 1 P.M. Clear and bright; ground covered with light snow; wind west, very light; temp., 28°. Herring Gull, 650; Mallard, 14; Golden-eye, 39; Old Squaw, 1; Downy Woodpecker, 1; Blue Jay, 1; Crow, 1; Robin, 1. Total 8 species, 708 individuals.—I. N. MITCHELL, W. H. CHEER, L. T. GOULD, F. W. ELLS, REV. J. OASTLER and S. A. LEONARD.

Sheboygan Falls to Sheboygan, Wis.—Dec. 26; 9 A.M. to 5 P.M. Clear; wind west; ground covered with snow; temp., 25°. Herring Gull, 50; Ring-billed Gull, 6; American Merganser, 200; Lesser Scaup Duck, 8; American Golden-eye, 10; Old Squaw, 100; Downy Woodpecker, 4; Crow, 25; Blue Jay, 2; Redpoll, 12; Northern Shrike, 2; Chickadee, 6. Total, 12 species, 425 individuals.—JAMES SANFORD and R. W. RICHARDSON.

Superior, Wis.—Dec. 25; 10.30 A.M. Snowing steadily. Snow Bunting, 12. Total 1 species, 12 individuals.—A. L. RHODES.

Tomahawk, Lincoln Co., Wis.—Dec. 27; 8 A.M. to 4.30 P.M. Cloudy; six inches of snow; wind northwest, light; temp., 20°. Downy Woodpecker, 1; Blue Jay, 3; Redpoll, 20; Brown Creeper, 2; Chickadee, 8. Total, 5 species, 34 individuals.—MRS. and MR. R. G. LEE and CHESTER HUNZIKER.

Walworth, Wis.—Dec. 26; 11 A.M. to 2 P.M. Clear; ground covered with snow; wind west, strong; temp., 26°. Canada Goose, 40; Hairy Woodpecker, 1; Blue Jay, 3; Crow, 4; Redpoll, 26; Tree Sparrow, 45; White-breasted Nuthatch, 2; Chickadee, 4. Total, 8 species, 125 individuals.—CARLY H. RIPLEY.

Wauwatosa, Wis.—Dec. 27; 9 A.M. to 4 P.M. Bright; snow on ground; wind southwest, light; temp., 35°. Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 12; Crow, 9; Redpoll, 2; Pine Siskin, 18; Junco, 17; Loggerhead Shrike, 1; White-breasted Nuthatch, 2; Chickadee, 1; Robin, 1. Total, 13 species, 70 individuals. Saw Red-winged Blackbird on 26th.—ESTHER TENNYSON.

Whitewater, Wis.—Dec. 26; 8 A.M. to 5 P.M. Wind southwest, light; ground covered to a depth of several inches; temp., 23°. Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 6; Crow, 5; Golden-crowned Kinglet, 10. Total, 7 species, 25 individuals.—FLORENCE L. ESTERLY.

Westfield, Wis.—Dec. 22; 9 A.M. to 1 P.M. Cloudy, three inches snow; wind southeast; temp., 24°. Hairy Woodpecker, 1; Red-headed Woodpecker, 2; Blue Jay, 10; Crow, 1; Redpoll, 21; Tree Sparrow, 6; Junco, 9; White-breasted Nuthatch, 4;

Chickadee, 3; Golden-crowned Kinglet, 2. Total, 10 species, 59 individuals.—PATIENCE NESBIT.

Chicago, Ill. (Desplains River in Leyden township and Graceland Cemetery and shore of Lake Michigan in Buena Park).—Dec. 24; 8 A.M. to 3 P.M. Cloudy; wind west, light; snow on ground half to three inches deep; temp., 8° to 18°. Herring Gull, 3; American Merganser, 15; Hairy Woodpecker, 2; Prairie Horned Lark, 15; Blue Jay, 1; Crow, 23; Evening Grosbeak, 4; Purple Finch, 45; Redpoll, 10; Goldfinch, 34; Lapland, Longspur, 60; Tree Sparrow, 42; Junco, 27; Brown Creeper, 1. Total, 14 species, 282 individuals.—FRANK C. GATES and WM. S. GATES, JR.

Milford, Ill.—Dec. 26; 9 A.M. to 3 P.M. Traces of snow; morning cloudy, afternoon clear; wind west, light; temp., 25 to 30°. Bob-white, 26; Prairie Hen, 8; Cooper's Hawk, 1; Red-tailed Hawk, 1; Rough-legged Hawk, 7; Sparrow Hawk, 1; Short-eared Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 8; Red-bellied Woodpecker, 3; Flicker, 22; Blue Jay, 2; Crow, 44; Purple Finch, 4; Goldfinch, 2; Lapland Longspur, 125; Tree Sparrow, 8; Junco, 64; Song Sparrow, 3; Towhee, 1; Cardinal, 6; Carolina Wren, 2; Brown Creeper, 7; White-breasted Nuthatch, 13; Tufted Titmouse, 18; Black-capped Chickadee, 7; Golden-crowned Kinglet, 2. Total, 27 species, 390 individuals.—H. C. HENDERSON.

Springfield, Ill. (Oak Ridge Cemetery).—Dec. 24; 8 to 11 A.M. Clear; ground bare; brisk north wind; temp., 9° to 15°. Screech Owl, 1; Downy Woodpecker, 1; Flicker, 1; Crow, 3; Junco, 50; Brown Creeper, 8; White-breasted Nuthatch, 1; Golden-crowned Kinglet, 2. Total, 8 species, 67 individuals.—BESSIE M. PRICE.

Rantoul, Ill.—Dec. 25; 7 A.M. to 1 P.M. Cloudy; dash of snow on ground; wind southeast brisk; temp., 10° to 20°. Bob-white, 1; Mourning Dove, 1; Marsh Hawk, 1; Red-tailed Hawk, 4; Barn Owl, 2; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 14; Red-bellied Woodpecker, 1; Flicker, 6; Horned Lark, 50; Prairie Horned Lark, 13; Blue Jay, 2; Crow, 39; Red-winged Blackbird, 2; Lapland Longspur, 80; Tree Sparrow, 220; Junco, 108; Song Sparrow, 2; Cardinal, 17; Northern Shrike, 1; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 43; Red-breasted Nuthatch, 9; Tufted Titmouse, 36; Black-capped Chickadee, 20; Golden-crowned Kinglet, 8. Total, 29 species, 689 individuals.—GEORGE E. EKBLAW and W. ELMER EKBLAW.

Rockford, Ill.—Dec. 30; 12.30 to 4.30 P.M. Clear; ground covered with about six inches of snow; wind southeast, light; temp., 15°. Hairy Woodpecker, 1; Downy Woodpecker, Red-bellied Woodpecker, 1; Crow, 1; American Crossbill, 12; White-winged Crossbill, 2; Junco, 1; White-breasted Nuthatch, 3. Total, 8 species, 22 individuals.—JENNIE E. WALDO, LOTTIE B. GREGORY, and EDITH P. SOVEREIGN.

Rock Island, Ill.—Dec. 26; 9.45 A.M. to 12.25 P.M. Clear; a little snow in protected places; wind west, light; temp., 25° to 31°. American Golden-eye, 4; Bob-white, 25; Downy Woodpecker, 6; Blue Jay, 2; Crow, 6; Tree Sparrow, 125; Junco, 125; Northern Shrike, 1; Cardinal, 8; Brown Creeper, 4; White-breasted Nuthatch, 10; Chickadee, 25. Total, 12 species, 341 individuals.—B. H. WILSON.

White Heath, Piatt county, Ill.—Dec. 18; 10 A.M. to 2.30 P.M. Cloudy; ground bare; wind strong from west; temp., 31°. Marsh Hawk, 1; Red-tailed Hawk, 3; Sparrow Hawk, 1; Hairy Woodpecker, 6; Downy Woodpecker, 15; Red-bellied Woodpecker, 3; Flicker, 3; Prairie Horned Lark, 16; Blue Jay, 1; Crow, 17; Tree Sparrow, 87; Junco, 14; Song Sparrow, 1; Cardinal, 17; Loggerhead Shrike, 1; Carolina Wren, 1; Brown Creeper, 9; White-breasted Nuthatch, 8; Tufted Titmouse, 18; Chickadee, 35; Golden-crowned Kinglet, 14. Total, 21 species, 301 individuals.—NEWTON L. PARTRIDGE.

Minneapolis, Minn. (North Common to Mount Pilgrim).—Dec. 25; 10.30 A.M. to 12.30 P.M. Dark and cloudy; snowing heavily; five inches of snow, trees and weeds covered; wind very strong and shifting; temp., 8°. Blue Jay, 2; Redpoll, about 50 (three flocks). Total, 2 species, 52 individuals (estimated).—CHARLES PHILLIPS.

Oslo, Minn.—Dec. 17; 2 to 5 p.m. Cloudy; ground snow covered; light wind from southwest; temp., 23°. Prairie Hen 5; Redpoll (approximately), 100; White-breasted Nuthatch, 2; Black-capped Chickadee, 1. Total, 4 species, 108 individuals.—OLE A. FIUSETH.

Fargo, N. D.—Dec. 26; 2 to 3.30 p.m. Fields and waste grounds nearly clear; three inches snow; wind south, light; temp., 32°. Horned Lark, 50; Redpoll, 5; Snow Bunting, 15. Total, 3 species, 70 individuals.—MR. and MRS. O. A. STEVENS.

Sioux Falls, S. D.—Dec. 26; 10 a.m. to 4 p.m. Clear; ground partly snow-covered; wind southwest, light. Mallard, 1; Prairie Chicken, 300; Short-eared Owl, 1; Horned Lark, 125; Blue Jay, 1; Crow, 2; Redpoll, 25; Lapland Longspur, 75; Tree Sparrow, 6; Northern Shrike, 1; White-breasted Nuthatch, 1; Chickadee, 4. Total, 12 species 542 individuals.—ADRIAN LARSON.

Des Moines, Iowa.—Dec. 27; 11.30 a.m. to 5 p.m. Cloudy; ground bare except in less exposed places; light east wind; temp., 38°. Hairy Woodpecker, 1; Downy Woodpecker, 3; Flicker, 1; Crow, 7; Purple Finch, 6; Tree Sparrow, about 110; Slate-colored Junco, 28; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 11; Golden-crowned Kinglet, 1. Total, 11 species, 171 individuals.—E. A. STONER.

Sabula, Iowa.—Dec. 25; 1.30 to 5 p.m. Cloudy; ground covered with snow; wind southeast; temp., 34°. Hoot Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Blue Jay, 2; Goldfinch, 14; Tree Sparrow, 150; Junco, 100; Cardinal, 8; Brown Creeper, 1; White-breasted Nuthatch, 3; Chickadee, 30. Total, 11 species, 316 individuals.—MRS. H. R. REBMAN.

Sioux City, Iowa.—Dec. 27; 8.30 a.m. to 3.30 p.m. Light cirrus clouds, southeast wind, light; temp., 22° to 40°. Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 10; Flicker, 2; Prairie Horned Lark, 5; Blue Jay, 3; Crow, 100; Redpoll, 6; Goldfinch, 1; Pine Siskin, 4; Tree Sparrow, 400; Junco, 15; Brown Creeper, 8; White-breasted Nuthatch, 5; Chickadee, 30. Total, 15 species, 593 individuals. Pine Siskins and Redpolls seem unusually abundant this year; none were noted a year ago.—MANLEY B. TOWNSEND, ARTHUR LINDSEY and WALTER W. BENNETT.

Wall Lake, Iowa.—Dec. 25; 2 to 2.30 p.m., 3 to 5 p.m. Partly cloudy, slight snow on ground, part gone; brisk west wind; temp., 40°. Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 2; Crow, 3; Redpoll, 1; Tree Sparrow, 15; White-breasted Nuthatch, 2. Total, 8 species, 26 individuals.—JOHN A. SPURRELL.

Omaha, Nebr.—Dec. 25; 10 a.m. to 3 p.m. Clear; ground bare except in ravines; wind southwest, light; temp., 38° to 55°. Distance walked five miles. Hairy Woodpecker, 1; Downy Woodpecker, 12; Prairie Horned Lark, 9; Crow, 1; Purple Finch, 10; Goldfinch, 1; Pine Siskin, 3; Tree Sparrow, 3; Junco, 23; Cardinal, 2; Brown Creeper, 1; White-breasted Nuthatch, 7; Chickadee, 35. Total, 13 species, 108 individuals.—SOLON R. TOWNE.

Kansas City, Mo. (Swope Park).—Dec. 26; 8 a.m. to 12 m. Clear; light southwest wind; ground bare; temp., 33°. Red-tailed Hawk (?), 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Red-headed Woodpecker, 2; Red-bellied Woodpecker, 2; Blue Jay, 19; Crow, 12; Purple Finch, 5; Tree Sparrow, 30; Junco, 25; Cardinal, 15; Carolina Wren, 6; White-breasted Nuthatch, 2; Tufted Titmouse, 13; Chickadee, 23; Golden-crowned Kinglet, 3. Total, 16 species, 166 individuals. A surprising absence of Harris Sparrows in their accustomed haunts.—A. E. SHIRLING.

Maryville, Mo.—Dec. 24; 2 to 4.30 p.m. Fair; ground bare; wind light from south; temp., 10°. Hairy Woodpecker, 2; Downy Woodpecker, 5; Flicker, 1; Blue Jay, 5; Crow, 2; Tree Sparrow, 40; Junco, 25; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 9. Total, 10 species, 92 individuals.—JOHN E. CAMERON and PHILIP COLBERT.

St. Louis, Mo. (Creve Coeur Lake).—Dec. 26; 10 a.m. to 4 p.m. Clear; ground

bare; wind south, light; temp., 34°. Sparrow Hawk, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 18; Red-bellied Woodpecker, 4; Flicker, 2; Crow, 4; Red-winged Blackbird, 60; Goldfinch, 6; White-throated Sparrow, 2; Tree Sparrow, 45; Junco, 60; Song Sparrow, 6; Cardinal, 30; Loggerhead Shrike, 1; Carolina Wren, 8; Brown Creeper, 4; White-breasted Nuthatch, 3; Tufted Titmouse, 20; Chickadee, 8; Golden-crowned Kinglet, 4. Total, 21 species, 289 individuals.—EDWARD H. CHRISTIE.

Monticello, Ark.—Dec. 24; 1 to 3 P.M. Ground bare; high south wind; temp., 56°. Bob-white, 15; Turkey Vulture, 10; Black Vulture, 2; Sparrow Hawk, 2; Downy Woodpecker, 2; Flicker, 3; Blue Jay, 4; Meadowlark, 45; White-throated Sparrow, 1; Field Sparrow, 5; Junco, 50; Lincoln's Sparrow, 1; Loggerhead Shrike, 2; Mockingbird, 10; Carolina Wren, 1; Tufted Titmouse, 4; Chickadee, 2; Ruby-crowned Kinglet, 1; Bluebird, 6. Total, 19 species, 165 individuals.—SALLIE CAVANESS.

Tonkawa, Okla.—Dec. 26; 11 A.M. to 4.30 P.M. Partly cloudy; wind southeast; temp., about 40°. Turkey Vulture, 1; Marsh Hawk, 3; Mexican Black Hawk (?) 1; Sparrow Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 2; Flicker, 10; Crow, 4; Meadowlark, 15; Grasshopper Sparrow, 12; Harris' Sparrow, about 50; Chipping Sparrow, about 50; Slate-colored Junco, 12; Towhee, 1; Cardinal, 20; Chickadee, 15. Total, 16 species, individuals 200.—F. B. ISELY and OTTO WALTER.

San Antonio, Tex.—Dec. 25; 3.30 to 5 P.M. Clear; wind east; temp., 65°. Mexican Dove, 20; Sparrow Hawk, 2; Kingfisher, 2; Texan Woodpecker, 1; Phœbe, 1; Boat-tailed Grackle, 2; Song Sparrow, 3; Cardinal, 30; Black and White Warbler, 1; Myrtle Warbler, 8; Mockingbird, 8; Lomita Wren, 2; Black-crested Titmouse, 3; Ruby-crowned Kinglet, 3. Total, 14 species, 86 individuals.—EDNA M. PERRY.

Livingston, Mont.—Dec. 26; 9 to 11.15 A.M. Partly cloudy; wind, southwest, very heavy; ground bare; temp., 30°. Golden-eye, 3; Magpie, 7; Northern Shrike, 1; Long-tailed Chickadee, 18. Total, 4 species, 29 individuals.—ARETAS A. SAUNDERS.

Boulder, Colo.—Dec. 25; 9 A.M. to 5 P.M. Clear; ground with snow patches; still; temp., 28°, warm at noon. Pine mesas and bottomland meadows.—Virginia Rail, 1; Marsh Hawk, 1; Rough-legged Hawk, 1; Long-eared Owl, 1; Batchelder's Woodpecker, 2; Red-shafted Flicker, 7; Magpie, 65 (50 in one flock); Long-crested Jay, 7; Red-winged Blackbird (sp.), approx. 300 (males); Western Meadowlark, 2; House Finch, 3; Redpoll, 9; Western Tree Sparrow, 60; White-winged Junco, 11; Shufeldt's Junco, 12; Pink-sided Junco, 17; Gray-headed Junco, 10; Mountain Song Sparrow, 8 (1 singing); Northern Shrike, 1; Cañon Wren, 4; Rocky Mountain Creeper, 5; Rocky Mountain Nuthatch, 1; Pygmy Nuthatch, 12; Long-tailed Chickadee, 10; Mountain Chickadee, 7; Townsend Solitaire, 1. Total, 26 species, 558 individuals.—NORMAN A. W. BETTS.

Clear Creek, Colo.—Dec. 26; 8.30 A.M. to 3.30 P.M. Clear; ground covered in places with snow; wind northwest, very light; temp., little below freezing at time of starting and considerably higher at time of returning. Virginia Rail, 1; Bob-white, 6; Ring-necked Pheasant, 2; Sharp-shinned Hawk, 1; Rough-legged Hawk, 1; Red-shafted Flicker, 8; Magpie, 30; Long-crested Jay, 2; Cassin's Purple Finch, 150; House Finch, 100; Pale Goldfinch, 5; Pine Siskin, 1; Western Tree Sparrow, 50; White-winged Junco, 3; Shufeldt's Junco, 15; Pink-sided Junco, 75; Mountain Song Sparrow, 25. Total, 17 species, 475 individuals.—F. G. LINCOLN.

Oracle, Pinal Co., Arizona.—Dec. 24; 4,500 ft. above sea-level; in foothills of Santa Catalina Mountains, forty miles from railroad. "Culture" District (ranches, grain field, scattered live-oaks). 6 to 7 A.M. Clear; ground bare; wind southwest, light; temp., 45°. Gambel's Partridge, 11; Road-runner, 1; Texan Woodpecker, 1; Ant-eating Woodpecker, 1; Woodhouse's Jay, 25; Raven, 2; Texas Meadowlark, 14; Gambel's Sparrow, 20; Western Chipping Sparrow, 1; Intermediate Junco, 30; Cañon Towhee, 1; Phainopepla, 1; Palmer's Thrasher, 3; Cactus Wren, 1; Baird's Wren, 1; Rocky Mountain Nuthatch, 1; Bridled Titmouse, 4; Ruby-crowned Kinglet, 1; Western Robin,

1; Western Bluebird, 9. Total, 20 species, 129 individuals. (3 English Sparrows were also noted.) *Live Oak Belt*, 4,500 to 5,000 feet (four miles of rocky, dry stream-bed with liveoaks, junipers, bear-grass, a few cacti and yuccas).—10 A.M. to 12 M. Clear; wind southwest, light; temp., 52°. Gambel's Partridge, 12; Woodhouse's Jay, 4; Raven, 1; Intermediate Junco, 100; Spurred Towhee, 1; Cañon Towhee, 5; Townsend Solitaire, 1; Western Bluebird, 1. Total, 8 species, 125 individuals. *Mesquite Belt*, 4,500 to 4,000 feet (six miles of sandy river-bed with mesquite, many cacti and yuccas). 3 to 5 P.M. Clear; wind southwest, light; temp., 60°. Gambel's Partridge, 3; Cooper's (?) Hawk, 2; Western Red-tailed Hawk, 2; Red-shafted Flicker, 1; Gilded Flicker, 1; Woodhouse's Jay, 3; Gambel's Sparrow, 4; Desert Sparrow, 1; Cañon Towhee, 1; Arizona Cardinal, 1; Palmer's Thrasher, 3; Cactus Wren, 2; Baird's Wren, 1; Lead-colored Bush-Tit, 9. Total, 14 species, 34 individuals. Grand total, 30 species, 291 individuals.—W. GRAY HARMAN.

Buena Park, Cal.—Dec. 25; 8.50 to 11.15 A.M. Partly cloudy, had been raining; strong breeze from east; temp., 47°. Florida Gallinule, 5; American Coot, 10; Killdeer, 78; Valley Quail, 3; Turkey Vulture, 31; Sharp-shinned Hawk, 1; Western Red-tail, 2; Desert Sparrow Hawk, 2; Short-eared Owl, 7; Red-shafted Flicker, 2; Arkansas Kingbird, 1; Say's Phoebe, 6; Black Phoebe, 9; California Horned Lark, estimated, 275; Crow, very large flock, estimated, 2,000; Red-winged Blackbird (sub-species undetermined) 52; Western Meadowlark, 41; Brewer's Blackbird, 2; House Finch, 133; Willow Goldfinch, 3; Lawrence's Goldfinch, 38; Western Vesper Sparrow, 27; White-crowned Sparrow, 124; San Diego Song Sparrow, 38; California Shrike, 10; Audubon's Warbler, 20; Pacific Yellow-throat, 7; Pipit, 58; Western Mockingbird, 1; Tule Wren, 8; Lead-colored Bush-Tit, 1. Total, 31 species, 2995 individuals.—JOHN McB. ROBERTSON.

Marysville, Cal.—Dec. 25; 7.25 A.M. to 12 M. Clear, ground dry; light frost; wind north changing to south, light; temp., 33°. Pied-billed Grebe, 1; Farallone Cormorant, 1; Mallard, 2; Wood Duck, 2; White-fronted Goose, Canada Goose and Cackling Goose over 1,000; Great Blue Heron, 7; American Coot, 63; Spotted Sandpiper, 1; Killdeer, about 155; Valley Partridge, about 30; Mourning Dove, 3; Sharp-shinned Hawk, 1; Cooper's Hawk, 1; Western Red-tail, 1; (also two other large hawks, probably the same); Red-bellied Hawk, 2; Swainson's Hawk, 1; Prairie Falcon, 4; Desert Sparrow Hawk, 12; Burrowing Owl, 1; Gairdner's Woodpecker, 2; Nuttall's Woodpecker, 9; Red-breasted Sapsucker, 1; Californian Woodpecker, 17; Red-shafted Flicker, 55; Say's Phoebe, 1; Black Phoebe, 2; Yellow-billed Magpie, 22; California Jay, about 17; Crow, 14; Bi-colored Blackbird, estimated 1,500; Western Meadowlark, at least 1,000; Brewer's Blackbird, 11; California Linnet, 28; California Goldfinch, 1; Green-backed Goldfinch, 16; Western Lark Sparrow, 4; Gambel Sparrows and Golden-crowned Sparrows were so intermingled and shy that they could not be counted separately, about 134 were seen. Oregon Junco, about 100; Heermann's Song Sparrow, 16; Spurred Towhee, 16; California Towhee, 24; California Shrike, 1; Audubon's Warbler, 25; Pipit (estimated) 400; Vigor's Wren, 21; Interior Tule Wren, 1; Ruby-crowned Kinglet, 17; Russet-backed Thrush, 1; Western Bluebird, 13. On December 21, a Mountain Bluebird, a rare bird in this vicinity, was seen, and on December 23, a Black-chinned Humming-bird was observed. Total, 53 species, 4,666 individuals.—CARL and JULIUS MUELLER.

Redlands, Cal.—Dec. 26; 7.30 A.M. to 5.30 P.M. Clear; wind moderate, northwest; temp., 36° to 59°. Killdeer, 6; Valley Partridge, 30; Sharp-shinned Hawk, 2; Cooper's Hawk, 1; Western Red-tail, 4; Desert Sparrow Hawk, 6; Barn Owl, 2; Red-shafted Flicker, 9; Anna's Hummingbird, 18; Say's Phoebe, 10; Black Phoebe, 4; California Horned Lark, 15; California Jay, 11; Western Meadowlark, 52; Brewer's Blackbird, 250; California Purple Finch, 8; House Finch, 110; Green-backed Goldfinch, 150; Western Vesper Sparrow, 16; Western Savanna Sparrow, 13; Western Lark Sparrow, 17; Gambel's Spar-

row, 152; Golden-crowned Sparrow, 100; Western Chipping Sparrow, 25; Thurber's Junco, 8; Bell's Sparrow, 4; Desert Song Sparrow, 20; Spurred Towhee, 3; Anthony's Towhee, 80; California Shrike, 2; Hutton's Vireo, 3; Audubon's Warbler, 50; Pipit, 36; Western Mockingbird, 16; Pasadena Thrasher, 13; Southwest Bewick's Wren, 17; Parkman's Wren, 1; Plain Titmouse, 2; Pallid Wren-Tit, 7; California Bush-Tit, 17; Ruby-crowned Kinglet, 17; Western Gnatcatcher, 11; Alaska Hermit Thrush, 14; Western Robin, 78; Western Bluebird, 16; Mountain Bluebird, 2. Total, 46 species, 1,328 individuals.—ALLYN G. SMITH.

Santa Barbara, Cal.—Dec. 24; 7 to 8 A.M., pier and beach (Dawson); 10 A.M. to 2.30 P.M., (Bowles, Dawson, Snyder) foothills north of town; 2.30 to 5 P.M., (Dawson, Snyder) pier, beach and lagoons. Clear; min. temp., 42°, max. 63°. Western Grebe, 1; Eared Grebe, 1; Pied-billed Grebe, 3; Loon, 2; Red-throated Loon, 2; Glaucous-winged Gull, 6; Western Gull, 200; Ring-billed Gull, 7; Short-billed Gull, 20; Heermann's Gull, 60; Bonaparte's Gull, 100; Royal Tern, 20; Farallone Cormorant, 20; Brandt's Cormorant, 3; Baird's Cormorant, 1; California Brown Pelican, 6; Green-winged Teal, 5; Pintail, 9; Shoveller, 3; Scaup, 1; Lesser Scaup, 4; Buffle-head, 1; White-winged Scoter, 9; Surf Scoter, 4; Great Blue Heron, 2; Coot, 200; Least Sandpiper, 26; Sanderling, 40; Killdeer, 40; Snowy Plover, 55; California Quail, 3; Western Red-tail, 1; Kingfisher, 1; Willow Woodpecker, 1; California Woodpecker, 1; Red-shafted Flicker, 4; Anna's Hummer, 16; Say's Phoebe, 1; Black Phoebe, 1; California Jay, 10; Western Meadowlark, 20; Brewer's Blackbird, 200; California Purple Finch, 60; House Finch, 40; Willow Goldfinch, 30; Green-backed Goldfinch, 300; Western Savannah Sparrow, 10; Large-billed Sparrow, 6; Gambel's Sparrow, 1,000; Nuttall's Sparrow, 200; Golden-crowned Sparrow, 200; Thurber's Junco, 10; Rufous-crowned Sparrow, 4; San Diego Song Sparrow, 12; Fox Sparrow, (several types), 8; San Diego Towhee, 6; Anthony's Towhee, 20; California Shrike, 20; Hutton's Vireo, 2; Lutescent Warbler, 1; Audubon's Warbler, 1,000; Townsend's Warbler, 1; Pipit, 20; California Thrasher, 2; Dotted Cañon Wren, 1; San Diego Wren, 7; Western House Wren, 1; Western Winter Wren, 1; Tule Wren, 20; Plain Titmouse, 5; California Bush Tit, 20; Pallid Wren-Tit, 20; Ruby-crowned Kinglet, 20; Western Gnatcatcher, 30; Dwarf (?) Hermit Thrush, 20; Western Robin, 40. Total, 76 species—J. H. BOWLES, W. LEON DAWSON and WATSON SNYDER.

Seattle, Wash.—Dec. 20; 1.30 to 4 P.M. Clear; ground bare; light west wind; temp., 43°. Canvas-back, 4; American Coot, 247; California Partridge, 24; Oregon Junco, 12; Rusty-backed Song Sparrow, 5; Fox Sparrow, 1; Oregon Towhee, 1; Oregon Chickadee, 2; Chestnut-backed Chickadee, 7; Western Robin, 3; Varied Thrush, 2. Total, 11 species, 308 individuals.—MRS. L. H. GRAY.

Noyes Crossing, Alberta, Canada.—Dec. 18; 10 A.M. to 3 P.M. Bright, sunshiny, beautiful day; eight inches snow; light west wind; temp., 40°. Ruffed Grouse, 8; Sharptailed Grouse, 20; Western Horned Owl, 1; Northern Hairy Woodpecker, 2; Arctic Three-toed Woodpecker, 5; American Three-toed Woodpecker, 2; Blue Jay, 2; Canada Jay, 7; American Raven, 5; Evening Grosbeak, 2; Pine Grosbeak, 10; Snow Bunting, 150; Redpoll, 50; Chickadee, 50. Total, 14 species, 314 individuals.—SIDNEY S. S. STANSELL.

Okanagan Landing, British Columbia.—Dec. 21; 8 A.M. to 5 P.M. Fine; ground bare; temp., 32° to 42°. Twelve miles along Okanagan Lake in pine-covered foothills. Horned Grebe, 2; Golden-eye (Barrow's?), 3; Ruffed Grouse, 2; Richardson's Grouse, 1; Cabanis' Woodpecker, 2; Red-shafted Flicker, 2; American Magpie, 12; Black-headed Jay, 8; Pine Grosbeak (Alaskan?), 2; Rusty Song Sparrow, 2; Long-tailed Chickadee, 15; Mountain Chickadee, 25; Rocky Mountain Nuthatch, 3; Red-bellied Nuthatch, 3; Pygmy Nuthatch, 2; Tree Creeper (Rocky Mt.?), 2; Western Winter Wren, 1; Townsend's Solitaire, 1. Total, 18 species, 88 individuals.—ALLAN BROOKS.

McKinley, Isle of Pines, Cuba.—Dec. 25; 6 A.M. to 6 P.M. Cloudy in the morning;

fair in the afternoon; temp., about 75° . Little Blue Heron (*Florida cærulea cæruleascens*), 1; Southern Green Heron, (*Butorides virescens maculata*), 1; 'El bobo' Pigeon (*Columba iuornata*), 150; White-crowned Pigeon (*Columba leucocephala*), 2; Cuban Mourning Dove (*Zenaidura macroura macroura*), 50; Cuban Ground Dove (*Chæmæpelia passerina aſlavida*), 50; Southern Turkey Buzzard (*Cathartes aura aura*), 30; Cuban Sparrow Hawk (*Falco sparveroides*), 10; Caracara (*Polyborus cheriway*), 2; Cuban Pigmy Owl (*Glaucidium siju*), 2; Ani (*Crotophaga ani*), 15; Isle of Pines Lizard Cuckoo (*Saurothera merlini decolor*), 5; Isle of Pines Tropicbird (*Priotelus temnurus vescus*), 3; Cuban Kingbird, (*Tyrannus cubensis*), 5; Cuban Crested Flycatcher (*Myiarchus sagræ*), 3; Cuban Pewee (*Blacicus caribæus*), 3; Cuban Meadowlark, (*Sturnella hippocrepis*), 25; Cuban Oriole, (*Icterus hypomelas*), 3; Cuban Grackle (*Holoquiscalus gundlachi*), 75; Yellow-throated Grassquit (*Tiaris olivacea olivacea*), 12; Florida Yellow-throat (*Geothlypis trichas ignota*), 1; 'Chillina' Warbler (*Teretistris fernandinae*), 10; American Redstart (*Setophaga ruticilla*), 2; Red-legged Thrush (*Mimocichla rubripes rubripes*), 5. Total, 24 species, 466 individuals.—A. C. READ.

Leith shore and Edinburgh Arboretum, Scotland.—Dec. 24; 10 A.M. to 3 P.M. Clear; wind west (very strong); ground bare and no frost; temp., 47° to 43° . Common Loon, 1; Red-throated Loon, 2; Razorbills, 1; Black-headed Gull, 60; Common Gull, (*L. canus*); 3; Lesser Black-backed Gull, 4; Black-backed Gull, 3; Herring Gull, 450; Red-breasted Merganser, 34; Golden-eye Duck, 2; Scaup Duck, 5,000; Rook, 16; Magpie, 1; Starling, 200; House Sparrow, 36; Greenfinch, 5; Rock Pipit, 38; Hedge Sparrow, 3; Robin, 1; Goldcrest, 1; Great Titmouse, 3; Blackbird, 8; Redwing, 2; Thrustle, 1; Missel Thrush, 2. Total, 25 species, 5,877 individuals.—GORDON BOIT WELLMAN.

Paris, France.—Dec. 25. Birds seen in a garden in the heart of Paris. Chaffinch; 'Wagtail'; Wren; Titmouse (species?); European Golden-crowned Kinglet; Robin Redbreast; European Blackbird. The Wren, Redbreast and Blackbird are residents in the garden, the others are visitors.—ANNA E. LOFGREN.



TUFTED TITMOUSE

Photographed by H. H. Cleaves, Staten Island, N. Y.

Book News and Reviews

MANUAL OF MORAL AND HUMANE EDUCATION. By FLORA HELEN KRAUSE. Chicago. R. R. Donnelley & Sons, 1910. 12mo., 271 pages, 25 full-page plates.

The connection between humane and nature studies is presented by the author of this volume in a reasonable and hence convincing manner. "Humane Education," she remarks (p. 22), "should be outlined for presentation in Elementary Schools along three lines: (a) Study which connects the child with his natural environment, or nature study; (b) study which connects the child with his social environment, or civics; (c) study which promotes character-growth by appealing to the esthetic and ethic nature of the child through art, legend, history, poetry, literature, music, and the sense of right and wrong—the elements of which study may be classified under the educational agencies art and literature."

On these lines, "A Graded Course of Study for Humane Education in Elementary Schools" is presented (pp. 31-195), in which the educational value of bird study is acknowledged by the inclusion of much material related to this branch of nature study and by the addition of "A List of the More Common Birds." (pp. 196-206).

A Section on Collateral Reading, and much pertinent information in regard to humane associations, Audubon Societies, and relative subjects, concludes this useful volume.—F. M. C.

THE HOME-LIFE OF THE SPOONBILL, THE STORK AND SOME HERONS. Photographed and described by BENTLEY BEETHAM. Witherby & Co., 326 High Holborn, London, W. C. 8vo., 47 pages, 32 mounted plates.

The author here presents in very attractive form the story of his successful efforts to photograph the birds mentioned in his title, together with interesting notes on their habits, as they were observed, apparently in Holland. The Spoonbill was

found nesting in low platform nests in the reeds, much as Coots (*Fulica*) nest with us, a situation which will commend itself to any one who has attempted to photograph the Roseate Spoonbill in red mangroves. The pictures are admirable, and form in themselves a valuable contribution to the biographies of the species they depict.—F. M. C.

DANSK FUGLELIV, STORMMAAGEN (*Larus canus*). Dens Liv I. BILLEDER. Fotograferet efter naturen, Af C. Rubow. 25 photographs, 3 pages text.

An exceptionally attractive publication by Carl Rubow (Ny Toldbodgade 6, Copenhagen, Denmark) tells with the aid of camera and pen the life history of the Mew Gull (*Larus canus*). The pictures are well made and beautifully reproduced, while several convey in a quite unusual way the real spirit of wild bird-life. This is particularly true of the double-page plate showing the Gulls following a plow, which has an artistic and spiritual quality approached by few bird photographs with which we are familiar.—F. M. C.

THE PURPLE MARTIN AND HOUSES FOR ITS SUMMER HOME. By J. WARREN JACOBS. Second Supplement to Gleanings, No. 5. Waynesburg, Pa.

Every one who has or who would like to have a Martin colony will be interested in the reports from various correspondents of Mr. Jacobs, giving their experiences in establishing and maintaining Martin colonies. Aside from its practical importance in this connection, this supplement also contains information of real ornithological value.—F. M. C.

REPORT OF THE CHIEF OF THE BUREAU OF BIOLOGICAL SURVEY FOR 1910. By H. W. HENSHAW. Reprint from the Annual Report of the Department of Agriculture. Washington. 1910. 19 pages.

We know of no publication of its nature and size which contains so much interest-

ing and important matter as this annual summary of the work and plans of the Biological Survey. After vainly attempting to summarize this summary we always come to the conclusion that it can be adequately reviewed only by reprinting it in full—which, under the circumstances, is out of the question.

For example, we learn from the first paragraph devoted to birds that Sapsuckers (*Sphyrapicus*), through their habit of puncturing the bark of trees, are estimated to occasion an annual loss of \$1,250,000 to the timber industry of the United States. To offset this we are told, on the following page, that thirty-eight species of birds are now known to feed upon the gypsy moth, and eight species of the brown-tail moth.

Investigations are in progress on the food-habits of wild Ducks, and Flycatchers, and much progress has been made in mapping faunal zones, biological surveys of Colorado and New Mexico having been completed.

The sections in relation to 'Game Protection,' 'Importations' National Bird Reservations' and 'Plumage' abound in facts of especial concern to the bird-protectionist. Thus it appears that, in July 1909, 7,000 semi-decomposed eggs of Terns were brought from Jamaica to New York City, where they were being sold as food in the restaurants at thirty cents each—a pretty high price even for an epicure to pay for the privilege of eating a bad egg.—F. M. C.

ANNUAL REPORT OF THE STATE ORNITHOLOGISTS OF [MASSACHUSETTS], FOR THE YEAR 1909. [By E. H. FORBUSH.] Reprint from the Fifty-seventh Annual Report of the State Board of Agriculture. Boston. 1910. 25 pages, 2 plates.

Mr. Forbush (whom we assume to be the writer of this report, although its author's name is not given) here presents a summary of the year's work which shows how active a state ornithologist can be and how important his office may be made. Lectures and legislative work consumed much time. The census influencing the decrease and increase in the numbers of

certain species of birds in the state are discussed, and a quantity of relevant data have been gathered. The status of the Purple Martin is dwelt upon at some length, and the experiences of persons who have attempted to found Martin colonies are given.

Investigations of the possible poisoning of birds by spraying trees with arsenical solutions were inconclusive, but it seem probable that "the fatal effects of such spraying have been exaggerated."

Under the head of 'Some Changes in Bird-Life in Massachusetts,' it is said that the Prairie Horned Larks and Carolina Wren are increasing as breeding birds in the state, and that the Mallard, Canvas-back and Evening Grosbeak occur more frequently.—F. M. C.

Ornithological Magazines

THE CONDOR.—Three numbers of 'The Condor' have appeared since the last review, but, on account of lack of space, only the most important articles can now be noticed, and these very briefly. The leading article in the July number, by R. B. Rockwell, on 'Some Colorado Night Heron Notes,' gives the results of some interesting observations, made in 1906, 1907, and 1908, on breeding-colonies at Barr, nineteen miles northeast of Denver, Colo. One of these colonies was located in a cat-tail swamp, and the nests were placed on or near the ground. Peyton's 'Nesting of the Spotted Owl (in Castaic Cañon), Los Angeles County,' and Pemberton's 'Notes on the Rufous-crowned Sparrow,' nesting near Arroyo del Valle, Alameda Co., Cal., both contain important breeding records of rare birds. The Directory of members of the Cooper Ornithological Club, which appears in this number, includes the names of 302 members of whom four are honorary.

One of the most important papers which has ever appeared in 'The Condor' is the well-illustrated article in the September number, by Ray, on 'The Discovery of the Nest and Eggs of the Gray-crowned Leucosticte.' Although the bird was first

described in 1831, the eggs have remained unknown until discovered by the author on Pyramid Peak, Cal., on June 22, 1910. The nest, composed of dry grass stems and roots, was placed among the boulders, 150 feet below the summit of the Peak (10,020 feet), and contained four eggs, which are described as "pure white, unmarked, ovate-pyriform in shape," and average .90 x .62 inches. Under the title 'Rouge et Noir,' Dawson describes a collecting trip to Clover Creek, south of Tacoma, Wash., on May 12, 1910, on which were obtained nests and eggs of the Tawny Creeper, Chestnut-backed Chickadee, and Sooty Grouse. Willett's account of 'A Summer Trip to the Northern Santa Barbara Islands' records the nesting of the California Brown Pelican, in June 1910, on Anacapa Island, the only locality where this species is known to breed north of the Mexican boundary.

Among the articles in the November number, mention should be made of A. B. Howell's 'Notes from Los Coronados Islands,' which contains some important facts on the nesting of Xantus' Murrelet. This bird is supposed to nest twice a year, once about the last of March and again about the middle of June, and as far as known does not now breed at any point north of these islands. The opportunities for studying birds at the Barr Lakes, Colo., are exemplified by Rockwell's 'Nesting Notes on the American Eared Grebe and Pied-billed Grebe' in 1907 and 1908. In 'Bird Notes from Southwestern Montana,' Saunders describes the nests of Wilson's Snipe, Pileolated Warbler, Lincoln's Sparrow, Mountain Chickadee, Red-naped and Williamson's Sapsuckers found on a trip made in 1910. An index to volume XII, with which the number closes, shows that this volume contains 218 pages and is a little smaller than the two preceding ones.

—T. S. P.

Book News

AMERICAN CONSERVATION. a new illustrated monthly magazine, will be issued by the National Conservation Association, as its official bulletin, beginning February

1, 1911. It will be of general interest to all, but it should be of special interest to students, speakers, librarians, members of clubs and all others who are studying conservation questions. The annual subscription of \$2.00 may be sent to the National Conservation Association, Colorado Building, Washington, D. C.

In response to a widely felt and urgent need for a periodical in which studies of the behavior and mental life of organisms may satisfactorily be published, 'The Journal of Animal Behavior' has been established under a thoroughly representative Editorial Board.

The 'Journal' will accept for publication field studies of the habits, instincts, social relations, etc., of animals, as well as laboratory studies of animal behavior or animal psychology. It is hoped that the organ may serve to bring into more sympathetic and mutually helpful relations the "naturalists" and the "experimentalists" of America, that it may encourage the publication of many carefully made naturalistic observations which at present are not published, and that it may present to a wide circle of nature-loving readers accurate accounts of the lives of animals.

Beginning with January, 1911, the Journal will appear bi-monthly in numbers of approximately 75 pages. The subscription price, \$3.00 per volume, may be sent to the Journal at Emerson Hall, Cambridge, Mass.

WITHERBY & Co. of 326 High Holborn, London, W. C., announce the publication of the first part of Mr. Gregory M. Mathews' elaborate work on the 'Birds of Australia.' The work will be issued in folio parts, at two guineas a part, and will contain hand-colored illustrations of every species of Australian Birds. The author has lived all his life in Australia, and has devoted many years to the preparation of his text. He will have the active assistance of field-ornithologists throughout Australia, and his undertaking should, when completed, form an adequate monograph of the bird-life of this most interesting part of the world.

Bird - Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

A WORD of explanation is due those contributors to the Christmas Census whose data were received too late for insertion among those published. To few composers, we imagine, is given a more difficult task than the putting in type of the thousands of unfamiliar names contained in the Census, from written MS. The work cannot be hurried, and this fact, in connection with the desirability of placing the Censuses in a geographical sequence, which cannot be disturbed after it has reached the page-proof stage, has made it impossible for us to use many interesting records. As it is, the published reports number slightly over 200, or thirty-three per cent more than was contained in the Census of 1909.

The space required by the Census, in spite of a material increase in the size of this issue, has forced us to omit the list of Advisory Councilors, which usually appears in the first number of each volume of BIRD-LORE, as well as a number of timely seasonal notes. Among the latter are several records of the occurrence of the Evening Grosbeak which should be referred to briefly here, although their publication in detail must be deferred until the succeeding issue. To give merely numbers, names and dates, Evening Grosbeaks have been reported to us as follows: Three at Naples, Maine, November 10, 1910, by Adeline Willis; eight at Litchfield, Connecticut, January 13, 1911, by Sarah W. Adam; five at Port Chester,

N. Y., January 9, 1911, by Cecil Spofford; one at Forest Hill Park, Brooklyn, January 8, 1911, by Mary W. Peckham; eight at Andover, Sussex Co., New Jersey, December 13, 1910, by Blanche Hill; "twelve or fifteen" at Newton, Sussex Co., New Jersey, January 6, 1911, by Mary F. Kanouse.

The publication of these records raises the ever-open question as to the desirability of adding to the literature of ornithology observations which cannot be of real value when any doubt exists of the identity of the bird in question. BIRD-LORE has always discouraged the publication of unusual 'records of occurrence' based only on field identification, nevertheless, every case of this kind must be decided on its merits. The degree of probability, possibility of confusion with other species, experience of the observer, length of time and distance at which the bird was seen, whether seen by more than one person, and other attending circumstances, must be taken into account when deciding whether a given observation is sufficiently satisfactory to be made public.

Almost daily the editor receives 'records of occurrence' which, without for a moment doubting the good faith of their author, it would, in his opinion, be unwise to publish. Their very improbability makes it absolutely essential that they should be founded upon the incontrovertible evidence of specimens, and lacking this it is better that they should never see the light.

Let us cite, in proof, the incredulity, to use no stronger term, with which the publication, by Dr. W. J. McGee of a record of the breeding of the Passenger Pigeon (*Ectopistes migratorius*) in southern Arizona ("Science," Dec. 30, 1910, p. 958) has been received. Dr. McGee's observations are presented with surprising minuteness of detail; he even states that an empty larder caused the killing of "some thirty of the pigeons" for food. Nevertheless, the elements of improbability and error in identification are here so great that his article is to be considered rather as an illustration of how even a trained observer may err than as a contribution to the history of the Passenger Pigeon.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

The Promise of the New Year

IN the initial number, February 1, 1899, *BIRD-LORE* stated its purpose to promote the study and protection of birds. At that time the public was not aware of the value of birds, either from an economic or an educational standpoint. The term "conservation" had not then been definitely related to natural resources. Farmers, teachers, indeed, comparatively few people, were actively or intelligently concerned in preserving bird-life. Museums contained dead birds, mounted with little reference to their educational value, or hidden away in drawers, unmounted. One has only to compare the crowded exhibits in the closely-packed cases of the Leyden Museum with the remarkable habitat groups in the American Museum of Natural History, or even with the excellently arranged collections of certain smaller museums, to realize what a transformation museum methods have undergone within recent years.

Nearer yet to an ideal method are the outdoor aviaries, parks, experiment plots, and national reservations, which are the visible signs of private, municipal, state, and federal interest in the protection and propagation of birds.

It is a long look backward to the time when William Bartram set forth from London in 1773 to search "the Floridas and the western parts of Carolina and Georgia" for botanical wonders of nature.

Urging his way "through the howling wilds of America," pursued by crocodiles and innumerable strange creatures, little could he have dreamed that within less than two hundred years the people of America would be endeavoring to save to these same wilds a mere fraction of their former superabundant life!

Year by year, since the reorganization of the Audubon Society, *BIRD-LORE* has had some step ahead in bird-protection to chronicle, some new enterprise in bird-study to launch. Since 1903, under the department known as "The Audubon Societies," there has been presented an important series of bulletins reflecting both protective and economic reform, beginning with certain of our most persecuted and rapidly-vanishing species, the Passenger Pigeon and Snowy Egret.

Concerning the former, it is worth noting that in 1856 Thoreau jotted down his surprise at running across so many snares for Pigeons around Concord, expressing the hope that trappers would not become as mercenary as farmers

who sell fowl for gain; that in 1903 the Pigeon was described as extremely rare, while by 1909 a committee was formed to conduct a scientific search for this so recently abundant species, the story of whose persecution and disappearance has been told both in book and magazine form.

The fact that so much information about birds now appears in weekly papers and periodicals is perhaps as striking a sign of progress as any that could be cited.

Today the study of birds is finding its place in our schools as a most attractive part of nature-study.

To be successful, it must be correlated not only with other parts of nature-study, particularly with insects and vegetation, but also with man. To this end, this department will endeavor to meet the special needs of teachers and pupils of primary and advanced grades. The New Year is full of promise. Bird-study and bird-protection are no longer doubtful issues, but a practical part of cultural and economic training.—A. H. W.

FOR TEACHERS

A Thirty-Minutes-a-Week Outline for Bird-Study

SINCE nature-study is not uniformly included in the curricula of primary and grammar grades, the following condensed outline has been prepared for the use of busy teachers who desire to take up bird-study in brief but interesting form. A correlated rather than systematic method is suggested. The subjoined list of birds is arranged by groups, with reference to the seasons; and, in addition, hints for indoor and outdoor work are given, sufficient to occupy thirty minutes a week, or as much more time as can be allowed.

It should be noted that first-group pupils learn one new bird a month, *reviewing* with each advance, *those species studied in preceding groups*, the object being to acquire thorough familiarity with a few species and accuracy in identification. By this method, fifth-group pupils should be able to identify sixty species in a season.

INDOOR WORK

1. Hang up picture of bird of the month. See and hear *the live bird* if possible.
2. Describe plumage, nest, song, food, winter and summer home. Emphasize economic value.
3. Have pupils draw bill, feet, tail and study color and markings of bird. Describe molt.
4. Correlate the life-history of the bird with its habitat. Show pictures of live specimens of the insect and vegetable food it eats. Describe how the bird is fitted to find and secure its food. Emphasize sight and flight.

Special Topics.—Tools of the bird; protective coloring; immature birds; kinds of flight; nest-architecture; bird-gestures and dances; how and where birds sleep; game-laws; bird-reservations; commercial uses of birds.

Reading and drawing exercises and color-work for lower grades are excellent. Bird-distribution is easily correlated with geography; making nesting-boxes and lunch-counters with manual training field descriptions with English.

OUTDOOR WORK

January. *Winter Visitants.* Bird lunch-counters. Where birds find food.

February. Feeding *Winter Residents.* Finding tracks of birds and animals.

March. Early *Spring Transients.* Learning weather-signs and migration movements.

April. *Transients.* "Waves" of migration. Spring food-supply.

May. Late *Transients.* Early nesting species. Song. Where birds bathe and drink.

June. *Summer Residents.* Choice of nesting-site. Nest-building. Putting up birds' drinking-fountains.

July. Late nesting species. Second broods. Food of young birds.

August. *Summer Visitants.* Decline of song. Change of food. Fruit-foods.

September. Early *Fall Transients.* Collection of weed seed and insects.

October. *Fall Transients. Irregular Migrants.* Fall food-supply.

November. Late *Fall Transients.* Putting up nesting-boxes.

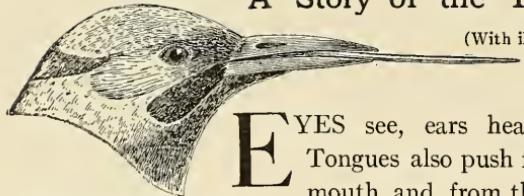
December. *Permanent Residents.* Christmas-day census. Putting up birds' Christmas-tree.

Group Age by years	First 5-7	Second 7-9	Third 9-11	Fourth 11-12	Fifth 13-16
Jan. . .	English Sparrow	Downy Wood-pecker	{ Ruffed Grouse Bob-white	Snow Bunting	Herring Gull
Feb. . .	Domestic Pigeon	American Owl	{ Golden-crowned Kinglet	Redpoll	American Duck
March.	Crow	Bluebird	Phoebe	Hermit Thrush	{ Canada Goose American Grebe
April. . .	Robin	Chipping Sparrow	{ Red-winged Blackbird	{ Towhee White-throated Sparrow	Myrtle Warbler
May. . .	Song Sparrow	Meadowlark	{ Wood Thrush Wilson Thrush	House Wren	Ovenbird
June. . .	Baltimore Oriole	{ Barn Swallow Eave Swallow Bank Swallow	{ Rose-breasted Grosbeak Purple Martin	{ Bobolink Cowbird	{ Red-eyed Vireo Yellow-throated Vireo
July. . .	{ Catbird Brown Thrasher Mockingbird	{ Yellow Warbler Redstart	{ Black and White Creeper	{ Kingbird Wood Pewee	{ American Heron Spotted Sand-piper
August.	Hummingbird	{ Scarlet Tanager Summer Tanager	Chimney Swift	{ Nighthawk Whip-poor-will	{ Indigo Bunting American Cuckoo
Sept. . .	{ Bronze Grackle Purple Grackle	Cedar Waxwing	Kingfisher	{ Purple Finch Cardinal	{ Woodcock Starling
Oct. . .	Flicker	American Gold-finch	Brown Creeper	{ Screech Owl American Hawk	Vesper Sparrow
Nov. . .	Blue Jay	Junco	American Shrike	{ American Cross-bill Tree Sparrow	Horned Lark
Dec. . .	Chickadee	White-breasted Nuthatch	American Hawk	{ Pine Grosbeak Evening Grosbeak	

NOTE.—Brackets indicate that a choice of species may be made according to locality. It is suggested that pictures of common and closely related species be shown and described with reference to distribution and habits.

A Story of the Tongue

(With illustrations from an article by F. A. LUCAS
in BIRD-LORE, Vol. II, No. 1)



Tongue of Flicker,
showing how it can be
extended.

EYES see, ears hear, noses smell, tongues taste. Tongues also push food away from the roof of the mouth and from the teeth down the long throat-tube. Some tongues do even more than this by helping to find the food and bring it to the mouth.

Man has a tasting, pushing tongue. Cats and dogs have a tasting, pushing, lapping tongue. The tongues of birds taste little, but push and feel, besides hunting for food and bringing it to the mouth.



If you have never seen a bird's tongue, you will hardly believe how wonderful it is.

The Chickadee's fork There are almost as many different kinds of birds' tongues as there are different kinds of birds; but when you find out how very many kinds of seeds and insects and other things birds eat, you will see that a bird must have the right kind of a tongue in order to get the food it likes.

The Chickadee's tongue looks like a tiny fork; the Sapsucker's might be called a brush, while the Goldfinches and Cross-bills have tongues shaped like scoops. The tiny Hummingbird has a kind of long double-tubed tongue, which it fills with sweet liquid deep down in the honey-sacs of flowers. No birds have more curious tongues than Woodpeckers. Long, narrow spears, pointed with barbs, as shown in the picture, these tongues, go well with the Woodpeckers' chisel-bills. But such tongues, if used like spears, must be fixed so that they can be thrown out beyond the bill. So the Woodpecker's tongue has very long cords which hold it firm and taut, as it shoots out an inch or more beyond the tip of the long bill. With such a tongue a



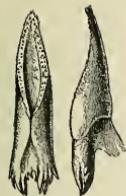
The spear of the Hairy Woodpecker



The brush of
the Sap-sucker

The arrow of the Solomon Islander

Woodpecker can search for the eggs and young of many insects which bore or tunnel beneath the bark of trees. When not in use, the long tongue-cords are snugly wound up over the skull and down into the beak. Watch the



The little scoop
of the Goldfinch

Woodpeckers and see which ones get their food from under the bark of trees, and which one feeds mostly on the ground around ant-hills.

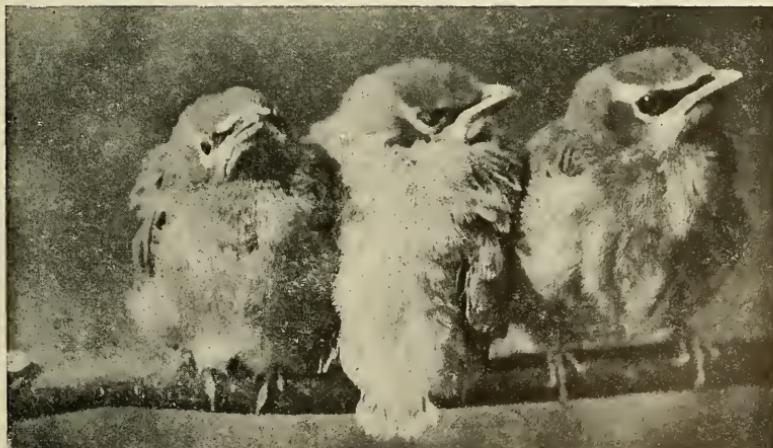
When you can study tongues with a magnifying-glass, you will learn much more about them; but with your own eyes you can see many things. Try watching an English Sparrow. You may not be able at first to tell exactly *what* it eats, but you can find out a great deal about *how* it eats.—A. H. W.

FROM YOUNG OBSERVERS

Do Birds "Freeze"?

I am a subscriber to BIRD-LORE and am much interested in the study of birds. I want to know if any other BIRD-LORE subscribers ever saw a bird "freeze"? I did, and I should like to tell what I saw. I was walking through an orchard at Lake Mahopac, New York, when I saw a Cedar Waxwing fly noisily into an apple-tree. I walked on, but glanced back at the tree. As I was looking at it, I saw the Cedar Waxwing sneak out and fly into another tree. I quickly ran under the tree to see what it was doing. There, not far from the ground, stood the bird next to her nest.(?) She was perfectly motionless. I sat down on the grass and watched for ten minutes, and she did not move. Somebody called me, and when I turned around she was gone. I noticed her do it several times, and I often wondered if any of the other birds do it. If any other person has seen them do it, I should like to know of it.—HOWARD D. BOYLE (aged 14), Elmhurst, N. Y.

[When suddenly surprised, many birds have the habit of becoming perfectly motionless, or "freezing," as Master Boyle puts it, with the evident object of escaping observation.—A. H. W.]



YOUNG CEDAR WAXWINGS

Photographed by A. W. Honywell, Jr., New Haven, Conn.

Where the Ruffed Grouse Sleeps

Entering Pine Clearing, my attention was attracted to the pines, the branches of which were heavily laden with snow. They looked very beautiful. As my eyes wandered around, I saw something dark beneath a small pine. The object saw me too, and, as it moved, I discovered that it was a Ruffed Grouse. It was in desperate haste to get away from me but floundered around in the snow. After struggling along a few feet, with a supreme effort it rose and went hurtling off through the grove. I examined its hole with interest, carefully taking a step forward, when another Ruffed Grouse burst the snowy covering not a foot from me and flew off, evidently for Pine Woods. As it flew, I noticed that two of its tail feathers were missing. After looking at its hole, I entered Pine Grove, and presently came upon a number of Grouse tracks and another hole. Looking in, I saw the dark plumage of a bird. I waited some time to see whether the bird would move but it did not. Advancing to within a foot of it, I stood still, and yet it did not move, but as I was about to brush the snow aside, out it burst and flew off through the trees. Elated by this success, I started after another hole. As luck would have it, I had not gone a hundred feet before I came upon one, this time closed up except for a narrow space about the size of my finger. Taking off my glove, I gently brushed the snow away and there was the back of a Ruffed Grouse! I stroked it for a moment, oh! so softly, when the bird burst out and flew away, giving me a most magnificent view of the finest bird in the neighborhood.—

JOHN MATHER ROGERS (aged 15), Port Dickinson, N. Y.

[Observation excellent, apparently exact in detail.—A. H. W.]



ENTRANCE AND EXIT OF A RUFFED GROUSE'S NIGHT'S LODGING
Photographed by Richard S. Eustes at Randolph, N. H., Jan 1, 1909



CEDAR WAXWING
(One-half natural size)

Order—PASSERES

Family—BOMBYCILLIDÆ

Genus—BOMBYCILLA

Species—CEDRORUM

National Association of Audubon Societies

Educational Leaflet, No. 48

THE CEDAR WAXWING

By EDWARD HOWE FORBUSH

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 48

Among my earliest memories of bird life is one that stands out clearly to this day. A Cedar Waxwing had built her nest on the low branch of an old apple tree at the edge of the orchard, and when I, a little eight-year-old boy, came and peered in, there she sat in fear and trembling, her crest flattened, her exquisite plumage drawn close to her body, and her eyes wild with fear; but she would not desert her charge, because the little ones beneath her tender breast were just breaking the shell. There was something fascinating about her lowered, flattened, almost serpentine head, with its black frontlet and the black bands enclosing her bright, startled eyes, as she snuggled down into her warm, leaf-sheltered nest. Alert and ready for instant flight, she held her place. It was my first glimpse of the home-life of a wild bird.

Next year was a canker-worm year, and all through the orchard the little geometrids began to cut holes in the young leaves. Then came the Waxwings in flocks, and there they stayed, often whispering to one another and always catching worms. Such gourmandizers as they were! They ate until they could eat no more, only to sit about on the branches or play with one another awhile, and then eat again. The canker-worms stripped a few of the old trees, but the Waxwings cleared most of them and saved the leaves; so we did not lose our apples. When the cherries were ripe, these birds always found them. They stayed in the cherry trees with the same persistence that they showed in their work with the canker-worms. They have a habit, when satiated, of sitting together, sometimes five or six on the same limb, and at such a time I have seen a cherry or a caterpillar passed from one to another until it had passed up and down the line before any would take it.

Who can describe the marvelous beauty and elegance of this bird? What other is dressed in a robe of such delicate and silky texture? Those shades of blending beauty, velvety black, brightening into fawn, melting browns, shifting saffrons, quaker drabs, pale blue and slate with trimmings of white and golden yellow, and the little red appendages upon the wing not found in any other family of birds—all, combined with its graceful form, give the bird an appearance of elegance and distinction peculiarly its own. Its mobile, erectile crest expresses every emotion. When lying loose and low upon the head, it signifies ease and comfort. Excitement or surprise erect it at once, and in fear it is pressed flat.

In 1908, some fruit-growers in Vermont introduced into the assembly a bill framed to allow them to shoot Cedar Waxwings. This bill was pushed with

such vigor that it passed the House in spite of all the arguments that could be advanced regarding the usefulness of the birds. In the Senate, however, these arguments were dropped, and the senators were shown mounted specimens of the bird. That was enough; its beauty conquered and the bill was defeated.

Range The Cedar Waxwing is found throughout the wooded portions of North America, from the fur countries southward, and winters in most of the United States and southward to Cuba, Mexico and Panama. It is accidental in the Bahamas, Bermuda, Jamaica and Great Britain. It breeds from British Columbia to northern Ontario and northwestern Quebec and south to southern Oregon and North Carolina.

Notes Perhaps in the white days of winter you may see a little flock sitting upright upon some leafless tree, calling softly to each other in their high-pitched, lisping, sibilant monotone. As Mr. Dawson says: "It is as though you had come upon a company of the Immortals, high-removed, conversing of matters too recondite for human ken, and who survey you the while with Olympian disdain."

During the nesting-season they become silent indeed, but several competent ornithologists have heard a low song. Judging from my own experience, however, this song must be about as rare as that of the dying Swan—which, by the way, is not a myth. Mr. Brewster has heard our Waxwing give a succession of loud, full notes, not unlike those uttered by Tree Swallows in spring. On several occasions they have been given by a bird circling high in air, as if in song flight, but he has heard similar cries uttered by wounded birds of this species, and suspects that these calls are merely a succession of alarm notes.

Nest and Eggs The Cedar Waxwing breeds very late, raising its young in July or August, when wild cherries and blueberries furnish them an abundant supply of food. In New England, the earliest nests sometimes have eggs by the second week in June. The breeding-season is at its height by the last of July. Sometimes a pair raises two broods, and a few have young in the nest in September. The nesting-site varies greatly. The nest is often located on some tree from which the waxwing gets its food, although I have never seen its nest in a cherry tree. The apple is commonly chosen, also the Virginia juniper or red cedar. Sometimes, in settled regions, the nest is placed on a low limb or a hedge not more than five or six feet from the ground, sometimes in tall elms or maples, more rarely in the top of a birch or some pasture tree. Both male and female engage in nest-building; the male often brings nesting-material, while the female fashions it into shape. In the forested regions of the North, the nests are found in spruce or hackmatack trees in open swamps. The nest varies as much in material and construction as in situation. In the South it is comparatively small and compact, built mainly of small twigs, grass culms, weed-stalks and leaves, and lined with fine grasses and grass roots. In the farming regions of the North the nest is often

a bulky structure, composed largely of the stems of weeds and grasses, a few twigs, grape-vine, cedar or hemlock bark, and feathers, hair or wool; sometimes including rags, string, lint, paper or yarn in its construction.

The eggs number three to five, pale bluish, or bluish gray, with more or less of a purple tint, tapering rather suddenly toward the small end, and marked with small distinct roundish spots of blackish or umber. The large end is marked with various touches and shades of purple. An egg is laid daily until the set is complete. The male and the female are said to take turns in incubating, and in feeding the young, which hatch after about fourteen days' incubation.

Migration The migrations and winter movements of the Cedar Waxwing are controlled largely by the supply of certain wild berries in the regions over which they pass. Therefore they may be met with in fall and winter anywhere from the latitude of Maine to that of Georgia, wherever the berries upon which they feed are plentiful. In spring, however, there seems to be a rather irregular double migration northward. Mr. Wayne states that they appear in South Carolina in February, and again in the last few days of March. In eastern Massachusetts, a flight comes usually in February and another in May, after which the bird is distributed over New England. The significance of these flights has never been fully explained, but in Massachusetts the earlier flight is supposed to be composed of birds that go far north to breed. When moving long distances, the Cedar Waxwing flies high, but ordinarily it passes just above the tree-tops.

Food The food of the Cedar Waxwing consists very largely of fruit; but most of it is wild fruit of no value to man.

The Biological Survey finds that 87 per cent of its food for the year is vegetable matter. Wild fruits and seeds compose 74 per cent of this and cultivated cherries only 5 per cent. The animal food consists mainly of insects. When the Waxwings come in spring, they may be seen pecking at the blossoms of fruit trees and scattering the petals broadcast; but when their stomachs have been examined quantities of the insects that infest the blossoms have been found. They are fond of leaf-eating beetles, and devour quantities of the Colorado potato beetle and the pernicious elm-leaf beetle, which has proved so destructive to elms recently in the eastern states. Mr. Outram Bangs informed me that the Waxwings entirely cleared his young elms of this pest. Mrs. Mary Treat notes a similar instance. This bird is very fond of the small geometrid caterpillars which strip the foliage from apple trees, elms and other trees, and it destroys enormous quantities of these worms. Professor Forbes estimates that a flock of thirty of these birds will eat 90,000 canker-worms a month—a very moderate estimate, for the appetite of the bird is unlimited. Cedar Waxwings have been known to gorge themselves with early cherries so as to be unable to fly. The young are fed quantities of insects, and, as they grow older, the parents give them fruit. The food is usually regurgitated into the open mouths of the little ones.

In late summer and early fall, the Waxwing imitates a Flycatcher, and, taking its post on some tall tree, usually near a pond or river, launches out over water or meadow in pursuit of flying insects. Birds taken at such times have been found crammed with insects to the very throat. Grasshoppers, crickets, crane flies, lace-wings, butterflies, moths, bugs, bark-lice and scale-lice all form part of their bill-of-fare, with occasionally a few snails. They seem to do little injury to cultivated fruit except to the cherry crop, and most of this usually may be avoided by planting a goodly number of early mulberry trees when planting cherries. In my own orchard, the mulberries attracted almost all birds away from the cherries. The best varieties of mulberries to plant are the Early Russian, the Charles Downing and the New American.

Like some other plump and well-fed personages, the Cedar **General Habits** Waxwing is good-natured, happy, tender-hearted, affectionate and blessed with a good disposition. It is fond of good company. When the nesting-season is past, each harmonious little family joins with others until the flock may number from thirty to sixty individuals. They fly in close order, and keep well together through the winter and spring until the nesting-season again arrives. Their manner of flight is rarely surpassed. Often they suddenly wheel as if at command and plunge swiftly downward, alighting in a compact band on the top of some leafless tree. They roam over the country like the Passenger Pigeon, never stopping long except where food is abundant. When hunting for caterpillars in the trees, they sometimes climb about like little Parrots. They often show their affectionate disposition by "billing", and by dressing one another's plumage as they sit in a row.

The fly-catching habit of these birds is sometimes exercised even in winter. Mr. Brewster notes that on March 1, 1866, in Watertown, Mass., he saw the members of a large flock engaged in catching snow-flakes. They took their station on the branches of a tall elm from which they launched forth in quick succession and snapped up the whirling flakes. The Waxwing lives a wandering Bohemian life, intent on satisfying its healthy appetite; and, this done, seems to be lost in admiration of the beauties and graces of its relatives and companions.

Large numbers of this lovely bird are shot by fruit-growers and also by alien hunters, who kill them on the wild cherry trees in August. Formerly many were shot for food in the North, and they are still taken for this purpose in the South. While they are occasionally a nuisance to the small-fruit grower, they well deserve protection for their beauty and for their utility to the general farmer.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 141 Broadway, New York City

President Dutcher

It is very painful to announce that President Dutcher's condition has shown very little improvement during the past two months. He has never entirely rallied from the paralytic stroke which he received on October 19, last. Although apparently in very good physical condition, the power of speech has not yet been restored to him, and his right side, which is paralyzed, renders it impossible for him to write. Much of the time he appears to be conscious of what is going on around him, and apparently understands the words spoken to him by his friends, although he is entirely unable to answer or to communicate his wishes, except vaguely. His physicians state that probably considerable time must elapse before any improvement in his condition can be looked for.—
T. GILBERT PEARSON.

Directors' Meeting

The prolonged and very serious illness of President William Dutcher necessitated action on the part of the Board of Directors, looking to the authorization of proper officials to represent the National Association. The Board, therefore, met by call on January 4, in the American Museum of Natural History, New York City. Eight directors were present, viz., Dr. J. A. Allen Dr. Hermon C. Bumpus, Frank M. Chapman, Dr. Jonathan Dwight, Mr. W. W. Grant, Dr. Frederic A. Lucas, Dr. T. S. Palmer and T. G. Pearson.

Dr. J. A. Allen was declared the Acting President, and T. Gilbert Pearson the general executive officer of the Association, by the following resolutions:

“WHEREAS the President of the Asso-

ciation is incapacitated through illness from performing his duties as President, and the first Vice-President's absence in Washington prevents his undertaking those duties,

“*Resolved* that, in compliance with Article IV of the By-laws, the second Vice-President be requested to take upon himself the duties of Acting President until the President's recovery, or until the next annual meeting of the Association, whichever shall first occur.”

“*Resolved* that the entire care and control of the New York office of the Association, the administration of the affairs, of the office, the employment of assistants at such office, the employment of wardens, field agents, and other representatives of the Association, be left with the Secretary subject to the approval of the Advisory Committee, and that the Secretary, so far as the By-laws of the Association will permit, shall be the Executive Officer of the Association.”

The Secretary's report of the work of the Association since the Annual Meeting, on October 25, showed the extensive activities of the Association in its various fields of operation. For instance, the report showed that during the past ten weeks 2,730 educational leaflets had been distributed gratis, and that 25,375 had been sold at the cost of publication. The general work of the Association has cost about \$500 less than for the same period last year. This was due, in part, to the heavy expense incurred during 1909 in preparing for the legislative effort at Albany, which resulted in securing the enactment of the Audubon Plumage Law. Other features of the report will be found elsewhere in these columns.

Mr. W. W. Grant rendered the follow-

ing report for the Committee, which is endeavoring to increase the endowment, known as the "Mary Dutcher Memorial Fund," to the sum of \$10,000.

Total amount collected, June 3,
to December 31, 1910.....\$8,132 37
Amount invested in
 Bond and Mortgage \$7,100 00
General expenses in
 collecting fund..... 431 05
Cash in Columbia
 Trust Co..... 601 32
 \$8,132 37

The Board held a prolonged session at which many features of the Audubon work were discussed.—T. G. PEARSON, *Secretary*.

Work Under the Sage Fund

The contributions of Mrs. Russell Sage to this Association, for its work in the southern states, which during the past year has amounted to \$5,500, has made it possible to employ four field agents, and conduct a large amount of other work in the southern states of late.

Miss Katharine H. Stuart, of Virginia, has been constantly engaged in lecturing and writing on bird protection and the work of the Audubon Society. She attended the meeting of the State Teachers' Association in Richmond, and, in her address, explained to the teachers the subject of organizing Junior Audubon Classes under the Mrs. Sage plan. Miss Stuart is now conducting a heavy correspondence among school teachers, and is distributing large numbers of educational leaflets.

Milford W. Haynes, in North Carolina, made a systematic canvass of the senators and representatives of the state, to interest them in supporting the Audubon bills which will be introduced in the legislature, to protect the Robin, to establish a game commission, and to provide a resident hunters' license tax, the money thus collected to be used for bird and game protection. He has also published several articles in the newspapers bearing on these points. After the first of January he was stationed in Raleigh, to watch closely the legislative situation.

James Henry Rice, Jr., in South Carolina has been conducting a most remarkable lecture course. Beginning August 15, a whirlwind campaign was carried on and meetings held daily, except Sunday. For at least sixty days there was never less than one meeting addressed, daily, and sometimes as high as six.

This included a campaign with farmers, school-children, factory operatives (the greatest slaughterers of birds in the state), and townsfolk. The number of people attending these meetings, according to newspaper accounts, exceeded forty thousand.

Special stress was always laid on the value of the birds, especially on such birds as the Robin, hitherto subject to relentless persecution. So far this winter, the robins have not been greatly molested; and not a single case has been prosecuted for killing Robins. Last year the Audubon Society conducted many prosecutions and there were numerous rumors of Robin slaughter where proof could not be had. Mr. Rice has secured the pledges of about ninety per cent of the members of the legislature to support the Audubon bill for a resident hunters' license.

Captain M. B. Davis has been conducting a most aggressive campaign in Texas. He has attended numerous gatherings where, in his addresses, he has presented the importance of bird protection, and urged the adoption of resolutions, and the formation of classes and committees who shall work to save the robin and other valuable birds of the state. Among the places where he has worked, some of the more important were the annual meeting of the State Teachers' Association held in Abilene, beginning December 28, 1910, meetings of the cotton growers, and gatherings of the state corn clubs. He has lectured before numbers of schools, and interviewed hundreds of superintendents and teachers. He estimates that his series of articles on Robin protection published in the Texas papers have been read by not less than 500,000 people. Mrs. Davis has greatly assisted him in his work. Among other places where her efforts have done

much good, was the meeting of the Federation of Women's Clubs where, according to the press notices, she spoke most effectively before the six hundred women gathered in annual convention, and secured their strong official endorsement of the bird-protection work now being done in Texas by the financial aid of Mrs. Sage.

Our plan for organizing Junior Audubon Classes in the South has met with very encouraging results. The first notices to teachers were sent out during the month of September, and, while a considerable area of the southern states has not yet been reached, up to the first day of January one hundred and sixty-nine classes, with three thousand five hundred and sixty-four members, have been organized. It may be of interest to readers of *BIRD-LORE* to know how these are distributed:

	Classes	Members
Texas.....	2	34
West Virginia.....	3	40
Louisiana.....	3	79
Kentucky.....	6	144
Georgia.....	9	213
Alabama.....	8	198
South Carolina.....	23	373
Virginia.....	36	671
North Carolina.....	22	430
Tennessee.....	56	1,324
	—	—
	168	3,506

Considering the comparatively short time that the plan of Junior Audubon classes have been under trial, these results are exceedingly gratifying, and reports from several of our workers promise greatly increased gains in the near future.

The sentiment for the protection of the Robin and other song and insectivorous birds in the whole South, under the stimulation of the education of the children, gives promise that the coming generation will see bird protection a fundamental part of the creed of that section.—T. G. P.

New Members

During the period between the Annual Meeting, held on October 25, 1910, and January 1, 1911, the following persons

have been enrolled in the membership of the National Association.

Life Members—

Mr. Chester W. Chapin,
Mr. Wm. T. Davis,
Mr. Andrew D. Meloy,
Mr. Charles D. Stickney.

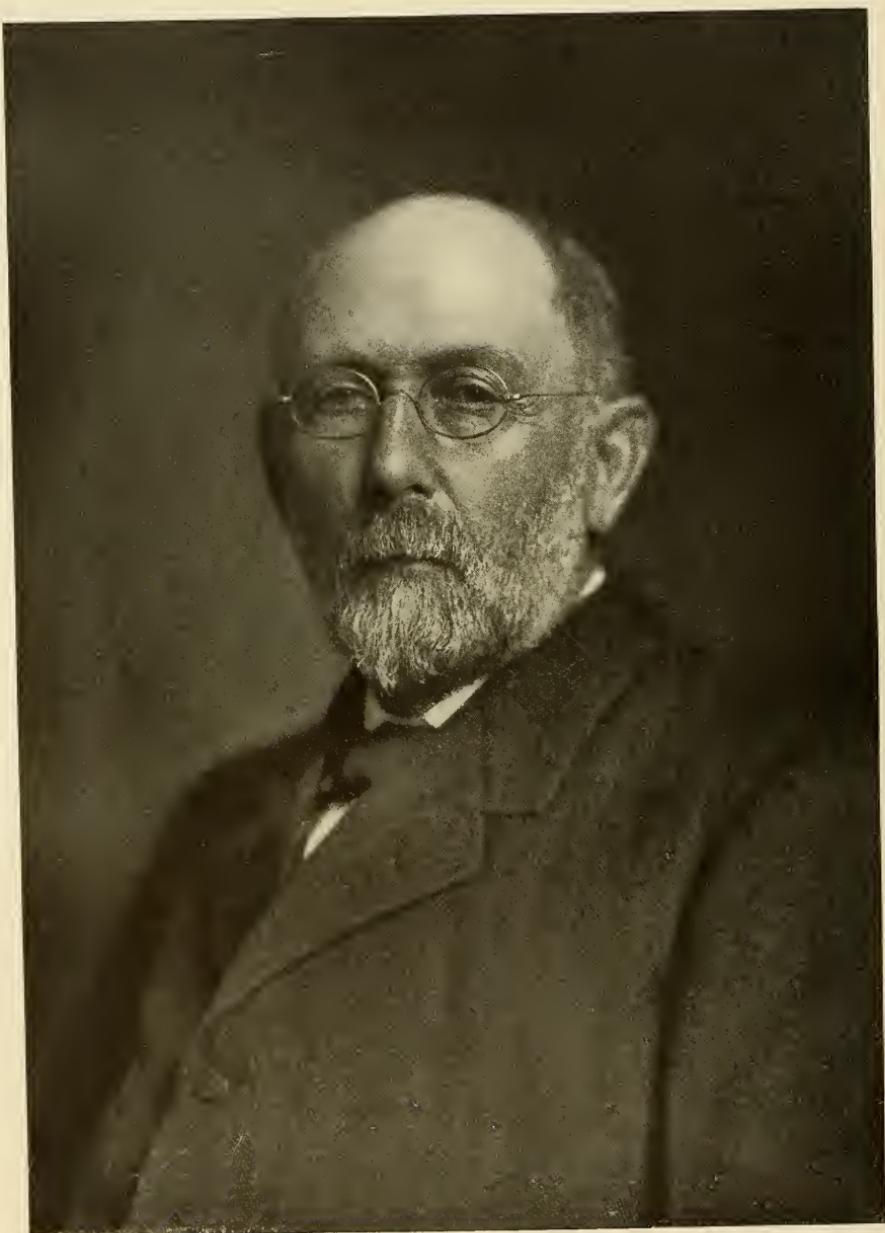
Sustaining Members—

Mr. J. B. Burnham,
Mr. A. R. Brewer,
Mr. Stephen W. Collins,
Mrs. J. P. Crapo,
Mr. Henry B. Culver,
Mr. C. A. Cummings,
Mrs. J. E. Davis,
Mr. W. R. Errett,
Mr. W. S. Farnham,
Mr. W. E. Hookway,
Mr. H. L. Horsky
Mrs. Adrian Joline,
Miss Mary F. Kanouse,
Mrs. H. F. Kean,
Mr. Robert B. Lawrence,
Mr. Norman McClintonck,
Mr. E. A. McIlheny,
Massachusetts Civic League,
Mr. H. F. Merriam,
Mrs. Robert S. Minot,
Mr. R. L. Montague,
Mr. Geo. H. Nicholls,
Mrs. A. E. Pfarre,
Mrs. Daniel F. Platt,
Mr. James Henry Rice, Jr.,
Mr. L. A. Shaw,
Miss Elizabeth M. Sturgis,
Mr. Ottamar H. Van Norden,
M. Percy Warner,
Mrs. B. P. Weaver.

Some Audubon Workers

II. WILLIAM WATSON WOOLLEN

William Watson Woollen is a true pioneer of Indiana, having been born May 28, 1838, in the city of Indianapolis. In his childhood, his father moved with his family to a farm northeast of the city. Excellent opportunity for nature study was presented to him, for the family lived in a double log-cabin in the midst of the Indiana forest, which was teeming with wild game. His study at this time was not from books, but was from first-hand observation. There was much to be done on the farm, and his moments of idleness were few; but it was a wholesome outdoor life, and it is with pleasure that he speaks of that time. He attended a log-cabin



WILLIAM WATSON WOOLLEN

country school, which was a very primitive affair, indeed. Having received such little schooling as he could get from this source, at the age of nineteen Mr. Woollen entered the Northwestern Christian University, now Butler College. During the years he spent here, he earned his way by teaching country school and doing occasional farming. He graduated from the law department a few years later and began the practice of law in Indianapolis. For nearly fifty years he has been con-

Indianapolis itself. On Easter Sunday, in 1897, as he wended his way down Fall Creek, he came upon a singularly wild and beautiful spot. As he himself has described it;

"Before me was a veritable wildwood. It was primitive. No stock had ever pastured in it. The buckeye and tulip trees were unfolding their beautiful foliage. The May flowers were just beginning to bloom. The anemones, pepper and salt hepaticas, trilliums and many other wild



THE LOG CABIN IN THE GARDEN

tinuously at his desk. He is the author of several law books of importance, and is an efficient and respected member of the Indianapolis bar.

Throughout all his busy life, Mr. Woollen has retained his love for the out-of-doors, and to this is undoubtedly due his physical vigor, and his wholesome, hopeful views of life. For many years it was his custom to spend a part of Sunday in taking long walks through the woods. Often he strolled along Fall Creek, a most beautiful little stream, which flows from the northeast down through the city of

flowering plants garlanded the hill. This dense forest that I was entering was a bird paradise and resonant with bird song."

Here he met an old resident, who, as they walked, pointed out many things of interest, among them the fallen trunk of a great tulip tree, which had never been removed after it was cut, because of its great size. The neighbors had called this great tree the "Buzzard's Roost," and so the place got its name. Mr. Woollen then and there determined he would purchase the place, and save it in its wildness as a place for nature study. He purchased it,

and for many years expended much time, labor and money in its development. He planted fruit trees and vines and flowers on the fifteen acres that are under cultivation. The twenty-nine acres of forest, that have never been pastured, he left unchanged, except to cut beautiful winding paths through its depth. Upon the crest of the hill he built a double cabin, which is a duplicate of the cabin in which the Woollen family lived.

In December of 1909, Mr. Woollen, as he so aptly expresses it, decided to administer upon his own estate. He therefore made a deed conveying this tract of forty-four acres of land lying along Fall Creek to the Board of Park Commissioners of the City of Indianapolis, and Mrs. Woollen very readily joined him in its execution. Some of the conditions of the deed are as follows:

"1. The place is to be known and designated by your board as 'Woollen's Garden of Birds and Botany.'

"2. The cabins upon it are to be maintained and preserved to the memory of my parents, Milton and Sarah Woollen, and so that future generations may have some idea of how the pioneers lived in this state. The north cabin is to be the Woollen room, and, in it kept a visitor's register.

"3. It is to be maintained and used as a place for Nature Study, including horticulture and floriculture for the use of the schools of this city, regardless of religious denominations, nationality or color, Butler College, the Indiana Academy of Science, the Nature Study Club of Indiana, and such other educational bodies or persons who may desire to pursue the study of the Natural Sciences.

"4. The wildwood of it is to be maintained as near as can be in its present wild state, and the wild life upon it, except when doing harm, is not to be interfered with or destroyed: it is to be a home and refuge for the wild creatures which are found there, or which may come to it."

The people of Indianapolis and, in fact, in many cities throughout the country, received this gift with much appreciation,

and many enthusiastic expressions of approval came to him.

Perhaps it is only among his more intimate friends that it is known that Mr. Woollen's gift did not come from a full purse, but was the result of his own self-sacrifice, which became a pleasure to him because he was anxious to help the children of the city, and the children yet to come, to a love and understanding of our birds and of all Nature, and because of a deep-seated conviction that such knowledge would make of them better citizens for his much-loved city.

In November last, a further testimonial of appreciation of Mr. Woollen's public-spirited service was recorded. The Commercial Club, of which he has been for many years a member, elected him its first honorary member.

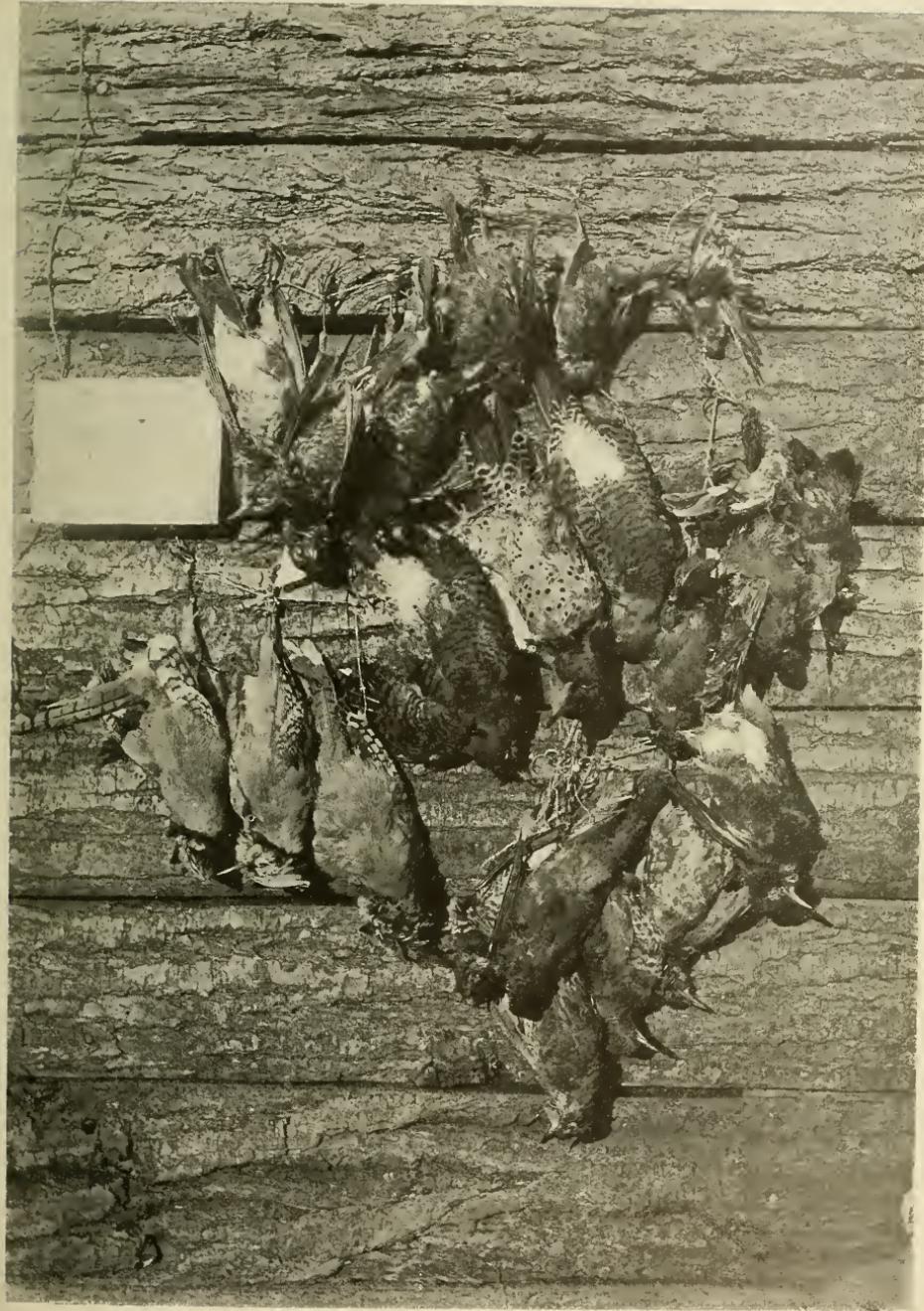
"Birds of 'Buzzard's Roost'—One for Each Week—and Other Essays" by Mr. Woollen was published in 1907. This book gives an accurate account of the life-history of fifty-two native Indiana birds, and it has met with a warm reception not only from bird lovers but from the public generally.

Mr. Woollen has been prominently connected with the Indiana Audubon Society, which he helped to organize.

In his private life, Mr. Woollen is a man who has put into practice the theory of "plain living and high thinking." He is very fond of children, and is never so busy that he has not a cordial greeting for the child who comes into his office or his home. He is devoted to his family and his friends, and finds much pleasure in his library, where he has accumulated a large amount of nature-study material, which he is arranging for the library of Woollen's Garden of Birds and Botany. One of his keenest pleasures is to walk through the wilds of Buzzard's Roost, where the little folk of the wood have learned to know him as their friend.—M. L. BASS.

Bird Destruction

In an address delivered by the English bird protectionist, Mr. James Buckland,



A CONNECTICUT GAME WARDEN'S BAG

15 Robins, 3 Flickers, 3 Blue Jays, 2 Hermit Thrushes, 1 Purple Finch. Taken from Antonia Distopple, October 21, 1910, at Stratford, Conn. He forfeited a \$40 bond. Photograph by Wilbur F. Smith

at the meeting of the Royal Colonial Institute, held at the Hotel Metropole, London, December 20, 1910, on the subject 'The Birds of our Colonies and their Protection,' he states some interesting facts regarding the destruction of birds for millinery ornaments.

The Emu (*Dromaius*), in Australia, is confined every year to a more restricted range. The birds have been pursued for their feathers until they have been exterminated absolutely in Tasmania, Victoria and South Australia. During the past year, only 1,019 skins were found in the London markets.

The Lyre-bird (*Menura*) of Australia, he declares, is rapidly approaching extinction. Evidence of this, as shown by the millinery trade of London, is that a few years ago as many as four hundred of the tails of this bird were catalogued there in a single season. The number has gradually decreased, until in 1910 only fifty-two appeared in the London markets.

The Blue Bird of Paradise (*Paradis ornis rudulphia*) of Papua, as British New Guinea is now officially called, is one of the species that has been relentlessly killed by the men who care nothing for birds except for the money which their feathers bring. Mr. Buckland says: "So fiercely has the bird been persecuted for its plumes that any hour now the report of some plume-hunter's gun may sound the knell of the last living representative of the species." He further states that the birds had become so scarce, by 1908, that in that year he found only twelve skins in the London market, and these were in imperfect condition.

Speaking of Hummingbirds, he calls attention to the fact that their destruction for feathers in the West Indies has been so overwhelming that certain species, with a restricted habitat, have been swept out of existence.—T. G. P.

Notes From the Field

VERMONT

The legislature of Vermont, which opened the first Monday in October and

closed just prior to the holidays, enacted three laws which are decided steps forward in the matter of bird and game protection. These were:

First.—A bill providing a close season for six years on the Wood Duck.

Second.—A bill which will stop the shooting of does, as the act allows only the shooting of deer with horns six inches in length or more.

Third.—An act establishing the office of State Ornithologist, with sufficient money in sight to pay for the services of such an officer.

This Association was represented at the legislature by Mr. E. H. Forbush, who not only was responsible in large part for the passage of these beneficial measures, but also used his influence to defeat several bills of a detrimental character, which the opponents of bird protection were seeking to have enacted.

NEW JERSEY

The New Jersey Audubon Society was incorporated on December 15, 1910, with headquarters at Trenton. On December 27, the former Society, known as the Audubon Society of the State of New Jersey, formally dissolved, and on the 29th of December the official meeting of the Trustees of the New Jersey Audubon Society was held, and on this occasion the secretary of the late Audubon Society of the State of New Jersey turned over to the new organization the balance in the treasury, amounting to \$81.75.

The officers elected were as follows: President, George Batten, of Montclair; First Vice-President, W. DeW. Miller, of Plainfield; Treasurer, John T. Nichols, of Englewood; Secretary, Beecher S. Bowdish of Demarest.

The meeting, besides endorsing the action of the incorporators in their selection of trustees and their drafting of constitution and by-laws, together with the act of incorporation, also took under consideration several methods of introducing and developing bird instruction in the schools, as well as the legislative program for the coming season.—T. G. P.



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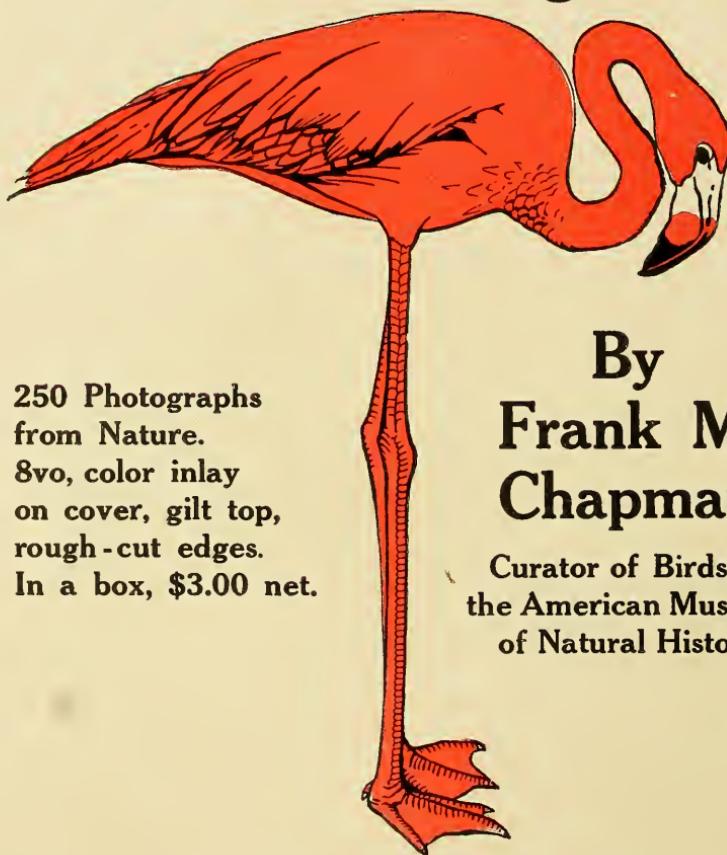
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Vol. XIII

MARCH—APRIL, 1911

No. 2

Birds and Seasons in My Garden

II. APRIL AND MAY

By MABEL OSGOOD WRIGHT

“On every bough the birdes heard I sing
With voice of Angel in hir armonie.”—*Spenser*.

WHEN spring has actually taken form and separated herself from the mists of melting snow, bringing Pandora’s own box of mysteries for luggage, even the garden owner who has ceased to expect the miraculous to happen suddenly becomes alert, and is continually in the attitude known as “nose to the wind,” in the lore of the wild.

Which of the earth tribe that live by root, bulb and seed has survived the winter? Who of the winged company have safely passed the perils of flight through storms and unfriendly lands? Will the warbler migration be great or small? Will the Blackburnians pass the garden by, or stop for a day or week in the spruces? What of the summer residents? Nesting-sites there are galore in tree, bush, briar-patch, and well-contrived houses that any sensible bird possessing a shred of imagination can easily mistake for post or tree holes.

Shed-beams are here for the Phœbes, snuggeries for House Wrens, a heap of cedar brush down in the farm land if the Carolina Wren is home-hunting, piazza roof nooks for the unfortunate Robins who have had bad luck in choosing a long branch site with too great leverage, so that the heavy nest with the added weight of young frequently topples to the ground.

A group of spruces on a knoll above the pool for two years harbored a nest of Green Herons. They joyfully ate the gold-fish that we kept in the pool as an antidote to mosquitos; yet we shall be glad to see them back, for they bring a welcome tropic touch to the formality of things. Everything is ready; who will come?

From April until the last Blackpoll has moved on, I feel not unlike the owner of some modest hillside resort, who, after painting his front stoop, swinging hammocks in the orchard, and staking out a new set of croquet, puts a

sign at the cross-roads, "Lodgings, with a Home Table," and then retires somewhat anxiously behind the living-room blinds, to await results, dreading lest the appearance of eagerness should frighten new-comers, and relying upon his past reputation alone to secure the return of old tenants.

Yet we may do what we please to allure. The way of the bird is the way of the wind, outside of certain supposedly set rules of highways of migration. The novice or theorist (who has the same quality) is apt to think that an April and May of fine weather promises best for a spectacular spring migration. As far as my garden is concerned, its record proves the contrary. An interspersal of storms of rain, with high winds, through periods of sudden sunny warmth have brought about some of the most wonderful "Warbler Days" that I have ever known.

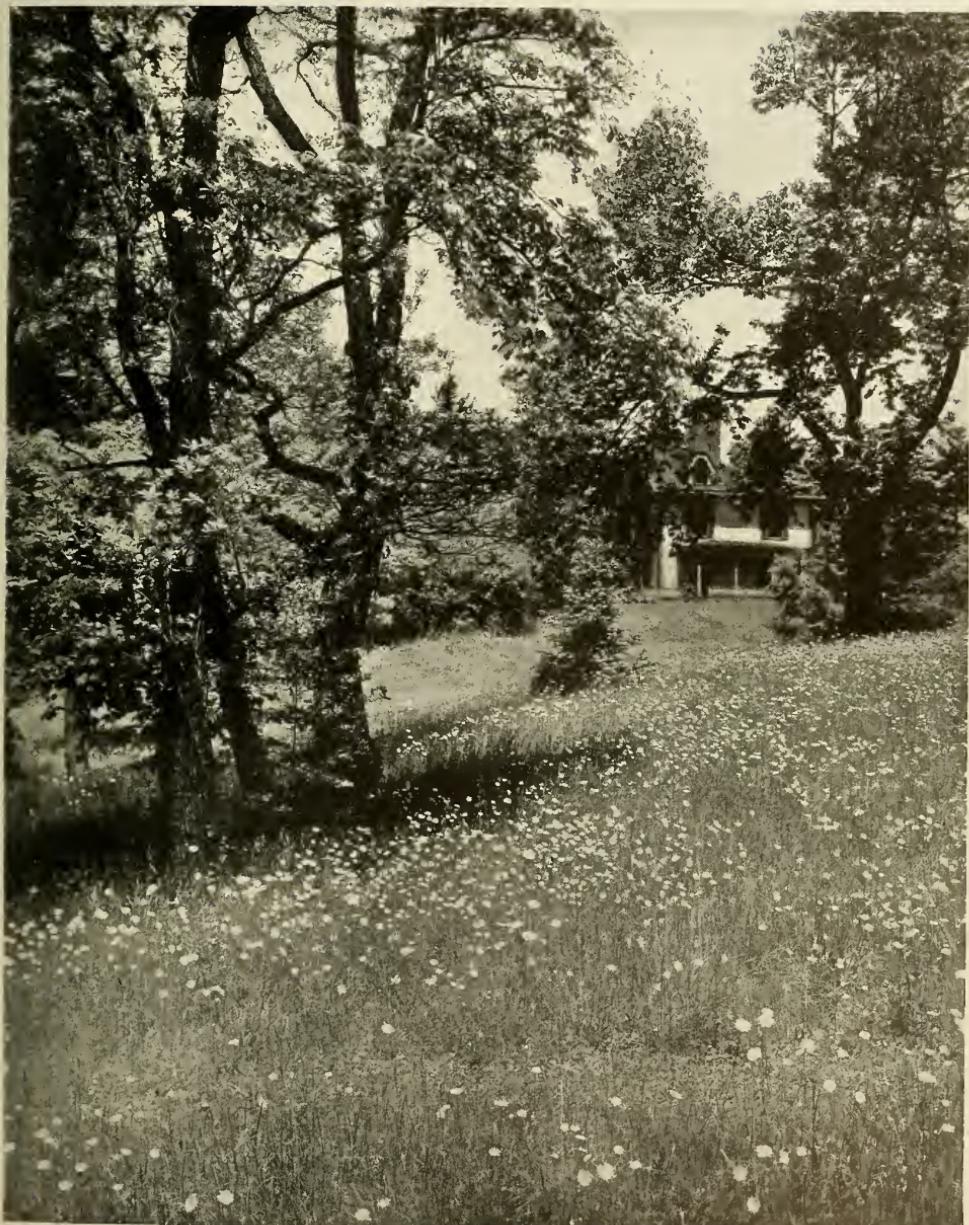
By the first of April, it is safe to say, even in southern New England, that spring is here. March will always be the football among months, tossed and touseled between winter and spring until its identity is wholly mergeable.

When is it really spring? I once asked a seasoned farmer of the hill country, whose ear, more than is usual, was open to the sounds and signs of other things than the clink of coin. "Well," he began, hesitatingly, "you can't safely reckon by the Bluebirds and Robins, 'cause they may be left-overs, nor Phœbes, because I've seen 'em come and get froze out again, just like March plowing. But when the peepers holler steady and unquenchable—that's spring, and a pretty close call on April the first."

Here in my garden and the outlying marches (to use the good old English term),—for it is impossible to set a fence boundary to the songs that float in at the windows at dawn, or to fix an arbitrary limit to one's property-rights in music,—there is a really thrilling, morning chorus of a soft first-of-April dawn. Redwing, Robin, Song Sparrow, Bluebird, insistent Phœbe, Meadowlark, Field Sparrow, the roll call of Flicker, with the spring notes of the Crows, give warning that time for waging war against their annual intrusion is at hand.

One of the greatest garden excitements at this time is a double war that is carried on between sundry Flickers and two pairs of magnificently-tailed gray squirrels, for possession of the Flickers' tree-holes in a group of old Sassafras trees,—theirs by hereditary right of years, even if the squirrels do argue the law of possession. The squirrels have used the holes as store-houses, during the winter, for the nubs of chicken corn that we serve them for rations, since—the chestnut crop now being a thing of the past—they are threatened with a starvation that means total extinction. Comfortably bedded in leaves and cedar bark these squirrels live in the houses provided for them, but persist in filling every possible bird-hole with their plunder.

On general principles, I hesitate to interfere in any tree feuds other than



A GROUP OF OLD SASSAFRAS TREES WHERE FLICKERS NEST

ejecting Crows and English Sparrows; nevertheless, the squirrels must see by this time that the Flickers have my sympathy and aid in clearing the sassafras holes from which, by the end of May, they will look out upon the first field-daisies that bloom hereabout, and find delectable food in the ant-hills that underlie the old meadow grass of the slope. The squirrels will chatter at them from their box in the nearby chestnut, but neutrality will be declared, even if it is of the usual armed variety common in greater affairs.

The second party of belligerents is drawn from the tribe of Crows, that spend their winter days in clamping on the beach. Every spring they insist upon nesting in one or more of the spruces, and cause us endless trouble and climbing to dislodge them. On their house-hunting search, which began in early March, they encountered the Black-crowned Night Herons that have made a winter rookery in the best and thickest group of spruces. Immediately the Crows declared war, not openly, but by sneaking through the trees, slipping from branch to branch in the same manner as when hunting for squab Robins later in the season.

At first the great, awkward Herons, when startled, would utter a distressed "quok!" flop to another branch, and finally leave the tree altogether. Now, however, they are gaining assurance, and, though they sway to and fro deliriously,—their feet lacking the sure grip of small perching birds,—they hold their places, and open their long beaks and gape, rather than snap, in the face of their tormentors in a most ludicrous way. A moving-picture exhibition of a few of the scenes that I have watched within a couple of hundred feet of the house would, I am sure, create a sensation. Unfortunately, however, the Crows vanish at the sight of a camera and the shade of the spruces is very deep, so all that I have been able to prison with a few random snaps has been a chance Heron of the party of eight. But I've a feeling that it is to be a case of Heron "rampant," to use a heraldry term, and that we shall have young Herons in the spruces in May, instead of material for an April Squab Crow Pie,—which a Russian-Pole, who is especially adroit in helping dislodge Crow nests, assures me is "Fine, sure fine! If you let they get not too much feathers."

One of the most thrilling sights of early spring is the mating flight of the Red-shouldered Hawks. Coming down from a stretch of oak woods, they will sail to and fro a half day at a time, going to the extreme edge of the open meadows below and returning against the wind. At times their calling is so frequent as to be almost rhythmic, and then will follow long periods of silence.

The Crows have a sort of courting flight also, but it wholly lacks the majesty of the Hawks' aerial courting. With the Crows it seems to be a serio-comic drama in two acts, in the first of which several birds dash about in the air in gradually widening circles, all calling together. When this has gone on for an indefinite time, one of the Crows, presumably a female, takes a lookout position on the

top of a tree, and remains motionless except to occasionally raise her head and give a sort of quavering croak suggestive of nausea, while the others dash about her in small circles, evidently in an angry or possibly competitive mood, until, without any apparent reason, they flock closely and disappear.

According to season and circumstances, dates of arrival in my diary vary sometimes by ten days or two weeks, and so I have come to associate certain parts of the months with groups of birds, rather than separate days with individuals.

With me, the middle of April means the final move of the Fox Sparrows that have been coming and going for several weeks, usually feeding in a weed field next door; but they frequently come to a little copse between the garden and pool where the dead leaves are allowed to lie and turn to mold. Here they scratch about with almost chicken-like vigor, and from the taller bushes I am almost sure to hear at least one of this Sparrow's wonderful evensongs.

A few years ago, the coming of the Barn Swallows was the next event, then a rearrangement of the buildings made them strangers. This year, I have had new openings made in one of the lofts, and I am expecting the Swallows to discover the fact as quickly as the Screech Owl found the box on the pine tree top.

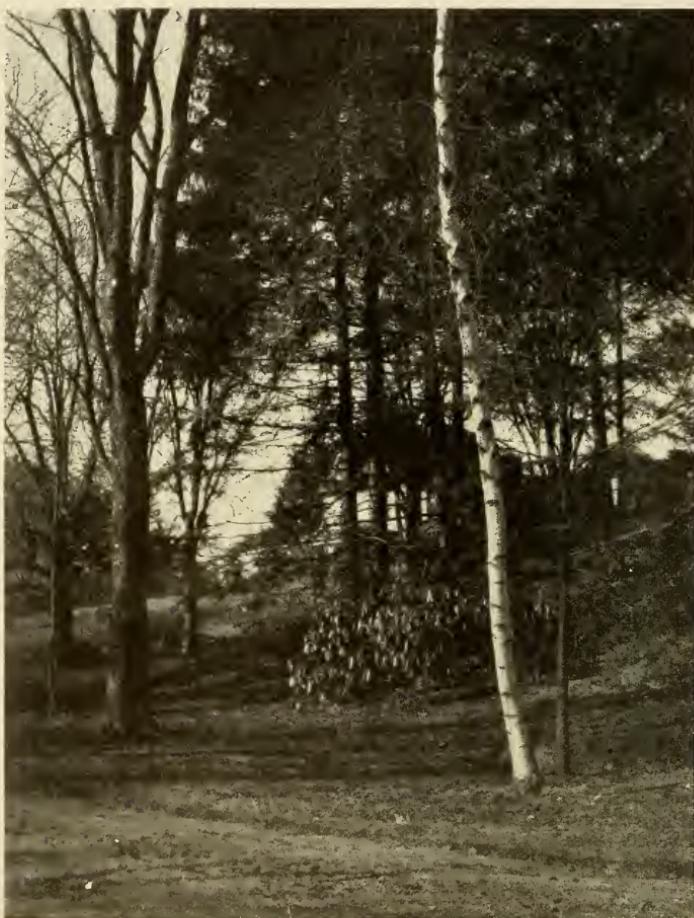
It is an endless surprise to me—this alertness and constant watchfulness on the part of birds for suitable nesting-sites. Last spring, when we had harbored no Chimney Swift about the place for years, owing to hooded chimney-tops, a revolving drum was blown off by the wind, and a pair of Swifts discovered the fact even before we house people realized the loss.

The Black-throated Green Warbler is one of the most abundant and least shy of the early comers of this interesting, yet puzzling family, if the hardy Myrtle Warbler of the four yellow spots be excepted. The Black-throat be-takes itself to the most plumy hemlock spruces, where it flits about incessantly, now showing the white tail feathers and then its dark throat and yellow face, while giving its unmistakable song by fits and starts.

The Myrtle Warbler, at least when it visits my garden, keeps close to the ground, searching along the lee of the grass borders for the smallest speck of animal life, and follows the overflow of the cobbled gutter, investigating the rustic seats, summer-house and porch steps with the greatest care. In fact, I find these two Warblers, together with their more tardy kin, the Yellow Warbler (*Dendroica aestiva*), and the Black and White Warbler, among our friendly birds, in spite of the fact that they are theoretically counted shy.

Gradually, as April reaches toward May and there is only a week's space between them, I expect at any moment the arrival of the first three of the sextet of great soloists that have come to be a part of the very garden itself, and as much to be counted upon as the succession of border flowers. The first three are the Brown Thrasher, Wood Thrush and Catbird; the second, the Rosebreasted Grosbeak, the Orchard and Baltimore Orioles.

It seems to me, also, that I always discover the first comer of each species in almost the same place each year. The Thrasher is either seen scratching about the footpath, leading to some dense shrubbery immediately back of the house, or else, selecting a spot where the early morning sun strikes full upon the bushes, this gallant yet coy minstrel spreads himself flat in the warmth, like a bit of clothing spread to dry upon a hedge. His first sign of



A GROUP OF SPRUCES ON A KNOB ABOVE THE POOL . . .
HARBORED A NEST OF GREEN HEBRONS

life is to comb out a dew-moist wing with an adroit action of beak and claw, after the manner of a Mockingbird. Later on, he will take to the tall ash opposite and sing, climbing upward as he increases in fervor until, when he reaches the very top, with head thrown back and swelling throat, his ecstasy floats into the sky itself. Often elusive as the Thrasher is, his favorite nesting-haunt is within thirty feet of the back porch, where I have left unpruned for

years a mass of the bridal wreath spirea, so that its upright shoots from creeping rootstocks have formed a stockade about the original bushes, making a cat-, dog-, and *bird student*-proof retreat which my Thrashers recognize. It is what Mr. Ellwanger calls the Hungarian Czardas of the Catbird that announces his arrival. It mingles with my dreams before I am really awake, and comes from the dapper, black-capped fellow who is in one of three places,—either on the pointed top of a clothes-pole, the wire clothes-line, or in the tall syringa bushes that are just breaking into leaf. *His* syringas, I should say, for to his family and ancestors they have belonged three-score of years, and we are always very careful, when we gather the flowers, not to bend or shake the boughs.

The Wood Thrush, though quite at home within garden bounds, begins his annual intimacy with a gentle reserve. The first song will, perhaps, come from the great white oak that overhangs the pool, and the singer remain there for several days before coming to the lawn. There another joins him, and yet another, until, last season, we had a Wood Thrush quartet that lasted until late July, entrancing us all, and bringing many guests to listen and be thrilled.

It is hard indeed for a female gardener, who not only tries to cherish the things rooted in the ground, but also the birds nesting in the branches, to keep sane and sound in the month of May. I've heard people wish that May could be two months long, and March be blotted out, to supply the needed days, but, for one, I doubt if I could stand the strain and rush of it. Yet, perhaps, if the time were not so brief the tension would be less, for, as it is, one is inclined to try to keep one's eyes literally pried open lest some winged rarity should have passed unseen.

About the second week in May comes my time of keenest suspense. Will the migrant Warbler horde visit me, or "pass by on the other side" of the river woods?—a belt that seems to have at times a local effect upon the migration.

There comes a dark morning, the clouds do not disperse, and by noon a steady rain falls, toward evening the wind rises, and we draw the curtains close, put extra logs upon the hearth-fire and, picking up books or work, draw toward the lamps with the comfortable calm of autumn evenings. Meanwhile, the lighthouse at the bar end, two miles away, gives the warning news of fog, as well. The next day the rain continues, and only the vigorous Robins are much in evidence, keeping up their endless tug-of-war with the earth-worms on the lawn. The second night the wind drops, the rain lessens, and once in a time a break of light shows that the moon is wrestling with the clouds. The air is full of mysterious sounds,—a Heron quoks, a single Whippoorwill cries—a bird that is a stranger here, east of the river and hill woods; a keen ear can hear numerous small birds shifting uneasily in the dripping trees.

Next morning, a ray of pale sunshine crosses the room, presently another joins it by way of an open window until, by seven o'clock, the full light of a perfect spring day pulls you from sleepy-land.

"Look out! oh, look quick, they've come!" you cry in an awe-struck voice, as if all outdoors might suddenly take alarm. And then, finding that you are alone in the room, you tiptoe to the bay window and raise the widest sash. Yes, the skyful of Warblers has descended, and everywhere you see glints of color, as eager for the warming touch of the sun as you are for the sight of them. One pin is enough to hold up your hair, and collarless necks are the fashion at present. "Down and out," at this moment, are not terms of failure, but of success.

In 1910 the darlings passed me by; but in 1909 this record of Warblers is in my book, all seen within garden bounds two days after a storm:

Blackburnian, Parula, Chestnut-sided, Myrtle, Redstart, Yellow, Bay-breasted, Black-throated Green, Maryland Yellow-throat, Chat, Worm-eating Warbler, Canadian, Blue-winged, Black-throated Blue, and the Blackpoll.

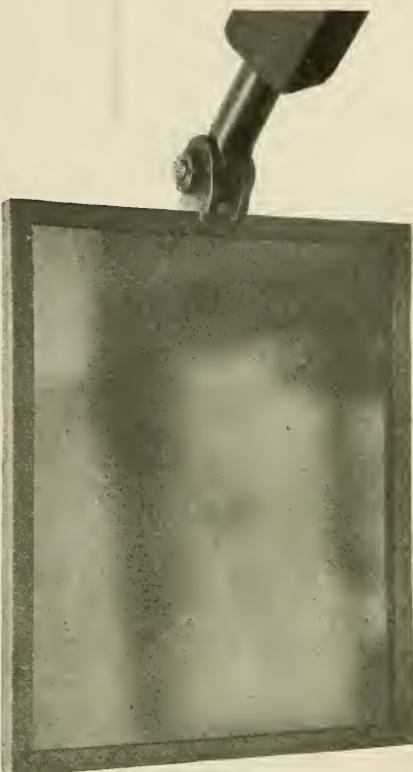
The Blackpoll, with all his motley stripes and streaks and leisurely ways, is, after all, the most ominous bird of his tribe; for with his departure the season of migration, as far as the garden is concerned, is over, and we take breath and settle down for the nesting. This announcement would doubtless seem rather belated to a couple of Robins, who are already toiling to fill four gaping mouths in the most up-to-date Robin home the place offers,—a bracketed shelf under the back porch, where a fine view and cat-protection are guaranteed, as well as first pick of earth-worms while cherries are forming on trees that are in plain sight.

A Device for Looking into Birds' Nests

By WILLIAM BREWSTER

SOME twelve or fifteen years ago it occurred to me that there might be an easier way of looking into arboreal birds' nests than that which necessitates climbing the trees—a practice congenial enough in the days of one's youth but likely to seem irksome when one has passed middle life. After a little experimenting, I found that the contents of most nests situated not more than fifteen or eighteen feet above the ground could be examined very satisfactorily by the aid of a looking-glass attached to a pole. The glass which I am now using, and which I consider best adapted for the purpose, is rectangular, and about six inches in length by five inches in breadth. It is set in a light metal (tin) frame, connected by a hinged joint with a hollow brass ferule that slips on and off the end of the pole. The hinge enables one to set the glass at any required angle by pressing it against twigs or branches after it is

over the nest. Its proper adjustment is not difficult, provided the hinge is neither too tight nor too loose. When the glass has been placed as it should be, it shows the eggs or young in the nest with surprising distinctness, even in poor lights. If it be desirable to examine them closely, an opera glass may be used in one hand while the other guides and supports the pole. Whenever I take the looking-glass with me on distant excursions, I carry it detached, in a leather case, improvising a pole, when needed, by cutting a straight young pine or spruce; but for regular, daily use about



THE MIRROR SHOWING MANNER OF ATTACHMENT TO THE POLE

home grounds, a bamboo fishing-rod fifteen or sixteen feet in length, with a wooden plug that exactly fits the ferrule inserted in the terminal joint, is by far the best thing I have thus far tried.

The simple little arrangement above described (and illustrated by the accompanying photograph) has excited so much interest among those to whom it has been shown that I have thought it worth calling to the attention of the readers of *BIRD-LORE*. Perhaps it could be improved upon, but at least it has served my purpose well.



REFLECTION OF A NEST AND EGGS IN THE MIRROR

An April Snowstorm

[The following observations, made in April, 1910, were received too late for insertion in the succeeding issue of *BIRD-LORE*, and were therefore held until they could be published at a seasonable date.—ED.]

My Dear Mr. Chapman: Here, in Waukesha county, Wisconsin, on April 23, 1910, we are experiencing a snow of many inches depth, which is already proving a terrible catastrophe to animal life of all kinds, and as yet there is no sign of abatement. Yesterday we were picking lilacs and counting the eggs in the nests of three Robins, now leaves and blossoms are frozen crisp while one may judge of the state of the season when I say that Woodchucks and Gophers (13-striped spermophiles) have been out in abundance for more than two weeks, and Tree Swallows, Chipping Sparrows, Kingfishers and other spring birds were noted several days ago.

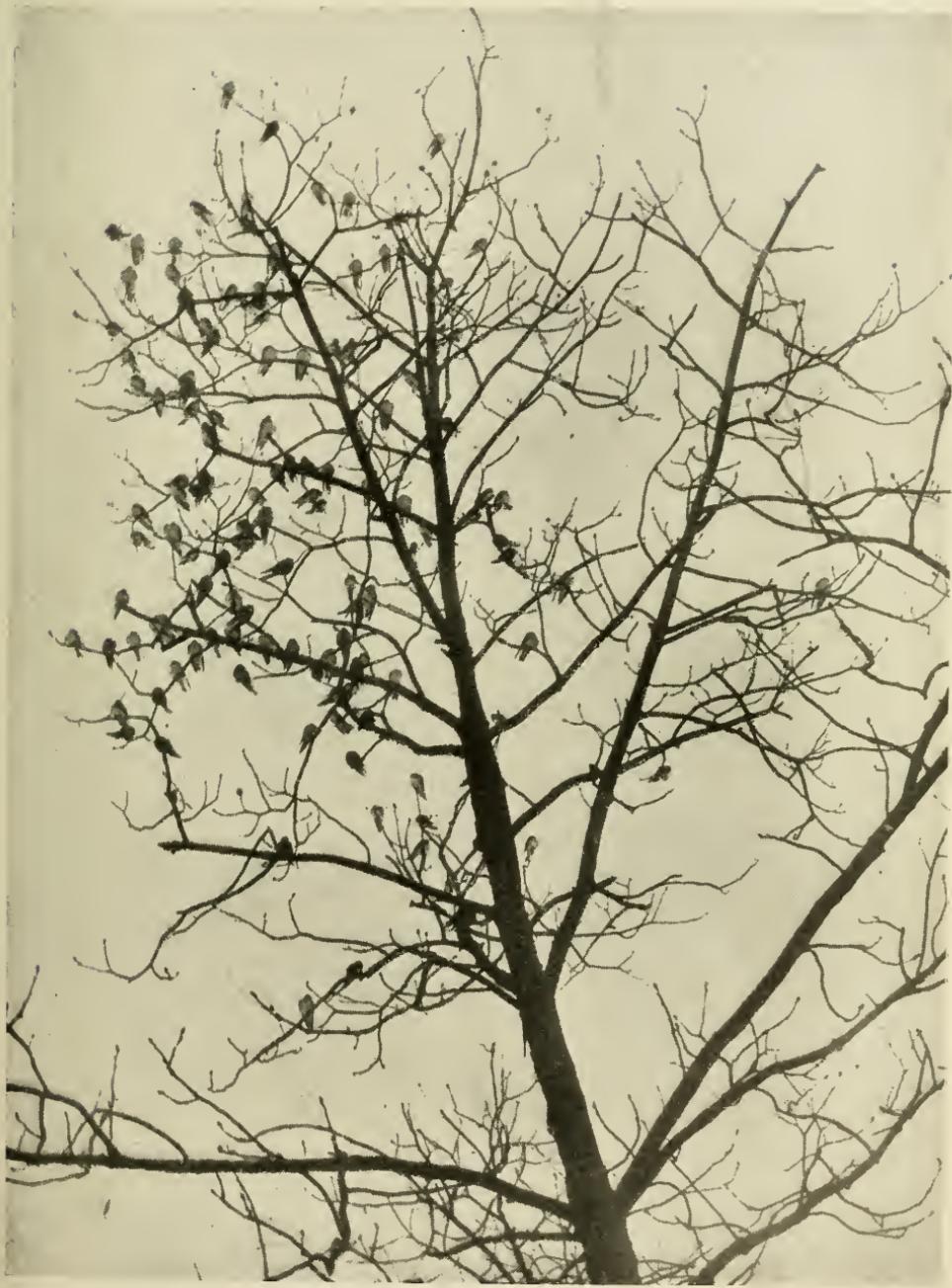
As the hours roll on without the birds obtaining any sustenance, they are becoming weaker and less able to resist the cold. A friend of mine caught a Chipping Sparrow in his hand. A Robin has taken refuge in the front room of one of the buildings, and a gray squirrel was captured in another building.

It is pitiful to see, as I saw this afternoon, a band of six Swallows drifting before the gale in search of insects.

Nashotah Lake, where these observations are made, is about a mile in length and less than half that in average breadth. It is situated together with many other lakes, in Waukesha county, in the southern part of the state. The lake is, for the most part, surrounded by open forest and pasture land, a large part of the estate of "Nashotah Mission," within which three-quarters of the lake is situated, being left in natural park conditions of hill, swale, swamp and marsh,—grass, grove, wood and swamp growth.

On the morning of April 24, we sallied forth shortly after sunrise, to find a leaden sky and presently more snow, which stopped before noon, however. We noticed that, unlike the actions of the birds during the driving blizzard, they were now much more timid and active in every way, and vociferous with their various songs and calls,—so that, as a companion remarked, it sounded like the chorus which greets one when opening the door of an aviary in a zoölogical garden.

Moved with pity, we hung bones and suet about in the trees, but a later reconnoiter of the lake in a canoe showed that this was unnecessary. The waters of the lake, warmed by the preceding month of spring, were producing multitudes of a large, mosquito-like insect, which everywhere were bursting from their pupa cases and, benumbed by the cold air, were fluttering and struggling with the strong waves on the surface of the water. Not only did they produce provender for the large flock of various species of Swallows which 'dipped' them from off the lake's surface, and for the Phœbes, which made sallies in Kingfisher fashion, but also for the feathered refugees which



TREE BARN AND BANK SWALLOWS

lined the banks on the grass and sand, which the waves licked clean of snow, and upon which they deposited tens of thousands of this God-given manna. That birds not so fortunate as to find the secret of the lakes perished miserably is evident from the fact that I know of two Robins and a Chipping Sparrow which succumbed in this favorable locality; of a Blue Jay, two Robins, two Chipping Sparrows, a Cowbird and a Savannah Sparrow, which sought and



MIGRATING SWALLOWS AFTER A SNOWSTORM

found an asylum inside dwellings, and of three Robins' nests, each with two eggs, the owners of but one of which are now brooding over their eggs. The other nests contained each three eggs, which burst open with freezing. The majority of the Robins have given over housekeeping and are congregating in large flocks,—a remarkable change of habit at twenty-four hours' notice!

About the lake, the following birds are the most abundant: Red-winged Blackbird, Rusty Blackbird, Robin, Savannah Sparrow, Tree Swallow. The following are very common: Bronzed Grackle, Song Sparrow, White-throated Sparrow, Tree Sparrow, Hermit Thrush, Barn Swallow, Junco, Phoebe, Blue Jay, Fox Sparrow, Swamp Sparrow, Chipping Sparrow, Myrtle Warbler, Crow and Sapsucker.

Strange to say, we saw but few Bluebirds (common during the past months), Cowbirds, Flickers, Chewinks, Chickadees, Vesper Sparrows, Downy or Hairy Woodpeckers, and Nuthatches; and but one each of the Cliff Swallow, Broad-winged Hawk, and Horned Grebe.

For more than twenty feet, a sheet of ice extended from the shallow margin of the lake; whilst at the center Barn Swallows were catching insects on the

wing. We counted more than a dozen of them, sitting with perhaps a hundred Tree Swallows on a certain leafless tree, whilst three more sat upon grasses extending above the deep snow. To hear them chattering, their spring song, happy and well-fed, perched some six inches above a foot of new-fallen snow, was indeed an unusual experience.

The snow is melting and windswept areas, where the snow was thin, are already becoming bare. But it has been a severe trial. I watched one disconsolate Robin eating snow and a frozen grass blade.—Very Sincerely, *Wm. D. Carpenter*, Nashotah, Wisconsin, April 24, 1910.

Boxes for Birds That Provide No Nesting Material

By **FRANK C. PELLETT**, Atlantic, Iowa

With photographs by the author

THE tree surgeon is abroad in the land. In the country, his presence has made no material difference as yet. In regions round about the cities, his work has been very effective; so effective in fact, that, while saving the trees, he has alarmed the bird lovers, who fear that his work will destroy the natural nesting-sites of Woodpeckers, and birds of similar habits. The most casual observer is familiar with the fact that these birds carve for themselves homes in decaying trunks, or limbs of trees. The removal of such wood, and the filling of cavities with cement, has the effect of depriving them of suitable sites for nesting-places. The woodpeckers carry in no material for nests, but simply leave some of the fine chips at the bottom of the cavity, on which to lay their eggs. The Sparrow Hawk, while not making a hole for himself, occupies the same kind of home, and usually is satisfied with one that has been abandoned by a Woodpecker.

For several years, the problem of attracting such birds to artificial houses has interested me. Naturalists of prominence have said that such a thing was unknown, and probably impossible. Instances of Flickers or Red-headed Woodpeckers making holes in cornices or similar places are often reported.



SHOWING THE INTERIOR OF THE
NEST-BOX WITH YOUNG SPARROW
HAWKS.

On one occasion, I put up an old, weather-beaten rabbit-trap on a pole, leaving the hole through which the trigger had worked, for an entrance. This box was soon occupied by Bluebirds. They were not long left in peace, however. The box also attracted the attention of a pair of Red-headed Woodpeckers. The entrance was too small to allow them to enter, but they soon enlarged it, and threw out the materials the Bluebirds had carried in. They were, seemingly, delighted with the location, and worked for days in trying to fit it for occupancy. They worked and hammered away until I decided that they were located permanently, before they gave up the attempt. This set me to thinking. It was very apparent that the trouble was not in the shape of the box, or the location. An editorial in one of the ornithological journals,



NEST-BOX OF THE SPARROW HAWK

not long since, expressed the idea that it would be necessary to devise expensive machinery for boring out hollows in solid wood, in imitation of the natural home, in order to attract Woodpeckers. The birds above mentioned seemed to be perfectly at home in the box, except for the fact that the bottom was too flat, and would allow the eggs to roll about. It then occurred to me that all that is necessary to attract these birds to artificial houses is boxes made of weather-beaten boards, shaped like their natural homes, and with chips in the bottom. With this idea in mind, I at once went to work and made some boxes on this plan. The first was placed about twenty feet from the ground, and nailed to the side of an elm tree, which had a broken top. Early in the spring of 1910 it was occupied by a pair of Flickers. They had been in possession about two weeks, when they were driven out by a pair of Sparrow Hawks. The Hawks still occupy the box, which is shown in the picture. A

second box was placed in a similar position, not far away. The Flickers then took possession of that, but were dislodged by fox-squirrels before they had fairly settled in their new position.

In the meantime, the Bluebirds were again nesting in the old rabbit-trap on the pole. To insure their not being disturbed, I put a piece of tin over the entrance, with a hole just large enough for Bluebird convenience. As soon as they seemed to be well settled at housekeeping, I removed the box to another location nearby. The Bluebirds did not seem to mind the house-moving in the least, and, as soon as I felt sure that they were suited with the new order of things, I placed another box, fitted especially for Woodpeckers, on top of the pole and awaited results. The Flickers, which had been dispossessed from two other boxes, now took possession of this one. I did not attempt to look into the box for some time, fearing that they might be frightened away. I felt confident, however, that they meant to stay, for the returning Red-heads tried very hard to get possession of the box, but were driven away. The Red-heads were not easily discouraged, and seemed to feel that they had a prior right to the location, from having discovered it the year before. As the Flickers held possession, the Red-heads contented themselves with a home in the top of a basswood tree near-by.

On May 24, feeling secure in the thought that incubation must now be in progress, I secured a long ladder and investigated. In the box were seven eggs, which have since hatched.

The photograph of the young Sparrow-Hawks shows the interior of the box, with a portion of the back board taken away.

Now, as to my method of making boxes to attract birds that supply no nesting materials. In the first place, use only weatherbeaten boards. While birds like the Martin do not object to the paint, I feel sure that some time will elapse before Woodpeckers can be induced to occupy painted houses. The boxes I have made are of six- and eight-inch lumber, the shape being well shown in the pictures. Those made of four six-inch boards seem to be large enough for any of the Woodpeckers. The eight-inch boxes are better for Sparrow Hawks and Screech Owls. The boxes are about two and a half feet long, with six to twelve inches of cork chips in the bottom. Sawdust would likely do as well, but the cork in which grapes are packed can be bought at



FLICKER AT NEST-BOX

any fruit store, and serves the purpose admirably. The entrance hole may be made to suit the bird likely to occupy it. The first one, which is now (June 18, 1910) occupied by Sparrow Hawks, was made with an entrance hole three inches across, in the hope that it would be occupied as a winter home for Screech Owls. The other one, now occupied by Flickers, has an entrance two inches in diameter. There should be at least a foot of space below the entrance-hole, as these birds all like deep nesting-places. My boxes are placed eighteen or twenty feet above ground, as Woodpeckers, and Sparrow Hawks as well, like lofty sites. The box should be nailed to the top of a pole, or to the side of a tree, near the top, to make the situation seem as much like a natural one as possible. I should not expect such a box nailed halfway up the trunk of a tall tree to attract these birds, as it is not a natural situation. While old boards should be used, care should be taken that there are no cracks, as the birds seem to avoid a box that is not tight.

After several years of experiment, I feel sure that I have solved the problem of attracting Woodpeckers and Sparrow Hawks to artificial nesting-sites. While, no doubt, improvements will be suggested, I believe that these birds can be attracted to such boxes as those described, if placed in suitable situations, as easily as Bluebirds, Wrens, or Martins, to made-to-order houses. After all, the cork in the bottom of the cavity is the important thing to be considered, and it is now in order to determine whether they will not occupy almost any kind of box with a suitable bottom.

An Artificial Swallow's Nest



ARTIFICIAL SWALLOW'S NEST

"Since town Swallows are diminishing in number in Denmark, the society *Svalen* has tried to attract them by artificial nests, which are made from a model invented and constructed by Mr. F. W. Falck, veterinary surgeon of Kjeflinge (Sweden). These nests are made of cement and are much frequented by Swallows. The nest should be placed towards the east. Swallows prefer this position. The nest must be

fixed close up under the eaves or in another prominent part of the house, so that no space is left between it and the nest. The nests should be placed some distance apart from each other. They can be fixed with nails. The Swallows themselves make the entrance hole.

"If one wants to attract the Swallows, it is a good plan to leave some clay in the yard and keep it moist with water. It is well worth while to bring back these feathered neighbors, not alone for the pleasure of companionship, but for the sake of the flies, mosquitos and other annoying insects which they will destroy."—*Svalen*.

The Migration of North American Sparrows

NINTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by LOUIS AGASSIZ FUERTES

(See frontispiece)

DICKCISSEL

One of the strangest, and, thus far, unexplained facts in ornithology is the almost complete disappearance of the Dickcissel from those parts of the United States east of the Allegheny Mountains, where, previous to 1860, it had been a common summer resident. Wintering in Panama and northern South America, it passes through Central America and across the Gulf of Mexico to its present summer home in the Mississippi Valley, where it breeds from southern Mississippi and southern Texas, north to southern Ontario and North Dakota. It is one of the latest and, therefore, one of the most rapid of migrants, reaching central Iowa on the average, thirteen days after it appears at the mouth of the Mississippi,—an average speed of nearly a hundred miles a day.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Swan Island, Honduras.....			March 25, 1887
Key West, Fla.....			April 30, 1889
Northern Florida.....	2	April 25	April 22, 1881
New Orleans, La. (near).....	4	April 21	April 6, 1894
St. Louis, Mo.....	6	April 24	April 17, 1888
Quincy, Ill.....	3	April 25	April 19, 1889
Odin, Ill.....	9	April 28	April 22, 1894
Indianola, Iowa.....	6	April 30	April 26, 1899
Fairfield, Ia.....	12	April 30	April 26, 1900
Des Moines, Ia. (near).....	10	May 1	April 25, 1885
Grinnell, Ia.....	6	May 1	April 24, 1886
Sabula, Ia.....	7	May 4	May 1, 1892
Siou City, Ia.....	5	May 5	May 2, 1905
Bloomington, Ind.....	7	May 1	April 23, 1886
Brookville, Ind.....	8	May 6	April 19, 1887
Columbus, O.....	4	May 8	May 2, 1889
Oberlin, O.....	2	May 8	May 6, 1896
Chicago, Ill.....	9	May 8	May 3, 1895
Hidalgo, Tex.....			March 27, 1877
Corpus Christi, Tex.....	2	April 12	April 11, 1903
San Antonio, Tex.....	12	April 18	April 13, 1904
Gainesville, Tex.....	5	April 20	April 15, 1884
Ottawa, Kan. (near).....	4	April 27	April 26, 1903
Manhattan, Kan.....	5	April 27	April 22, 1882
Onaga, Kan.	15	April 30	April 23, 1891
Dunbar, Neb.....	10	May 1	April 24, 1904
Badger, Neb.....	3	May 7	May 5, 1901
Harrison, S. D. (near).....	4	May 20	May 11, 1910
Heron Lake, Minn.....	3	May 16	May 14, 1886
Meridian, Wis.....			May 19, 1897
Portage la Prairie, Manitoba.....			June 14, 1897

The latest dates south of the United States are: Suapure, Venezuela, April 9, San José, Costa Rica, April 20; La Palma, Costa Rica, May 1, 1882; Half Moon Bay, British Honduras, May 10, 1862; Tampico, Vera Cruz, May 23, 1888.

FALL MIGRATION

The earliest fall migrants reached Ocuilapa, Chiapas, August 22, 1895, and by September 27, 1899, had appeared near the southern limit of the winter range, at Buritaca, Colombia.

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Harrison, S. D.			September 4, 1891
Onaga, Kan.	13	September 9	September 21, 1906
Lincoln, Neb.			September 23, 1899
Caddo, Okla.			September 25, 1883
Runge, Tex.			September 19, 1905
Tucson, Ariz.			September 11, 1884
Chicago, Ill.	4	September 7	September 16, 1906
Wauseon, O.	7	September 5	September 20, 1897
Bicknell, Ind.	3	September 17	September 24, 1907
Indianola, Ia.	4	September 13	September 17, 1900
Winthrop, Mass.			August 16, 1905
North Truro, Mass.			September 30, 1889
Westbrook, Me.			October 10, 1888
Miller Place, N. Y.			October 10, 1888

LARK SPARROW

The Lark Sparrow is a bird of the middle and western United States, breeding from the southern Mississippi Valley, and northwestern Mexico, north to southern Ontario and southern British Columbia. It winters almost entirely south of the United States.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Kerrville, Tex.	5	March 14	March 1, 1904
Fredericksburg, Tex.	3	March 15	March 10, 1895
Gainesville, Tex.	5	March 26	March 23, 1886
Eubank, Ky.	4	April 19	April 15, 1891
St. Louis, Mo.	4	April 15	April 12, 1887
Montere, Mo.	5	April 17	April 10, 1906
Carlinville, Ill.	3	April 15	April 12, 1886
Chicago, Ill.	3	April 29	April 28, 1908
Bloomington, Ind.	5	April 21	April 12, 1903
Terre Haute, Ind.	4	April 24	April 20, 1887
Brookville, Ind.	4	April 28	April 23, 1887
Waterloo, Ind.	4	April 28	April 24, 1904
Wauseon, O.	10	April 26	April 12, 1886
Oberlin, O.	7	May 2	April 26, 1908

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Waverly, W. Va.	4	April 27	April 16, 1906
Plymouth, Mich.	8	April 30	April 22, 1896
Petersburg, Mich.	4	May 1	April 26, 1897
Southwestern Ontario	6	May 4	April 25, 1897
Manhattan, Kan.	4	April 13	April 1, 1882
Onaga, Kan.	14	April 15	April 2, 1895
Hillsboro, Ia.	6	April 16	April 5, 1898
Keokuk, Ia.	11	April 20	April 10, 1892
Grinnell, Ia.	6	April 18	April 10, 1888
Iowa City, Ia.	7	April 25	April 16, 1884
Sabula, Ia.	7	April 25	April 17, 1898
Sioux City, Ia.	5	April 25	April 19, 1908
Storm Lake, Ia.	3	May 1	April 28, 1889
La Crosse, Wis.	5	May 1	April 25, 1906
Lanesboro, Minn.	8	April 28	April 21, 1891
Minneapolis, Minn.	10	April 29	April 21, 1907
Southeastern Nebraska	6	April 23	April 19, 1900
Northern Nebraska	5	May 7	April 28, 1894
Grand Forks, N. D.			May 4, 1903
Aweme, Manitoba	3	May 15	May 14, 1905
Southern Colorado	4	April 27	April 24, 1894
Boulder, Colo. (near)	7	May 4	April 27, 1892
Cheyenne, Wyo.			May 7, 1889
Terry, Mont.	6	May 7	April 27, 1900
Great Falls, Mont.	3	May 12	May 8, 1889
Berkeley, Cal.	2	March 15	March 11, 1887
Chelan, Wash.			March 19, 1896
Chilliwack, B. C.			May 21, 1889
Okanagan, B. C.	2	May 22	May 20, 1907

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Minneapolis, Minn.			September 18, 1906
Palmer, Mich.			September 30, 1894
Plymouth, Mich.	3	September 16	September 20, 1891
Wauseon, O.	6	September 14	October 5, 1897
Grinnell, Ia.	4	September 25	October 16, 1886
Onaga, Kans.	9	August 31	September 9, 1893
Yuma, Colo.	3	September 23	October 1, 1906
Berkeley, Cal.			October 4, 1887
Mt. Carmel, Ill.			October 17, 1885
Bonham, Tex.			October 22

While the Lark Sparrow is regularly a western bird, not ranging east of the Mississippi Valley, it seems to be gradually working its way eastward, as the original forest has been cleared off, and it has been taken quite a number of times east of the Alleghanies. There are a few spring records: Pulaski,

Va., April 28, 1895; Framingham, Mass., April 29, 1883; and a great number of fall occurrences: Raleigh, N. C., August 19, 1889 and October 25, 1893; Cranberry, N. C., August 9, 1886; Cape Charles, Va., August 24, 1895; Washington, D. C., August 25-27, 1877, and August 8, 1886. Schraalenburg, N. J., November 26, 1885; Sayville, L. I., August 20, 1879; Miller Place, L. I., November 27, 1899; Shelter Island, L. I., July 28, 1902; Newtonville, Mass., November 25, 1877; Magnolia, Mass., August 27, 1879; Barranco Hondo, Guatemala, October 22, 1873.

VESPER SPARROW

The Vesper Sparrow and its several forms range from the Atlantic to the Pacific, wintering from the Gulf States, Texas and California to southern Mexico, and breeding from Virginia, Texas and northern California to southern Canada.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Washington, D. C.	18	March 25	Rare, winter
French Creek, W. Va.	4	March 23	March 17, 1889
Waverly, W. Va.	4	March 24	March 15, 1903
Beaver, Pa.	7	March 29	March 24, 1905
Philadelphia, Pa. (near)	9	March 30	March 22, 1907
Renovo, Pa.	14	April 6	March 27, 1898
Englewood, N. J.	5	April 4	April 1, 1909
New Providence, N. J.	9	April 7	March 31, 1893
Ithaca, N. Y.	8	March 28	March 23, 1903
Alfred, N. Y.	20	April 1	March 22, 1897
Flatbush, N. Y.	8	April 2	March 22, 1893
Branchport, N. Y.	9	April 4	March 27, 1898
Center Lisle, N. Y.	11	April 7	March 17, 1898
Ballston Spa, N. Y.	7	April 10	April 1, 1892
Bridgeport, Conn.	8	April 2	March 14, 1902
Jewett City, Conn.	17	April 4	March 20, 1889
Hartford, Conn.	13	April 6	March 31, 1888
Providence, R. I.	8	April 8	March 28, 1904
Fall River, Mass.	3	April 4	April 3, 1890
Taunton, Mass.	6	April 5	April 1, 1886
Beverly, Mass.	8	April 6	April 4, 1909
Randolph, Vt.	8	April 11	April 5, 1892
St. Johnsbury, Vt.	14	April 17	April 4, 1897
Hanover, N. H.	5	April 9	April 2, 1897
Phillips, Me.	6	April 13	April 5, 1910
Portland, Me.	9	April 16	April 10, 1905
Montreal, Canada	2	April 10	April 9, 1909
St. John, N. B.	9	April 16	April 11, 1889
Scotch Lake, N. B.	10	April 19	April 9, 1910
Chatham, N. B.	5	April 23	April 17, 1904
Quebec, Canada	2	April 21	April 21, 1896
Godbout, Quebec			April 24, 1885
North River, Prince Edward Island	4	April 26	April 17, 1889
Red Boiling Springs, Tenn.	2	March 7	March 3, 1906

SPRING MIGRATION, continued

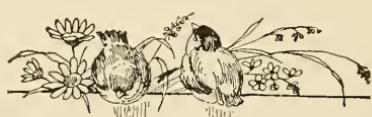
PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
St. Louis, Mo.	3	March 15	March 12, 1909
Eubank, Ky.	7	March 20	February 23, 1891
Brookville, Ind.	7	March 22	March 18, 1886
Bloomington, Ind.	7	March 22	March 17, 1903
Waterloo, Ind.	17	April 1	March 18, 1889
Wauseon, O.	10	March 28	March 18, 1898
Oberlin, O.	17	March 28	March 20, 1898
Youngstown, O.	6	March 29	March 23, 1910
Plymouth, Mich.	8	March 28	March 18, 1894
Petersburg, Mich.	12	March 31	March 19, 1894
Dunnaville, Ont.	6	March 25	March 14, 1896
London, Ont.	6	April 3	March 26, 1901
Plover Mills, Ont.	7	April 5	April 2, 1897
Strathroy, Ont.	9	April 5	March 30, 1897
Ottawa, Ont.	17	April 13	April 1, 1907
Kearney, Ont. (near)	9	April 17	April 15, 1897
Davenport, Ia.	5	April 5	March 30, 1905
Grinnell, Ia.	4	April 6	April 2, 1885
Chicago, Ill.	9	April 7	March 23, 1907
Madison, Wis.	8	April 4	March 26, 1907
La Crosse, Wis.	6	April 6	March 26, 1907
Lanesboro, Minn.	8	April 5	April 3, 1893
Minneapolis, Minn.	6	April 11	April 8, 1903
White Earth, Minn.			April 20, 1881
Southeastern Kansas	7	April 10	April 6, 1909
Manhattan, Kan.	6	April 14	March 28, 1890
Southeastern Nebraska	6	April 9	April 5, 1901
Grand Forks, N. D. (near)	7	April 23	April 17, 1895
Aweme, Manitoba	14	April 10	April 14, 1901
Indian Head, Sask. (near)	4	April 22	April 11, 1910
Edmonton, Alberta (near)	4	May 3	April 29, 1903
Southern Arizona	5	March 17	March 14, 1902
Southern Colorado	5	April 10	April 3, 1908
Boulder, Colo.	5	April 18	April 2, 1910
Cheyenne, Wyo.	3	April 18	April 12, 1888
Terry, Mont.	3	April 28	April 27, 1896
Great Falls, Mont.	3	April 29	April 27, 1889
Columbia Falls, Mont.	5	May 1	April 26, 1894
Portland, Ore. (near)	4	April 5	April 3, 1906
Tacoma, Wash.	6	April 17	April 8, 1908
Okanagan, B. C.	3	April 14	April 13, 1907

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Gainesville, Fla.			April 9, 1887
Northern Florida	5	April 9	April 15, 1893
Charleston, S. C.			April 12, 1909
Raleigh, N. C.	7	April 15	April 23, 1892
Washington, D. C.	11	April 5	June 14, 1899
Biloxi, Miss.			April 2, 1903
Athens, Tenn.	5	April 3	April 8, 1903
Monteer, Mo.	3	April 17	April 20, 1904
Pasadena, Cal.			April 25, 1896

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Raleigh, N. C.	12	October 18	October 11, 1893
Frogmore, S. C.			October 14, 1886
Northern Florida	4	October 14	October 5, 1908
New Orleans, La.			August 5, 1893
Athens, Tenn.	4	October 21	October 20, 1908
Southern Mississippi	3	October 29	October 24, 1902
Pasadena, Cal.			September 14, 1897

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Okanagan, B. C.	3	October 6	October 8, 1908
Big Sandy, Mont.			October 30, 1906
Aweme, Manitoba	11	October 13	October 17, 1902
Lanesboro, Minn.	6	October 11	October 29, 1885
Littleton, Colo.			October 23, 1908
Onaga, Kan.	4	October 19	November 8, 1904
Vicksburg, Mich.	4	October 26	November 2, 1906
Plymouth, Mich.			November 20, 1892
Ottawa, Ont.	10	October 7	October 17, 1885
London, Ont. (near)	8	October 21	October 24, 1901
Sabula, Ia.	4	October 26	October 27, 1894
Delavan, Wis.			October 28, 1896
Chicago, Ill.	6	October 17	October 25, 1896
Waterloo, Ind.	9	October 31	November 12, 1905
Wauseon, O.	9	November 9	November 14, 1897
Oberlin, O.	6	October 31	November 25, 1890
Eubank, Ky.	3	November 1	November 7, 1889
North River, Prince Edward Island	3	October 5	October 7, 1888
Yarmouth, N. S.			October 25, 1904
Scotch Lake, N. B.	6	October 27	November 4, 1893
Montreal, Canada	3	October 9	October 17, 1909
Phillips, Me.	6	October 14	October 18, 1905
Pittsfield, Me.	4	October 14	October 18, 1898
Hebron, Me.	6	October 24	October 28, 1908
Randolph, Vt.	3	October 16	October 20, 1889
Ballston Spa, N. Y.	6	October 16	October 27, 1900
Easter Massachusetts	13	October 20	October 30, 1896
Providence, R. I.	4	October 8	October 24, 1909
Hartford, Conn.	9	October 7	October 27, 1887
New Providence, N. J.	7	October 26	November 9, 1888
Renovo, Pa.	10	October 22	November 2, 1908
Beaver, Pa.	6	October 28	November 4, 1890
Berwyn, Pa.	4	October 14	November 12, 1901
French Creek, W. Va.	3	November 5	November 13, 1890



Notes on the Plumage of North American Sparrows

EIGHTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Dickcissel (*Spiza americana*, Figs. 1-3). In adult plumage, the Dickcissel is a well-marked, distinct, easily identified species, but, in juvenal plumage, it so resembles an English Sparrow that one is glad to refer to its more pointed tail-feathers as an unquestionable distinguishing mark. The primaries, secondaries, and tail-feathers of this plumage are retained, and the balance molted as the bird passes into first winter plumage, when the young male closely resembles the female (Fig. 2). The adult male, after the usual postnuptial molt (Fig. 3), resembles the young male in winter, but has a small, more or less veiled black throat-patch.

The spring molt is largely restricted to the anterior parts of the body, the gray crown and sides of the head, the yellow on the crown and over the eye, the white chin and black throat-patch being of new feathers, while the feathers which are retained fade into the grayer summer dress, in which young and old look alike.

Lark Sparrow (*Chondestes grammacus grammacus*; Fig. 4). In this species the sexes are alike, and there is but little variation with age or season. The juvenal plumage has the breast distinctly streaked with black, the crown is striped like the back, and the chestnut head markings are wanting. According to Dr. Dwight, the postjuvenile molt is complete, and the first winter plumage is practically indistinguishable from the winter plumage of the adult. Some birds, in first winter plumage, however, have the chestnut head marks but slightly developed. The prenuptial (spring) molt is confined largely to the head, but the rest of the plumage becomes worn and faded, making summer birds grayer than those in winter plumage.

The Western Lark Sparrow (*C. g. strigatus*), breeding from the eastern edge of the plains westward, is somewhat paler than the eastern bird, and is more narrowly streaked.

Vesper Sparrow (*Poæcetes gramineus gramineus*; Figs. 5, 6). In this species the sexes are alike. The juvenal passes into first winter plumage (Fig. 5) by a molt of the body feathers, and is then indistinguishable from the winter adult. There is no spring molt, and the less-brown, more sharply marked summer plumage (Fig. 6) is acquired by wear and fading.

The Western Vesper Sparrow (*P. g. confinis*), of the western United States, except the Pacific Coast, is similar to the preceding but is paler above and has a more slender bill. The Oregon Vesper Sparrow (*P. g. affinis*) is similar to the preceding but is smaller with an even slenderer bill and a plumage browner than that of *P. g. gramineus*.

Bird-Lore's Advisory Council

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

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

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

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

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

ALASKA.—Dr. C. Hart Merriam, Biological Survey, Dept. of Agr., Washington, D. C.

ARIZONA.—Herbert Brown, Tucson, Ariz.

CALIFORNIA.—Charles A. Keeler, Berkeley, Cal.

CALIFORNIA.—Walter K. Fisher, Palo Alto, Cal.

COLORADO.—Dr. W. H. Bergtold, 1460 Clayton Ave., Denver, Colo.

CONNECTICUT.—J. H. Sage, Portland, Conn.

DELaware.—C. J. Pennock, Kennett Square, Pa.

DISTRICT OF COLUMBIA.—Dr. C. W. Richmond, U. S. Nat'l. Mus., Washington, D. C.

FLORIDA.—Frank M. Chapman, American Museum Natural History, New York City.

FLORIDA, Western.—R. W. Williams, Jr., Dept. of Agriculture, Washington, D. C.

GEORGIA.—Dr. Eugene Murphy, Augusta, Ga.

ILLINOIS, Northern.—B. T. Gault, Glen Ellyn, Ill.

ILLINOIS, Southern.—Robert Ridgway, U. S. National Museum, Washington, D. C.

INDIANA.—A. W. Butler, State House, Indianapolis, Ind.

INDIAN TERRITORY.—Prof. W. W. Cooke, Biological Survey, Washington, D. C.

IOWA.—C. R. Keyes, Mt. Vernon, Ia.

KANSAS.—University of Kansas, Lawrence, Kan.

LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.

MAINE.—O. W. Knight, Bangor, Me.

MASSACHUSETTS.—William Brewster, Cambridge, Mass.

MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.

MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth Avenue, South Minneapolis, Minn.

MISSISSIPPI.—Andrew Allison, Ellisville, Miss.

MISSOURI.—O. Widmann, 5105 Morgan St., St. Louis, Mo.

MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.

NEBRASKA.—Dr. R. H. Walcott, University of Nebraska, Lincoln, Neb.

NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.

NEW HAMPSHIRE.—Dr. G. M. Allen, Boston Soc. Nat. Hist., Boston.

NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.

NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.

NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.

NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Washington, D. C.

NEW YORK, Northern.—Egbert Bagg, 191 Genesee Street, Utica, N. Y.

NEW YORK, Western.—E. H. Eaton, Canandaigua, N. Y.

NEW YORK, Long Island.—William Dutcher, 141 Broadway, New York City.

NORTH DAKOTA.—Prof. O. G. Libby, University, N. D.

NORTH CAROLINA.—Prof. T. G. Pearson, Greensboro, N. C.

OHIO.—Prof. Lynds Jones, Oberlin College, Oberlin, Ohio.

OKLAHOMA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.

OREGON.—W. L. Finley, Milwaukee, Ore.

PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.

PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburgh, Pa.

RHODE ISLAND.—H. S. Hathaway, Box 1466, Providence, R. I.

SOUTH CAROLINA.—Dr. Eugene Murphy, Augusta, Ga.

TEXAS.—H. P. Attwater, Houston, Tex.

UTAH.—Prof. Marcus E. Jones, Salt Lake City, Utah.

VERMONT.—Prof. G. H. Perkins, Burlington, Vt.

VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.

WASHINGTON.—Samuel F. Rathburn, Seattle, Wash.

WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.

WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.

CANADA

ALBERTA.—G. F. Dippie, Calgary, Alta.

BRITISH COLUMBIA, Western.—Francis Kermode, Provincial Museum, Victoria, B. C.

BRITISH COLUMBIA, Eastern.—Allan Brooks, Okanagan Landing, B. C.

MANITOBA.—Ernest Thompson Seton, Cos Cob, Conn.

NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.

ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.

ONTARIO, Western.—E. W. Saunders, London, Ont.

QUEBEC.—E. D. Wintle, 189 St. James Street, Montreal, Canada.

MEXICO

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

WEST INDIES

C. B. Cory, Field Museum, Chicago, Ill.

GREAT BRITAIN

Clinton G. Abbott, 153 West 73d St., New York City, N. Y.

Notes from Field and Study

The Evening Grosbeak



Evening Grosbeak. From the painting by Bruce Horsfall, reproduced from *BIRD-LORE*, Vol. ix, 1907.

Below are printed, in full, the records of the occurrence of the Evening Grosbeak, to which brief reference was made in the preceding issue of *BIRD-LORE*, together with a number of others since received. It is evident that unusual numbers of this fine bird have extended their winter wanderings far east of the boundaries of their regular winter range. Replying to the inquiries of several correspondents, we may state here that the Evening Grosbeak does not winter regularly east of Wisconsin, where, according to Kumlien and Hollister ('Birds at Wisconsin,' p. 90), it is a "common winter visitant any time . . . from December on." In southeastern Minnesota, Dr. T. S. Roberts writes, "It is a common visitant appearing about October 17 and remaining as late as May 19."

The frequency of the occurrence of the Evening Grosbeak to the eastward of these states decreases as the distance increases. (See especially, Butler, *Auk*, 1892, pp. 238-247.) Consequently, while irregular, it is by no means rare or infrequent in Illinois and Michigan, but there are no records for the New England States prior to the winter of 1889-90, when the bird appeared there in large numbers, and was

reported from every state but Rhode Island. According to Brewster ('Birds of the Cambridge Region,' p. 251), "they were noted first at South Sudbury, Massachusetts, on January 15; and last at Henniker, New Hampshire, on May 1; . . . they were present in greatest numbers during January, February and March, and most of them apparently departed before April, no doubt returning whence they came."

The most southern record during this incursion was at Summit, N. J., on March 6, when eight birds were observed (Raymond, *Orn. and Oöl.*, XV, 1890, p. 46); but the known range of the species has now been slightly extended by Mr. Miller, who found it at Plainfield, N. J., as recorded below.

Since 1890, the Evening Grosbeak has been observed in New England on several occasions, but there has been no flight in any way comparable with that of the present winter.—FRANK M. CHAPMAN.

ROCHESTER, N. Y., February 10, 1911.—Referring to your editorial in the current *BIRD-LORE*, there can be no doubt that the evening Grosbeak has this winter visited many places in the North and East, where before he had been seen rarely, if at all. A flock of six was in this city for several days, in late December—one flock at least. On the 31st, I examined these birds at my leisure. They were feeding in a tree at a distance of only fifteen or twenty feet and I made out every detail of the plumage. No observations could have been more accurate and satisfactory. A number of other students had the same opportunity.—DR. C. A. DEWEY.

ROCHESTER, N. Y., February 15, 1911.—I give below the dates of the appearance of the Evening Grosbeak at Rochester, and am happy to say that, as the good news of their being here was passed about quickly, about twenty people had the pleasure of seeing them, and more than once.

December 20, first Evening Grosbeak seen at Sumner Park; a male. December 23, three Evening Grosbeaks on Alexander Street; two males, one female. December 29, six Evening Grosbeaks at Sumner Park; three of each sex.

After this, the six were seen each day till January 2, when they disappeared, and have not been seen since. They fed on the seed-vessels of the ash-leaved maple which stood in Sumner Park; and, even when they left, not all the seeds were gone, though each day the ground was strewn with the husks from their feeding. The weather at this time was bitterly cold, with high winds, but they sat for an hour or two at a time in the tree, were in splendid plumage and fine condition, and, I am glad to say, none were "taken."—N. HUDSON MOORE.

LYONS, N. Y., February 11, 1911.—In the January-February number of *BIRD-LORE*, I note your reference to the observations on the Evening Grosbeak in northeastern United States. Thinking that it might also be of interest to you, I wish to state that it has been the pleasure of my friends and self to observe these birds in this locality.

During the last days of January, and up to February 8, Evening Grosbeaks have been observed here. They have been seen in numbers of from two to thirty. Usually I have seen about a dozen together. They would disappear and not be seen for a day or two, when they would be with us again. While here, they seem very busy feeding on maple buds.—S. B. GAVITT.

ITHACA, N. Y.—On February 12, 1911, one male and two female Evening Grosbeaks were seen at Ithaca by Mrs. Frank Morse. The birds were feeding on maple buds, and were observed under conditions which permitted a wholly satisfactory identification.—LOUIS AGASSIZ FUERTES.

GREENWICH, N. Y., February 9, 1911.—Evening Grosbeaks, as many as eight in one flock, have been seen here, and no

one can be found to say they have ever observed them here before. I saw seven of them at one time 'budding' on an ash tree.—D. W. MANDELL.

NAPLES, MAINE, November 20, 1910.—On November 10, I saw, in Bridgton, three birds I did not know. They very closely resembled the female in the colored plate of the Evening Grosbeak published by *BIRD-LORE*, only that all the back seemed faintly tinged with yellow.

There were only the three as long as I could spare the time to watch them. They were quite tame. I saw them distinctly, and thought them exactly alike.—ADELINE WILLIS.

FALL RIVER, MASS., February 9, 1911.—I wish to report to you that a flock of fourteen Evening Grosbeaks were in our yard, and the immediate neighborhood, for two hours, February 9, 1911, feeding mostly on seeds of the ash-leaved maple.

Most of the flock were either females or immature males, but there were two in the full plumage of yellow, black and white, making any mistake as to identification impossible, as I have the very excellent *BIRD-LORE* picture.

On February 3, a single, lone female was here, digging furiously through the ice with which the ground was covered, with her great bill, for seeds. This bird was very tame, apparently paying little attention to our near approach.—ELLEN M. SHORE, 440 Highland Avenue.

WOONSOCKET, R. I.—A flock of five female and two male Evening Grosbeaks appeared within the city limits of Woonsocket R. I., January 13, 14 and 15, coming daily to feed on a tree overhanging a grocery store.

The birds were observed by various people. To quote one correspondent, Mary F. Smith: "We watched them this morning (January 15), between eight and nine o'clock, and, though there was quite a party admiring them and we took no pains to be still, they continued their breakfast of maple or box-elder seeds and

did not appear to notice us. . . . The birds are there several times a day, and feed perhaps half an hour. . . . We call them very strikingly marked, particularly the males, with the bright yellow stripe between the wings and the large, square-cut, white wing-patch, edged with the narrow line of velvety black."

Reports also came in of the Evening Grosbeak at Meshanticut Park, R. I.—
ALICE HALL WALTER.

TAFTVILLE, CONN., February 15, 1911.
It is a pleasure to be able to report that, on February 13, a flock of Evening Grosbeaks took up their abode in this vicinity. This is the third day that they have frequented our school premises, and it would seem that they have found comfortable quarters for at least a short stay with us. We have been able to count twenty-six in the flock—eight males and eighteen females. They were first discovered in an ash-leaved maple (*Acer negundo*), eating the seeds with great relish. They are not in the least timid, approaching the building within twenty-five feet, and allowing us to watch them as we stand about in groups on the playgrounds, immediately under the trees, and not over twenty feet from the branches upon which they are sitting. We consider it a rare treat, and we trust that other bird-lovers may be accorded a similar privilege.—
F. J. WERKING.

CANAAN, LITCHFIELD CO., CONN., January 13, 1911.—Bird-lovers in this village are much interested in watching a flock of Evening Grosbeaks that have recently appeared here. In your 'Handbook of Birds of Eastern North America,' you mention that there was an incursion of these birds, in 1890, in New England.

Have any been seen since then? I am anxious to know if they are in other parts of New England this winter. Are they getting to feel at home in the eastern states?

The flock in my yard numbers eight—three males—and they feed on dried crab-apples and maple seeds.—SARAH W. ADAM.

HARTFORD, CONN., February 12, 1911.

—Today, Mr. Arthur G. Powers, Vice-President of our Bird Study Club, and myself, saw at the foot of Talcott Mountain, in West Hartford, a pair of Evening Grosbeaks. We easily approached them within fifteen feet, and watched them for fifteen minutes. There was no possible doubt as to the identification. They had the great yellow bills, the black wings with the large white markings, black crowns, greenish brown cheeks, and necks with yellow reflections, and, in fact, all the characteristic markings, though both were distinctly duskier in color than the illustrations given by Reed and Blanchan.

I may add that the birds were the same species, without doubt, that I saw within twenty rods of the same place on October 17, 1909—a record which I suppose was considered doubtful because so early in the season and without confirmation.—
EDWARD PORTER ST. JOHN, President, Hartford Bird Study Club.

PORT CHESTER, N. Y., January 9, 1911.

—On this day, the undersigned observed five Evening Grosbeaks. The birds were feeding on maple buds and were watched for ten minutes at a distance of twenty-five feet.—CECIL SPOFFORD, and SAMUEL N. COMLY. [Mr. Spofford subsequently visited the American Museum and confirmed his identification by an examination of specimens.—EDITOR.]

ANDOVER, SUSSEX CO., N. J., December 13, 1910.—Today we have had the pleasure of seeing from our window what are claimed to be rare bird visitors to this section. We refer to the Evening Grosbeak, at least eight of which visited our banqueting tree, which stands not more than twenty feet from the house.

Owing to preparations we have made for feeding birds in and near this tree, we are favored by calls from nearly all the winter birds to be seen in this locality. Other years, besides the more common birds, we have seen here the Pine Grosbeak, and the White-winged and American Crossbills. But we were hardly pre-

pared for the great favor done us today by the call of such exclusive guests as the Evening Grosbeaks.

The morning was bright and clear, and the snow-covered trees made an admirable background for the beautiful yellow plumage of these handsome birds. So perfect was our view that every mark of identification was seen, even without the aid of a glass. They remained with us for nearly two hours, apparently making a fine meal upon the maple seeds still clinging to the tree. They then disappeared as silently as they had come.—Members of Sussex County Nature Study Club, by BLANCHE HILL.

[As this is the second record for New Jersey, as well as the second record sent BIRD-LORE this season, we requested further details, which Miss Hill gives under date of December 19, as below.—ED.]

Your letter asking for additional information concerning the Evening Grosbeaks is at hand.

Five persons, four of whom are members of our Nature Club, and who have been studying birds for several years, saw them during their first visit to us, that is, on the 13th. Two or three specimens were not more than fifteen feet from the window, while the others were seen at distances ranging from twenty to forty feet. My father, who has been a nature student all his life, and I, stood under the large maple tree in which they were feeding, when one, presumably a male, because of his brilliant coloring, flew to one of the lower branches and lighted not more than ten feet above our heads, where he remained long enough for us to give him careful inspection.

Since my first letter to you, they have visited us twice,—once on the 17th, and again on the 18th. Once the whole flock (ten were counted) were feeding on the ground beneath a spruce tree standing about twenty feet from the house.—BLANCHE HILL.

NEWTON, SUSSEX CO., N. J., January 6, 1911.—Would it interest the bird-lovers to know that a flock of Evening Grosbeaks

have been about here? Walking on the outskirts of the town, Saturday morning, I heard quite a chirping in a maple tree and saw twelve or fifteen of these beautiful birds. In the afternoon they were about my home, and yesterday morning favored us with another visit. They were feeding in the maples; then they perched in the Norway spruces, about twelve feet from the house. They were quite tame. Each member of the family was called to see the visitors, and a few neighbors came for an introduction. We went close to the trees where they were, but the best view was from the second-story windows.—MARY F. KANOUSE.

NEWTON, SUSSEX CO., N. J.—While spending Sunday, February 5, at my home in Newton, I had the pleasure of watching for a long time a flock of some twenty-five or thirty Evening Grosbeaks. The birds were in a yard on the outskirts of the town and were so little disturbed by my presence that I was able to observe them at a distance of not more than thirty feet.—STEPHEN D. INSLEE.

PLAINFIELD, N. J.—A flock of thirteen Evening Grosbeaks were seen by me in the Washington Valley, near Plainfield, N. J., on January 29. On February 12 and 19, and on other days between these dates, they were again observed by the writer and by several other bird students. Somewhat larger numbers were seen than on the first occasion, there being at least twenty birds, three or four of which were adult males. They are found in a grove of red cedars, feeding on the berries of the flowering dogwood, which are plentifully interspersed among the cedars. The crop of dogwood berries last fall was remarkably abundant and, as a result, the Robins, Hermit Thrushes and Purple Finches have wintered in unusual numbers. These species can use only the soft meat of the berries, but the Grosbeaks reject this part and crack the stone with their strong bills to get at the enclosed kernel.—W. DEW. MILLER.

BROOKLYN, N. Y.—On January 8, I saw, in Forest Hill Park, Brooklyn, a bird which was undoubtedly a Grosbeak. It was about the same size and shape as a Rose-breasted Grosbeak, but the bill was even heavier and larger than theirs, and wax-yellow in color. The body was a grayish olive with a decidedly yellowish cast, almost bright yellow on the rump and lighter and yellower on the breast and sides. The outer wing feathers looked to be black their entire length, but the inner feathers, the secondaries, had a good deal of white in them, so that they had the appearance of being striped cross-ways with white. The tail was black, but also had white on it. The head was more grayish, also a grayish mark along the sides and breast. The bird had the clumsy movements of a Grosbeak—hopped along the branches. It was in a dogwood tree, and was feeding on the buds at the ends of the twigs.

It showed absolute unconcern at our presence, and kept right on eating even when we came directly under it. It gave, occasionally, a note like a thrilled *chur-r-r*, very soft and low.

Unfortunately, some boys saw us looking at it and came under the tree. I tried to interest them in the bird, and, upon leaving they promised me they wouldn't harm it. We were no sooner out of hailing distance, however, before they began to throw stones at it.

It then flew into another tree not far away, and its note then was a single note, rather sharp and high, as if alarmed.

Could it have been an Evening Grosbeak? I have a picture of a pair of these birds, and it was not like the picture of the male. It had no black cap and its forehead was not yellow, and the secondaries were black and white; and yet the bird was much yellower than the picture of the female.—MARY W. PECKHAM, Member of Bird Lovers' Club, Brooklyn.

[Mrs. Peckham's bird, which very evidently was an Evening Grosbeak, is the first bird of this species to be recorded from Long Island.—ED.]

DELAWARE, O.—In our bird notes for the past eleven years we have our first record of the Evening Grosbeak. These strangers from the far North were first noticed on January 28 and March 2. I find them still with us. They appear to be very fond of dried wild cherries, on which we find them feeding daily.—HARRY and LILIAN HIPPLE.

Winter Notes from Northern New Jersey

On January 29, while I was motoring past some fields near the station at Far Hills, N. J., which is five miles from Bernardsville, and twelve miles from Morristown, N. J., I heard the full summer song of a Meadowlark, which I immediately recognized, though I did not see the bird. I never knew before that Meadowlarks sang in winter. I have seen them several times this winter, but have not heard them until the 29th. Other birds of interest that I have seen this winter are: Northern Shrike, one, seen on December 26, 1910; Acadian Owl, one was caught by a man who simply picked the little Owl off a fence-post, in December. We kept it about a week, when it died, and I think, as it was so easily caught, that it was hurt when captured.

A flock of Redpolls stayed in a ravine about two weeks around December 15, and fed on the seeds of birch trees, of which there was a grove.

For about a week, around December 20, a flock of about a dozen Bluebirds lived about our house, and ate the seeds of a vine that grows on the house. A great deal of the time they stayed with English Sparrows.—JOHN DRYDEN KUSER, Bernardsville, N. J.

Brooklyn Birds

During the year 1910, 134 species of birds were seen by members of the Bird Lovers' Club of Brooklyn, within the limits of that city. Of these, 112 were observed in Prospect Park. The following are worthy of special notice:

Great Black-backed Gull, Laughing Gull and Bonaparte Gull, seen in the upper bay in the spring.

Wilson's Petrel, a flock of 100+, near Fort Hamilton, on July 18, 1910..

Great Blue Heron, in Prospect Park, June 1; Bald Eagle (immature), in Prospect Park, May 28; Redpoll, in Prospect Park, December 25 to 31; Blue-headed Vireo, in Prospect Park, Nov. 20, 1910; Kentucky Warbler, Fort Hamilton, May 22, 1910; Blue-Gray Gnatcatcher, Prospect Park, April 8, 1910.

The Kentucky Warbler was seen by me on May 22, 1910, on 88th Street, Brooklyn, near Shore Road. My attention was attracted by a loud and unfamiliar song. I found the singer in a low tree, and had a splendid opportunity to study him with my binoculars. It proved to be a male Kentucky Warbler, a bird which is extremely rare on Long Island. While I could not get a good view of the bird's back, I identified him by his yellow underparts and superciliary line, and by the black line along the throat, all of which were seen in good light. The song, also, closely resembles the descriptions given in Chapman's Warbler Book.—EDWARD FLEISCHER, Secretary.

Mockingbird Wintering in West Hartford, Conn.

It is of interest that two Mockingbirds are spending the winter in West Hartford. They are commonly found about a mile apart, both remaining very near the places where they are regularly fed, though they have been seen together a few times at one feeding station. Their identification is positive. They are seen daily feeding upon berries, cereal foods, chopped boiled eggs mixed with boiled potato, etc. They are very tame, and every opportunity for close inspection is given. One approached me so closely that I could clearly note the color of the iris. It frequently comes to the window-sill when observers are within three feet of the feeding-place.

Mrs. L. A. Cressy and a neighbor, upon whose bounty one of the birds has been subsisting, believes that three of the birds have visited the food-tables, but I

think that not more than two have been seen at one time. A gentleman who has kept caged Mockingbirds declares that a pair of the birds nested in a near-by cemetery last summer, but I have been unable to ascertain what is the basis for the statement.—EDWARD P. ST. JOHN, *President Hartford Bird Study Club.*

A Fire Station Martin Box

The enclosed photograph represents the Martin house at No. 7 fire station, at Fort Wayne, Ind. The house is mounted on a telegraph pole, and contains 48 rooms. The climbing vines are morning-glories.

Capt. A. J. Baker informed me that it was occupied this season by 47 pairs of Martins and one pair of English Sparrows.

All of the fire stations in our city have well-patronized Martin houses. The



secret of their success is that the doors are not opened until after the Martins arrive in the spring. The Sparrows are persecuted at all times.—CHAS. A. STOCKBRIDGE, *Fort Wayne, Ind.*

Starling Imitating Notes of the Wood Pewee

With the increasing abundance of the Starling in the vicinity of New York, we have come to refer to this species almost any unfamiliar clucks, chatters, squeals or whistles. In this connection, the case of a Starling which has added the notes of a native species to its already rich legitimate vocabulary is of interest.

In the late fall of 1910, some weeks after Wood Pewees had left for the South, the writer heard the characteristic notes of this species on several occasions near his home at Englewood, N. J.,—once close at hand in some Norway spruces beside the house.

The sound was not definitely located, but circumstances pointed to the Starling as responsible for this unseasonable bird note. Quite unexpectedly, on the morning of January 11, 1911, while I was walking to the car near the crest of the hill between the golf course and Leonia Junction, characteristic Wood Pewee notes were heard, and their author, a Starling, promptly located on the top of a nearby telegraph pole, repeated both the *pee-a-wee* and *pee-ah* notes, interspersed with scarcely audible Starling-like chirps and twitters. The imitation was close enough to deceive one perfectly familiar with the notes, but once there was an unfamiliar quaver in the *ah*, and perhaps the *pee-a-wee* was a little higher pitched and, with practice, not quite indistinguishable from the genuine.—JOHN TREADWELL NICHOLS.

[The Editor is familiar with the Starling's Peewee notes, which Mr. Nichols describes, and, in an earlier number of *BIRD-LORE*, has recorded his surprise on

hearing what was apparently a Wood Pewee, when no bird of that species should have been in the United States. Several times since, he has seen the Starling utter these notes, and Mr. Nichols' observations now confirm a growing belief that they are part of the bird's natural repertoire, and not an imitation. Can some reader of *BIRD-LORE* in England, who is familiar with our Wood Pewee's notes, tell us whether English Starlings have a similar call?—ED.]

Song Season of the Nightingale

So many Americans are disappointed not to hear the Nightingale in June (or only a very poor song) that I am venturing to write and say that the Nightingale sings at night, and at its best in the first fortnight of May. I have allowed enough margin for it to recover from migration and the cold April nights, and also for it to be heard before ceasing altogether.

It does not sing in Devonshire, and I think not in Cornwall, nor in Wales or any of the northern counties. Cambridge is an excellent place, as are Surrey and Hampshire, that I know of.

It is even possible to hear it in Wimbledon, which is close to London; indeed, a great many of our Warblers may be seen and heard there and in Richmond Park, notably the Redstart and Willow Warbler, which are the easiest to see and hear in those places.—MARIANA HOPKINSON, *Cambridge, England*.

[In connection with the song of the Nightingale it will doubtless both surprise and disgust all true lovers of bird music to learn that it has been recorded by the phonograph, the records now being for sale in this country. It is sufficiently painful to hear a caged Nightingale voice its passion to irresponsive walls, but the limit of violated sentiment would appear to have been reached when the music of the poet's own bird can be reproduced by the turn of a crank!—ED.]

The History of a Ruffed Grouse's Nest

On April 17, 1910, a nest of the Ruffed Grouse was found near my home in Concord, Mass., by a nurse who was out walking with some children. They notified me immediately, and I hastened to examine the nest myself. It was carefully concealed, being at the foot of a white oak, about twenty yards from a lumber road, and was partially roofed over by a dead branch of white pine. At this time there were three eggs in the nest. It rained continuously for three days thereafter, and, as the eggs got a thorough soaking, and no more were laid, I supposed that the bird had deserted the nest. On April 20, however, I was walking past the nest when to my great surprise, the bird flushed. At this time there were four eggs in the nest. On the 24th there were six eggs in the nest, and on the 30th, ten. May 7, the bird finished her set of fourteen eggs and began to incubate. On June 5, nothing was left but fourteen neatly split egg-shells, to tell the tale of fourteen hardy little chicks following their mother among the brush.—E. P. WARNER, *Concord, Mass.*

A Rare Warbler

April 27, last, remains to me a memorable day, for I had the good fortune to see a beautiful male Cape May Warbler. He stayed a short time among some pear

and oak trees in our yard near the house. He was not very shy, and frequently uttered a thin, faint chip. This bird is the first one of its species that I have seen.—EDWARD S. DINGLE, *Summerton, S. C.*

The Notes of the Hermit Thrush

In a grove of red cedars, in a sheltered valley near Plainfield, fully twelve or fifteen Hermit Thrushes spent the past winter, finding an abundance of food in the berries of the flowering dogwood.

I have lately heard three distinct call-notes from these birds, one, of course, the familiar low, blackbird-like *chuck*. The two other notes do not seem to be commonly known, at least to those familiar with the bird only as a migrant. The first is a simple, high-pitched whistle, rarely loud; the second, a curious, somewhat nasal cry recalling the unmusical note of the Veery.

The Hermit Thrush seldom sings while with us in the spring, and the song is so low as to be inaudible if one is more than a few yards from the singer. On March 19, I was agreeably surprised to hear four or five of these thrushes singing through most of the afternoon, though it was raining at the time. The song of only one bird, however, was of sufficient volume to be heard at any distance.—W. DEW. MILLER, *Plainfield, N. J.*



Book News and Reviews

SIGNIFICANCE OF WHITE MARKINGS IN BIRDS OF THE ORDER PASSERIFORMES. By HENRY CHESTER TRACY. Univ. Cal. Pub. in *Zoöl.*, vi, 1910, pp. 285-312.

Few ornithologists, we imagine, have seen a Meadowlark or Junco, a Mockingbird or Magpie, expose its white markings in flight without speculating over their significance. It is almost invariably the outer pair of tail-feathers which have the most white, and we believe that in no bird is the central pair white and the outer pair dark.

The white is, therefore, so disposed that it is visible only when the tail is more or less spread; and in many cases it is spread or opened just enough to show the extent of these white markings.

The theories advanced in explanation of the value or purpose of flight-exposed white marks at least prove that "many men have many minds," even if their wide variance tends to weaken our belief in their validity. To Thayer, such color characters are concealing or obliterative; to others, including the author of this paper, they are revealing or directive; while it was Merriam, we believe, who first suggested that they protected their possessor by being so strikingly evident when their wearer was in flight that their sudden and complete effacement when the bird took to cover, left the pursuer looking for a victim which had disappeared as if by magic; a theory, by the way, not referred to in the paper under review.

After commenting on the importance to a bird of "seeing and being seen by its companions," Mr. Tracy asks, "How do the birds of our woods and fields actually keep track of one another?" The value of the voice and ears is admitted, but it is further claimed that "sight plays a part of corresponding importance in the economy of bird-movement,—to some extent replaces sound as a means of recognition." To test the value of directive markings, Mr. Tracy presents a table of North

American Passeriform Birds of the Open designed to show that the birds marked with white, taken as a whole, have the habit of flocking, while the reverse holds true for those not so marked; from which he concludes that white markings are of directive value in keeping the individuals of a flock together.

It does not seem to us, however, that this table presents an altogether correct view of the matter. If memory is not at fault, Horned Larks, for example, show black not white on the outer tail-feathers when in flight, while the Dickcissel, various species of Blackbirds of the genera *Malathrus*, *Agelaius*, *Scolecophagus*, and *Quiscalus*, and the Swallows, seem to us to be better placed among "Birds of the Open" than among the Warblers, Thrushes and other "Passeriform Birds of Arboreal Habit," in the table on page 299. All are preëminently flocking species, and only the Barn Swallow has white in the tail, and this is so placed as to be but slightly revealed by flight.

In the second table, just referred to, Mr. Tracy places arboreal birds in two groups, according to the presence or absence of white wing or tail markings, and expresses his belief that while certain of these markings may, in conformance with Thayer's theory, have a concealing value when in repose, they are revealing, and hence directive, in flight. We observe that while the eastern Robin is here placed with birds having white tail markings, no mention is made of the fact that in the Western Robin (*Planesticus migratorius propinquus*) the white tail marks are wanting. The case is exceptionally interesting, for here is a bird which, as a species, can be placed in both categories, a fact which rather weakens one's faith in the functional value of white tail markings in this particular instance.

Mr. Tracy concludes his paper with a special study of the *Mniotillidae*, and a

brief discussion of 'Sexual Selection, as Affecting White Patterns,' and 'Directive Markings Outside the Order Passeriformes.' While he cannot be said to have presented a satisfactory solution of the difficult problem which he has attacked, he has made a very acceptable contribution toward this end, one which we trust will stimulate observation in the field, where alone will be found the data on which the final answer is based.—FRANK M. CHAPMAN.

THE VERTEBRATES OF THE CAYUGA LAKE BASIN, N. Y. By HUGH D. REED and ALBERT H. WRIGHT. [Cornell University.] Proc. Am. Philos. Soc., xlvi, No. 193, 1909, pp. 371-458, 4 maps; Birds, pp. 380-390; 409-453.

This valuable paper "is based mainly upon the records made by members" of the Department of Neurology and Vertebrate Zoölogy of Cornell University, since the opening of the University, in 1868. The personal observations of the authors have extended over twelve of these, some forty years. It goes without saying, therefore, that the writers of this brochure are thoroughly equipped, both by experience and by what may be termed inheritance, to handle their subject with authority. Their paper, therefore, forms an admirable guide to the faunal affinities and status of the species of vertebrates in the region which they cover.

Of birds, 257 species are recorded, and under each are given brief but pertinent data on its manner and times of occurrence, and nesting dates (if a breeding bird).—F. M. C.

AN ANNOTATED LIST OF THE BIRDS OF COSTA RICA, INCLUDING COCOS ISLAND. By M. A. CARRIKER, JR. Annals of the Carnegie Museum, Vol. vi, Nos. 2-4, 1910, pp. 314-915, one map.

It is not our purpose to write a critical review of Mr. Carriker's valuable contribution to our knowledge of tropical American bird-life, but we should like the readers of BIRD-LORE to know of the appearance of so adequate a work on the birds of this part of our continent. The amazing

richness of Costa Rica's bird-life is brought home to us when we observe that from this small republic, not quite so large as our state of West Virginia, there have been recorded no less than 753 species and sub-species, or about three-fourths as many as are known from all America north of Mexico!

Mr. Carriker has some introductory matter on the geography, physiography, life-zones, etc., and his manner of treatment of the species included makes his book useful to both the systematist and the zoögeographer, but to the average reader his book will be of interest chiefly because of his excellent notes on the habits of many birds of which we know but little in life. He is to be congratulated on the completion of a task to which, both in the field and study, he has evidently given unsparingly of his time and effort.—F. M. C.

The Ornithological Magazines

THE AUK.—The January number opens with a 'Description of a New Oriole (*Icterus fuertesi*), from Mexico,' by Mr. F. M. Chapman; and a fine colored plate of the species, from the brush of Mr. L. A. Fuertes, makes the issue unusually attractive. A new species in an old land is a rare find nowadays; but there are new discoveries to be made right under our noses, for it turns out that the much-observed Bittern wears and displays conspicuous white plumes during the breeding season. This Mr. Wm. Brewster writes about under title 'Concerning the Nuptial Plumes Worn by Certain Bitterns, etc.' The credit of first recording the plumes seems to be due to Miss Agnes M. Learned (BIRD-LORE, May-June 1908, pp. 106-108).

Several pages are devoted to an entertaining account of the Wild Pigeon,—a translation from an old Swedish journal of 1759 of an article by Peter Kalm, the traveler. His name, however, has not been translated, and remains "Pehr." As a sad commentary on Kalm's observations, Mr. C. F. Hodge has a few words to

say on the ill-advised 'Passenger Pigeon Investigation.' It is probably the first time on record that a species has become extinct with press agents 'hot-foot' on its trail.

'The Warblers in Wayne Co., Michigan, in 1909,' by Mr. J. C. Wood, seems to be more an array of notebook extracts, rather than the digested observations so much needed in the study of migration. Mr. Frank Smith records the 'Double-crested Cormorants Breeding in Central Illinois.' Might these birds not be the form *floridanus*?

Space does not permit critical reviews of several local lists. Mr. A. A. Saunders includes 198 species and races in 'A Preliminary List of the Birds of Gallatin Co., Montana'; Mr. S. S. Visher, 154 species in an 'Annotated List of the Birds of Harding Co., Northwestern South Dakota;' and Mr. J. C. Phillips has a long list, the result of 'A Year's Collecting in the State of Tamaulipas, Mexico,' wherein a new Owl (*Strix virgata tamaulipensis*), a new Wren (*Heleodytes narinosus*), and a new Yellow Warbler (*Dendroica aestiva ineditus*) are described. It will be noted that the much-abused asterisk serves one purpose in Mr. Saunders' hands and another in Mr. Visher's, but of far greater importance is the fact that only Mr. Phillips has followed the new A. O. U. Check-List in the use of trinomials. It makes us wonder if 'The Auk' is going to to recognize the Check-List as a guide, or adhere to usage current before trinomials were properly understood. This is not a matter for discussion here, but the veriest tyro can grasp the idea that a binomial means *two* names and a trinomial *three*, and see the inconsistency (for example, on p. 14) of "*Melospiza melodia*" (meaning *Melospiza melodia melodia*, the Eastern race), being placed on the same footing as *Melospiza georgiana*, a species with no races. 'The Auk' can hardly afford to ignore the Check-List method of using trinomials.

Mr. John H. Sage's report of the twenty-eighth annual meeting of the A. O. U. indicates the vigor of the Union. An unusual number of notes and reviews swells the issue to 152 pages.—J. D., Jr.

THE CONDOR.—By a vote of 63 to 44, the members of the Cooper Ornithological Club have decided against the use of simplified spelling in 'The Condor.' The editor, gracefully yielding to the wishes of the majority, has brought out the opening number of the new volume greatly improved in appearance, not only typographically, but in the number of illustrations. All but one of the longer articles are accompanied by half-tones, which comprise two plates and fifteen text figures. Of the five main articles, Keyes' 'History of Certain Great Horned Owls,' and Brewster's 'Courtship of the American Golden-eye,' both well illustrated, deserve especial mention. The former contains an interesting account of a family of Owls observed in 1906 and 1907 near Mt. Vernon, Iowa; the latter some very carefully recorded observations of the Golden-eye, at Back Bay Basin, Boston, in February, 1909. Shelton describes the 'Nesting of the California Cuckoo,' in Sonoma county, and Bowles contributes a brief account of the nesting habits of 'The Pallid Wren-Tit (*Chamaea fasciata henshawi*)' in the vicinity of Santa Barbara. Under the title 'Collecting Socorro and Black Petrels in Lower California,' Osburn gives the results of two trips to the Coronado Islands in July, 1909, and June, 1910.

Among the 'Editorial Notes and News' occurs the interesting statement that "there are at present 525 species of birds definitely recorded from within the limits of the State of California. Of these 163 are water birds and 362 land birds." This is undoubtedly the largest number known from any state in the Union except Texas. Announcement is made of "the preparation of a sumptuous work upon the 'Birds of California,'" by W. L. Dawson, "with the coöperation of the members of the Cooper Ornithological Club." Judging by the author's well-known works on the 'Birds of Ohio' and 'Birds of Washington,' and the fact that four or five years are to be devoted to the task, we may reasonably expect that the rich avifauna of the state will be adequately treated.—T. S. P.

Bird-Lore

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Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WHEN this number of BIRD-LORE appears, the Editor hopes to be encamped with Louis Fuertes in the Andes of Southern Colombia. A wireless telegraph will not be included in our equipment, and communication by mail will be too infrequent and uncertain to warrant forwarding letters. The indulgence of correspondents is therefore begged until such time as we return to more beaten paths.

It may not be out of place to explain that this absence will be occasioned by the second of the American Museum's expeditions in search of specimens and data on which to base Habitat Groups of Tropical American Birds. Studies for the first group of this series were made in the State of Vera Cruz, Mexico, in the spring of 1910. The second group is designed to show a general view of an Andean range from a tropical or temperate level, and the Cauca Valley of Colombia has been selected as a region where representative material for a group of this nature could be found.

WE WOULD urge all contributors to BIRD-LORE to use consistently the common names of birds contained in the third edition of the American Ornithologists Union's 'Check-List of North American Birds.' It is now published in a small pocket edition with blank pages for notes, which may be obtained from Dr. J. Dwight, Jr., Treasurer of the A. O. U., at

134 W. 71st Street New York City, for twenty-five cents.

Unfortunately, in an effort to simplify the common names of our birds, the authors of this work have gone a step too far. They decided, and doubtless rightly, that it was unnecessary to continue to use the prefix 'American' for those birds which, either in fact or fancy, are the New World representatives of Old World forms.

For example, it is no more necessary for us to say American Osprey or American Crossbill than it would be for an Englishman to say English Osprey or English Crossbill. In the first instance, it is true, from a local standpoint, Osprey is quite sufficient, there being but a single species of Osprey in each country. But where several species of the same country bear the same common group name, its application to each must be in connection with some qualifying name, if it is to have exact, specific meaning. For a bird student in America to say he has seen a Crossbill, therefore, is not enough, since it would not be clear from this statement whether he referred to what in earlier editions of the Check-List was called the American Crossbill or the White-winged Crossbill. Here it might be well to return to the old name of Red Crossbill.

In a similar manner, while it is obviously unnecessary for us to use the name American when speaking of our Eared Grebe, White Pelican, Avocet, Woodcock, Barn Owl, Long-eared Owl or Dipper, to cite several examples, we cannot use the names Merganser, Scaup, Golden-eye, Eider, Scoter, Egret or Bittern, for example, and make our meaning unmistakable without employing some qualifying term.

Such terms, also, it seems to us, should be used as well for all the forms of an American species. That is, if we call *Planesticus migratorius propinquus* Western Robin, we should call *Planesticus migratorius migratorius* Eastern Robin, leaving the mere name Robin, in exact writing at any rate, to be the group name of the species *Planesticus migratorius*.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

Conservation of Home Resources

A Bird and Arbor Day Suggestion

WHEN the school-tax is paid, the average citizen considers his duty done for the ensuing year so far as schools are concerned. But how much is really given to our teachers and pupils? Are up-to-date school-buildings, free text-books and other material equipment sufficient to lift school-life to the plane which we take pride in believing our schools have reached, or ought to have reached? It is a true but singularly significant fact that, with all the money and effort now expended to educate the children of this land, very little has yet been done to bring them into *vital touch* with the world in which they live.

Visit a few schools in your neighborhood. Talk with teachers. Talk with pupils. It may be a surprise to find boys and girls of high-school training, fitted for college, who know almost nothing about trees or plants, or any other living organisms, outside of domesticated animals.

Just why reading, writing and arithmetic are so much more important than the study of nature need not be discussed here. The point to be emphasized is *the immensely valuable home resources* in every locality, which it is the duty not only of the taxpayer, but of the Audubon Society and reliable people generally, to help our teachers and pupils to discover and conserve.

Every one is supposed to take a lively interest nowadays in the conservation of national resources. Why not shift the center of interest to the conservation of home resources?

A logical and practical beginning may be made by seeing, first, that each school has a school-garden; and, second, that each school-garden is managed as a part of the nation's resources. How can a boy who grows up without any first-hand knowledge of tree-planting and horticulture be expected to conserve forests, of whose place in nature and value to man he knows little or nothing?

How can any child who is unfamiliar with the animals, birds, plants, insects, rocks, soils and water-powers of its own home neighborhood, develop into a progressive citizen with respect to the proper use of these resources?

The opportunity is now before us to redeem the past by giving to this day and generation the chance to work out the problem of conserving natural resources. Of all days in the school-calendar, Bird and Arbor Day is the most appropriate for beginning such a work.

Let us go to our schools and join with teachers and pupils in getting at this matter.

Let us help to celebrate Bird and Arbor Day, in school and town, as a *national festival*, a nature fête, rich in economic, esthetic and educational values.

Agassiz' message: "Study nature, not books!" rings out with peculiar significance in this age of indoor education.—A. H. W.

A QUESTION

Has any village, town or city, through any of its officials, improvement societies or civic leagues, invited the school-children to contribute to the community life by assisting in planting trees and shrubs in public places, in clearing up and reclaiming waste or neglected places, or in sharing the responsibilities of keeping home, common, park and roadsides attractive?

Who can say what the value of such an incentive to civic beauty, pride and confidence might not be in the development and education of our boys and girls!—A. H. W.

FOR TEACHERS

Suggestions for Bird and Arbor Day

THE school calendar includes a variety of anniversary days, which call for special exercises and extra effort on the part of both teachers and pupils. In some states, it has become almost a burden to keep up to a high standard in giving expression to patriotic, memorial and thanksgiving tributes. While there is some truth in the objection that the regular work and discipline of the school are more or less interfered with at these particular periods, it should not be forgotten that a very important and reasonable reason exists for the observance of all these occasions, namely, the opportunity to lift school routine out of monotony into higher usefulness by bringing the pupils into touch with some of the fundamental incentives to national and universal welfare. Possibly, no day now set aside for celebration can be made to contribute more directly to the development of the individual pupil than Bird and Arbor Day. Obviously, the problem of getting the most satisfactory results from this day must be worked out differently in rural and city schools, in warm and cold climates, and in progressive and unprogressive localities. However, there may be a general agreement on a few points:

1. Make the day one of *Joy*, if nothing else.
2. Celebrate the day *Outdoors* if possible.
3. Emphasize *Life*, moving, growing, breathing, feeding, reproducing,—in short, every form of life-activity.
4. Do away with all the formality of ordinary exercises possible, and let the *Pupils* really contribute to the occasion by summing up their nature-study work

in some simple, practical, beautiful fashion. Much has been written of interest and worth concerning Nature. It is all good material, but don't overlook the value of the work of your own school-room, in order to recite and rehearse what has elsewhere been said and done.

5. Lastly, relate Bird and Arbor Day to the *Homes* and the *Public* in your immediate neighborhood.

A few special hints are offered, with the hope that teachers may not only find them helpful but that they may also excite sufficient interest to bring to this department criticisms, suggestions and personal experiences from those who observe Bird and Arbor Day in our schools.

I. RURAL SCHOOLS

According to locality and climatic conditions, lay out, prepare, sow or cultivate the school-garden. If possible, plant a tree and some shrubs, paying especial attention to beautifying the grounds and attracting birds. Invite parents and friends to spend an hour or so working with you. Let each pupil plant at least one seed or help set out one shrub. Where there is room, give each pupil a small plot to cultivate and raise a crop on. Have a row of sunflowers somewhere, and a flower-bed of hardy, late-blooming species which may contribute to the decoration of the school-room in the fall. A few early blossoms may be possible in mild climates; midsummer flowers are less practicable.

Select a site for a birds' drinking-fountain, and assign the work of getting material and setting it in place to those pupils best fitted to do it. If no money is available for such a purpose, make a simple trough, or round receptacle, detailing different pupils to fill and keep it clean week by week, including the vacation-time. Ask farmers to let the school have some of the extra seedlings when they "thin out" vegetable beds, and try setting these out in competition with the same plants grown from the seed in the school-garden. Dates of all planting, transplanting and harvesting should be kept.

If the day is fair and sufficiently mild, have the so-called "exercises" outdoors, making the marching and massing of the pupils to and from and about the school-grounds as attractive as possible. Indoors, arrange an exhibit which shall show what the pupils have done in nature-study through the year; hang up pictures; make blackboard sketches or diagrams, and give lists of birds, flowers, trees, rocks, insects, animals and soils which have been identified, stating dates and localities; have window-boxes with something growing (for example, the common grasses of agriculture) with one or more of their enemies, in the form of weeds. Let the pupils do as much of this work as possible. When desirable, assemble the schools of a town in some hall or outdoor park where the public may join in more formal exercises, inviting as guests the Board of Education or School Committee, Fish and Game Commissioners, State Forester, State Geologist and similar officials. The State Boards

of Agriculture should not be neglected. The Weather-Bureau might also suggest interesting matter bearing on the successful development of a school-garden.

Increase the school-room library by sending to the State and National Departments of Agriculture for bulletins and pamphlets.

II. CITY SCHOOLS

To the indoor arrangements given above, add any Audubon Society or museum loan-material available; if provided with a stereopticon, have a short, illustrated talk; give each pupil if possible, a nature picture which he may mount on a pasteboard back and take home to keep. If the room likes to choose its favorite bird, flower, tree or animal for the year, let the picture represent that. Spend ten minutes having each pupil say in a word what interests him most in nature. Have a map colored to represent Bird and Game and Forest Reservations in the United States.

Outdoors, assuming that there is no garden and only a paved yard, use window-boxes for planting seeds (to be carried indoors later). If possible, let each pupil take home a two-inch flower-pot containing a sprouting seed or seedling, to be tended and brought back for exhibit at the close of school in June. After the exhibit, prizes might be awarded and the plants given outright to the pupils for their home-yard or garden.—A. H. W.

TREES, PLANTS AND SHRUBS ATTRACTIVE TO BIRDS

(See 'The Protection of Birds,' E. H. Forbush)

Consult also "Methods of Attracting Birds," by Gilbert H. Trafton; "How to Attract and Protect Wild Birds," Von Berlepsch Method, National Association of Audubon Societies, 141 Broadway, New York City; "School Gardens," Bulletin No. 160, Office of Experiment Stations, United States Department of Agriculture; "Nature-Study and Life," by C. F. Hodge; Cornell Study Leaflets, Bird and Arbor Day Annuals, apply to State Commissioner of Education.

Wild Sarsaparilla	American Holly	Catbrier
Mountain Ash	Bittersweet	Spice Bush
Sumac	Golden-rod	Sour Gum
Red Elder	Millet	Dogwood
Sweet Elder	Cranberry Tree	Partridge Berry
Sweet Gum	Barberry	Red Cedar
Virginia Creeper	Shad Bush	Ground Juniper
Red Mulberry	Bayberry	Sunflower
Russian Mulberry	Wild Rose	Weed-seeds
Black Alder		

A Bird and Arbor Day Program

MUSIC

CLASS I, lead by a herald, marching with mounted pictures of trees, birds and animals, comes to a halt, forming in line.

Herald steps to the front, saying:

“When ice is thawed and snow is gone,
And racy sweetness floods the trees;
When snow-birds from the hedge have flown,
And on the hive-porch swarm the bees,—
Drifting down the first warm wind
That thrills the earliest days of spring,
The bluebird seeks our maple groves,
And charms them into tasseling.”

—From “The Bluebird.” MAURICE THOMPSON.

First Speaker: “The trees have budded and are still blossoming. Soon the green leaves will be out, for spring has come again.”

Second Speaker: “Bloodroot and cowslip, spring-beauty, hepatica, squirrel-corn and violets are waiting for us to find them.”

Third Speaker: “The animals know spring is here, for the bear has waked up from his winter sleep; the woodchuck, too, and frogs are croaking in the marshes.”

Fourth Speaker: “Birds are flying fast by night and day from the far South to greet spring in the North. Phœbe and Song-Sparrow, Robin and Bluebird are already here, and many whom we want to see slip by us when we do not know.”

Fifth Speaker: “Mosquitoes have come out from garrets and cellars and all sorts of hiding-places under bridges or in crannies, and are laying thousands of eggs wherever they find water.”

Sixth Speaker: “Yes, and the apple-tree tent caterpillars are hatching out now from their eggs, which have been so safely kept through the winter. Click-beetles and potato-beetles have left their winter shelters.”

Seventh Speaker: “Everywhere insects are coming in great numbers. Some will do good. Many will do harm.”

All: “We want to find them and watch them.”

Eighth Speaker steps forward and says:

“Summer and Autumn, Winter, Spring,
Each season of the varied year
Doth each for us a lesson bring,
If we but turn the listening ear.”

—From “Nature Intelligible.” JONES VERY.

If indoors, class hangs up pictures and forms in marching order.

NOTE.—Flowers, birds and insects to suit the locality may be substituted for those given above.

A Child comes forward and says:

“The bee is not afraid of me,
I know the butterfly;
The pretty people in the woods
Receive me cordially.”

—EMILY DICKINSON.

MUSIC

CLASS II marches and forms in semicircle.

A CALENDAR FOR MAY IN NORTHEASTERN UNITED STATES

Adapted from “Nature’s Calendar,” by Ernest Ingersoll.

A Leader comes forward and says:

“The earth is warm again,
the air is filled with odors,
The lanes lined with gay flowers,
which nod and bend
To every passing breeze.”

First Speaker: “The fur-bearing animals put on a new coat now.”

Second Speaker: “Look up in the trees for big nests of dried leaves made by the squirrels. This is the time when the young squirrels are born.”

Third Speaker: “Meadow-mice, too, are making nests on the ground and, if you look sharp, you may find a white-footed mouse snugly housed in an old thrush’s nest, which it has roofed over with leaves.”

Fourth Speaker: “Wild-cats, gray foxes, the minks and the weasels, skunks, otters and woodchucks, with beavers, wolves and the bristly porcupine are raising their young in dens and burrows and holes.”

Fifth Speaker: “In April we find many white or pale-colored flowers; but in May there are bright yellow blossoms,—wild indigo, golden mustard, the dandelion, five-finger, the yellow violet and marsh-marigold.”

Sixth Speaker steps forward saying:

“When wake the violets, Winter dies;
When sprout the elm-buds, Spring is near;
When lilacs blossom, Summer cries,
‘Bud, little roses! Spring is here.’ ”
—From “Spring Has Come.” OLIVER WENDELL HOLMES.

Seventh Speaker: “The chestnut tree will not shake out its yellow blossoms until summer but the red maple is already fruiting.” (Shows branch of red maple keys.) “In March and April this maple was beautiful with scarlet-yellow blossoms. Its leaves have scarlet stems. In autumn it will be the glory of the northern forests.”

Eighth Speaker: "Soft-shelled turtles are laying their eggs in the sand. Snakes have come out from their winter hiding, and are hunting for mice in the fields, or for toads and frogs near water."

Ninth Speaker: "Fishes lay eggs, too. The shad has come in from the ocean. Schools of mackerel are coming. The black bass is making its shallow nest near the sandy lakeshore."

Tenth Speaker: "Along the coast, crabs and shrimps are making their way inland, and will soon be shedding their shells. In Long Island Sound, lobsters are laying their eggs now, but it may be summer before there are any young lobsters in the northern waters of Nova Scotia."

Last Speaker steps to middle of semicircle and says:

"Is Summer real and coming,
With its waving green and its herds?
For the greatest good the Winter can bring
Is the hope in me of returning Spring,
And the joyous song of the birds."

—From "Winter." WILLIAM G. BARTON.

Class forms and marches.

MUSIC

CLASS III. The Message of the Birds.

Single Speaker, acting as leader:

"The skies can't keep their secret!
They tell it to the hills,
The hills just tell the orchards
And they the daffodils!
A bird, by chance, that goes that way
Soft overhead the whole.
If I should bribe the little bird,
Who knows but she would tell?"

—EMILY DICKINSON.

Each speaker carries a colored picture of the bird he describes.

First Speaker: "While May bedecks the naked trees
With tassels and embroideries,
And many blue-eyed violets beam
Along the edges of the stream,
I hear a voice that seems to say,
Now near at hand, now far away,
'Witchery—witchery—witchery!'"

—From "The Maryland Yellowthroat." HENRY VAN DYKE.

All: "The Maryland Yellowthroat!"

Second Speaker: "High on yon poplar, clad in glossiest green;
 The orange, black-capped Baltimore is seen,
 The broad extended boughs still please him best,
 Beneath their bending skirts he hangs his nest."
 —From "The Baltimore Bird." ALEXANDER WILSON.

Shows nest, if possible, collected in the autumn.

All: "The Oriole! the Baltimore Oriole!"

Third Speaker: "From the first bare clod in the raw, cold spring,
 From the last bare clod, when the fall winds sting,
 The farm-boy hears his brave song ring,
 And work for the time is a pleasant thing."
 —From "The Meadowlark." HAMLIN GARLAND.

All: "This must be the Meadowlark!"

Fourth Speaker: "Among the dwellings framed by birds
 In field or forest with nice care,
 Is none that with the little wren's
 In snugness may compare."
 —From "The Wren's Nest." WORDSWORTH.

All: "A Wren!"

Fifth Speaker: "The blackbirds make the maples ring
 With social cheer and jubilee;
 The redwing flutes his *o-ka-lee.*"
 —From "May-day." EMERSON.

All: "Red-winged Blackbird!"

Sixth Speaker: "In the days of spring migrations,
 Days when warbler hosts move northward,
 To the forests, to the leaf beds,
 Comes the tiny oven builder.
 Daintily the leaves he tiptoes;
 Underneath them builds his oven,
 Arched and framed with last year's oak-leaves,
 Roofed and walled against the raindrops."
 —From "The Oven-bird." FRANK BOLLES.

All: "Have you seen a nest of the Oven-Bird?"

Seventh Speaker: "The bob-o'-link again I hear,
 The merriest bird of all the year.
 As through my open window floats
 The gladsome music of his notes."
 —From "Sunrise." THOMAS HILL.

All: "Bob-o-linkum! Bob-o-linkum!"

Eighth Speaker:

“He sits on a branch of yon’ blossoming bush,
 This madcap cousin of robin and thrush,
 And sings without ceasing the whole morning long!
 Now wild, now tender, the wayward song
 That flows from his soft, gray, fluttering throat,
 But often he stops in his sweetest note,
 And, shaking a flower from blossoming bough,
 Drawls out, “*Mi-ew, mi-ou!*”

—From “The Catbird.” EDITH THOMAS.

All: “Saucy, mocking Catbird.”

—MINOT J. SAVAGE.

Ninth Speaker:

“‘I own the country hereabout,’ says Bob White,
 ‘At early morn I gaily shout, I’m Bob White,
 From stubble field and stake-rail fence
 You hear me call, without offence,
 I’m Bob White! Bob White!’”

—From “Bob White.” CHARLES C. MARBLE.

Tenth Speaker: “The whistle of the meadowlark is sweet,
 The blackbird’s rapid chant fills all the vale,
 And touchingly sweet the unincumbered song
 That the thrush warbles in the greenwood shade;
 Yet is the robin still our sweetest bird,
 And beautiful as sweet.”

—From “The Robin.” WILLIAM T. BACON.

All: “The Robin shall be our bird for the year!”

Leader: “Swallows over the water,
 Warblers over the land,
 Silvery, tinkling ripples
 Along the pebbly strand,
 Afar in the upper ether
 The eagle floats at rest;
 No wind now frets the forest,
 ‘Tis nature at her best.”

—CHARLES C. ABBOTT.

MUSIC

CLASS IV, carrying leaves or blossoms of the different kinds of trees in the locality.

Single Speaker:

“When we stand with the woods around us,
 And the great boughs overhead;
 When the wind blows cool on our forehead,
 And the breath of the pine is shed;
 When the song of the thrush is ringing
 Wonderful, rich, apart—
 Between the sound and the silence
 Comes a sudden lift of the heart.”

—ELIZABETH K. ADAMS.

Leader: “We know where the trees in our (town) (village) (city) are.”

Shows map colored to mark wooded areas.

Each speaker steps forward in turn and shows his branch, saying:

“I have brought the (name of tree) to show you.
 “Here is the (name of tree) to show you.
 “I have found the (name of tree) to show you.
 “This is the (name of tree) to show you.”

It grows (state
 distribution
 in this locality).”

NOTE.—Do not omit the evergreen trees.

Leader: “Once forests covered all this region, now only a few trees are left.”

Single Speaker:

“Preserve your forests, in them lies your wealth;
 They are better than gold, for riches untold
 Cannot buy what they’ll give you in comfort and health;
 Their thirsty roots will drink in the rain
 That might cause your rivers to overflow,
 And they’ll store it up till the leaves breathe it forth,
 To temper the heat of the summer glow.

“When down from the North the wind rides forth,
 Your friends, the trees, will break its power;
 In their branches, in spring, the birds will sing,
 They will shelter each delicate wind-blown flower.
 Now the secret is this,—bear it well in mind,
 No matter how urgent may be your case,—
 ‘Never lay your axe to the root of a tree
 Till you’ve planted another to take its place.’ ”

—“The Secret.” LILLIE SOUTHGATE.

NOTE.—Apply to State Forester, State Board of Agriculture and State Historian for information about early and present conditions of forests.

MUSIC

“Fröhlicher Landmann” ROBERT SCHUMANN.

CLASS V, Children, marching two by two.

First Pair: “Farmers are we to take care of the crops.”

Second Pair: “We mean to grow up and watch over the trees.”

Third Pair: “Gardens where flowers grow we’d rather have.”

Fourth Pair: “Honey we like, so we’ll choose the bees.”

Fifth Pair: “Give us the birds, who can fly and can sing.”

Sixth Pair: “Rocks and mines say we, because they bring wealth.”

Seventh Pair: “We’ll take water and all which there swims or sails.”

Eighth Pair: “Pure air for us, winds and clouds that give health.”

Ninth Pair: “The soil we shall choose and make smooth, lasting roads.”

Tenth Pair: “Our choice is the heavens, with moon, stars and sun.”

Eleventh Pair: “Let us have the animals, tame ones and wild.”

Twelfth Pair: “We like fairies best. Don’t you think we’ll find one?”

(To be spoken by the two youngest children.)

All: “The great, wide, wonderful, beautiful world!”

Every day

We will sing, work and play

In this beautiful, wonderful world!”

All the classes now form with their respective leaders, singing as they march to plant seeds, shrubs or trees in the school-garden.

MUSIC (See note.)

It is suggested that special attention be given to the selection of music and also to the marching. A May-pole with colored streamers might be introduced with charming effect.

NOTE.—The following may be sung to the tune of “Abschied,” page 145, *Buch der Lieder*. Collection Litolff No. 846.

Girls: “For flowers that bloom about our feet;

For tender grass, so fresh, so sweet;”

Boys: “For song of bird and hum of bee;

For all things fair we hear or see;”

(Repeat first four bars of music.)

All: “Father in Heaven, we thank Thee!

Father in Heaven, we thank Thee!”

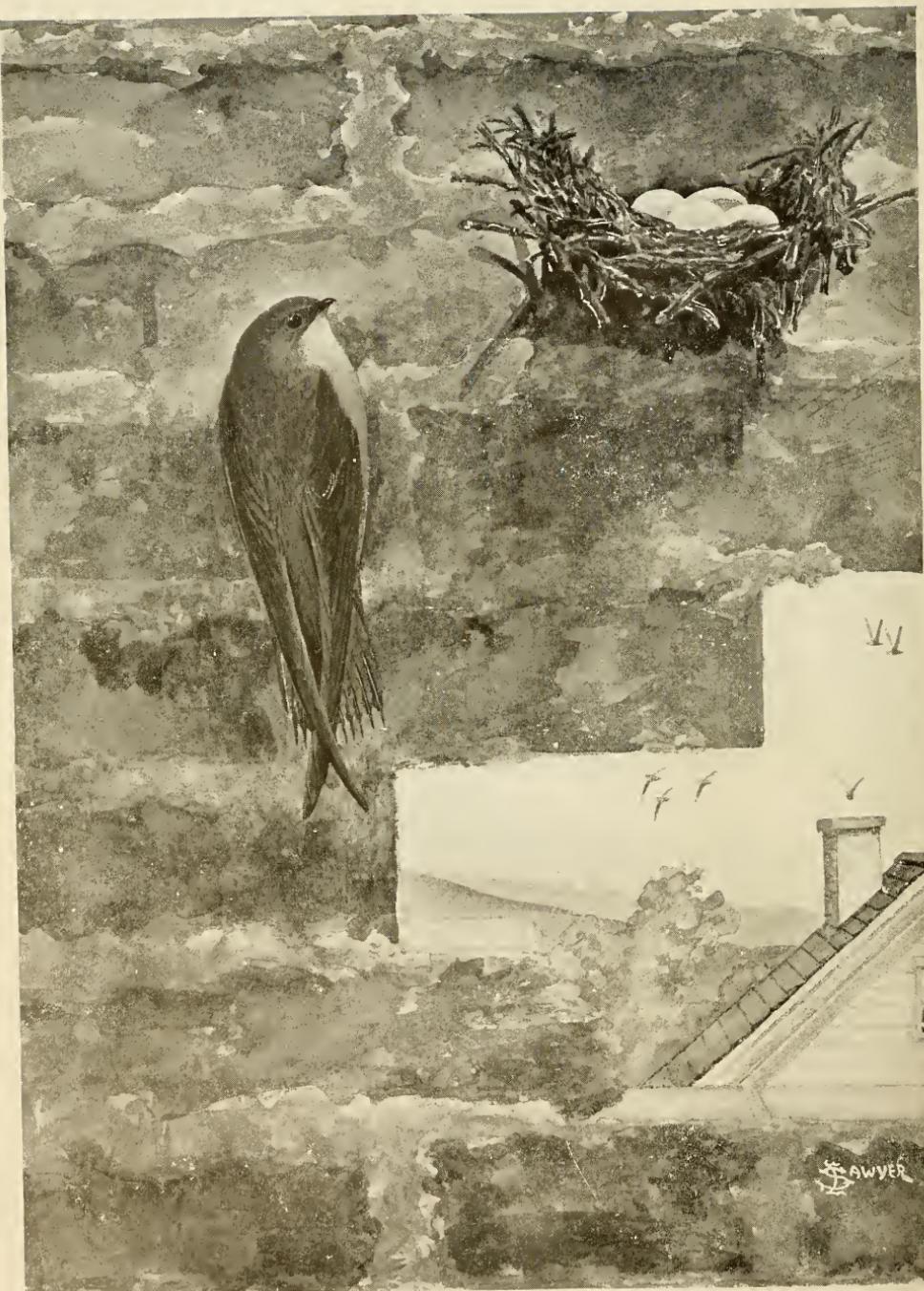
Girls: “For blue of stream and blue of sky;

For pleasant shade of branches high;”

Boys: “For fragrant air and cooling breeze;

For beauty of the blooming trees;”

All: “Father in Heaven, etc.—” A. H. W.



CHIMNEY SWIFT
(One-half natural size)

Order—MACROCHIRES
Genus—CHLÆTURA

Family—MICROPODIDÆ
Species—PELAGICA

National Association of Audubon Societies
Educational Leaflet, No. 49

THE CHIMNEY SWIFT

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 49

One late summer's evening, after the sun went down, there were observed flying above the tree-tops of a North Carolina village a large number of black objects. Some one said they were bats, while others pronounced them swallows, but they were neither. The swarm of dusky forms swinging rapidly about the sky was a flock of Chimney Swifts. They seemed to be more numerous in the neighborhood of a large college building. Presently they began circling in one rushing, revolving, twittering mass of bird life. One side of this living wheel passed directly over the large chimney which leads downward to the furnace in the basement.

Suddenly, during these last moments of twilight before the **Their Bedroom** darkness falls, one of the Swifts threw up its wings and dropped out of sight in the chimney. Soon another did the same, then another and another. They went in by pairs, by fours, almost by dozens. The wheel continued to revolve while a stream of birds, as if thrown off by a kind of centrifugal force, went pouring down into the gaping mouth of darkness.

We stood and counted as best we could the numbers in this cataract of feathered life. Not for one moment was the scene changed until the play was at an end. "One thousand," I said. "One thousand and twenty-five," answered the gentleman with me, who had probably counted more correctly. Five or six birds which had hesitated to the last moment to take the plunge, and now possibly missing the moral support of the large company, gave up the idea of stopping there that night and, turning, flew away in the falling darkness. Night closed in upon the great chimney, with its sooty walls lined with an army of clinging, drowsy Swifts; for this was the huge bedroom of these little piccaninnies of the air.

It was now seventeen minutes past seven o'clock. Less than twenty minutes had been required for the flock to enter. Since early morning, each bird had been upon the wing, roaming the endless pathways of the air in quest of insect food. It is possible that not once during the day had one paused to rest, as the Swift never trusts the weight of its body to its weak feet, except at such times as when, in the hollow breast of a great tree, or down the yawning throat of a chimney, it can cling perpendicularly to the wall, braced from below with its tail, each feather of which ends in a stiff, needle-like outgrowth.

In the early morning, we hastened out to see if the Swifts were up and

away. Over the rim of the chimney we found them coming, singly, by twos, by threes, by fours; making long sweeps toward the earth with the first bound; then mounting high in air with innumerable twitterings, they would be off for the day's experiences. At five minutes of six o'clock they ceased to appear. More than eight hundred had been counted within fifteen minutes. Something unexpected now happened. Back into the chimney came rushing the Swifts. In ten minutes 116 had reentered. What could it mean? Up from the east a dark, threatening cloud was moving. The Swifts had espied it, and all those which by this time were not far afield came hurrying back to the chimney of refuge.

For many evenings we watched the birds. They always went to roost the same way, going through the same performances. For more than two weeks they continued with us. One day, near the middle of September, we saw from our window that the maple trees over on the hillside were turning yellow and red. "Autumn has come," said my friend. Perhaps the Swifts saw the sign, too, and passed the word that the summer had ended and the air would soon be free of insects.

That evening, at the hour of gathering about the chimney, **The Migration** less than one hundred appeared. The great flock had taken

up its line of flight and was now far on its course toward the land of perpetual summer. The others lingered for some time, gathering in stragglers, and also those families the young of which had been slow in getting upon the wing; and then, one day they, too, were off to join their fellows in the far South.

We shall see no more of the Swifts until some day next spring, when we may hear falling to us from the air above a joyous twittering, and, looking up, may catch a view of the first arrival, a black, animated bow-and-arrow-shaped object darting about at such a height that it seems to be scratching its back against the sky.

The birds usually reach us in April, and within a few weeks **The Nest** nest-building begins. The structure consists of a bracket work

of dead twigs, glued together somewhat in the form of a half-saucer. It may be found sticking to the wall on the inside of a chimney. These twigs are the ends of small dead branches broken from the trees by the birds, who grasp them with their feet or bill while on the wing. They are fastened together by a salivary substance secreted by glands in the bird's mouth. Apparently the flow of this gluing secretion is sometimes checked. This is possibly due in part to an unhealthy condition of the bird. At such times, the nest-building must proceed slowly, and its completion may even be delayed until time for the eggs to be deposited. Often nests have been examined which contained eggs, many days before the full number of twigs had been glued in place.

Before the settlement of this country, the Swifts built their nests on the

inner vertical sides of hollow trees, but when the white man came, with his chimneys, they left their homes and came to dwell with him.

A chimney is usually occupied by but one pair of birds. It is only in the autumn, when the Swifts accumulate from far and near about some favorite roosting-place, that we see so many inhabiting one chimney. Their eggs are four or five in number, and are white. Nature is not inclined to lavish her coloring material on the shells of eggs where it is not needed. With a comparatively few exceptions, those which are deposited in dark places, as in chimneys, or holes in trees, or in the ground, are white. Such eggs do not need



NEST AND EGGS OF CHIMNEY SWIFT

Photographed by B. S. Bowdish

the protection of coloring matter, as do those which are laid in open nests, and are thus exposed to the eyes of many enemies.

The Swift is a very valuable bird, as is shown by the following letter written February 23, 1911, by Mr. W. L. McAtee, of the United States Biological Survey:

"My investigation of the food of the species is complete to date, and I hope to prepare a publication on the bird before very long. I may state, however, that the bird's food consists almost wholly of insects, and that beetles, flies and ants are the principal items. It gets many beetles (*Scolytidae*), the most serious enemies of our forests, when they are swarming, and takes also the old-fashioned potato beetle (*Lema trilineata*), the tarnished plant-bug

(*Lygus pratensis*), and other injurious insects. The bird is, of course, largely beneficial to the agricultural interests of the country."

In China and some of the neighboring countries, there are Swifts which build even more peculiar nests than the American species. No sticks or twigs are employed in their construction, the gummy saliva from the bird's mouth being the only material used. These nests are much sought by the people of those countries as an article of food. They are built on the faces of cliffs, or the walls of caves. In large numbers, they are gathered and sold in the markets as "edible birds' nests." To prepare them for the table, they are cooked in the form of soup. Our Swift is a representative of a large and widely distributed family. There are about eighty species found throughout the world. About thirty occur in America, but only four in North America, and the Chimney Swift (*Chætura pelagica*) alone represents the family in the eastern part of the United States.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1974 Broadway, New York City

President Dutcher

More than five months have passed since President William Dutcher was stricken with apoplexy, and, while his condition continues to improve, the gain has been very slow. He is totally unable to walk or to speak, although otherwise he appears to be in excellent physical condition. The sorrow that his illness has occasioned among his wide circle of friends and correspondents is attested by the numerous inquiries regarding the state of his health which constantly reach this office.—T. GILBERT PEARSON.

Change of Office

The increasing volume of work connected with the administration of the affairs of the National Association has necessitated the acquiring of larger office space. After April 15, 1911, therefore, the address of the Association will be 1974 Broadway. This is, in many ways, a very convenient location. It can be reached in one minute's walk from the 66th street station of the Columbus Avenue Elevated Railway, or the subway station at 66th street. Several lines of surface cars also converge here. We shall hope to welcome many of our members and friends of bird protection at the new location.—T. G. P.

Attack on the Plumage Law

A bill has been introduced in the Assembly of the New York Legislature, by A. J. Levy, of New York City, which will not only repeal in effect the splendid Shear-White Plumage Law enacted last year, but by the omission of the word "plumage" from Section 98 of Chapter 24 of the

Forest, Fish and Game Law will, it appears, *open the way for the sale of the plumage of all birds*. So adroitly is the bill drawn, with such skilful manipulation of words, that many have been deceived and regard the measure as a still further safeguard to the birds of the state. In fact, press despatches sent out from Albany at the time the bill was introduced contained statements to that effect. *This bill is a most vicious one and should be defeated at all hazards*. It is clearly in the interests of certain large moneyed concerns in New York, who have shown that they care nothing for wild birds except for the money which can be made from the sale of their feathers. There is evidence that large sums have been raised to employ a powerful lobby at Albany to aid in the passage of this measure, and it is imperative that the friends of the birds immediately exert themselves to the utmost if the state is to take no backward steps in bird protection.

WHAT YOU CAN DO

Last winter, when our Plumage Bill was up for passage, one Assemblyman in a speech, stated on the floor of the Assembly that he had received over one hundred letters from his constituents asking him to vote for this bill which the Audubon Society advocated, and he gave that as his reason for favoring it. This illustrates the importance of having voters write their views to their representatives in the Legislature.

I wish to urge with all the earnestness at my command that you get your friends to write at once to the Senator and Assemblymen from your district and ask them to vote and use all their influence against the passage of Assembly Bill 359, intro-

duced by A. J. Levy, and intended to cripple and destroy the present plumage law. *To be effective, this should be done at once.*

Two other important measures are before the Legislature of New York State.

1. Senate Bill No. 9, introduced by Senator J. L. Long (same as Assembly Bill No. 2, introduced by Frederick Sheide), is for the purpose of opening up the duck shooting on Long Island until April 1. *This should be killed.*

2. Senate Bill No. 513, introduced by Senator Howard R. Bayne, to prohibit the sale of feathered game in New York. *This measure should become a law.* It would do more for the protection of the game birds of New York State than any other game law on the statute books.—T. G. P.

Cold Storage of Game

One of the most beneficial game laws on the statute books of New York State is the provision which prohibits the sale of Woodcock, Grouse or Quail taken within the state, and prohibits the possession of such birds during the closed season except under bond to the state of New York that such bonded birds shall not be sold or taken from cold storage until the following open season. The open season on Quail is from November 1 to November 30, both inclusive; on Woodcock and Grouse, from October 1 to November 30, both inclusive. On the waders, Plover, Snipe, Rail, etc., the same sale provisions apply, and the open season is September 16 to December 31, both inclusive. Following are approximate figures of game birds held under bond in cold storage in New York at the present time:

Wild Ducks.....	98,156
Plover.....	48,780
Quail.....	14,227
Grouse.....	21,202
Snipe.....	7,825
Woodcock.....	967
Rail.....	419
Black Cock.....	301
Total.....	191,877

Many of the game birds sold in New York are imported from foreign countries, and some of the game dealers contend that they should be permitted to sell these, if they choose, during the spring and summer months. On the other hand, students of game protection write emphatically declaring that such license would open the door for widespread abuses as many of our native birds can readily be substituted for foreign game, and further inducements would thus be held out for those who wish to kill birds illegally.

At the date of going to press, there are heard many rumors that certain wholesale game dealers will attempt to have the law repealed at this session of the New York Legislature, or at least to modify it in such a way as to be of advantage to their personal interests and a menace to the birds of the state. We urge all readers of BIRD-LORE to keep a sharp lookout for the appearance of such a measure at Albany, and, if the bill is introduced, to use their influence at once with their Senators and Assemblymen to secure its defeat.—T. G. P.

Elk Starving in Wyoming

A few years ago, during a trip in the West, the writer became more deeply interested than ever before in the problem connected with saving the remnant of big game that still inhabits the Rocky Mountains.

Some of the members of the Audubon Society, with others, are working hard to accomplish results in the direction of big-game preservation. The following extract from a letter written February 4, by S. N. Leek, of Jackson, Wyoming, tells a pitiful tale of the hardships to which the elk of that territory are now subjected:

"We have a Yellowstone Park, and a Teton State Game Preserve, together containing something over 3,000,000 acres, where all hunting is prohibited; on this vast region there is a great deal of game. The region is of such an elevation that the game cannot winter there, but must

go to a lower altitude. The Forest Service issues permits to the sheep men to graze their flocks on every side of this region but the south or Jackson's Hole side. The elk, in leaving the Park and Game Preserve, are, therefore, forced to come into Jackson's Hole in greater numbers than the valley will support. In consequence, a great many of them starve. We are trying to have the state make some arrangement to stop so much unnecessary suffering. Two years ago, 5,000 elk died of starvation in this valley right among the ranches. Again, this winter, they are dying by hundreds, and within a month they will starve by the thousands. There are now 20,000 elk in this little valley in a starving condition; the calves go first. The poor little things follow the herd as long as they can till they get too weak to go farther, then they lie for days in the shelter of some friendly bush until death relieves their suffering. Right now, as I write these lines, there are hundreds of them around our barn, among the horses and cattle, picking up the few straws to be found. It takes a hard heart to see them suffer so, but, did we feed them or allow them to feed with our stock, we would run short of hay and our own stock would suffer; so we are obliged to drive them away when we feed. We just received word over the telephone that the state has appropriated \$5,000 with which to buy hay, but there is not enough hay in the valley that can be spared to feed one fourth of the elk. The only recourse is to get the settlers to drive stock out over the Teton Range of mountains into Idaho, where they might procure food for them, and let the elk have the hay here. This, however, is quite an undertaking, attended with much risk, and, besides, the only road is now blocked with snow nearly ten feet deep. If Wyoming would only prepare for this during the summer when there is plenty of cheap hay, or else reduce the numbers of elk by some legitimate means, there would be less suffering."

Mr. Howard Eaton, of Wolf, Wyoming, in a letter dated February 27, suggests a

way of relief by urging that the government take steps to remove the extra stock of elk in Jackson's Hole to other reservations, such as the Big Horns, Medicine Bow Range, and the head of the Shoshone Encampment Country. A moderate appropriation would do this, and the elk would be given additional territory in which to increase. With great force, he points to experiments of this character in the state which have been abundantly successful.—T. G. P.

New Members

During the period between January 1 and March 1, 1911, the following persons became members and contributors to the work of the National Association.

Life Members—

Brooks, Mr. Peter C.,
Taft, Mr. E. B.,
Watson, Mrs. James. B.,
Wells, Mrs. F. L.,

Sustaining Members—

Abbott, Mrs. Edwin H.,
Allen, Miss Mary P.,
Appleton, Miss Maud E.,
Ayer, Mr. C. F.,
Bacon, Mrs. F. E.,
Bartol, Miss C. H.,
Bellard, Miss Katherine,
Brower, Miss L. S.,
Brown, Mr. N. C.,
Burnham, Mrs. J. C.,
Case, Mrs. Ermine,
Case, Mrs. Geo. B.,
Christie, Mr. Percival,
Cole, Mrs. Adelina A.,
Converse, Mr. F. S.,
Courtney, Rt. Rev. F.,
Crane, Miss Ellen J.,
Crocker, Dorothea,
Cummings, Mrs. C. A., Jr.,
Davis, Mr. Geo. P.,
Dickson, Mrs. James B.,
Dickson, Mr. James B.,
Dryden, Mrs. Cynthia F.,
Dryden, Mr. John F.,
Du Bois, Mrs. Goddard,
Ewell, Mrs. J. M.,
Finch, Mr. Edward,
Forbes, Mrs. M. J.,
Franklin, Miss Laura I. P.,
Fuertes, Louis A.,
Hamilton, Mrs. W. P.,
Hammond, Mrs. J. H.,
Henrickson, Mr. John H.,
Hodge, Mr. D. W.,

Sustaining Members, continued—

Houghton, Mrs. O. F.
 Hunnewell, Mrs. Arthur,
 Hussey, Misses,
 Irving, Miss Helen E.,
 Jenks, Mrs. Wm. F.,
 Kellogg, Mr. Francis J.,
 Knowlton, Miss Gertrude,
 Kuehn, Mr. Otto L.,
 Lawrence, Mr. John S.,
 Lawyer, Mr. Geo. A.,
 McAlpin, Mrs. D. H. Jr.,
 Mallock, Miss Mary S.,
 Mills, Mr. Herbert R.,
 Moore, Mrs. W. H.,
 Morrell, Mr. Edward,
 Morris, Mrs. D. H.,
 Morris, Mr. L. R.,
 Morton, Miss Helen,
 Muhlfeld, Mr. F. J.,
 Powell, Mr. P. H.,
 Rothwell, Mr. J. E.,
 Seymour, Mr. Julius H.,
 Sloan, Mrs. William,
 Smiley, Mr. Daniel,
 Spurrell, Mr. John A.,
 Stewart, Mr. A. M.,
 Sullivan, Miss Florence,
 Tucker, Mr. R. P.,
 Van Tassell, F. L.,
 Wakeman, Miss Francis,
 Wakeman, Miss Mary F.,
 Wharton, Mr. E. P.,
 White, Mrs. Wm. M.,
 Willson, Mrs. C. H.,
 Winslow, Miss Isabella,
 Winslow, Miss Maria C.,
 Wood, Mr. Arnold,
 Wright, Mrs. Theo. F.,

Contributors—

Anglers' Association of Onondaga County,
 Barlett, Miss Alice M.,
 Belmont, Mr. August,
 Elkins, Mr. W. P.,
 Keeland, Mr. Francis,

NOTES**Mrs Wright Appointed a Director**

At the bi-monthly meeting of the Board of Directors of the National Association, held in New York on February 28, 1911, Mrs. Mabel Osgood Wright was appointed a director, to serve until the next annual meeting of the Association. She was chosen to fill the vacancy caused by the resignation of Dr. H. C. Bumpus, whose work in the West has necessitated his removing to Madison, Wisconsin.

California

Miss Gretchen L. Libby, who has served as Field Agent for this Association in California, has been devoting much time to organizing Junior Audubon Classes. As a result of her efforts and of those associated with her, 3,000 Junior Members have been enrolled, and the California Society confidently expects to double this number in the near future.

It is particularly interesting to note that the State Fish and Game Commission are alive to the importance of conducting an educational campaign, similar to that so constantly carried forward by the Audubon workers. It has recently arranged to place her in the field, to devote her entire time to speaking and cultivating public sentiment to a better appreciation of the value of preserving the wild bird and animal life of the state.

Florida

Information gathered from various sources indicates that fully four hundred yachts annually go down the Atlantic coast to cruise in Florida waters. To these are added many other small vessels carrying pleasure parties from Florida ports. The majority of these boats have fire-arms aboard, and in the thinly settled reaches of the coast the temptations are many and subtle for the cruisers to try their aim at passing birds. The Audubon Warden, B. J. Pacetti, who guards the Government Reservation at Mosquito Inlet, has had an experience with such a party. John and Julian Dupont, of St. Augustine, were captured by him after a long and exciting chase, and later pleaded guilty in the court of shooting at Pelicans. They were fined, and it is to be hoped that the wide publicity given to the matter in the papers will cause other shooters to remember that, even in Florida, there are places where the strong arm of the law reaches out to guard and protect the wild bird life.

Tennessee

Audubon Society work has been moving forward rapidly in Tennessee, of late. Dr. R. B. Maury, President of the West Tennessee Audubon Society, has been doing a large work among the schools of Memphis. His efforts have been rewarded by the organization of 60 Junior Audubon Classes, containing in all 1,567 members. Each child has paid a fee of ten cents, and in return has received a Mockingbird button and ten of the Association's leaflets, with colored plates. The teacher at the head of each class receives "BIRD-LORE," and certain leaflets especially helpful to their bird work.

The Legislature has recently passed a law which prohibits the sale of robins. This is a strong step toward robin protection, on which the Audubon Society workers and State Game Warden Colonel Joseph H. Acklen are to be congratulated.

—T. G. P.

Destruction of Meadowlark in Georgia

The following clipping appears in a recent issue of a Georgia paper:

"KILL 11,000 FIELD LARKS."

"Waycross, Ga., March 15.—A total of 11,231 Larks, enemies of corn, were killed in a contest originated by farmers living about Manor, this county. The contest opened February 1, and closed today.

"The first prize, a purse of gold, which farmers raised among themselves, was divided among Dan Henderson, Tom James and W. D. James. They killed 1,586."

The above strikingly illustrates the profound ignorance that still exists in many sections of our country relative to the economic status of some of our most valuable feathered assistants. It also emphasizes the possibilities opened to us through the generosity of Mrs. Sage, in contributing a special fund for educational work in the bird-protection field in the South. Georgia's illustration of ignorant destruction of valuable birds is not unique by any means, and it is not so many years

ago that parallel cases were to be found in some of our northern states. The change in the public attitude of such states and the development of public appreciation of the value of birds is the direct result of a systematic campaign of education, and the results mentioned form an indication of what may be hoped for in other sections of our country when the sinews of war at our command permit us to carry on a continued campaign of like character in those localities.—T. G. P.

A Statement in Support of the Present Law Regarding Wild-fowl

[Much valuable data has been accumulated by Mr. E. H. Forbush, in his efforts to prevent the opening up of spring shooting in Massachusetts and elsewhere in New England. His arguments are so clear and convincing that the subject matter of one of his circular letters is reproduced herewith.]

The killing of all migratory birds should stop at the end of the fall migration. Fall shooting, if not excessive, does not reduce the annual numbers of wild fowl; they increase in numbers under well-regulated fall shooting. Wild Ducks have increased within the last few years in the states and provinces where spring shooting is now prohibited, and already the overflow of this increase is felt along the Atlantic seaboard.

Shooting in New England and the other northern coast states after the ponds are frozen allows unscrupulous or unthinking gunners to take advantage of the fresh-water Ducks, when, in severe seasons they are half-starved and driven by hunger and thirst to the open spring-holes, where the gunners lie in wait for them day or night. Non-diving, surface-feeding Ducks, of which the Black Duck is the principal New England species, are obliged by necessity to go to these spring-holes. Wild-fowl sometimes starve and freeze to death in severe winters. In the coldest weather, most Ducks will brave death by shooting rather than endure thirst or starvation.

Tales have been told of gunners shooting Ducks at spring-holes until the water was red with blood,—tales of hundreds of birds shot when they were starving and unfit for food,—of birds so nearly starved that they could hardly rise in the air. Some of these stories may be exaggerated, but there are enough authentic instances on record to prove that all shooting should be stopped in January and February. This closes the shooting-season on the coast when nature closes the ponds of the interior, and this is fair to all gunners. All authorities agree that spring shooting is a most wasteful practice. It has extirpated the Heath Hen, Wild Turkey, Passenger Pigeon and Eskimo Curlew, and decimated other Curlews, Godwits, Golden Plover, the River Ducks and the Upland Plover, and driven out birds that once bred here. Its advocates say that it is useless to protect the birds here while large numbers are killed in winter in the South. This argument is fallacious for the following reasons: (1) Many of our wild fowl remain off the coast of New England all winter, particularly in mild seasons. (2) Most of the birds killed in the South are bred in the Northwest, and never come here. (3) Granting that some of our birds are killed in the South, why should we kill in spring our own birds that have escaped the southern gunners, thus "killing the goose that lays the golden egg."

The southern people are awakening to the necessity of game protection. The laws in some of the southern states are already better and more efficiently enforced than some of those in the North. In time to come, the South will protect her birds fully as well as the North.

Uniform protection of all wild-fowl in winter and spring has an almost immediate and very striking effect. The owner of a little pond in Rhode Island does not allow shooting on his premises, and Black Ducks breed there every year. A Massachusetts man controls all the land around one side of a large pond, and does not allow any winter or spring shooting there. Last July, 75 Black Ducks were counted on

his side of this pond, and these birds were reared there. On Fisher's Island, New York, breeding Ducks increased so rapidly, under a few years of spring protection, that there was good shooting in the fall on the island, while on the opposite shore, in Connecticut, where spring shooting was then allowed, there were few, if any, Ducks.

Wherever any state has passed and enforced a law protecting wild-fowl in spring, Ducks, and in some cases, Geese, which had been driven out, have come back to breed and increased rapidly in numbers. They are coming back now to Massachusetts. All this shows how even local spring protection in the North increases the birds.

The law to be effective must be uniform, with all shooting and sale stopped. Otherwise there is continual temptation to lawbreaking. If there is a close season and an open market here, there will be a continued demand for birds from the South for our markets, so long as they remain open. Therefore, open markets bring about the destruction of our birds and others in the South, while the law protects them from the gunner here. If the shooting of a single species is allowed during the close season, all species will be shot. A law which permits the shooting of Brant only, on Long Island, during the spring, has resulted in the killing and marketing of all kinds of protected Ducks in spring, and the people of New York State have now repealed that law.

The present law in Massachusetts should be sustained, as it corrects all these evils.

Our Massachusetts Law now prohibits the shooting and sale of Swans and Wood Ducks at all times, and the killing and sale of all species of Wild Ducks, Geese and Brant annually from December 31 to September 15.

After having passed the New York Senate and being favorably reported by the Fish and Game Committee of the Assembly, the bill extending the open season on water fowl to April 1 was lost in the Assembly by a vote of 68 to 73.—T. G. P.

The Journal of the Maine Ornithological Society

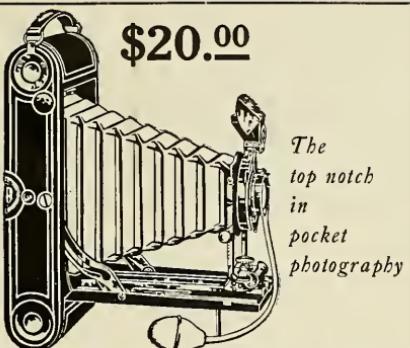
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No. 3

Ceremonials of Courtship Practiced by the American Merganser

By WILLIAM BREWSTER

THE behavior of American Golden-eyes, or Whistlers, while engaged in courtship has been rather closely studied and fully described* of late, but that of American Mergansers does not appear to have received similar attention. Although I have been familiar with the latter birds since boyhood, only one opportunity of seeing the males pay court to the females has ever been vouchsafed to me. This occurred at Fresh Pond, Cambridge, Mass., on March 16, 1909, when I wrote the following account of the experience in my journal:

There were thirty-one Mergansers in the pond, when, in company with Mr. H. A. Purdie, I reached it about nine o'clock this morning. Nineteen were drakes in full nuptial plumage and twelve females or immature males (not to be distinguished from the females with any certainty when living, even in spring). For the first half hour or so the birds were at a considerable distance; but, on the calm water and in the clear morning light, they could be seen very distinctly with the help of the small telescope that I carried. During this time most of the males were constantly absorbed in their attentions to the females. Their behavior was in some respects not unlike that of Whistler drakes when similarly employed. In numbers varying from three or four to ten or a dozen, they would collect about one or two females, or follow them from place to place in single file, never interfering with one another in any way or showing the least sexual jealousy or animosity. While thus employed, they were, however, much more active and animated than Whistler drakes, swimming fast at all times and sometimes gliding over the water with really surprising swiftness, yet very evenly and smoothly. The combined movements of such a group were often so abrupt or so intricate that it was difficult to follow them closely with the eye or to interpret their precise significance. In a general way, they seemed to represent a sort of

*By Dr. C. W. Townsend in *The Auk*, Vol. XXVII, No. 2, April, 1910, pp. 177-179; also by W. Brewster in *The Condor*, Vol. XIII, No. 1, January, 1911, pp. 22-30.

dress-parade, so ordered as to give all the rival drakes an equal opportunity of displaying their respective charms of plumage and deportment to the best advantage, in direct yet friendly competition with one another. Their evolutions appeared to be regulated largely by established system or convention, and some of them were strikingly beautiful. Thus eight or nine drakes, strung out in single file, but so close together that the bill of each almost touched the tail of the one next in front, would swim past a female at top speed, and then turn about instantly, each bird on its own axis, as if at a given signal, before starting back in reversed order—that is, with the bird which had been last now leading and the one that had been first bringing up the rear. I saw this done a dozen times or more, the distance traversed in a straight line on these occasions varying from ten to fifty yards. When a number of drakes started after a female that was swimming away from them, they commonly overhauled and passed her quickly in the manner just described, but sometimes the chase would continue for one or two hundred yards. When overtaken, she usually stopped, and seemed to watch the behavior of her numerous admirers with some interest. While parading before her, one or another of them would occasionally thrust his head and neck straight upward to their full length. This position was never maintained for more than a fraction of a second, thereby differing from the corresponding and otherwise similar one often assumed by the male Whistler. The distance was too great for me to make out whether or not the bill was opened. I noticed no other unusual movements of the head and neck, which, indeed, seemed to be carried for the most part as on ordinary occasions, although perhaps somewhat higher and more erect. But I did see, very many times, jets of water or spray fly into the air at the rear of the drakes which, at the time, were "displaying" in the presence of one or more females. These jets were similar in most respects to those which are kicked up by male Whistlers on like occasions, but they rose to a greater height and were apparently somewhat broader. That they form a more or less essential part of the ceremonials of courtship seems evident. Nor do I doubt that the Merganser, like the Whistler, throws them up by a vigorous kick of one or both of its feet although I did not actually see the feet exposed.

Later in the morning the Mergansers swam in nearer to the shore, where we watched them for some time at distances within two hundred yards. They had now ceased parading and were scattered about singly, in pairs, and in small groups, many of them engaged in fishing. One pair, not over one hundred and fifty yards away, acted for a time in a singular manner. At first I noticed only the drake, a fine, big fellow with snowy white sides and bottle-green head, who was swimming slowly in circles about an inconspicuous object that looked very like a piece of bark or driftwood. On scrutinizing it closely, however, I soon made out that it was a female Merganser, floating perfectly motionless, and so deep in the water that only the line of her back

showed above the surface, her head and neck being apparently, completely immersed. "That must be a dead bird," I said to my companion. During the next three or four minutes she remained thus immovable, and the drake continued to encircle her, occasionally pecking at her very gently. At length, and of a sudden, the water was violently agitated, and a brown-crested head, followed by a grayish body, came into full view, as the female Merganser sprang almost clear of the surface by a single convulsive effort. After this she swam sedately by the side of her mate as long as we had the pair in sight. Her odd behavior at first was, I think, in the nature of a bit of studied and probably conventional coquetry, practised to stimulate the ardor of the male. Similarly, a female Mallard, when in the presence of a drake with whom she desires to mate, "may coyly lower herself in the water till only the top of her back, head, and neck is seen," this being her "last appeal" to him. So, at least, Millais affirms in his beautiful and valuable book entitled "The Natural History of the British Surface-feeding Ducks," where the words just quoted occur on pages 6 and 7.



WHITE-CROWNED SPARROW

Photographed by G. A. Bailey, Genesee, N. Y.

Birds of My Garden

III. THE NESTING-TIME

By MABEL OSGOOD WRIGHT

Hither the busy birds shall flutter
With the light timber for their nests,
And, pausing from their labor, utter
The morning sunshine in their breasts.

EVEN though all but a scant dozen of the familiar birds begin their housekeeping in May, and a few like the Bluebird, Robin, etc., in April, June is conceded to be the universal nesting month. By the first week of June the last laggard Blackpoll, Canadian Warbler and Gray-cheeked Thrush has moved on, and the garden takes on all the attributes of a cottage colony.

No matter how much time one has spent far afield in the aggressive quest of bird life in the nesting season, no matter what peeps at rare nests and genuine ornithological thrills it may have afforded, the opposite side of the picture, where conditions are reversed and the bird becomes the visitor, has an entirely different and more intimate charm; while the surprises are as great, and even more dramatic, because they take place on familiar ground.

Because one has lived in the same place for twenty-five years, watched the pines and spruces grow skyward until beneath their thorny branches a sturdy second generation is doing its best to keep the mysterious cycle of life intact, it is not safe to assume that we know all about it, or ever shall; so endless are the resources of nature when it comes to sheltering her very own. War has been waged relentlessly for years against that arch egg-thief, the red squirrel; and yet he is with us still—cheerful, unabashed, attractive and prolific.

Rabbit-hounds share the ownership of the place equally with their master and mistress, being the captains-in-chief of the cat patrol, with well-understood orders to execute all prisoners captured without benefit of trial. Yet, one April morning this year, when the odors of night, with a mere nip of frost, left the scent so heavy and irresistible that the hounds, noses down and tails held gaily, picked up a trail and followed it full cry, at their own sweet will, before they were a quarter of a mile away, there appeared upon the lawn three Molly Cottontails, who breakfasted upon the tender grass in a most leisurely fashion! Evidently they have a warren under a rustic house with a strong brick foundation, and the chain of stone fences act as their highways. The lying down of the lion and the lamb in harmony, surely, is not more strange than that the hunter and the hunted should both live happily in one garden.

The Robin is surely a conspicuous bird, for his size, song, nesting habits,



THE ROBINS' ROOST

and (I must say it) general stupidity; yet I have tried many times to record *all* the Robins' nests in the garden, only to find, after leaf-fall, that I have missed a dozen or more.

The Ruby-throated Hummingbird, though by no means so silent in his comings and goings as many a larger bird, yet is so fleet of wing and so erratic in flight that, though in one year there were four nests within garden limits, two remained undiscovered until after leaf-fall, though one was on the branch of an apple tree under which we sat continually from middle May. Neither can one be sure that Jennie Wren, who has preëmpted a particular house, time out of mind, may not suddenly desire a change, even if for the worse, like some of her human prototypes, and betake herself to a tin can half full of rusty nails on the ledge of an outbuilding. In fact, a Wren once abandoned her tree-box for an old-fashioned glue-pot that hung in the tool-house. Wanting the glue in a hurry, the pot was taken down and was half-way to the kitchen fire before it was discovered that a superstructure and six speckled eggs covered the hardened glue. To the tune of a rousing scolding, the pot was replaced, and the broken chair was given a rest for several weeks until Madam Wren released the glue-pot.

Another very sudden seizure of a home-site was made by a pair of Wrens, between 9 A. M., and 5 P. M. A housemaid's pail of zinc with an incurved rim was hung to air, bottom upwards, on a stake behind a trellis covered with honeysuckle. Something about its appearance fired the constructive ambition of the Wrens, and they set to work with the brittle twigs gleaned under the spruces, to make a chimney-like structure between the side of the pail and the stake, broad at the bottom and tapering toward the top, where there was a hollow left for the eggs, which was partly roofed, Ovenbird fashion. So rapidly did they work that by the next morning the nest was complete. Destroy so much skill for the mere use of a pail? Of course not! We bought another, and proceeded to keep watch on the Wrens; by so doing, however, we assumed a partial responsibility for their poor judgment. A heavy rain softened the ground, and the stake, with its strange cap, listed to one side. Straightway they built an annex to the left. Then the wind caused an opposite tilt; another annex, in which we assisted with a bunch of excelsior. Every one who called asked to see the curious nest. The Wrens scolded, but did not leave, until, before the end, two other stakes and a rope had been called into play to hold the pail in place, and we gave a sigh of relief when the couple transferred themselves to an orthodox Wren-box for their second brood.

Below the garden once stood a glorious old orchard. One by one, the trees fell to the ground on bent knees, after the way of apple trees, and with them disappeared the homes of a host of Flickers and Bluebirds. After putting up a number of houses made from old shingles after the old fence-post type, we watched the results most anxiously. The last of March brought back a number of Bluebirds, who spent the days in the few mossy trees that were left,

making many trips in and around the new houses. Some of these were nailed against tree trunks, and half a dozen topped the alternate posts of a grape trellis. Which location would they prefer? To my mind the trees were preferable, not so the birds. While three pairs seemed unsettled, and finally went over to a neighbor's orchard, one pair very deliberately went in and out of the post-houses for several days, finally choosing one that was slightly sheltered by an overhanging tree. Having located, they became the most friendly of garden companions, feeding close to us and splashing in the very latest improvement in birds' baths the garden affords—the large cap-stone of a wall, in which a day's tooling has made a natural-looking hollow twelve by twenty inches. A bird's drinking- or bathing-place, to be successful, should slope gradually from the edges, and bear as few signs of artifice as possible. The larger birds frequent the pool, and in the summer, when the water-lily leaves are large, the smaller species often use them as islands, but in the nesting season nothing will be more appreciated than a nicely hollowed stone, a trifle in the shade, and yet not where cats may lie near-by in ambush.

In one single morning, the birds that came to drink gave me the key to those that were nesting near-by—Phœbe, Song, Chipping and Field Sparrows, Chickadee, Goldfinch, Maryland Yellow-throat and, last of all, a dancing, joyous Redstart.

In my garden, the Phœbe is one of the early nest-builders, and, in spite of the lateness of the spring, I found eggs in the nest on April 25. Food supply may have something to do with this, for, even under modern sanitary conditions, the place teems with insect life while yet woods and fields have nothing to offer the Flycatcher tribe.

We have had two pairs of Phœbes and a single pair of Wood Peewees every season, ever since I can remember. If it were not for the way in which lice breed in the bulky nest of the Phœbe, I should call it one of the most welcome birds, for its lack of true song is made up by its colloquial call and, at times, frantic earnestness in telling its own name.

A landscape gardener said to me, a few weeks ago, "Why do you trim your shrubs so sparingly? Is it merely on account of the labor implied, or is it a matter of theory?"

"It is something more practical than theory. I do not wish to prune away the birds," I replied, "for if you wish to have Catbirds, Brown Thrushes, Yellow-throats, Song and Chipping Sparrows nest in the garden, plenty of thick (I had almost said untidy) bushes are a necessity. Shrubs such as the common purple lilac and the bridal wreath spirea have a way of throwing up root suckers, so as, in a short time, to fortify the original bush against the random attack of cats. I say, random, because, if a cat makes up its mind to reach a nest, nothing short of a barbed tangle or a tree made rat- and cat-proof with an inverted tin collar, applied after the method of protecting the supports of a granary, will be of any use."

From being originally a keeper of cats,—I will not say a lover of them, because one cannot really love anything of such inherent treachery of temperament,—I have come, through a long experience, to consider them the chief menace to bird life of the day. What warden can protect game-birds, eggs or young from this velvet-pawed prowler, who blends its sinuous color-protected shape in the shadows of the two twilights, the time of its principal hunting?

Fight and kill them as I may within my own garden, each year has its tragedies. Only this morning, four little Robins have been taken from the nest that gave us a bit of comedy at breakfast. There was rain early in the night, and on the piazza the unmistakable footprints in mud of a cat led along to the hand-rail, then along the rail to the honeysuckle vine, where the nest, half pulled from its support and empty, told the rest. The cat's last victim was one of a much-treasured pair of beautiful gray squirrels. Neither is this a wild, half-starved cat, with any plausible sort of excuse or need, but belongs to a neighbor, who calmly affirms that it never hunts and seldom leaves the house. We call this animal the *domestic* cat. There is no such thing in nature. The cat is a hunter, pure and simple, who is at times distorted into a kind of tameness, from which it quickly relapses. Food is not necessarily the aim of the hunting, as the well-fed animal proves by stalking the prey for the pure sport of it.

Reproaching myself for allowing the corner support of a roof-gutter to fall into decay, I was looking at it by the aid of a field-glass, to make sure of the extent of the necessary repairs, when from the hole, so round that I imagined a red squirrel had made a winter home inside, a sleek, black and slate head peered, then came out, and began pulling some sort of food from between the nearby shingles, where there was evidently a storehouse, and dived into the hole once more. It was a White-breasted Nuthatch, with a family snugly ensconced inside, while several weeks later, at the other end of the same space, a pair of Chickadees made their home.

By the same token, how will the modern tree surgery affect what may be called the tree-hole birds? Last season, I had some necessary trimming of dangerous dead wood done by experts, who tried to convince me that a glorious old, gnarled swamp maple and a picturesque, if derelict, willow should be deprived of the hollows natural to age, scraped, chiseled out, cemented, tarred and trimmed, in order to give it a few years of totally objectionable existence, and also evict a score of tenants who return each summer; the list having, at different seasons, included a Barred Owl, Screech Owls, Flicker, Hairy and Downy Woodpeckers, Starlings and Bluebirds.

It seems to me that the true spirit of forestry is to plant new trees in time to take the places of those that die a natural death, and sink back to Mother Earth wrapped in the gracious drapery of vines and to the singing of birds,—not to shave and whittle the poor old things out of every bit of identity, smoothing off bases lest water lodges, spoiling all natural branch articulation and leav-

ing no nice little tufts of "blind branches," to hold nests, until the poor trees look like some elderly persons who smile in a ghastly way to exhibit elaborately filled or monstrously new teeth. Why must we be worried by so many "up-to-date" ideas and contraptions?

It is said that the Oriole and Rosebreast will not rifle the blossoms of an apple tree that has been sprayed for the coddling moth at the crucial moment. Oriole and Rosebreast, come to my garden and revel to your hearts' content. Imperfect apples are very good for pies, and I would not exchange the uttermost perfection for the loss of the thrill that comes to me at your bugle call, Spring Fire, or the delight to both ear and heart at the sun-warmed melody of the black-cloaked Knight of the Rosy Shield.



A BIRD'S BATH BENEATH THE ROSES

After all, many garden problems may be solved if one is not too greedy. It is not difficult to net the strawberry bed of a home garden, only—please leave *one* row free, for there is nothing that imparts such a liquid tone to the throat of the Thrasher, who lives in the heap of last year's pea-brush, when he mounts to the top of the tall ash tree for matins, as a perfectly ripe strawberry, to be followed by a raspberry, currant, cherry and Agawam blackberry! You give pennies to the organ-grinder's monkey without a thought of complaint, and then howl at sharing your fruit with one of the chief makers of the earth's fruitfulness. Who is responsible for a thicket of young, white-flowering dogwoods that have sprung up in the garden at exactly the right spot, to fill in some trees that are thinning? The Hermit Thrushes, in their

autumn visit, who share the red fruit with its owner, eating the pulp and leaving the hard seeds to grow.

Who has bordered the tumble-down wall between the wild and the cultivated with currants, black cherries, raspberries, trailing briars and a score of wild vines, until it is a thing of beauty that man's hand could not replace. That Quakeress, the Cedar Bird, the Catbird who owns the big syringa, and a row of tenant bushes, opposite the foxglove walk, as well as the wire clothes-line and all the poles, the boisterous Robins of the hemlock roost, and the Wood Thrush, with his note of "harp and zither and flageolet," Ah, well! to the victor belong the spoils in more than one sense; and what temporal gain would one not forego for the sake of having a quartet of male Wood Thrushes in the garden! For two years this has been our joy. Two sing close above the pool, one above the garden-house, and the fourth in the pines of the wild walk. Today, I am wondering how many will return. Sunday brought the Wrens back; today, Mayday, the Catbirds; tomorrow should bring the Wood Thrush, and next week the Oriole. Meanwhile, I am at present bent upon oiling my silent little rifle, lying low at twilight,—administering Old Testament justice to that cat; and may the ghosts of the four little Robins make my hand steady and my aim true. Otherwise, there will lie a shadow of reproach upon the garden in this nesting-time—a thickly-formed shadow—with quickly unsheathed claws and breathing treachery—a specter of the great honeysuckle from which the Oriole

"Twitches the fibrous bark away
The cordage of his hammock-nest;
Cheering his labor with a note
Rich as the orange of his throat."

Listen—Would-be Protectors of Birds! It is time to look yourselves and your cats seriously in the face. Ours is, in a great measure, the responsibility for the loss of life in the nesting season, at least in our gardens. In your unreasonable defense of cats, you but show your own feline side, for then the birds have double and other duties, as Lowell said of the Oriole:

Thy duty, winged flame of spring,
Is but to love, and fly and sing.



The Friendly House Wrens

BY WILBUR F. SMITH

Photographs by the author



THEIR CURIOSITY CAUSED THEM TO EXAMINE MY CAMERA

IT must have been away back in the days before the white man's advent that Sir Christopher and Jenny Wren left their ancestral home in the hollow of the tree, to begin their intimate acquaintance with man and to build their nests near his abode. Audubon, in his day, found that the little House Wrens had already intrenched themselves near to man, and he calls them "homey little birds," picturing them as nesting in an old, discarded hat.

Though we long for the return of the Bluebird and rush to the window to see the first Robin on the lawn, neither they nor any of the birds can quite take the place of the chattering, scolding Wrens, who have returned from

their winter's holiday in the Southland, to build again in the little box-house on the end of the grape-arbor or under the eaves of the wood-shed. For the next three months they will fill the garden with song, and proclaim that they are "at home" by taking an interest in the up-keep of the place, working among the currant bushes and around the grape-vine, cleaning insects and larvae from the fences, watching every nook and corner of the wood-pile and cow-shed, and cleaning spiders' nests from under the siding of "the big house" to build into their nest. Showing that they are above taking toll for their services, they refuse even to sample the strawberries and cherries. They proclaim their family rights by scolding the cat, and sometimes the dog, and sit on their front porch and sing as you hoe the beans almost under their very home. Indeed, they are as much a part of the spring life of the place as the family dog or the children's pet bantam chickens.

Toward the last of April, or the first of May, they return on the wings of the night, and their jolly, chattering song floats in at the open window to greet our first awakening moment! With a little imagination we can interpret their song as,—"Hello! I'm real glad to get back home again. How are all the folks? Well, I must go and see what has to be done to the old nest." By

the time we dress and go into the garden, they are inspecting the old home, and soon will be carrying in new material to repair it.

These useful and interesting birds would have gone on increasing and forming new friendships with man but for the advent of the English Sparrow, who fights them away and takes possession of their nesting-places, unless we have fixed for them a box or tin can with an opening so small that the



TURNED THE HAT TO REVEAL THE NEST

Sparrow cannot enter. An English Sparrow was seen to enter a Wren's house, pull the Wren out, and drop her exhausted to the ground, when the good woman who saw it stayed home from an afternoon's visit, that she might protect the Wrens, which was accomplished only by shooting the Sparrows.

Very disastrous has been the persecution of the Wrens by the Sparrows. Mr. Ora Knight, in his "Birds of Maine," tells us that they became scarce in

1885, and entirely disappeared in 1887, in the vicinity of Bangor; and Mr. Forbush, in "Useful Birds," says that, "while they once abounded, they are no longer a regular summer resident over the greater part of Massachusetts."

They cannot always be induced to build in the boxes that we put up for them, but will sometimes select the queerest sort of places, and may even intrude with their friendliness, as witness the pair that tried to build in the fish creel of a friend, who, returning from trout-fishing, had hung his basket on the side of the house to dry. A pair insisted on building in the family pump



"WOULD STOP FOR A MOMENT ON THE TOP OF THE COAT"

and a sprinkling of sticks floated out with each pail of water, till the Wrens became tired of the constant tearing-down of their nest, and sought a new site, while a more fortunate pair built in a small watering-pot hung beside the kitchen door, a new sprinkling-pot being bought for the flowers. Another pair interfered with the United States mail by building in a rural-delivery mail-box, going in by the opening for letters. No complaint was ever made to the authorities at Washington, but the carrier and the family took extra steps each day, that the Wrens might complete their housekeeping. Strange indeed was the fancy of a pair which built high in an elm tree in a swaying last year's Oriole's nest.



"ONE OF THEM FOUND AN OPENING
IN THE SLEEVE"

anew. Six speckled eggs turned into six brown baby Wrens, and then there were busy times in the old garden, keeping them fed and cared for; but I noticed that the old ones managed to find time for an occasional promenade around the brim of the hat, and to sit for a moment up on top and give vent to their happiness in song. Their curiosity caused them to examine my camera, creeping under the bellows, balancing on the rubber tube, and, from a position on the lens-rack, peering over at the front construction, even working down the tripod legs to the ground.

On another occasion I took an old satchel, made a small hole in it, and hung it in a pear tree in the garden.

In an old-time garden a scarecrow was set up to keep the Blackbirds from the sprouting corn, and the Wrens, who had for years built in the water-spout, began to carry sticks up under the hat, only to have them fall to the ground every time the wind spun the hat around on the stake. I made the hat secure and built a platform of string under the brim. So nest-building was resumed on a firm foundation, and it was nearly completed when one of them found an opening in the sleeve of the scarecrow and went in to investigate. Soon it came out, flew away, and returned with the mate. At once both disappeared inside. When they came out, it was all settled, and building began.



WOULD WALK DAINTILY OVER THE
EDGE TO THEIR DOOR

The Wrens forthwith left their box-house on the grape-vine arbor and took possession. By climbing the tree and opening the satchel, I watched them many a time until the seven young ones flew away. When the young were half grown, I took the satchel from the tree and fastened it on a camera, near the ground. Though the Wrens complained, and, I fancy, called me some hard names, they soon accepted the new situation, and kept coming and going, in answer to the insistent clamoring from within the satchel. Sometimes they would stop for a moment at the doorway of their home, and send forth their bubbling song, or again, with a fat bug or worm, would daintily alight on the up-turned handle of the satchel and walk over its edge to their door.



PARENTAL LOVE CAUSED THEM TO BRAVE ALL DANGERS

Last spring, a neighbor put up a scarecrow, to keep the birds away from his strawberries. The wind began playing havoc with the dummy man and blew his hat off the first day, but the strings held it fast against the breast of the coat. It fooled the Robins and the Catbirds, and protected the berries, but it just suited a pair of Wrens, that began building in the hat the second day after it was placed there.

I did not hear of this until after the young had flown, when I was taken to see the nest as a great curiosity. As we turned the hat around, out darted a little brown Wren. In the repaired nest was a second set of six eggs. These hatched in due time, and then, with the regularity of clockwork, bugs, grubs, moths, granddaddy-long-legs, and other insects, disappeared inside the hat. The regular line of travel was from the corner fence-post to the sleeve of the

coat, where, after a moment's pause, with a dive the traveler would disappear inside the hat, though occasionally one would stop for a moment on the top of the coat. They protested when I turned the hat, to reveal the nest, but their parental love caused them to brave all dangers and to continue feeding their young. Thanks to the good people who kept watch on the family cat, this second brood also safely left the nest. The owners never had occasion to complain of *these* birds in their strawberry patch, and, on the contrary, they are hoping that their tenants will safely return each year.

In case you have no pair of House Wrens nesting on your place, do not let another season pass without putting up one or more boxes or tin cans, to attract them, making sure that the opening is small enough to exclude the English Sparrow. If, after they become permanent residents, they leave the house provided for them and tuck their nest away in some unheard-of place, you will enjoy them all the more, and agree with a well-known writer that "very cramped and bare indeed must be the suburban place that does not offer the Wren a home."



SEVEN YOUNG WRENS IN THEIR SATCHEL HOME

The Story of Two House Wrens

By LIDIAN E. BRIDGE

FOR the past five years, we have been the happy hosts of a pair of House Wrens, which have been the delight of our summer.

This year, we had such a singular experience that I thought other bird-lovers might be interested, so I took some notes.

The male bird arrived on April 28, and began at once to fill with sticks the gourd in which two broods had been successfully raised each year for the last four. He sang constantly, but, owing to cold weather or some unknown cause, no mate appeared until May 9, when housekeeping began in earnest, the female lining the nest, which is all the work I had ever seen her do during four years' careful observation. As the gourd was hung from a tree, over an old stone wall, close to our piazza, we had excellent opportunities to observe. On June 4 the little Wrens were hatched, and were fed every few moments by one or other parent, never by both.

Meantime, I had noticed that the male, who had built another nest in a bird-house, always spent the night and the greater part of each day in or around that house; but I suspected nothing until June 24, when I found both birds feeding young there.

I do not know when those eggs were laid nor when they were hatched, but, after that date, both nests were carefully watched, and so far as I could see, at no time did the male bird feed the young in the gourd, but both birds fed the little ones in the bird-house.

On June 28, five little Wrens left the gourd, but remained in the bushes for a week. On July 6, four little Wrens, which I had first noticed being fed on June 24, left the bird-house, and were fed in the bushes until July 14, chiefly by the female. On July 9, the male worked hard all day, clearing out the lining of the gourd-nest, while the female still fed the young in the bushes. This continued until July 14, when the female began repairing the nest with fibers from a clematis stalk, while the male sang in the tree. Later he carried in spiders' webs for lining. On July 19, the female began to sit, and the young were hatched some time between August 5 and August 9, when, on my return from Nantucket, I found both birds busy feeding the young.

The female bird disappeared after a few days, falling a victim, I fear, to a neighbor's cat, and on August 16 no male appeared, and the little birds cried all day, so that, late in the afternoon, we decided to take them in and try to feed them on meal worms and spiders. They refused to eat anything, so, hoping to save their lives, as they were well-grown and could fly about the room, we carried the five little Wrens to a safe spot in the Middlesex Fells, where there was an abundant food supply, and trusted that they could feed them-

selves. Although I visited the spot in the afternoon and several times afterward, I never saw the young Wrens again; but I hope they are safe, and that some of the fourteen raised on our place will return next year.

QUESTION: Did not the female lay in two nests, and was not one set of eggs incubated by the male bird?

Carolina Wrens in a Blacksmith Shop

By CLARA CALHOUN

THE most interesting nest that came under the observation of the Green Arbor Audubon Club, for the season of 1910, was that of a Carolina Wren.

The site chosen was in a bolt-rack in a busy country blacksmith shop.

If Father Wren's consent was obtained to this site, it was while the shop was deserted; as he was never seen inside during the building of the nest and incubation, but cheered his more courageous mate with beautiful songs from nearby.

As the nest progressed most rapidly during the smith's absences, he believed that both birds worked while he was away.

The mother bird knew no fear, but flew boldly about, gathering up shavings and excelsior fairly under the smith's hands and feet, approaching the nest over a horse that was being shod, and often keeping her place upon it when the smith worked at the vise for welding tires, which the picture shows, undaunted by the ringing blows or showers of sparks.

The nest was completed and two eggs were laid, when I first visited the shop, July 7. Mrs. Wren kept her place during the shoeing of my horse, but flew off on my too close approach.

On July 26, when I was again at the shop, the smith reported five eggs and the little mother sitting close; but, as we peered in at her, she showed signs of nervousness, and finally flew off, revealing five newly hatched fledglings.

Father Wren now became brave enough to enter with food when only the smith was about, and all five nestlings grew and thrived. But, when they left the nest, one was unable to steer its course for the beautiful outside world and struck the door, crushing its head.

[The photograph was taken by Prof. C. P. McCormick, of the Bentleyville High School, Washington County, Pa.]



Photographed by Prof. C. P. McCormick and published by courtesy of
Abraham Baxter, blacksmith

The Migration of North American Sparrows

TENTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by LOUIS AGASSIZ FUERTES

(See frontispiece)

IPSWICH SPARROW

Sable Island is the only breeding-place known; from here the species migrates along the Atlantic coast as far as Georgia, where it was taken near Darien, January 8 and 15, 1890.

About one-fifth of all the individuals remain on Sable Island throughout the winter; the remainder leave the Island in October and return in March; they have been taken in January all along the coast from Maine to Georgia, but comparatively few winter north of Massachusetts. Some dates of arrival are: Seguin Island, Me., October 11, 1900; eastern Massachusetts, average October 29, earliest October 22, 1889; Shinnecock Bay, N. Y., October 12, 1884; Mount Pleasant, S. C., November 6, 1906. The earliest spring date in Maine is March 20, 1875; the latest dates are: Far Rockaway, N. Y., April 3, 1885; North Truro, Mass., April 10, 1890; St. John, New Brunswick, April 11, 1882.

SAVANNAH SPARROW

The Savannah Sparrow has been separated into four forms, which, together, extend from ocean to ocean and from Guatemala to Labrador and Alaska. East of the Rocky Mountains, the species winters principally in the southern third of the United States, and breeds in the northern third and northward, the wintering and breeding ranges being thus separated by a district 100 to 300 miles wide, in which the species is known only as a migrant. West of the Rocky Mountains, the species breeds south to southern Mexico, and winters north to northern California, the wintering and breeding ranges overlapping for more than 1,500 miles.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Washington, D. C.	9	March 20	Rare, winter.
Philadelphia, Pa.	3	March 31	March 25, 1907
Northern New Jersey.	9	April 10	March 13, 1909
Ithaca, N. Y.	5	April 12	March 23, 1905
Alfred, N. Y.	20	April 18	April 3, 1910
Holland Patent.	3	April 16,	April 12, 1890
Hartford, Conn.	9	April 9	March 31, 1888
Providence, R. I.	4	April 16	March 31, 1905
Taunton, Mass. (near)....	5	April 7	March 22, 1890
Beverly, Mass.	9	April 4	March 26, 1898

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Randolph, Vt.	6	April 14	April 9, 1886
St. Johnsbury, Vt.	9	April 15	April 7, 1907
Southern New Hampshire	13	April 18	April 10, 1898
Portland, Maine	6	April 15	April 9, 1905
Phillips, Maine	5	April 14	April 11, 1905
Pittsfield, Maine	5	April 16	April 11, 1897
Montreal, Can.	6	April 17	April 11, 1909
Grand Manan, N. B.	5	April 13	April 3, 1880
St. John, N. B.	9	April 17	April 5, 1892
Scotch Lake, N. B.	8	April 25	April 16, 1910
Chatham, N. B.	5	April 30	April 23, 1899
Halifax, N. S.	6	April 24	April 20, 1896
North River, Prince Ed. Island	5	April 28	April 27, 1891
Quebec City, Can.	12	May 2	April 10, 1904
Godbout, Que.	3	April 26	April 21, 1882
St. Louis, Mo.	5	April 6	March 13, 1886
Bloomington, Ind.	2	March 20	March 17, 1903
St. Thomas, Ont.	3	April 13	April 8, 1891
Toronto, Ont.	5	April 15	April 11, 1889
Ottawa, Ont.	14	April 14	March 31, 1907
Chicago, Ill.	11	April 15	April 1, 1895
Keokuk, Iowa	5	April 3	March 16, 1897
Manhattan, Kan.	3	March 28	March 22, 1890
Onaga, Kan.	7	April 8	March 30, 1895
Southeastern Nebraska	5	April 15	March 19, 1902
Southeastern South Dakota	6	May 6	May 3, 1889
Aweme, Manitoba	12	April 29	April 23, 1900
Pueblo, Col.			April 1, 1892
Northwestern Oregon	7	April 3	March 29, 1900
Tacoma, Wash.	4	April 10	March 27, 1908
Chilliwack, B. C. (near)	4	March 18	March 14, 1905
Columbia Falls, Mont.	2	May 2	April 30, 1894
Flagstaff, Alberta	2	May 9	May 6, 1908
Red Deer, Alberta	2	May 11	May 9, 1893
Edmonton, Alberta			May 10, 1903
Fort Providence, Mackenzie	2	May 13	May 12, 1904
Fort Simpson, Mackenzie			May 17, 1904
Dawson, Yukon			May 23, 1899
Portage Bay, Alaska			May 5, 1882
Kowak River, Alaska			May 29, 1899

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Green Cay, Bahamas			April 12, 1887
Central Florida	3	March 25	May 6, 1887
Frogmore, S. C.	3	May 1	May 4, 1870
Charleston, S. C.			May 9, 1909
Raleigh, S. C.	6	April 30	May 11, 1893
Washington, D. C.	9	May 4	May 11, 1885
Philadelphia, Pa.	4	May 9	May 14, 1884
New Orleans, La.	9	May 2	May 12, 1902
San Antonio, Tex.	3	April 26	May 3, 1890
St. Louis, Mo.	4	May 9	May 13, 1909

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Erie, Pa.....	2	September 3	August 30, 1893
Washington, D. C.....	6	October 13	September 21, 1903
Raleigh, N. C.....	9	October 13	September 16, 1887
Charleston, S. C.....			September 28, 1909
Northern Florida.....	6	October 26	October 6, 1904
New Orleans, La.....			September 23, 1895
Caddo, Okla.....			September 24, 1883

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
St. Michael, Alaska.....			September 11, 1899
Chilliwack, B. C. (near).....	4	October 19	November 16, 1903
Yuma, Col.....			October 9, 1906
Aweme, Manitoba.....	2	October 3	October 3, 1907
Onaga, Kan.....	3	October 29	November 2, 1896
Lanesboro, Minn.....	4	October 16	October 26, 1888
Ottawa, Ontario.....	14	October 3	October 21, 1908
Chicago, Ill.....	5	October 18	October 26, 1895
Keokuk, Iowa.....	3	November 19	November 21, 1899
Oberlin, Ohio.....			November 9, 1907
North River, Prince Ed. Island.....	3	September 27	October 12, 1889
Scotch Lake, N. B.....	4	October 2	October 5, 1907
St. John, N. B.....	9	October 14	October 27, 1889
Pittsfield, Maine.....	5	October 10	October 19, 1898
Hartford, Conn.....	10	October 5	November 29, 1888
Northern New Jersey.....	5	October 26	November 12, 1905
Washington, D. C.....	5	October 23	Rare, winter.

BELDING'S SPARROW

The Belding Sparrow is a non-migratory species, inhabiting the salt marshes of the Pacific coast from about Santa Barbara, Cal., to San Quintin Bay, Lower California.

LARGE-BILLED SPARROW

The Large-billed Sparrow and its two sub-specific forms, the San Lucas Sparrow and the San Benito Sparrow, range along the western coast from San Pedro, Cal., to Cape San Lucas. They are partially migratory, but some individuals remain all winter at the northern limit of the range. The breeding range is very imperfectly known; the San Lucas and the San Benito Sparrows breed in lower California, while the typical form of the Large-billed Sparrow has never as yet been found breeding anywhere.

Notes on the Plumage of North American Sparrows

NINTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Savannah Sparrows (*Passerculus sandwichensis savanna*, Figs. 1, 2). The Savannah Sparrow shows no sexual difference, and but little seasonal difference in color. The juvenal plumage resembles adult plumages in general pattern, but is strongly suffused with yellowish. In August, all but the wings and tail are shed and the first winter plumage (Fig. 2) is acquired. This resembles that of the adult in winter, but averages slightly browner, and is without the yellow line over the eye which is sometimes present on the winter adult.

The nuptial plumage (Fig. 1) is less brown in tone than that of the winter plumage, the markings are more sharply defined, and there is a lemon-yellow line (unfortunately not well shown in the plate) over the eye. This plumage is acquired in part by molt, chiefly on the anterior parts of the body, and in part by wear and fading.

The Aleutian Savannah Sparrow (*P. s. sandwichensis*), of Unalaska and the contiguous islands, is larger than the eastern Savannah Sparrow, with more yellow behind the eye. The Western Savannah Sparrow (*P. s. alaudinus*) resembles the Eastern Savannah Sparrow, but has the bill more slender, the yellow over the eye paler and of less extent. Bryant's Sparrow (*P. s. bryanti*), of the coast of California, is smaller than the Western Savannah Sparrow, and is darker in color, with the yellow over the eye more pronounced. The seasonal plumage changes of these three subspecies are doubtless similar to those of our Eastern Savannah Sparrow.

Belding's Sparrow (*Passerculus beldingi*, Fig. 3). Belding's Sparrow breeds on the coast of California, from Santa Barbara southward to Lower California, and is there evidently a representative of Bryant's Sparrow, which nests on the California coast region from San Francisco northward. It is closely related to Bryant's Sparrow, but is darker above and more heavily streaked below, and in fall plumage the upper parts are more or less suffused with oliveaceous. As in the Savannah Sparrow group, specimens in first winter plumage lack the yellow line over the eye, which is present in all summer specimens.

Large-billed Sparrow (*Passerculus rostratus rostratus*, Fig. 4). The generally paler coloration, absence of distinct streaks above, larger bill, and other characters by which this species may be known from its relatives of the Savannah Sparrow group, are well shown by the figure 4 of the plate. In summer plumage, the streaks below are more sharply defined, and the tendency to streaks on the back is more pronounced. In no plumage is there a yellow line over the eye.

The exact breeding range of this bird is as yet unknown, but it is found in the salt marshes of the coast of California from Santa Barbara southward. The St. Lucas Sparrow (*P. r. guttatus*), a smaller, darker form, breeds on Abreojos Point, Lower California, and winters about San José del Cabo; while the San Benito Sparrow (*P. r. sanctorum*), a smaller and grayer form, is restricted to San Benito Island.

Ipswich Sparrow (Fig. 5). The Ipswich Sparrow is apparently an island offshoot of the Savannah Sparrow, which, under the influences of environments and isolation on Sable Island, N. S. (where alone it is known to nest), has become larger and paler. Its molts and seasonal variations in plumage agree with those of the Savannah Sparrow, and, as in that bird, the yellow line over the eye is not acquired until the first prenuptial (spring) molt, which occurs in March. The figure of the bird in winter plumage (Fig. 5), by one of those variations from proof which evidently cannot be foreseen or prevented, is by no means gray enough.



SEA-BIRDS FOLLOWING A WHALE

Large flocks of Sea-birds are frequently to be found hovering over the surface when a whale is near, feeding upon the minute crustaceans brought to the top of the water by the movements of the great animal. (See BIRD-LORE, December, 1908, p. 261.) Photographed by Roy C. Andrews, Japan, 1910.

Notes from Field and Study

Record of Evening Grosbeak at Branchport, N. Y.

January 10. A single male seen feeding on the seeds of a maple.

January 17. Two males seen several times in the maples in the streets today.

February 8. Two males were feeding for over an hour in the maples across the street from my house.

February 9. Two males and one female were in the same trees as they were yesterday, for nearly two hours.

February 10. This morning there were six males and three females, and they were on the move all the morning, going from one part of the town to the other. We had them under observation all the forenoon. About nine o'clock two more appeared, making eleven in all.

February 11. This morning there were eleven of the Evening Grosbeaks in the street, and at one time a flock of Goldfinches mingled with them in a tree-top. At noon there were fifteen in the flock, and at two o'clock there were twenty of them.

February 12. Today the flock numbered twenty-two and we followed them from place to place for about three hours. They were on the move a good share of the time, moving along through the maples, feeding as they went; then away across the fields to a gully, where they drank from the brook and cracked a few pods from a locust; then back to the maples again; then on down the street, flying on to the roof of a house, to pick in the snow, and on another house they found the gutter full of maple seed-pods, and such a scramble as there was then, about a dozen birds lined up along the gutter, pushing and crowding each other to get at the seeds! Here my camera missed fire, and I lost the best opportunity I have ever had for a picture of them.

Shortly after this, they went away

across the fields, and we did not see them again.

During the following week, several people reported to me having seen from two to five or six birds.

February 19. We saw three males and one female for a little while in the morning.

February 21. Two lots (reported to me as twenty or thirty) were seen by three different people.



EVENING GROSBEAK.

February 23. Saw three this morning and again in the afternoon.

February 26. There were six of the Grosbeaks in Mr. Tyler's yard. They were feeding on maple seeds, found on either side of the walk where the snow was gone.

March 5. There were six of them in the maples and evergreens in this same yard this morning, and we saw them go down to the walk and work at the maple seeds.

I do not doubt but that these birds have been here constantly since February 8, as a number of people have reported seeing them, and I have seen them nearly every time that I went out to look for them.—VERDI BURTCH, Branchport, N. Y.

Nesting of the Carolina Wren

Of this Wren Chapman says: "The cozy nooks and corners about the home

of man which prove so attractive to the House Wren have no charms for this bird. His wild nature demands the freedom of the forests, and he shows no disposition to adapt himself to new conditions." Other authors say much the same thing, so I was surprised and interested, this summer, to find a pair of Carolina Wrens nesting in a situation which might be more properly described as "*in*" rather than "*about* the home of man;" and one, too, which had been chosen in former years by House Wrens as a building-site.

I had seen a pair of the birds twice during the spring, in the fields two or three blocks from my sister's house, which is in the outskirts of the city of Asbury Park, not far from Deal Lake.

Early in June, she reported them as being about the house, and by the second week they were seen to be prospecting for a nest. The site chosen was on a beam in the corner of my sister's little summer-kitchen, next to the door. This is enclosed by latticework, but has an open doorway about five or six feet from the door of the real kitchen. There is a constant passing in and out, especially by the children. House Wrens disputed over the occupancy of this corner with the English Sparrows for a number of years, until they were given a little house of their own in the yard.

By June 16, they had begun to build. On that date my sister and family went away for a short visit. When she returned, on June 23, the nest appeared to be completed. There was at least one egg in the nest on June 26, for I got a ladder, and felt in it, as it was too high and too dark to see.

The father bird was very assiduous in his attentions to the mother, bringing her food continually. In coming to the nest, he first perched on a tree outside and sang his joyous song. He never flew to the nest direct, however, but always chose a roundabout way, often hopping up from branch to branch of the rose bush which runs up the latticework, concealed by its leaves, then darting through, and so up to the nest.

On July 10, my brother tried to take a picture of the nest. I was very anxious to get one, but did not think he would have to disturb the birds as much as he did, and that, too, without getting the picture, as he frightened her off the nest in the attempt. He reported that the young birds had hatched out. The mother was a very close sitter, and I had not seen her, up to that time, although, of course, my sister had.

On July 20, I walked over to my sister's and found that I was just half an hour too late to see the young Wrens fly from the nest. The mother was in evidence, though, very much excited, and keeping up her peculiar metallic warning cry all the morning. I thought at first she was scolding us, as we investigated the hedge, trying to find her babies, but later decided that she was warning them to stay perfectly still; and so well did they obey her, that it was quite a while before I discovered one of them hidden in a clump of plants by the porch next door. It was almost on top of me while I was looking for it.

That was the only one I did see, too, although we knew there were three. I had counted them myself, one day, when they were being fed, and my sister had seen the three as they flew.

That was the last seen of the family this summer, but we are hoping to renew the acquaintance next year. The songs of the male—loud, clear and ringing—was especially enjoyable in the early mornings.
—MISS EMMA VAN GILLUWE, *Ocean Grove, N. J.*

Notes from Gardiner's Island

It had always been my wish to visit this island Eden, to study its wonderful waterfowl life, and on March 24, 1910, in company with Mr. S. V. LaDow, it was my good fortune to get there in an open motor boat from Greenport. On November 26, Mr. LaDow and I again visited the island, this time in company with Mr. W. DeW. Miller, of the Museum of Natural History at New York. On both occasions

the sights we saw would probably be impossible now anywhere else on the Atlantic coast north of Chesapeake Bay, so I thought it might interest readers of Bird-Lore to give in brief the results of the two trips, especially as few ornithologists seem to have visited the island at those seasons of the year.

It was with no small amount of satisfaction that, on November 26, we looked into one pond and almost at a glance saw American Megansers, Baldpates, Redheads and Ruddy Ducks, swimming by, fifty yards off shore. The entire absence of the so-called "fresh-water" Ducks in March was compensated for by a flock of some 2,000 Brant. They were standing in the marshes of the North Shore Inlet, and, when they flew up in great masses, many thousand ducks which covered the waters of the inlet took alarm and flew up too. For fully five minutes the air was black with waterfowl, flying east, west, north and south, the Ducks quacking and the Geese honking; then they formed in one great flock and streamed out to sea. The majority were Black Ducks, Whistlers and Buffleheads, but there were probably many other species. It certainly was a wonderful and impressive sight. By far the most abundant Duck in March was the Whistler, and hardly five minutes passed, during the whole day, when we did not see some. They were in the bay, in the ponds and inlets, in the ocean, or sitting in hundreds along the beach, and from the highest hills in the center of the island we could hear the musical whistling of their wings out at sea.

Land-birds were comparatively scarce on both trips. Four Fish Hawks and a great Blue Heron were noted in March. On November 26, thirteen Great Blue Herons were seen, eleven of them in one flock. Below I give a list of the waterfowl seen on both trips, with an approximation of their numbers, which will probably seem greatly exaggerated; but every effort was used to be accurate, and it is likely that the eye, entirely untrained to such numbers, is unable to take in the real amount.

Species	March 24	Nov. 26
American Merganser		25
Red-breasted Merganser	25	100
Mallard		1
Black Duck	2,000	2,000
Baldpate		100
Redhead		6
American Scaup Duck	200	25
Whistler	10,000	150
Bufflehead	50	27
Old-squaw	5,000	250
American Scoter	10	3
White-winged Scoter	500	1,000
Surf Scoter	500	150
Ruddy Duck		12
Brant	2,000	

—LUDLOW GRISCOM, *New York City.*

Some Nesting Notes

The following notes are the result of two days' observations,—one day in the Puente and Coyote Hills, and the other in the willow bottoms of the San Gabriel River.

On May 1, 1910, I found the following nests: Two California Jay nests, one in an oak tree 4 feet from the ground, shallow-bowl-shaped, a foundation of dry oak twigs lined with dark brown plant fiber, contained three young just hatched and one egg just hatching. The other nest was six feet from the ground similar in construction and lined with the same plant fiber; it contained five young, partly feathered out.

Several Red-wing Blackbird nests in the La Habra Valley, along Coyote Creek. A typical one was in a weed at the edge of the water, two feet above the water level, composed of dry grass, and contained three well-incubated eggs.

In the Coyote Hills I found the following: A California Linnet's nest in a tree tobacco plant beside the road, six feet from the ground, of weed stems and twigs lined with small cottony leaves of mullen, contained four well-incubated eggs.

A Thrasher's nest, species undetermined, in a sage-bush two and one-half feet from the ground, bowl-shaped, of coarse sticks lined with rootlets, contained

one egg. The bird was sitting, and slipped away when I approached.

A Roadrunner's nest, in a cactus patch, three feet from the ground, a shallow platform of sticks lined with grass, contained two young and two eggs. The old bird came back while I was there, but sneaked away again without making a sound.

A Say's Phoebe nest in an oil-well derrick which was not in use, on two five-foot timbers, standing on end in the corner, made of fine grass, rootlets and small clods of earth, lined with wool and a little horse-hair, contained two fresh eggs; two more were laid later.

An Anthony's Towhee nest, in an elder tree, seven feet from the ground, made entirely of grass, contained three eggs, marked heavily for this species.

Saw several Cactus Wrens' nests, but could not reach them for the cactus. Found one in columnar cactus three feet from the ground. It was retort-shaped, with the opening at the side, with thick, compact walls of dry grass and sticks lined with feathers; contained four fresh salmon-pink eggs.

A Black-tailed Gnatcatcher's nest, in a bush 2 feet from the ground, deep cup-shaped, of shreds of bark and lichens together with spider-web, and lined with rabbit fur, contained three young and an egg.

On May 15, 1910, in the willows along the San Gabriel river, southwest of Artesia, I found the following nests:

A Song Sparrow's nest, in a willow tree, six feet from the ground, of sticks and marsh grass lined with finer grass, contained four well-incubated eggs.

A Western Black Phoebe nest, in a willow tree that leaned almost horizontally over the water, on the end of a short dead stub that grew out from the under side of the tree at an angle of about 45° , made of mud and strips of bark, lined with bark and hair, contained two young. This species usually builds on buildings or bridges here.

A Thrasher's nest, same species as noted above, in a willow tree, six feet from the

ground, of willow twigs lined with rootlets. The nest was empty but the female was sitting on it, and both birds made a fuss when I approached.

Found a number of Willow Goldfinch's nests; a typical one was in a willow sapling at the edge of the river, seven feet from the ground, cup-shaped, of soft plant fiber lined with willow and thistle-down; contained three eggs.

Found three Arkansas Kingbird's nests, could not reach two, the third was in a willow tree about twenty feet from the ground, of small sticks and grass, thickly lined with white cow-hair; contained three eggs.

A Hummingbird's nest, species undetermined, on a small horizontal limb of a willow tree, ten feet from the ground and three feet from the trunk of the tree. Made of white cottony plant down held together by spiders' web; contained two fresh eggs. The female was very tame, and came back to the nest while I was in the tree.

A Black-headed Grosbeak's nest, in young willows and blackberry vines, five feet from the ground, a flimsy structure of sticks lined with rootlets, contained three well-incubated eggs. The male bird was sitting and remained nearby, but I did not see the female.—JOHN MCB. ROBERTSON..

Notes from Illinois

During the winter of 1909-1910, several White-crowned Sparrows took up their winter quarters in our near vicinity. They were recorded several times during the winter, being found at different places.

It was very much of a surprise to find a Lesser Scaup Duck on a small creek very near my home on June 25. It stayed there for several days.

The finding of the Song Sparrows and Red-winged Blackbirds on Christmas Day was very surprising also, and it was with wonder that we saw the Red-bellied Woodpecker for the first time that day.

A Carolina Rail, or Sora, remained in

our neighborhood during the whole season, from spring to fall. It was last seen on December 27, a day before a heavy rain.

A White-crowned Sparrow was seen on January 20, of this year.

The first Robin was seen, this year, on February 6. Early as this was, it was only ten days ahead of the migration of its fellows. I believe the migration of Robins, Bluebirds, Meadowlarks, Wild Ducks, Killdeers and Song Sparrows was the earliest ever known. They all came on the same day, the sixteenth of February.—

GEORGE E. EKBLAU, *Rantoul, Ill.*

A Dove's Nest in Sphagnum

In May, 1909, while botanizing on the Cranberry Island, of Buckeys Lake, in Licking Co., Ohio, the writer came upon a nest of the Mourning Dove which, from its unusual situation, seems worthy of notice. Instead of being built in a tree, it had been built on the ground in the sphagnum, among cranberries and cat-tails, as seen in the illustration. The nest itself was very slight, consisting of a few twigs laid on the sphagnum. It did not serve in any degree to elevate the nestlings above the moss near it nor to keep them dry. On the contrary, it was thoroughly soaked and, with the accumulated excrement from the young birds, which at the time of discovery were nearly grown, presented as filthy an appearance as possible. Such apparently unsanitary surroundings did not seem, however, to affect the young birds nor to disturb them, for they were healthy and happy at the time of discovery.

The selection of such a nesting-site was not due to any lack of trees and bushes suitable for nests of the sort usually built by the Mourning Dove, for there were numerous alders and maples nearby. Moreover, the writer is inclined to believe that this was not merely the idiosyncrasy of the particular bird, but a habit shared by others. At any rate, during the summer of 1910 he found another nest in the same place under exactly similar condi-

tions. The successful issue of a nest in such a situation is dependent on the absence of enemies of the eggs and nestlings. It is interesting to note that this condition is almost perfectly met in the Buckeye Lake bog. It is surrounded on all sides by deep water, which prevents the ingress of predaceous animals. Snakes are very rare and, during the summer, mammals



THE DOVES' NEST

are equally so, being limited to an occasional mouse or a straggling rabbit. It may very well be that this is the reason for the selection of this nesting-site. One can easily imagine that so slipshod an architect as the Dove would prefer, when possible, to avoid even the necessity of building a nest sufficiently secure to keep its occupants from falling through.—ROBERT GRIGGS, *The Ohio State University*.

Photographing a Kingfisher Interior

The article in the November-December number of *BIRD-LORE*, by Mr. Dwight Franklin, concerning the photographing of Kingfishers, calls to mind an experience of mine, in a similar line, during my college work.

In the spring of 1901, while at Cornell, I was assigned to write up the habits of

was the one to actually manipulate the camera.

The hole was in a sandy bank, so we dug away from in front till the nest was revealed, at a depth of about four feet. It consisted of a rough pile of sticks, feathers and rubbish, and was occupied by the full set of eggs. Judging that the mother would be sitting most of the time, we walled up the excavation, except the entrance hole, made a place to set the camera, and adjourned till next day.

On our return, the female was "at home," and apparently not at all concerned by our remodeling of her residence, so we set up the camera as per schedule. To solve the problem of letting light back into that four-foot hole, without using flashlight or other apparatus, I suggested the setting of the camera close to the mouth of the hole. I stood back of it, and with a bright, plain *watch-case* threw a beam of

light down the tunnel, and moved it all around, illuminating each part.

Although it must have taken several seconds for each exposure, the birds remained perfectly still; for our prints are fairly clear, considering the conditions, and show both nest, birds and eggs.

The nest was restored and, in due time, the eggs hatched.—T. J. Moon.



SOME LIGHT ON THE KINGFISHER

the Kingfisher, for a course in Ornithology, and, as I knew of a convenient nest, I determined to illustrate my paper, if possible. The accompanying prints are the result of that endeavor, and the *modus operandi* of their taking may be of interest. I want to say, however, that the real credit of the photographic work belongs to a friend of mine, Pettis by name, who

Book News and Reviews

BIRDS AND MAMMALS OF THE 1909 ALEXANDER ALASKA EXPEDITION. Univ. of Calif. Pub. in Zoöl., VII, 1911, pp. 9-172; pls. 6, figs. 3.

Mr. Swarth, with one assistant, devoted the period between April 8 and October 1, 1909, to the exploration, in a twenty-eight-foot gasolene launch, of the Sitkan district of Alaska. He visited sixteen islands and six mainland localities, and, as a result of his observations, records 137 species and sub-species of birds. His critical and biographical notes on these occupy pages 28 to 112 of this publication, and contain much of value and interest.

Under 'Distributional Considerations,' some of the more interesting problems presented by the life of the region are discussed, and attention is called to the fact, already mentioned in the body of the paper, that certain species of the interior, like *Geothlypis trichas occidentalis* and *Empidonax traillii alnorum*, apparently reach the coast by following down river valleys where conditions are favorable.—

F. M. C.

THE LINNET OF THE HAWAIIAN ISLANDS: A Problem in Speciation. By JOSEPH GRINNELL. Univ. of Calif. Pub. in Zoöl., VII, 1911, pp. 179-195.

The Linnet, or House Finch (*Carpodacus mexicanus frontalis*), was introduced into the Hawaiian Islands, probably about forty years ago, from the vicinity of San Francisco, and Mr. Grinnell here calls attention to and discusses the fact that Hawaiian males of this bird have those parts which in California specimens are normally red, colored yellow or orange.

It is well known that the red colors of caged male Purple, as well as House Finches, change by molt to saffron or yellow, as a result. This has commonly been supposed to be due to change of food, though, in one instance, Beebe has shown that a Purple Finch which had worn a yellow plumage for several years,

when moved from a "dark cage" to one which was exposed to full sunlight, regained its red colors at one molt.

Mr. Grinnell discusses at length the various factors which may have been patent in producing this surprisingly uniform and rapid change in the Hawaiian House Finches, and well says that they "may lie among a multitude of elements constituting the environmental complex." Temperature, humidity, change of food, and reduction of enemies, however, are not believed to have played a part. Rather it is suggested that the close-breeding incident to insularity may have resulted in physiological inability to reproduce in full the elements which enter into the composition of a red feather. The author truly concludes that "the problem is an attractive one for investigation," and he invites attention to it in a most suggestive manner.—F. M. C.

BREWSTER'S WARBLER. By WALTER FAXON. Memoirs of the Museum of Comparative Zoölogy at Harvard College, Vol. XL, No. 2, pp. 57-78, with one colored plate (to be supplied).

Looked at from the varying points of view of the faunal, the systematic, or the evolutional ornithologist, it would be difficult to find a more fascinating problem than the relationship of Brewster's and Lawrence's Warblers with the Golden-winged and Blue-winged, which they are intermediates between. We therefore welcome an article entitled Brewster's Warbler, published in January of this year, by Mr. Walter Faxon. In this article, he not only brings together the existing data and cites the various theories advanced to explain them, giving each the weight which it seems to him to merit, but gives an extremely interesting account of a series of careful personal observations on three Brewster's Warblers which spent the past summer within the narrow confines of a maple swamp at Lexington,

Mass. Two of these birds were females, both mated to Golden-wing males, and each raised a brood of young birds. One brood of these young was composed entirely of Brewster's Warblers. In the other brood, all but probably one, were Brewster's Warblers, and that one a Golden-wing. The third, a male, was defeated in competition with a Golden-wing for at least one of the Brewster's Warbler females, and passed the summer unmated.

Much of the zoölogical research of the present day may be divided roughly, into two classes. In the first, data gleaned from nature in the field is correlated and explained. In the second, artificial conditions are brought to bear on some particular problem the investigator has in mind, a method most frequently met with in university laboratories. Mr. Faxon, a scientist trained in the first method, baffled by the difficulty of the problem he is dealing with, appeals to the second method for aid. If Golden-winged and Blue-winged Warblers could be crossed, and the succeeding generations bred in an aviary, we should finally have definite data to back up or disprove our theories! It may be that not until this is done shall we have the desired proof. It would indeed have been difficult to establish and prove the laws of Mendelian inheritance (which appear to be operative in these Warblers) except by artificial animal breeding.

Yet if Brewster's and Lawrence's Warblers truly are Mendelian derivatives of the Golden-wing and Blue-wing, we will get a certain light on the place of Mendelian inheritance in nature and its value in species formation from such observations as Mr. Faxon records, which no amount of artificial experiment would yield.

The paper would be more complete prefaced with a clear statement of what the Brewster's and Lawrence's Warblers are, and how each differs from the Golden-winged Warbler on the one hand and the Blue-winged Warbler on the other; but, after all, a person unfamiliar with the birds can get such

information from any good text-book which deals with our Warblers. The inconclusiveness of this paper but gives us hope that it will be followed by others containing the results of further observation, or of experiments such as Mr. Faxon has suggested.

The Ornithological Magazines

THE AUK.—The April number opens with an announcement, by Mr. John E. Thayer, of the discovery of the "Eggs of the Spoonbill Sandpiper (*Eurynorhynchus pygmaeus*)."¹ A set of four was obtained near Cape Serdze, in northeastern Siberia, by Capt. F. Kleinschmidt, who also secured breeding birds and downy young. The eggs and young are figured in color, and it is of interest to observe that the peculiar form of the bill of the adult has developed in the young by the time of hatching. It is to be regretted that the account of so rare a species should be so meager in outline.

For a painstaking study of the "Nest Life of the Screech Owl," Miss A. R. Sherman's observations are to be commended, and such papers are valuable contributions to the life histories of birds. In lighter vein is Mrs. F. M. Bailey's sketch, "A Drop of Four Thousand Feet," which, in spite of its blood-curdling title, merely relates the incidents of a trip down the mountains of New Mexico. Under the caption "Concealing Coloration Again," Messrs. Thomas Barbour and J. C. Phillips review at considerable length Mr. A. H. Thayer's recent book, and make mince-meat of some of the contentions set forth in its pages. A review of Tracey's "Significance of White Markings, etc.," at p. 278 of "The Auk," should be read in this connection.

A carefully prepared local list is that of Mr. H. Lacey on "The Birds of Kerrville, Texas, and Vicinity," also that of Mr. A. W. Honeywill, Jr., entitled "Notes on Some Summer and Fall Birds of the Crooked Lake Region, Minnesota," in both of which articles maps add to their value. Again, however, attention may be

called to the lack of consistency in the use of trinomials which the editor permits. The old method prevails in Mr. Kerr's list, the modern in Mr. Honeywill's, and the reader is left in doubt as to whether "The Auk" is up-to-date or not.

Revision of the new Check-List is already in order, and we have "Notes Extending the Ranges of Certain Birds on the Pacific Slope," wherein Mr. J. H. Bowles furnishes new information concerning nearly forty species. Mr. J. C. Phillips records "Ten Years of Observation on the Migration of Anatidæ at Wenham Lake, Mass.," and believes that the diminution of wildfowl amounts to nearly twenty-five per cent. Mr. C. H. Kennedy supplies "Notes on the Fruit-eating Habits of the Sage Thrasher in the Yakima Valley," pointing out, especially, the damage done to clusters of grapes by birds that puncture the fruit in order to sip the juice.

A critical revision of "The Bahaman Species of *Geothlypis*" is from the pen of Mr. W. E. Clyde Todd. The group is boldly divided into three races of one species, a rational synthesis that might well be applied to other confused groups which today are little more than undigested masses of names.

The annual list of members of the A. O. U. closes the number.—J. D., Jr.

THE CONDOR.—Of the eight principal articles in the March number of 'The Condor,' the opening one, by Florence Merriam Bailey, entitled 'The Oasis of the Llano,' has a special interest in showing the marked effect of topography on the distribution of bird life. The wind-swept plains of western Texas afford comparatively little variety in bird or plant life, but along the eastern edge of the Staked Plains the Llano drops off suddenly, forming in some places a precipitous wall 400 to 500 feet in height. Here trees and shrubs find shelter from the winds, and the variety of vegetation attracts a number of birds, so that the Llano wall actually becomes an oasis in the otherwise arid Plains.

A brief paper by Willard on 'The Blue-throated Hummingbird,' illustrated by four photographs, forms a welcome contribution to the life history of this comparatively little-known species. The observations on which it is based were made, during several years, in the Huachuca Mountains, in Arizona. Under the title 'Odds and Ends,' Joseph Mailliard gives notes on the Wood Duck, the two Egrets, the Little Brown Crane, and the Western Tanager in California. In speaking of the Egret (*Herodias egretta*), he says: "In view of the fact that this species was at one time nearly extinct in this state, it is encouraging to the advocates of bird protection to note that these Egrets are increasing in numbers."

Gilman's article on the 'Doves of the Pima Reservation' contains full and interesting notes on the four species which occur in this section of southwestern Arizona. Rockwell's 'Notes on the Nesting of the Forster and Black Terns in Colorado,' illustrated with 7 half-tones, are the latest contribution to the important series of papers on the birds of the Barr Lake region, published in recent volumes of 'The Condor.' The extensive irrigation projects in eastern Colorado have brought about marked changes in the local avifauna, and in this region have caused a decided increase in the abundance of certain water birds. A striking illustration of this change is afforded in the case of these two Terns, which 30 or 40 years ago were rare, but are now common summer residents. In Peck's 'Summer Birds of Willow Creek Valley, Malheur county, Oregon,' will be found brief notes on 74 species in a little-known section in the eastern part of the state. An illustration of the curious places in which birds may sometimes be found is furnished by the note that, "on July 8, 1910, a Wilson Snipe was flushed from a sage bush!" Jay's paper on the 'Nesting of the California Cuckoo in Los Angeles county' and Carriger and Ray's 'April Day List of Calaveras Valley Birds' are chiefly of local interest. The latter article includes a nominal list of 50 species.—T. S. P.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

Ways and Means

FOllowing out the suggestion of beginning at home to conserve national resources, how may public sentiment be most surely and sympathetically aroused to take hold of the matter in a practical way?

Undoubtedly, the first step is *to educate* the public to recognize and appreciate home resources; the next, *to demonstrate* what may be done with such resources.

A simple and opportune method of educating public sentiment is through public and traveling libraries. There are at least two valid reasons why libraries should engage in such an undertaking.

In the first place, a library is doing its best work when it makes a direct appeal to all classes and all ages along some line of vital importance.

A subject of such importance is the one under consideration, because it touches the welfare and interests of the entire community.

In the second place, by means of circulating the very best kinds of information, a library can quietly and effectively accomplish, at relatively small expense, what could scarcely be done with ten times the same amount of money and effort, in lectures, personal appeals and desultory experiments.

If the Audubon Societies should ask the librarians in their respective states to coöperate with them in developing the educational side of home resources, a very broad and far-reaching movement would be speedily in operation.

Why not begin by giving to each library, not already so equipped, a set of bulletins and pamphlets relating to forestry, agriculture, horticulture, economic ornithology and entomology, with a copy of the state game laws, a copy of *BIRD-LORE*, a collection of National Audubon leaflets, and as much more nature-study material as may be available?

To this initial gift, add the request that a special shelf or table be set aside for the purpose of displaying this material as attractively as possible.

Every progressive librarian will be glad to add such a department to his library, and will see that simple, durable bindings are put upon all unbound printed matter, to offset the wear and tear of use and circulation.

A special effort should be made to invite teachers and pupils, particularly those whose equipment for nature-study work is limited, to utilize this "home resources" corner in the town or village library as a factor in the school work.

From time to time, special nature-study exhibits might be added to the attractions of the corner. School exhibits along this same line would also be of general interest to the public, and by means of them our common schools and the busy, indifferent grown-ups might pleasantly and profitably be drawn into a more intimate relationship.

To successfully further such a method of educating public sentiment, the Audubon Societies should prepare, each year, a list of up-to-date publications on this very complex subject of home resources, and send a copy of the same to each library with the request that as many additions as are within its means be made to the new department.

The traveling library offers as great, if not greater, advantages than the stationary library in this work of distributing information. By means of it, even the most remote hamlet in the state can be reached. Statistics show that the traveling library meets with a ready welcome, almost without exception.

How many traveling libraries has each state? How many distinctively nature-study libraries? How general is their circulation, not only in the homes, but also in the schools of the state?

In any enterprise, coöperation is the key to success. Nature-study is a subject important to all the people, whether in school or out. Let us seek the aid of our great public library system in bringing *within the reach of every one* the best information possible, as a basis for the work of conserving home resources.—A. H. W.

A Request

Will readers of the School Department of BIRD-LORE who live in localities frequented by the *European Starling* kindly send in notes of *its winter and summer distribution*, relation to other species, food, habits, song and *increase*? It is important that this introduced species should be studied and become as widely known as possible, in order that its movements and habits shall be accurately followed.

FOR TEACHERS

Migration Afterthoughts

WITH bird-study, as with everything else, the most exciting part is supposed to be the most important, or, at least, the most interesting.

Without questioning either the importance or the absorbing attraction of the migration movements of birds, especially during the spring, there is still a wealth of material left for bird-students to get hold of throughout the rest of the year.

May and June bring mating, nesting and the full song-period, for most of our bird-population in the northern United States. But just how to settle

down to a connected study of a few species, the ordinary run, as it were, of permanent and summer residents, after the thrilling chase of the multitude of spring migrants, is quite a problem, and one far more taxing upon the teacher than upon the ordinary observer.

Warm, sluggish days dispose the pupils to lag in their school-work. Eyes turn longingly out-of-doors, and the one desirable goal of all normal children is vacation.

Why not let all of nature possible *into the school-room and into the school-books* at this season, and make the pupils feel that contact with nature is *essential* to their daily health, joy and success?

Migration naturally raises many questions, few of which can be adequately answered, it is true, but most of which lead to fruitful discussion.

One teacher suggested migration as the subject for a nature composition to pupils in the lower grades. Many and unusual were the ideas brought forth, but two points were evidently impressed upon the mind of every pupil, namely, the *distance* and the *dangers* of migratory journeys.

Taking these two points as a basis, suppose the teacher goes on to connect the fact of migration with the welfare of the bird, its place in nature and relation to man.

A scheme something as follows might aid in making these important connections clear:

MIGRATION	<ol style="list-style-type: none"> 1. <i>Welfare of the Bird.</i> <ol style="list-style-type: none"> a. Secures safe and congenial nesting-sites for many species. b. Secures a change of food for many species. c. Probably secures a greater supply of food for nestlings. d. Enables many species to get the benefit of the locality best suited to them at all seasons of the year. 2. <i>Bird's Place in Nature.</i> <ol style="list-style-type: none"> a. Distributes birds over wide land-areas at the season when they are needed. b. Gives birds the chance to do their proper work in nature of destroying seeds, destroying insects, distributing seeds, making soil, acting as scavengers. 3. <i>Bird's Relation to Man.</i> <ol style="list-style-type: none"> a. Brings birds into beneficial relations to man in agriculture, horticulture, forestry. b. Sometimes brings birds into non-beneficial relations to man in agriculture, horticulture. c. Brings birds into beneficial relations to man with reference to his health, with reference to his enjoyment of life.
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NOTE.—Bring out clearly the reason why birds are occasionally non-beneficial in agriculture and horticulture, by virtue of *man's creating an abnormal food-supply within a limited area*. Examples: Rice-fields and Bobolinks; grain-fields and Red-winged Blackbirds.

Or, try making a geography lesson less humdrum, by following out the principal migration routes of the birds of North America.

A. *Route of Golden Plover and Some of the Wading Birds:*

Nest in Arctic Circle up to 81° in June; Labrador in August; coast of Nova Scotia; 1,800 miles over Atlantic ocean to eastern West Indies; 600 miles to eastern coast of South America; southern Brazil and the prairie region of Argentina, September to March; Guatemala and Texas in March; prairies of the Mississippi Valley in April; Northern United States and to the Arctic Circle in May. Route from Argentina and Brazil to Texas and Guatemala not yet known. 16,000-mile trip.

Atlantic Coast Route of Fifty New England Species:

Follow coast from New England to Florida; 1. Florida through Bahamas or Cuba, to Hayti; Hayti to Porto Rico, Lesser Antilles and South America. 2. Florida to Cuba, Jamaica and South America. 3. "Bobolink route," Cuba direct to South America.

NOTE.—From New England to South America, 2,000 miles; from Florida to Cuba, 150 miles; from Cuba to Jamaica, 90 miles; from Cuba direct to South America, 700 miles.

C.—*Atlantic Coast Route of Most Eastern Species:*

Atlantic Coast to Florida; northwestern Florida southwest, across Gulf of Mexico, 700 miles; Central and South America.

NOTE.—Very few species take the easier passage along the Florida coast to Cuba, Yucatan, and, so on, to Central and South America.

D.—*Mississippi Valley Route:*

Louisiana; Gulf of Mexico at its widest point; Central and South America.

NOTE.—Species from Middle States use this route.

E.—*Plains and Rocky Mountains Route to Mexico and Central America.*F.—*Pacific Coast Route to Mexico and Central America.*

NOTE:—Migratory routes of many ocean species unknown.

Drawing teachers might easily take advantage of this opportunity to have pupils draw carefully the map of North and South America, marking in heavy or colored lines the migration routes of our birds, and distinguishing in some fashion their respective points of departure and destination.

Indeed, what a very pleasant task teaching and studying would be, if all the hard, dry facts in books were made clear and vivid by presenting *real, live, activities* of the great world, in which each thing and each creature has a part to play.

NOTE.—Routes of Migration as given above are taken from data gathered by Mr. Wells Cooke: "Some New Facts about the Migration of Birds."

See "Yearbook of Department of Agriculture, 1903."

The Story of a Hummingbird

From the middle of May until late in September, or even the first of October, the smallest bird we know visits our flowers and blossoming vines in search of nectar and insects. Measure on a piece of paper three and a fourth inches, which is the length of this tiny creature from the tip of its long tube-like bill to the very end of its short tail.

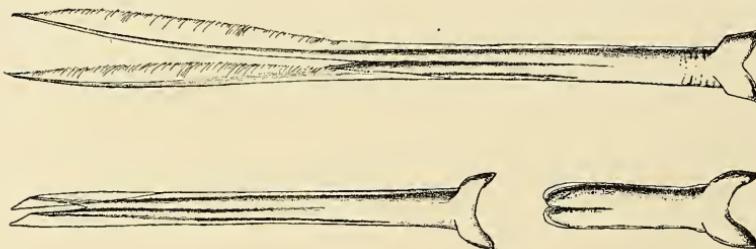
With a whirr and a flash, it comes and goes, hovering and poising on its swiftly beating wings, now searching a morning-glory cup, now a nasturtium.

Where the horse-chestnut grows, the little Hummingbird appears with the blossoms of this tree—at least, in Lincoln Park, Chicago, this was true.

A glimpse of a Ruby-throat makes one sure of the male. The female's throat is just whitish, without bright color. Stripped of its brilliant, iridescent, green feathers, the Hummingbird's body is no larger around than one's finger, yet so powerful are the muscles of this mite that it is stronger for its size than most other birds.

With minute insects and the sweet honey of flowers for food, and wings so tireless that they seem forever in motion, what a life must this little bird lead, making the rounds of gardens and vine-covered porches from sunrise until dewfall!

And yet it has come hundreds of miles over long stretches of land from Central America and Mexico, to find a place to put its tiniest of nests. If you will split a walnut or some round nut about the size of a walnut, and



Courtesy of Smithsonian Institution
TONGUES OF HUMMINGBIRDS

cover it with light-colored lichens, and then, with the skill of a fairy, line the inside snugly, you will have some idea of the size of the Hummingbird's nest.

There is just room for two truly wee, white eggs. When the nest is all finished, set, as it usually is, on the limb of a tree, it looks so like a knot in the bark of the tree that the sharpest eye, having once found it, can hardly discover it a second time.

Although so small, no bird shows more courage in defending its nest than the beautiful "Ruby-throat." Even the Kingbird and quarrelsome English Sparrow draw back from its fierce attacks, as it darts like a bewitched arrow among these larger birds.

I used to watch the Hummingbird, when a child, as it visited each flower along the broad beds which ran about the piazza of my home. Never seeing one alight, I believed that the little hummer never rested. Roses, lilies, scarlet runner, honeysuckle, and other blossoming plants, made the dazzling visitor welcome; but of all the flowers then about the piazza, the morning-glories seemed most in favor.

It was at this time that I used to hunt for fairies. When the dew fell at night, I was sure it had something to do with these little people.

Years after, on a hot August day, I was again watching the Hummingbird

feed about this flower-bordered piazza. Walking to a bed of nasturtiums, I picked a large bouquet, so large indeed, that it was hard to hold all the flowers I had picked in one hand.

Half kneeling by the bed, with eyes fixed on the unwieldy bouquet, I was suddenly aware of a fairy just above my hand. It was very beautiful and glittered green and many colors in the sunlight. Holding my breath and making never a move, I still felt sure the beating of my heart would frighten this lovely creature away. But no! it sipped honey from the flowers in my



HUMMER BROODING YOUNG

hand and, most wonderful of all, for a brief moment, alighted on my forefinger.

When it darted away with a flash and a whirr, I saw that it was a Hummingbird—but that really made little difference. It had seemed just like a fairy, and I have always felt sure, since then, how fairies feel and how they act.

Of course, the next impulse was to see if I could not attract the Hummingbird again to my hand. So, walking very softly and slowly around a cedar hedge, I found it *resting on a low branch*, over a bed of blue larkspur. I cannot tell you how much I wished it would come to me a second-time. Drawing nearer step by step, I stopped at last, never taking my eyes off this elf of a bird.

And now comes the best part of the story, for, just as in a real fairy-story, one's wishes come true, my wish came true then. The little Hummer darted

from the tree, circled hither and yon about the larkspur and without warning, as if by magic, found the big bunch of nasturtiums in my hand. It was all over in an instant, and away went the fairy-bird to seek honey elsewhere. I was very, very tired when I stepped out to gather flowers that warm afternoon, but this glimpse into another world rested me as much as sleep. If I could only tell you how wonderful a feeling it is to really be *friends* with the birds, so that they have no fear of one—but that is impossible! You must try for yourselves, and learn, by really attracting birds to your gardens and to *yourselves*, what fairyland and fairies are like.

NOTE.—Look up the food of the Hummingbird, its nesting habits and methods of attracting it to the home-garden.

A. H. W.

FROM YOUNG OBSERVERS

A Spring Migration Record. 1910

Robins arrived February 24. About 672 seen.

Towhee arrived March 1. [Perhaps wintered.]

Wild Duck seen March 3, swimming in creek.

Red-winged Blackbird, seen on March 6.

Flickers arrived March 6.

Blackbirds arrived March 18. [Rusty Grackle.]

Chipping Sparrow, March 26.

Purple Martin arrived March 31. Only one bird, a male. On April 3, his mate came.

April 12, two more came. On April 15 there were fourteen birds.

Kingfisher came on April 4.

Goldfinch arrived April 12. Five of them were seen. [P. R. as well as T.]

Blue-gray Gnatcatcher arrived April 13. Seen on willow tree.

Barn Swallow arrived April 15. Came at 9:15 A. M. Two came.

Cowbird arrived April 18. One bird seen.

Water-Thrush [Louisiana?] arrived April 19. One bird seen.

Brown Thrasher arrived April 12

Slate-colored Junco left April 14.

Black and White Warbler arrived April 29.

Catbird arrived April 30.

Whip-poor-will arrived May 1.

Indigo Bunting arrived May 4.

Scarlet Tanager arrived May 5.

Maryland Yellow-throat arrived May 8.

American Redstart arrived May 12.

Magnolia Warbler seen May 15.

Bobolink arrived May 15.

Blue Grosbeak arrived May 17.

Yellow-breasted Chat arrived May 17.

Chimney Swifts arrived May 19. [April 19?]

Ruby-throated Hummingbird arrived May 19.

Kingbird arrived May 23. [See table of dates below.]

—GARRETT CAMPBELL, (age 13 years), *Mannington, W. Va.*

(An unusually reliable list for so young an observer. Compare with the following data.—A. H. W.)

AVERAGE AND EARLIEST DATES OF ARRIVAL

	Wayne County, Ohio		Eastern Pennsylvania and New Jersey
Kingfisher.....	March		Rare in winter.
Flicker.....	Permanent Resident		Mar. 25.
Whip-poor-will.....	May		Apr. 22.
Swift.....	Mar. 28–Apr. 21. Av., Apr. 15.		Apr. 15.
Hummingbird.....	May 1–10.		May 12.
Kingbird.....	Apr. 19. Av., May 3.	Washington, D.C., Apr. 29. White Sulphur Springs, W. Va., Apr. 24.	May 6.
Bobolink.....	Apr. 21. Av., May 1–8.		May 1–15
Cowbird.....	Mar. 16–Apr. 1.		April.
Red-winged Blackbird.....	Feb. 25. Av., Mar. 7.		Feb. 6—later.
Rusty Blackbird.....	Mar. 25–May 8 Av., Apr. 15.		Mar. 1–Apr. 15.
Purple Grackle.....	Feb. 25. Av., Mar. 1.		About Feb. 20.
Bronzed Grackle.....	Permanent resident.	Alfred, N. Y., Apr. 25. French Creek, W. Va., Mar. 26.	Uncommon. Permanent Resident
Goldfinch.....		Waverly, W. Va., Mar. 30.	
Chipping Sparrow.....	Mar. 21. Av., Apr. 1–8.		Mar. 30.
Junco.....	Leaves late in April.		Leaves Apr. 15–May 1.
Towhee.....	Mar. 18–Apr. 6.		About Apr. 18.
Blue Grosbeak.....			Reported to have bred in Cumber- land and Lancas- ter Cos., Penna.
Indigo Bunting.....	Apr. 24. Av., May 7–14.		About May 10.
Scarlet Tanager.....	May 1–7		May 5–18.
Purple Martin.....	Mar. 25. Av., Apr. 1–8.		Apr. 1–10.
Barn Swallow.....	Apr. 9. Av., Apr. 20.		Apr. 19.
Black and White Warbler.....	May 1–15.	French Creek, W. Va., Apr. 13.	Apr. 25–May 15.
Magnolia Warbler.....	May 11–22.	Washington, D. C., Apr. 30. Beaver, Pa., May 5.	May 10–20.
Louisiana Water-Thrush.....	Apr. 21–30.	Washington, D.C., Apr. 11. French Creek, W. Va., Apr. 3.	Apr. 12.
Maryland Yellow-throat.....	Apr. 23–May 7.	Washington, D.C., Apr. 21. Beaver, Pa., May 4.	Apr. 25.
Yellow-breasted Chat.....	May 17.	French Creek, W. Va., May 1.	May 5.
Redstart.....	Apr. 30. Av., May 7.	Washington, D.C., Apr. 23. Beaver, Pa., Apr. 29.	Apr. 30–May 20.
Catbird.....	Apr. 26.		May 5.
Brown Thrasher.....	Apr. 1–few days later.		Apr. 22.
Blue-gray Gnatcatcher.....	Apr. 19. Av., late in Apr.		Rare summer resi- dent, southern N. J. Reported from southern Pa.
Robin.....	Feb. 5–27, usually before Feb. 15.	Berwyn, Pa., Feb. 14– Mar. 7.	Mar. 15, also a per- manent resident.

Av. = average.

The Goldfinch is more abundant during spring and fall in places marked "Permanent Resident."

The above data are taken from: A Preliminary List of the Birds of Wayne Co., Ohio, Oberholser, 1896; Birds of Eastern Pennsylvania and New Jersey, Stone, 1894; Migration of Warblers Sparrows, Flycatchers and Thrushes, Cooke, see BIRD-LORE, Vols. VI-X.

**A Nature-Study Composition Based Upon Personal Observation.
A Catbird's Revenge**

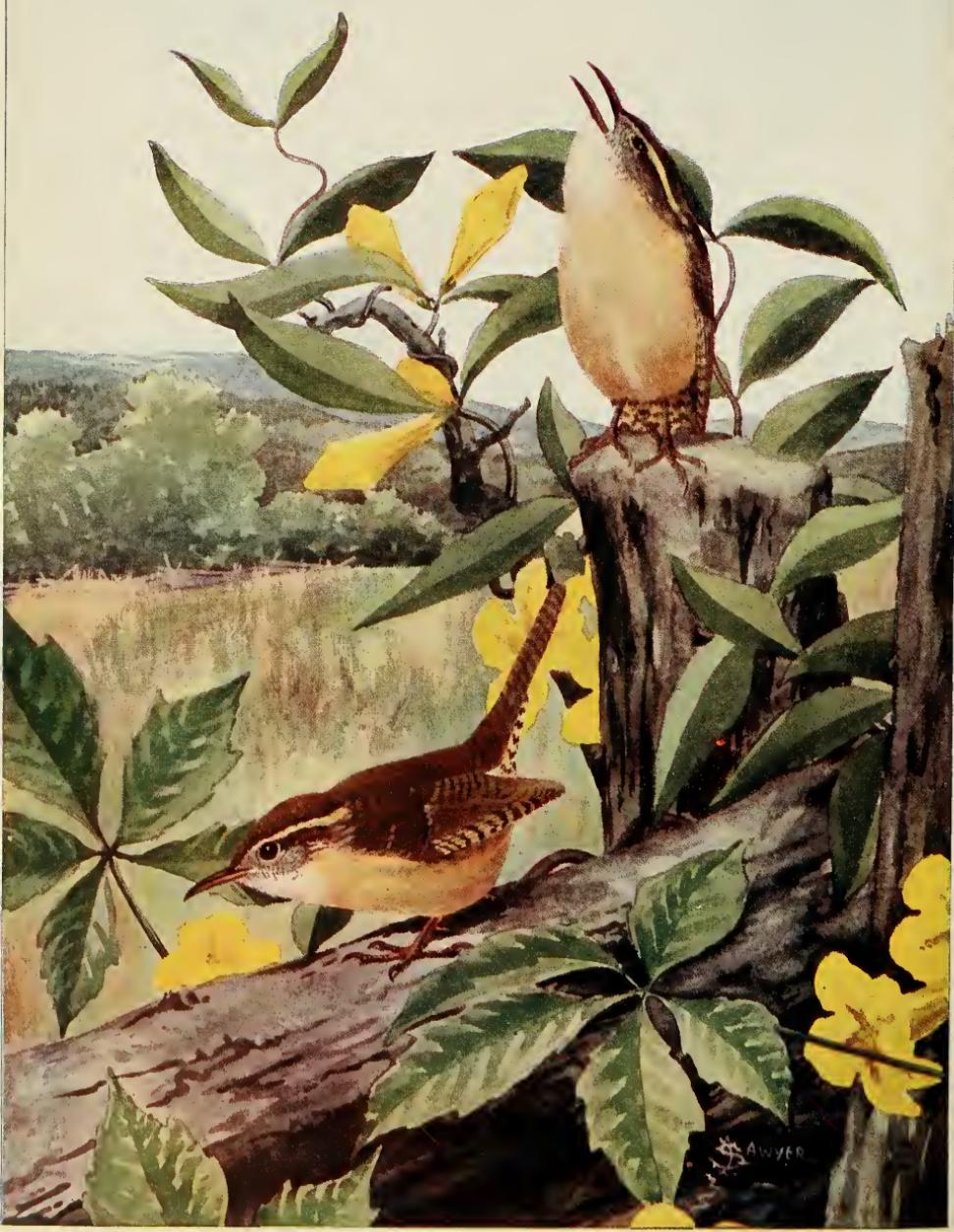
Once, up in the small branches of a tree, there was a cosy little family of Catbirds, including the mother, the father and the young, all as happy as could be. Every morning, the two older ones would go out in search of worms for their babies. But one day, alas! that awful creature with long claws and sharp teeth, called the cat, that filled the young with horror and made the parents tremble, made a visit to that little nest. In a few minutes the happy little family were all destroyed, all save the two older ones.



CATBIRD ON NEST

The poor mother, reduced to despair, did not care whether she lived or died, and the prowling cat waited his chance and with one quick spring, he had her in his claws. Now that this family had been killed there was but one thing that the mate thought of and that was revenge. What this poor bird did, he would not [have] dared [to] do if he had not been so enraged. The cat would be lounging lazily on the ground, when the bird would swoop down from a near fence or tree, pluck[ing] a bill full of fur from the back of his enemy, and then fly quickly away. Try as he would, the cat could not catch the Catbird. He would not let the cat get any rest, and so made the cat's life miserable.—OGDEN A. KELLEY (age 11 years), *Chevy Chase, Md.*

A good observation, vivid and connected. The instincts of birds, should not be confused with human emotions.—A. H. W.



CAROLINA WREN
(One-half natural size)

Order—PASSERES

Family—TROGLODYTIDE

Genus—THRYOTHORUS

Species—LUDOVICIANUS

National Association of Audubon Societies

Educational Leaflet, No. 50

THE CAROLINA WREN

By WITMER STONE

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 50

There are two birds which, dissimilar as they are in color and family relationships, are always closely associated in my mind because of their similarity in voice and habitat—the Cardinal and the Carolina Wren. Both are characteristic of that southern land which stretches along our lower Atlantic seaboard and comes pushing northward along the Susquehanna and Delaware river valleys and up the Mississippi and its branches.

In alder swamps and low, moist woodland we find them both throughout the year; for they seem to be practically resident wherever they occur. Time and again we are puzzled in early spring, when both are in full song, to distinguish between their varied melodies.

In the low, flat ground bordering the tide-water creeks of southwestern New Jersey, they are particularly abundant, especially in midwinter, when it always seemed to me that most of the Cardinals and Carolina Wrens gathered in these swamps from all the country round about. Here they find food and shelter suitable to their needs, and here the winter sun seems to shine more warmly than back in the higher grounds of Pennsylvania.

The Carolina Wren, however, is not entirely confined to these low grounds in winter, but ranges well up the narrow valleys and deep ravines, and often we find him along the rocky banks of some ravine where flows a narrow, tumbling stream and where the hemlocks of the North mingle with the red-bud and tulip-tree of the South.

In such retreats in midwinter, when all is white with snow and the edges of the streams are fringed with ice, we are startled by his clear, ringing whistle—"tea-kettle, tea-kettle, tea-kettle," and suddenly he darts out from behind some fallen log, all action, like the typical Wren he is, bobbing up and down on his slender legs, tail cocked in the air, his sharp eye constantly fixed upon the intruder, and he is out of sight in a moment, only to reappear again somewhere else in a perpetual game of hide and seek.

To those who are familiar only with the House and Winter Wrens he seems too large for a Wren; indeed, he seems quite as large as a Song Sparrow, especially when his soft plumage is well fluffed up. His color is bright cinnamon-brown above, strongly tinted with the same below, but whitish on the throat, and with a conspicuous white line running over the eye down to the side of the neck. When we spread apart the long rump feathers, we find many of them marked near the middle with round spots of white, which are entirely concealed unless the plumage be disarranged. The Carolina Wren, like the

other members of his family, undergoes no change of plumage. Young or old, winter or summer, his dress is practically the same, differing merely in fullness of feather and depth or purity of tone.

His Song His most characteristic song has been likened by Mr. Chapman to *tea-kettle, tea-kettle, tea-kettle*, or *whee-udle, whee-udle whee-udle*. Wilson wrote it *sweet-william, sweet-william, sweet-william*, while to Audubon it seemed to say *come-to me, come-to me, come-to me*. There are variations recalling forms of the Cardinal's song, as well as that of the Tufted Titmouse; and the Wren, after repeating one form for some time, often changes suddenly to another, producing a rather startling effect, as if another bird had taken his place.

There are also Wren-like 'chucks' of annoyance or interrogation when a stranger appears on the scene, and a peculiar fluttering 'k-r-r-r-r-uck,' which resembles the bleating call of the tree-toad more than anything else.

The Carolina Wren is often termed the Mocking Wren, on the supposition that its notes are deliberate imitations of those of other birds. Indeed, Nuttall gives a most elaborate list of its vocal performances, likening them to various birds from the Kingfisher to the Maryland Yellow-throat, in addition to those already mentioned.

It seems probable, however, that the Carolina Wren is not a mocker; that the resemblance of his notes to those of certain other birds is accidental, and that they are as truly his own as are the song of the Robin, the Hermit Thrush, or any other of our birds.

That there is a striking resemblance between the notes of our Wren, the Cardinal and the Tufted Titmouse, is beyond question; and one cannot but recall the similarity of their distribution, and wonder if there is any relationship between song and environment.

The Nest As spring advances, the repertoire of the Carolina Wren seems to be enlarged, and his voice is always a characteristic one in the bird chorus of his neighborhood. Rocky banks with cave-like retreats have now more interest for him than ever, and with never-abating energy he and his mate search out each promising cavity for a suitable location for their nest. This structure is usually arched over with an opening on the side, constructed of leaves, roots, feathers, moss, etc., lined with finer material. The eggs are four to six, creamy white, with rusty brown and lavender markings often collected about the larger end.

Old stumps and hollow trees, or cavities in stone walls, are often appropriated as nesting-sites, and occasionally the bird becomes quite as familiar as his smaller relative, the House Wren. In one instance, a brood was reared in a mortise-hole in the wall of a house, in such a position that the old bird had to fly in and out over the heads of the people sitting on the porch.

Mr. Pearson has found nests in North Carolina, situated in the pocket of an old overcoat left hanging on a back veranda, in a tin wash-basin on

the mantel of a deserted negro cabin, in a broken gourd carelessly tossed on a grape arbor, and in a cap hanging against the lattice wall of an outhouse.

In a country place near Philadelphia, a pair of Carolina Wrens entered the sitting-room through a window that was left partly open, and built their nest in the back of an upholstered sofa, entering where a hole had been torn in the back. Needless to say, they were not disturbed, and were given full possession until the young were safely reared. Not far away, a brood raised near the house came back, night after night, to roost in a rolled-up Japanese screen hanging on the porch.

As a rule, however, the Carolina Wren is distinctly a bird of the wilder wooded spots, usually in the immediate vicinity of some small stream or river shore, for water seems to have a peculiar attraction for him.

The food of the Carolina Wren consists wholly of insects of various kinds—caterpillars, beetles, etc., and, like all of its tribe, it is an exceedingly beneficial bird, fully meriting the protection that is usually accorded to Wrens by all save the house cat, who is their mortal enemy.

I was delighted, one day several years ago, to hear a subdued song apparently coming from my small city yard. I thought at first that some neighbor had a caged Cardinal, but, upon investigating, found a Carolina Wren exploring my wild-flower bed, and occasionally indulging in a subdued whisper-song. All day long I tried to protect him from the cats, which were intent upon "stalking" him from the neighboring yards, but which were kept off to a great extent by my chicken-wire addition to the fences. I trust that he departed in safety, though I know that the cats, a few days previously, deprived a visiting House Wren of his tail, and rendered him so strikingly like the Winter Wren that I fear he may have proved the subject of an unusual record of the latter species.

The Carolina Wren occurs throughout the lowland of the **Distribution** southern states, north to the upper limits of the Carolinian Life Zone, regularly to southeastern Pennsylvania and southern New Jersey, and west of the Alleghanies to southwestern Pennsylvania, central Ohio, Indiana, and Illinois, and west to southern Iowa, Kansas and Texas. It occurs casually north to southern New England, Michigan, and Minnesota.

While of regular occurrence about Philadelphia, it is to some extent local, and not so abundant or universally distributed as along the broader valley of the Susquehanna, a little farther to the westward. That is the region particularly associated in my mind with the Carolina Wren in summer, just as the low swamps of New Jersey stand out as his winter quarters: the broad river rushing along among its rocks and islands, the high wooded hills rising from either bank, cut with innumerable rocky ravines, the summer sun lighting up the whole landscape, and floating up from every side the clear, far-reaching notes of the Carolina Wren.

The Carolina Wren (*Thryothorus ludovicianus ludovicianus*)

Classification breeds from southeastern Nebraska, southern Iowa, Ohio, southern Pennsylvania and lower Hudson and Connecticut valleys south to central Texas (western Texas in winter), Gulf States and northern Florida; casual north to Wisconsin, Michigan, Ontario, Massachusetts, New Hampshire and Maine. The form known as the Florida Wren (*Thryothorus ludovicianus miamensis*), is the Florida representative of this species south of the Suwannee river, Gainesville and Palatka. The Lomita Wren (*Thryothorus ludovicianus lomitensis*), is the form of the Carolina Wren represented in the Lower Rio Grande Valley, Texas and northern Tamaulipas, Mexico.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1974 Broadway, New York City

President Dutcher

Those closest to President William Dutcher find little for encouragement in his continued illness. The paralytic stroke, which seven months ago took him with cruel suddenness from the service of a happy and wonderfully useful life, has rendered him entirely incapable of any activities. Occasionally he is lifted to a chair, but most of the time he simply lies in bed, where, propped on pillows, he often looks out over the beautiful garden of his Plainfield home and follows with keen interest the movements of the birds which gather about the nesting-boxes he built for them. His mind seems clear, and his face shows enjoyment when occasionally a letter is read, or some cherished friend is allowed to see him for a few minutes.—T. GILBERT PEARSON.

Levy Plumage Bill

Apparently, Assembly Bill No. 359, introduced in the New York Legislature by Assemblyman A. J. Levy, was designed chiefly to open up the traffic in Heron aigrettes. The wording, however, was of such peculiar character that it is the general opinion of those who have studied it most closely that it would open up the way for the sale of other feathers and place in jeopardy many birds of New York state. Later, it was amended so as to permit without restriction the sale of the feathers of birds of prey coming from without the state. At the date of this writing (May 17), the bill is understood to be in the hands of the Rules Committee, having passed there from the Assembly Committee on Forest, Fish and Game. This is a customary disposition of all bills which are still pending when the end of the legislative session approaches.

The fight which the friends of birds have waged in New York state against the passage of this measure has been a most notable one, and the National and State Audubon Societies has had the active and earnest coöperation of many other organizations. Among these may be mentioned The Camp-Fire Club of America; the New York Forest, Fish and Game League; the New York Zoölogical Society; the Wild Life Protective Association; the New York Association for the Protection of Game; The Hunter's Club of Onondaga, and the Conservation Committee of the General Federation of Women's Clubs. To these should be added the names of scores of local game-protective clubs, women's clubs, and other organizations. At least five of the organizations named have issued printed appeals, which have been distributed widely, calling upon the citizens of the state to request their Representatives and Senators to vote against the Levy Bill. As a consequence, thousands of letters and telegrams of protest have poured into Albany. Over a month ago, one Assemblyman wrote to a member of the Audubon Society that he had received over two hundred letters from his constituents, asking him to use his influence against the Levy Bill.

The public press of the state is evidently in entire accord with the contention of the Audubon Society, and the sentiment prevailing is well expressed in the title of an editorial appearing in the "Rochester (New York) Union" for April 29, "The Milliners vs. The People." On the other hand, certain large interests in New York City, which are more interested in exploiting birds commercially than in protecting them, have, by means of letters, paid articles for the newspapers, and by representatives sent to Albany, sought to show

that the opposition to the Levy Bill was entirely a matter of misguided sentiment, and that failure to pass it would entail a very great loss to large legitimate business interests.

A hearing on the merits of the bill was given by the Forest, Fish and Game Committee of the Assembly, on April 26. This Association was represented by the First Vice President, Dr. T. S. Palmer, the general counsel, Mr. Samuel T. Carter, Jr., and by the Secretary. Mrs. Ralph Waldo Trine spoke for the women of the Association. The New York Zoölogical Society was represented by Dr. William T. Hornaday; the New York Association for the Protection of Game by Mr. Robert B. Lawrence; The Camp-Fire Club of America by Mr. A. S. Houghton; The American Museum of Natural History by Mr. W. DeW. Miller, and the Humane Society of Rochester by Mr. J. W. Johnston. There were also several others present in the interest of bird protection, among these was Mr. C. S. Cooke, attorney for Miss Theodora Wilbour, a member of the Audubon Society. The millinery interests were represented by an attorney and several men and women connected with the millinery business.

The milliners contended that the Shea Law was indefinite and difficult of interpretation; that its enforcement would produce much suffering on the part of employees of the feather trade; that they had no desire to deal in the feathers of New York birds, and wished only to be permitted to carry forward a business in imported feathers. The Levy Bill, they said, would give them the relief they sought.

The Audubon Society and its friends contended that it had already been demonstrated that the Shea Plumage Law was a practical one and easy to construe; that the Levy Bill would open the way for the killing of many New York birds which the people of the state desired should be preserved; that the feather workers would still find adequate employment in making decorations for women's hats, and that it was hardly fair to repeal the

Shea Law before it had time to go into effect on July first of this year. Attention was also called to the fact that this law had passed at the last session of the Legislature by an overwhelming majority, and in response to an almost universal demand on the part of the people of the state.

The hearing was a long and spirited one. The Committee reserved its decision until a later date and, as stated above, the bill has now passed into the hands of the Rules Committee.—T. G. P.

Save the White Herons

It is very apparent that, unless the most immediate and energetic efforts are taken, the Snowy Heron and American Egret in the United States will soon succumb to the greed of man and pass into history, to take their places beside the Labrador Duck, the Passenger Pigeon, Eskimo Curlew, and Carolina Paroquet. Their habits of nesting in colonies, the fact that they produce aigrette plumes only in the reproductive season of the year, the constantly increasing prices which are paid for their feathers, and the eagerness with which they are hunted, all combine to produce an adverse condition under which no species of animal life can long survive.

This Association, and many State Audubon Societies, have been laboring for years to stem the terrific tide of fashion and love of money which is sweeping the birds with relentless force to the sea of extinction. Many positive results have been accomplished. For example: the states where these birds are found have, through the work of the Audubon Society, passed laws to protect them. In several states, including New York, New Jersey, Louisiana, Missouri, Massachusetts, Oregon, and California, statutes have been enacted which prohibit the sale of Heron feathers, and thousands of thoughtful women have ceased to wear aigrettes and have placed the stamp of their disapproval upon the custom,—and still the slaughtering of the birds goes on! There are yet many large cities where business interests

stand with outstretched hands beckoning to the inhabitants of the southern swamps to send on the snowy product, and the man with the gun, catching the glint of gold in the eager fingers of the northern merchant, starts for the haunts of the Egret with renewed eagerness. Few of the states which the birds inhabit today have adequate warden forces and so the plume hunter goes unrestrained. Then, too, the milliners are busy in other directions. Recently they have been distributing with great energy cunningly worded articles to the effect that aigrettes are not taken from shot birds but are picked up on the ground in Venezuela beneath the Herons' nests. In support of this, they bring forward a statement purported to have been written by "Mayeul Grisol, Naturalist and Explorer of the Honorary Mission of the Museum of Natural History in Paris," in which the author verifies this story. So incredible does this seem to many American naturalists that Prof. Henry Fairfield Osborne, President of the American Museum of Natural History, New York City, sent the following cablegram on April 20, 1911, to the Museum of Natural History, in Paris: "Is Mayeul Grisol of scientific standing? Has he been an accredited explorer for your museum to South America?" The answer was received two days later: "Mayeul Grisol *inconnu*." (Mayeul Grisol unknown.)

Reference to the European catalogues of scientific men show that there is a man by this name who is an entomologist, but who apparently has never done any work in ornithology and, therefore, can hardly be considered authority on birds and their habits.

In New York City there is today a man named A. H. Meyer, who for nine years was a collector of Heron plumes and alligator skins in Venezuela.

Here is a quotation from a sworn affidavit given the writer of this article, April 19, 1911.

MEYER'S AFFIDAVIT. "I wish to state that I have personally engaged in the work of collecting the plumes of these

birds in Venezuela. This was my business for the years 1896 to 1905, inclusive. I am thoroughly conversant with the methods employed in gathering Egret and Snowy Heron plumes in Venezuela, and I wish to give the following statement regarding the practices employed in procuring these feathers: It is the custom in Venezuela to shoot the birds while the young are in the nests. A few feathers of the Large White Heron (American Egret), known as the *garza blanca*, can be picked up of a morning about their breeding-places (*garzeros*), but these are of small value and are known as 'dead feathers.' They are worth locally not over three dollars an ounce, while the feathers taken from the bird, known as live feathers, are worth fifteen dollars an ounce.

"My work led me into every part of Venezuela and Colombia where these birds are to be found, and I have never yet found or heard tell of any *garzeros* that were guarded for the purpose of simply gathering the feathers from the ground. No such a condition exists in Venezuela. The story is absolutely without foundation in my opinion, and has simply been put forward for commercial purposes. The natives of the country, who do virtually all of the hunting for feathers, are not provident in their nature, and their practices are of a most cruel and brutal nature. I have seen them frequently pull the plumes from wounded birds, leaving the crippled birds to die of starvation, unable to respond to the cries of their young in the nests above, which were calling for food. I have known these people to tie and prop up wounded egrets on the marsh where they would attract the attention of other birds flying by. These decoys they keep in this position until they die of their wounds or from the attacks of insects. I have seen the terrible red ants of that country actually eating out the eyes of these wounded, helpless birds that were tied up by the plume hunters. I could write you many pages of the horrors practiced in gathering aigrette feathers in Venezuela by the natives for the millinery trade of Paris and New York.

"To illustrate the comparatively small number of dead feathers which are collected, I will mention that in one year I and my associates shipped to New York eighty pounds of the plumes of the large heron and twelve pounds of the little curved plumes of the snowy heron. In this whole lot there were not over five pounds of plumes that had been gathered from the ground—and these were of little value."

Mr. A. H. Meyer lives at Fort Wadsworth, Staten Island, New York, and can easily be seen or communicated with by any one wishing to obtain further information.

The Heron Aigrettes used in the North American trade today come largely from foreign countries, where the plume hunters went in quest of them after the birds had nearly disappeared in the United States. If we can preserve the small remnant found in this country today, there is no reason why they should not once more become numerous, and be seen frequently about the shores of the ponds and rivers where they formerly occurred, even as far north as New York state and beyond. We know today of less than a dozen colonies, although there are doubtless some others in the wilder recesses of the southern swamps.

FIVE THOUSAND DOLLARS NEEDED. To save these birds, we need at once a fund of \$5,000, and the same amount annually for at least two years to come. With this fund, we will be able:

1. To search out and locate the existing colonies of these birds.
2. To employ wardens to guard the birds during the time of year when they are engaged in constructing their nests and caring for their young.
3. To publish and distribute widely throughout the United States, in circular form, the real facts regarding the method of collecting Heron Aigrettes, with a view of discouraging the traffic in them.
4. To conduct a vigorous legislative campaign in those states which have not yet passed laws prohibiting the sale of the

feathers. We would also be in a position to aid the local game protective authorities in enforcing the law where merchants attempt to evade its provisions.

There are probably among the readers of *BIRD-LORE* a great many who may be interested in contributing something to this cause.

A subscription list has been started and during the past ten days the following contributions have been received:

A Friend of the Birds.....	\$500 00
Linnæan Society.....	200 00
Mr. John Dryden Kuser.....	100 00
Mr. Harry H. Benkard.....	84 00
Mr. Edwin Gould.....	50 00
Mr. Arthur Goadby.....	50 00
Mrs. C. Oliver Iselin.....	25 00
Mr. Maunsell S. Crosby.....	5 00
Dr. W. H. Bergold.....	5 00
Misses S. E. and E. L. Clark.....	2 00
Wm. B. Evans.....	2 00
Miss Emily Belle Adams.....	1 00
Mr. Eliot Blackwelder.....	1 00
Mr. Wm. S. Essick.....	1 00
Mr. Thomas D. Keim.....	1 00
Mr. James P. Garrick, Jr.....	1 00
	\$1,028 00

That action cannot be taken too quickly is well illustrated by the following quotation from a letter received from Warden O. E. Baynard, who is today guarding the Heron colony in Orange Lake, Florida. Under date of April 24, he writes: "I was too late to do any good on the Oklawaha river. That rookery of long whites (American Egrets) are shot up to one pair of birds. I had a man (unpaid) start to looking after it, but he said he came home one afternoon from Melaka from selling his fish, and it sounded like four men with double-barrel guns in there, and it sounded like war. He went the next day and said it was a sad sight."

And thus it is that we witness the passing of the White Herons! Is it worth while to save them?—T. G. P.

Maine Legislation

Mr. Arthur H. Norton, President of the Maine Audubon Society, has been very active, the past winter, in legislative work

in that state. He sends the following summary of final results:

The game-protective measures passed were:

An Act prohibiting the use of motor boats in hunting Ducks in Laco Bay.

An Act providing protection for Eider Ducks from February 1 to October 1.

An Act extending the close season on Plover, Snipe and Sandpipers, so that the season shall close on the first day of December, as it does in the case of Grouse and Woodcock, instead of May 1 as heretofore.

An Act restoring Loons, Herons and Kingfishers to the list of protected non-game birds, providing that the Commissioners of Portland Fisheries and Game shall have authority to destroy the same, when found in or around fish hatcheries.

An Act establishing a close time on Wood Duck for four years.

An Act limiting the number of Ruffed Grouse that may be taken by one person in one day to five.

An Act making the purchase of protected game birds illegal.

And an Act providing that game seized by the Commissioners, or their official subordinates, shall not be sold, but distributed to hospitals or charitable institutions, and the said officials shall take a receipt from the officials of the institutions receiving the same.

The following measures were opposed, and were not passed by the Legislature.

To allow one week in April to shoot wild fowl in Merry Meeting Bay.

To extend the open season on Black Ducks in Casco Bay to February 1, and to allow the shooting of Whistlers the same time, or a month longer, in the same bay.

Some Audubon Workers

III. FRANK BOND

Another national bird reservation was created on April 11, 1911, by order of President Taft. This is located in Northern California, and is to be known as Clear Lake Reservation. It is number fifty-two

in the list of places which the Government has made sacred for the homes of wild birds.

The custom of protecting birds by executive order began in 1903, when, on March 14, President Roosevelt, by a couple of strokes of his pen, provided that Pelican Island in the Indian River, Florida, should be a perpetual home of the wild birds that assemble there. It required a Roosevelt to inaugurate this hitherto undreamed of method of protecting birds by governmental action. He did this on the recommendation of Commissioner Richards, of the General Land Office, who acted on the recommendations of Mr. William Dutcher, Dr. T. S. Palmer, of the Biological Survey, and others. A few months before this occurrence, an earnest worker for the Audubon Society, Mr. Frank Bond, came to the Land Office to serve as Chief of the Drafting Division. He saw in the foregoing incident a great opportunity to preserve the birds over vast areas of territory yet owned by the Federal Government. From many sources he gathered information regarding lakes, islands and swampy regions unsuited for agricultural purposes, but formed, as if nature had designed them to be the homes of innumerable water-birds. He was a Director of the National Association of Audubon Societies, and thus kept in close touch with its workers throughout American territory. Later Mr. Bond was made Chief Clerk of the Land Office by Secretary Garfield, which placed him in even a better position to be of influence in the establishment of bird preserves. It was he who prepared the Executive Orders and important explanatory letters of transmittal to the President for the remaining fifty-one reservations. These refuges are distributed widely:

Ten are along the Florida coasts and keys; four on Louisiana coast; two in Lake Superior, Michigan; North Dakota, two; Oregon, three; Washington, eight; California, three, and California and Oregon, one; Wyoming, three; Montana, one; Utah, one; Idaho, two; Arizona, one; Alaska, six; Hawaiian Islands, one; South



FRANK BOND

Dakota, one; Porto Rico, one; New Mexico two.

The Louisiana and the Florida coast and key's reserves protect, chiefly, the plume birds, such as Herons, Pelicans, Gulls and Terns, Black Skimmers, etc., during the nesting-season, while several of them are the winter homes of myriads of the edible waterfowl, chiefly Ducks. The northern inland reserves, except those in Lake Superior, are breeding-resorts of the ducks and geese which winter on the Gulf coast, and they serve also as resting-stations during the spring and fall migrations for the countless flocks of these birds which go further north to breed. The mid-Pacific and Pacific coast reserves, south of Alaska, are breeding-grounds for countless numbers of sea-birds, the Albatrosses and Petrels in the mid-Pacific, and the Auklets Puffins, Guillemots, Gulls, Cormorants, Petrels, Murres, etc., on the coastal islands; while the Alaskan islands are breeding-grounds not only for these and similar sea-birds, but for many species of Wild Ducks, including the Eider Ducks. The large Yukon Delta reservation protects the Emperor Goose, this being the only known breeding-ground of this rare and royal bird on American soil. Some of the coastal islands are also the breeding-resorts for sea-lions which, of course, are given the same protection afforded the birds.

No man, at this early period in the bird-protection movement, can even estimate the value of these reservations to the rising generation, which is now taking up the burdens of human existence, much less foretell the blessings the increase in bird life will confer upon those who follow in the centuries to come. Mr. Bond believes, also, that, when the available reservation territory is set aside and properly administered, the question of extinction of valuable species, whether of plume or edible birds, will have been solved in the negative, and that in the preservation of the insectivorous and song birds through the awakening conscience of the people, and through the terrors which the vision of an insect-eaten world creates, our descen-

dants, until the end of time, will enjoy much more than we these feathered necessities of human existence.

Mr. Bond has long been interested in bird-life and bird protection. During his twenty years in Cheyenne, Wyoming, as editor of a daily morning paper, he constantly dwelt on the subject, until he built up one of the largest Audubon Societies then existing in the United States. He was born June 30, 1857, and his youth was spent in healthful exercise on his father's farm in Iowa.

His interest manifests itself in a number of ways. He is an artist of ability, and his illustrations have often been published. He is a clever imitator of the notes of many birds. I recall sitting with him one evening in the Palm Court of the Endicott Hotel, in New York, when he set the caged canaries wild with interest and curiosity. Evidently, they thought a new and powerful male canary had arrived in their midst.

—T. GILBERT PEARSON.

New Members

During the period between March 1 and May 1, 1911, the following persons became members and contributors to the work of the National Association.

Life Members—

Brooks, Mr. Gorham,
Hopewell, Mr. Frank,
Pratt, Mr. Geo. D.
Schroeder, Miss L. H.

Sustaining Members—

Adams, Mrs. Brooks
Ames, Miss Harriet S.
Andrews, Mr. R. C.
Baldwin, Mr. George J.
Barlett, Miss Fannie
Barry, Mr. C. T.
Bement, Mrs. Grace F.
Benkard, Mr. J. Philip
Blake, Mr. Maurice C.
Blossom, Miss K. E.
Brown, Miss Augusta M.
Brown, Miss Eva I.
Brown, Mr. Robert I.
Brown, Mr. T. H.
Brown, Mr. W. H.
Burleigh, Mr. George W
Buttrick, Miss H. B.
Carty, Mrs. John
Case, Miss M. R.

Sustaining Members, continued

Chase, Mrs. M. M.
 Church, Mrs. George
 Churchill, Mr. J. R.
 Converse, Mr. Costello C.
 Crehore, Miss Elizabeth T.
 Crompton, Miss Cora E.
 Crompton, Miss Mary
 Crompton, Miss Stella S.
 Crossett, Mrs. Lewis A.
 Crowell, Mrs. J. S.
 Curtis, Mrs. J. F.
 Daland, Mrs. T.
 Dane, Mrs. E. B.
 Davies, Mrs. Mansfield
 Dodge, Miss Josephine K.
 Ford, Mrs. Simeon
 Gellatly, Mrs. J.
 Goadby, Mr. Arthur
 Goodell, Mrs. James
 Hawkins, Mrs. Eugene D.
 Heller, Mrs. David
 Hentz, Mr. Leonard L.
 Hentz, Mr. Henry
 Hopewell, Mr. John
 Hoyt, Mrs. John Sherman
 Hupfel, Mr. Adolph
 Kuser, Miss Cynthia G.
 McAlpin, Jr., Mr. D. H.
 Miller, Mrs. C. R.
 Rawlinson, Miss Ellen
 Sands, Mrs. P. J.
 Scaife, Mr. William B.
 Thayer, Mrs. Mary R.
 Towne, Mr. William E.
 Underhill, Mr. W. P.
 Vanamee, Mrs. William
 Ward, Mr. Edward L.
 Willson, Miss Katherine E.
 Wilcox, Miss Marie
 Wood, Mrs. A. B.

Contributors—

Beaufort, Mr. W. H. De
 Chapman, Miss Annie B.

Notes From the Field

KENTUCKY.—The Audubon Society of Kentucky was organized on January 28, 1911, with the following officers: President, James H. Gardner; Vice President, Miss Nannie Bain Didlake; Secretary-Treasurer, Victor K. Dodge.

The Society has been growing rapidly, and has been doing much splendid work. Largely through the efforts of Miss Emily Barnes, one hundred and eight Junior Audubon Classes, with a total paid membership of one thousand, four hundred and sixty-nine, have been organized in the

schools, under the provisions made possible by the contributions of Mrs. Russell Sage.

ALABAMA.—May 4, the anniversary of the birth of John James Audubon, was celebrated in practically all the public schools of Alabama by the observance of a program incorporated in the Alabama Bird-Day Book, prepared by Hon. John H. Wallace, Jr., State Game and Fish Commissioner. The program deals with the economic value of birds and game, and their beneficial relations to man, and has for its object the inculcation into the youthful mind of a desire to conserve all the valuable natural resources of Alabama. The plan includes taking the children into the woods and fields, where they may study at first hand the habits of the wild birds, and notice the visible reasons why care should be taken for their preservation. In this work, Alabama is setting a splendid example for many other states.

NEW JERSEY.—All bird-lovers are to be congratulated on the recent legislative outcome of the New Jersey State Audubon Society's work. A bill to prohibit the sale of the plumage of any wild bird which would jeopardize the protection extended the native birds of New Jersey was, on February 21, 1911, introduced in the Assembly by Hon. Amos H. Radcliffe. This was the Audubon Society Bill which was pushed by its members and friends until, on April 18, it was signed by Governor Wilson. In its wording it follows closely the Shea-White plumage law enacted in the New York Legislature last year. Had this wise action not been taken by the New Jersey Legislature, there seems to be no reason why the wholesale milliners of New York City should not have moved their stock across the river, and gone on with their business much as heretofore, when on July first of the present year the New York law goes into effect.

Mr. J. D. Kuser deserves honorable mention for having secured the largest number of paid members for the New Jersey Society.—T. G. P.

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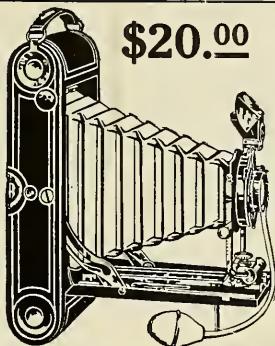
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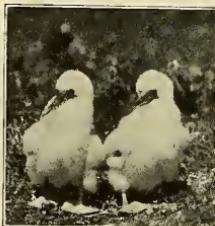
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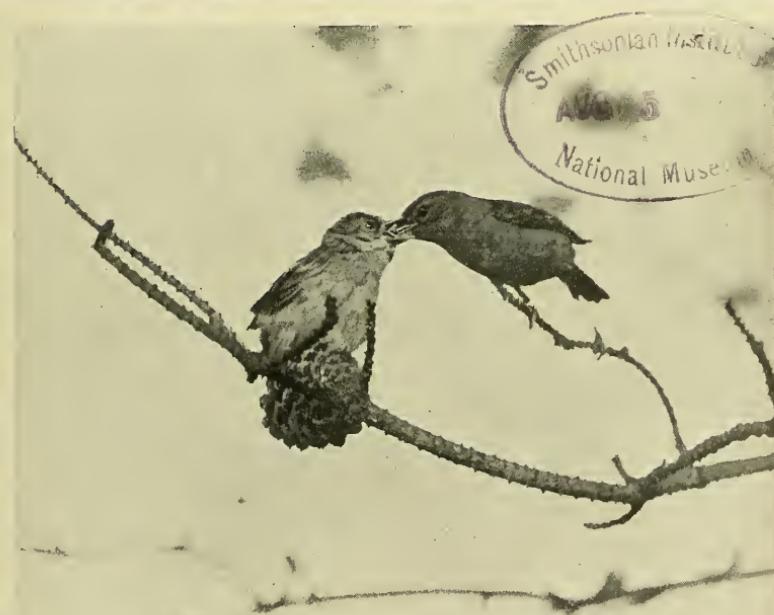
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Bird - Lore

July - August, 1911

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Vol. XIII

JULY—AUGUST, 1911

No. 4

Birds and Seasons in My Garden

IV. JULY AND AUGUST

By MABEL OSGOOD WRIGHT

FROM the standpoint of the militant bird student who wishes to come, see and conquer, July and August are the low-tide months of the bird world, well-matched twins of January and February. Yet, in my garden, each year we have a little spectacular performance that breaks the comparative monotony between the nesting and the flocking seasons, and this play we call The Comedy of the Cherry Trees. Today, the sixth of July, this comedy is at its height, and, having begun ten days ago, it bids fair to last another week.

The cherry trees are five in number, and, though they draw sustenance from our soil, they do not belong to us but to the birds, for were they not bird-sown? Yes; surely, even though their ancestors were garden cherries that yielded the famous fourth of July cherrypie to some careful housewife. Hence, though the cherries are well flavored and plentiful, they are too small to be considered from a culinary standpoint, so, having taken a toll of the eye from the trees through their beauty in blossom time, we, thenceforth, surrender them to the birds without hindrance or regret.

Four of these trees are in a copse where they have reached up, tall and slender, toward the light. The fifth, or I should rather say, the first, from point of importance, is down in Bluebird Farm within easy reach of the stone drinking-basin, and it is among the branches of these trees that we may best take the bird census of a July day, when the music is beginning to dwindle in volume and innumerable fledglings are causing not only audible parental anxiety, but warning the garden owners to double the *Cat Guard*, an important branch of the rural military service of Garden Scouts.

We have had no novelties nesting here this year, only the rank and file—the good old standbys—the twenty odd species that *vox populi* means when it says that it *loves birds*. Here is the list for those who care for tabulation: Robins, Chipping Sparrows, Wrens and Song Sparrows *galore*; two pairs of Bluebirds, four pairs of Catbirds and the same number of Wood Thrushes;

one pair of Orchard Orioles and two pairs of Baltimores; three pairs of Flickers, one pair each of Downy Woodpeckers, Wood Peewees, Red-eyed Vireos, Rose-breasts, Warbling Vireos, Hummingbirds, Screech Owls, and Chickadees, five pairs of Field Sparrows, two pairs of Brown Thrashers, one pair of Crows (eggs and nest removed as soon as laid, birds pretended to go away but didn't), two pairs of Jays, half a dozen pairs of Meadowlarks and Purple Grackles, a trio of Red-wings, a number of Goldfinches, nests not yet located, two pairs of Yellow Warblers and Starlings—Starlings everywhere—so disagreeable to the bird brotherhood in general as to deserve the name of feathered cats, and last of all a platonic pair of Night Herons, the last of the flock that wintered here, who, being nestless, still roost in the spruces and go down to tidewater on foraging excursions.

The morning chorus has, for the past week, resolved itself to a sextet, the voices of Robin, Catbird, Wood Thrush, Wren, Song Sparrow and the drumming of the Flicker above being particularly distinguishable. The Baltimore Oriole is songless, though his wife still admonishes him querulously. His plumage is still of the brightest, and, this morning as I saw him hanging upside down from one of the heavily laden branches of the great cherry tree, his colors seemed complimentary of the cherries themselves.

A healthy cherry tree is so well shingled with deep green leaves as to form an almost impenetrable screen to the watcher, and many birds are consequently seen as silhouettes. The Oriole ate voraciously and yet scolded more than he ate. Soon he was joined by his mate, and then my attention was attracted by the careful way in which they kept on the *outside* of the trees in feeding, a rather unusual proceeding on the part of birds of bright hues. Were the glowing cherries offering them sufficient color protection?

No; a second later a number of Robins dived in among the branches and the tree literally exploded birds. A flock of some forty Starlings, adults and young of the year, and half as many Robins, all engaged in a beak and wing fight. In some cases the birds separated into pairs to fight it out, in others small groups kept whirling about while the feathers flew. The battle waged all over the garden and down across the Meadowlarks' old grass field. Now and then, four or five young Starlings would perch on the top wire of the fence, only to be swooped off sometimes by Robins and sometimes by their own kin, who had lost their heads after the fashion of agitated human parents. Results, dead, one Robin and one Starling; maimed, three Robins and one young Starling, with a queer wing, who, however, trailed off so quickly that it could not be caught.

Robins are certainly pugnacious birds, but the Starling is more than a match for them in a scientific encounter; for while the Robin pecks, the Starling gives powerful, well-directed hammer blows on the head of its victim that are very damaging. Also, the Starling, as far as my experience holds good, is fully as quarrelsome as his countryman, the English Sparrow, in addition to the



THRUSH LANE

weight of superior size. The Starling, without apparent reason, will attack a Robin on the nest, the melee, in two cases, having caused the set of eggs to be broken, and it has not been an uncommon sight to see a pair of Robins within a few feet of their home, parrying with difficulty the vicious thrusts of a single Starling. It would be interesting to know if there is some special antipathy between these two species, or if it is merely because the nest of the Robin is so much more conspicuous than that of any other bird that it invites attack.

For some time after the battle, the great cherry tree remained in apparent quiet; but though not a form had been seen to enter, cherry pits were continually dropping, together with some ripe fruit, and I crept cautiously back of the tree to find the cause. When my eyes became accustomed to the depths of the dim, flecked shade, I saw a solemn company of five feasting in a manner almost suggestive of funeral baked meats—two pairs of crested Cedar-birds and an odd one. Later in the day I found that a pair of these was incubating, their nest being high in a nearby apple tree. The birds that were evidently mated sat close together, but the single bird was somewhat apart and wore a very alert and knowing expression, keeping such a sharp lookout on things beyond that it would frequently leave the tree to make excursions after insects, Flycatcher fashion.

As a slight noise, little more than the wind in the grass, disturbed him, and he slunk off down the meadow, quickly seeking the protecting sides of a half dried water-course, a fresh commotion arose in the tree. A Catbird began it by calling for help, and quickly succeeded in collecting a crowd among which the sharp warning note of the Wood Thrush was prominent. Even a couple of Purple Grackles responded, a quite unusual occurrence, as they do not seem to have quick sympathies, and are so often rebuked for conduct unbefitting polite birds by their tuneful brethren as to be beyond the pale. The enemy this time consisted of two adult red squirrels and three in the kitten stage; all were feasting on the cherries, the young merely eating the pulp, the parents splitting the pits with great relish. To many hard pecks, aimed chiefly at their poppy eyes, the squirrels replied by a fiendish chattering, but it took a systematic onslaught of twenty minutes duration to dislodge even one of the merry devils. Meanwhile, a single Crow, perching in the top of a sycamore, kept up an insistent monotonous one-minute calling, not unlike the tolling of a cracked buoy bell veiled by fog.

At best, the natural enemies of the wild song-bird make an appalling array, and it seems miraculous that any survive when the unnatural foes are added to the list—the cat, the tree-trimmer and the rustic vandal who cuts every wayside bush and draping vine on the odious general principle of neatness. In sitting in one's own garden, in and out of season, so many lesser details appear in addition to the greater ones; and yet it is dangerous to take the guiding of the balance-wheel of nature into one's own hands too rashly.

Of direct enemies to the bird world in general in the nesting-season, the Blue Jay, Crow, Purple Grackle, Starling, red squirrel, cat, black snake and weasel must be counted, while of the indirect and inanimate are the small-meshed wire fences, electric lights and wires, the complete drainage of wide tracts, which not only cuts off the water-supply, but the insect food that breeds near it. Yet, though many of these conditions cannot be directly obviated, they can be counteracted, at least within garden confines.

It is two years since I have continued the supply of lunch-counter food during the entire season with, to me, astonishing results. "Pauperizing the birds," I was once inclined to consider this, and, strictly speaking, it might be so called; and yet, do we expect to invite guests to our houses and not give them of our very best?

Generally speaking, the feeding of birds is preached as a matter for the winter months, but, to my mind, it is, owing to climatic conditions, fast becoming a matter for every day. In early spring, the insect-eaters often return to be met by a killing frost. A dry May sends the earth-worms below the Robin's tug-of-war reach; much spraying with arsenate of lead cuts off the tree-top supply of another group, and so on.

Now at mid and on to waning summer I am having a no less interesting group of table-boarders. To be sure, the supplies are more scattered than in winter, being distributed in a half-dozen places; for I have discovered that when the fruit is picked over for the table, using the damaged berries of various kinds at the feeding-stations, the garden crop benefits in proportion. Only be sure to have the fruit-counter near a shady copse from which the birds may sally forth unobserved, and naturally located, on a fence or stone wall.

I found, during the past winter, that a finely ground compound, sold as "chickfeed," was the best and most economical food for the smaller seed-eaters, such as Song and Tree Sparrows, Lesser Redpolls, Juncos, and so forth. This I kept thickly sprinkled on some old shingles that, for protection, I had fastened over the posts of the piazza railing. I intended to take them off at spring cleaning time, but the sight from the breakfast-table was still so attractive that I said "Just a little longer," until now it has become a feature of the day. Owing to this, three pairs of Song Sparrows have located close to the house, and not only come for their daily rations, but have brought their puffy little fledglings as well, and this morning our own meal was suspended and the Commuter's train allowed to slip by on account of a charming little *tableau vivante*—a mild-eyed mother Chippy feeding a little brood of four, who stood before her on the shingle, open-mouthed with wings all a-quiver. While, more unusual yet, the shy Field Sparrow, with his bright bill and strongly marked back, also visits this place.

Judicious feeding has, I am convinced, helped me to solve the Jay problem so far as it concerns my garden. While in summer the Jay might be dis-



THE BIRDS' POOL—AUGUST

pensed with, in winter he becomes a vital part of the landscape. Add half a dozen Jays to a snowy landscape, sharpened by the clean, black outline of bare trees with blue sky above, and you seem to have the animate revelation of the whole. At this season, the Jays, generally so furtive, become confident and almost friendly, thanks to their ration of dog-biscuit broken into bits no bigger than acorns. "Why," we said to ourselves, "might not a continuance of the supply act as a bribe against egg-hunting?"

All this spring and summer we have kept this food on the winter shelf, and on another, standing on a shady wall, with its long legs protected by inverted tin pans, granary fashion, from the thefts of field-rats. It is rash to assume too much by mere inference, but this one thing I *know*, two families of Jays have been reared in the garden spruces, while two other pairs have made visits daily to the food-shelves, and but once this season have I been called by the scolding and alarm notes of song-birds to find a Jay the center of trouble.

But back to the cherry trees. While the action in the great cherry tree seems usually of the melodramatic, or even tragic, order, the happenings in the four slender trees of the copse by the garden-house savor more of comedy. Here the Catbirds flirt and preen, and the Brown Thrasher, with straight flight and outspread wings, sails through, bearing twin cherries to his bushy retreat that these many years we have called the Thrashery. The feeding methods of birds are well illustrated in the Cherry Tree Comedy. The Catbirds, Thrashers and Robins often 'bob' for the cherries in half flight, as people strive for apples at Hallowe'en. The Orioles cling to the branches and pry among the clusters, even as they rifle the apple-blossoms of insects and, casually, honey, in May, while the heavy-bodied Flickers secure the fruit, carry it to a place of deposit, and then, after several trips, sit them comfortably down, as if picking ants on the lawn, and make a hearty meal.

Yesterday morning, being curious as to the constant rattle of cherry-pits upon the roof of the garden-house, which was in no wise under the tree, I found that a trio of Flickers has ensconced themselves on a ridge at the peak and were rapidly dropping the stones from their store, where they glanced down the shingled eaves to the ground. Then down on the stone wall arose a note, the perfect love song of a perfect Wood Thrush, denoting that the life of the nest is still in progress. August 10 is the last date that I have recorded for the complete song—by middle July it usually passes. Within a dozen feet of me is the singer. Enraptured, unafraid, he sings, and pauses on the zither note, listens, as it were, and picks up the strain, which another thrush over by the pool is answering. Along the wall comes an apparently full-grown bird, its way of using its wings and opening of the beak alone suggest the nestling of a first brood, perhaps.

The musician pauses, flies into the copse, returns with a cherry which he places in the open beak, and calmly continues his song. What an artist is Nature!

With The Comedy of the Cherry Trees closes the complete life of the nesting-season prolonged by the Cedar-birds, Goldfinches and odd individuals until the silent month of molting, August.

Say goodbye to some of the gaily-robed singers, for when they emerge in late summer or early autumn, their individuality of life and plumage will be gone. It will be the life of the flock, not the pair, that will pass before you. The Orioles that stab the trumpet flowers for their honey, will be dull of coat—male blended with female—and the Scarlet Tanager who called so bravely from the oak wood will come out minus his glowing feathers. The Swallows will have left their bank-holes to flock across the marsh meadows, like low-lying smoke that ever and anon settles on the heavy-fruited bay bushes; and out on the lawn and in the hay meadows, the Grackles will walk boldly, and, when at the signal of the leader they fly off, follow, to make sure that they are not investigating those wonderful heads of sweet corn that you are thinking to exhibit at the County Fair.

Ah well! The laborer is worthy of his hire, *only*, in the case of Grackles and Starlings, we protectionists will soon have to protect ourselves, and be given a little leeway as to the workers we are forced to employ and the exact amount of wages we are required to pay.

Meanwhile, why worry? Least of all has this a place in the garden shelter of a midsummer noon. The bell sounds and I go indoors; then presently a little melody comes from beside the house, a song associated with cool grass and evening, not with a burning midday.

“One syllable, clear and soft
As a raindrop’s silvery patter.”

It is my Field Sparrow singing to pay for his dinner of chickfeed, paying before he eats! How can I ever so pay for the meal spread before me in the cool shadows of the room.

Hark! Of a sudden there is a commotion in the copse by the garden, birds calling for help in every key. Has the Screech Owl come over from the willow stump to stir up the Jays?

I go out, shading my eyes from the glare with one hand, while the birds circle about my head. There on the wall crouches our very worst cat enemy, a great, lean, brindled gray, that comes and goes like a shadow at dawn and twilight, always blending in the underbrush before one can take aim. We got the calico cat with the bull head last week, and since then the gray has taken the young from three nests, convicting gray fur telling the tale. Now for the first time she does not see us through gazing into the cherry tree, the light is perfect, but—we have not a single cartridge left!

The Breeding of the Pine Warbler in Rhode Island

By ROBERT CUSHMAN MURPHY, Providence, R. I.

With photographs by the author

THE Pine Warbler is a common resident throughout the greater part of Rhode Island, yet there seems to be no published record of the discovery of its nest within the limits of the state, or of the occurrence of fledglings during the early summer. In Remington's 'Check List of Breeding Birds of Rhode Island,' the species is included in the list of hypothetical breeders only, and, so far as I can determine, there is no Rhode Island set of eggs in any of the several public or private collections in the state. The first record of breeding, accompanied by satisfactory data, is that of Mr. Harry S. Hathaway, of Providence, who found a nest at East Greenwich last spring.

It is a curious fact that the average dates of arrival of the Pine Warbler in Rhode Island are earlier than those given by numerous authorities for the spring appearance in Pennsylvania, New Jersey, and southern New York, including Long Island. The average date of appearance at Providence for the last seven consecutive years, taken from the notes of three observers, is April 6. This is also the average date for observations made in several different townships in 1910. My earliest spring date is April 1, 1908, when, early in the morning, I found three birds on the sunny side of a pine grove along the Seekonk River at East Providence. The weather was cold; there was ice on the puddles and a freezing wind was blowing from the river. At this time the birds were feeding on the ground. All three were males, and they were trilling cheerily and were very tame.

In Rhode Island, Pine Warblers are the first migrant *Mniotillidae* to arrive in the spring,* and they are among the latest to depart in the autumn. Concerning the lateness of the fall migration I have little data, but a belated male, in good condition, was shot at Cranston, R. I., on November 4, 1890.

The following account of the discovery of the first nest is quoted directly from Mr. Hathaway's notes, which he has kindly permitted me to use:—"On May 25, 1910, I spent the time between 5 and 7 P. M. among the pines near East Greenwich. I watched three female Pine Warblers which fed leisurely from limb to limb and from tree to tree. I surmised from their behavior that they were birds that had eggs, and had been getting an evening meal. I was about to leave when my attention was attracted by a female carrying something in her bill, and hopping rapidly from bough to bough until she finally disappeared in a bunch of needles. I could just make out the shape of the nest which looked like a cone. I quickly climbed the tree, and looked into my first Pine Warbler nest, which was empty and nearly completed. Just as I started down the tree the pair owning the nest came up much excited. I visited the nest again on June 3, but was greatly disappointed to find

*The Myrtle Warbler is unquestionably a winter resident in Rhode Island

it deserted. All work had probably ceased when I had been detected looking into it."

The data concerning the Pine Warbler family pictured in this article are as follows: Late in the afternoon of June 5, 1910, while in a field of thinly scattered pitch pines near the Ten Mile River in Rumford, R. I., a male Pine Warbler alighted in a bush a few yards from me, and allowed me to approach almost within arm's length. A moment later I saw a female, carrying a small green caterpillar, fly into the top of a nearby pine. I watched her closely, and she flew into a second pine, and from that to half a dozen others successively, until finally she departed from one of them without the caterpillar. Exam-



PINE WARBLER COAXING FLEDGLING OFF NEST

ination disclosed the nest, which was ill-concealed, and saddled upon the highest horizontal limb of a small tree, thirteen feet from the ground.

I climbed up to it and found three full-fledged nestlings snuggled in the scarcely sufficient hollow of their home, and basking with closed eyes in the late sunshine. They gave no sign of recognizing my presence, even when I shook the limb and tapped the sides of the nest.

On the following day I was unable to visit the nest until evening, and dusk was coming on when I arrived. The old birds were not in the tree, nor did I find any indication of their presence nearby. The nest was undisturbed, and I prepared to climb to it again, but no sooner had I grasped the trunk of the tree than all three fledglings sprang out and flew to the ground in three different directions; and it was with some difficulty that I succeeded in cap-

turing them and carrying them back to the nest in my cap. During this time I heard occasional chirps of uneasiness in the neighborhood, but whether they came from the parent Pine Warblers or a disturbed Field Sparrow is uncertain. At any rate, the old birds did not approach very near. It was easy enough to restore the youngsters to the nest, but to keep them there was another matter. Something in the environment, perhaps the cool evening air and the twilight, had completely transformed their sluggish dispositions of the previous afternoon. Time and again I held my hand over the nest until they had quieted down, but one or two, or all of them, invariably popped out before I had descended to the ground. Finally, however, I succeeded in replacing two of them



PINE WARBLER FEEDING YOUNG

permanently. The other, which was more active, I placed upon a low limb of the tree, and after retiring a few paces, I had the satisfaction of seeing it settle down calmly among the pine needles.

On the following afternoon, June 7, I came out prepared to photograph the bird family. It turned out that two of the nestlings had flown, and I could find no trace of them anywhere, but fortunately the third was perched a foot or so above the nest, and seemed to be enjoying the exclusive attentions of its parents. When I climbed up to get it, it made no effort to escape, but the male parent protested strongly, and was so bold as to fly almost into my face. The fledgling clung firmly while on my finger, but whenever I put it

on a bough, it showed a tendency to follow the coaxings of the mother, and would flutter to the ground. The mother would then drag herself off through the brush, with wings trailing, and tail bent curiously to one side, in a vain attempt to attract my attention to herself—a humpback exhibition, quite similar to the sham which I have seen an Ovenbird perform under like circumstances.

The next step was to attach the camera so that it bore upon the nest, after which I replaced the young bird, ran out thirty feet of rubber tubing, and sat down amidst a clump of sweet ferns, though still in plain view, with the bulb in my hand.

For a while the mother resorted to coaxing tactics, in which she was generally successful. She would approach within a few inches of the nest, and then would *peep* inducingly to the little one, while with wings fluttering rapidly, she would retreat tail foremost to the farther side of the tree, with the fledgling following her through the branches. After a while she varied her procedure and began to bring the youngster food, and I was enabled to make several exposures of the birds in the act of feeding.

During all this time the male remained close at hand, singing frequently, and sometimes flying close to me in order to inspect me with his beady eyes. He never fed the young bird, nor did he take any part in the coaxing performance, but whenever I went near the young one he did his best to draw me away from it.

The nest, which I brought away a few days later, was built in a cluster of pine twigs, and was surrounded by needles. It was merely saddled on the supporting bough, the attachments being confined to the branchlets and to the needles. The limb was about a half-inch in diameter and less than three feet long, and the nest was situated six inches from the trunk of the tree. The inside dimensions are two inches for both diameter and depth. It is made up externally of fine rootlets and a considerable quantity of weather-beaten white twine. Small cocoons and tufts of vegetal down are also inwoven. On the inner edge there is a circle of horsehair, and the bowl is lined with buff and white chicken feathers, some of which project above the rim. In the bottom, a mass of down and feather sheaths is matted together.



Disabled Birds

By WILLIAM COGSWELL CLARKE, New York City

RECENTLY, on our rambles, we have found a number of incapacitated birds. After spending much time for over thirty years in the woods and back lots, I have chanced upon more injured birds in the last two years than ever before. The injuries, except one, were directly or indirectly due to man. This increase in bird injuries fits properly with the increase in population.

On a small pond, in New Hampshire, near Lake Umbagog, we spied a big Blue Heron standing on a log over the water. We tried to see how near we could approach him by moving our boat quietly along the shore. To our surprise we kept getting nearer and still nearer. The bird never moved. We were soon within a hundred feet and still he did not fly. We knew then that there was something wrong; it was too late in the fall for him to be an immature bird. At thirty feet we could see that he was full grown and fully feathered, and that his gaze was fixed seemingly upon the shore. Just as the bow of the boat slipped beneath his log he started up and ran feebly into the woods, where one of us easily caught him. The bird made a little effort to escape, but was weak. We watched with care his powerful bill, recalling the fact that an Indian was said to have been killed by a terrific thrust from the bill of a Blue Heron which was driven through the eye into the brain. This would seem scarcely possible. We looked over our bird for injuries and found none. His feathers seemed to be in perfect condition and his weight was good. After allowing him to stand among the cows in the pasture for the afternoon, we rowed him across to a safe cove where frogs were plentiful, so that if he recovered, food would be at hand. The only explanation I have to offer is that he had some acute illness, the nature of which we could not determine.

That fall, we were out in the fields one day and came upon an old Crow under a bush. We picked him up, after he had thoroughly bitten our fingers, and found that both tibiae had been broken, apparently by shot, since there was a small amount of dried blood on each side of the legs over the breaks. The injury was what is called a compound fracture, meaning that there was a direct communication through the skin to the broken bone, permitting infection to pass easily down to the break. A hasty examination of the bird's body revealed at the time no other injury. We thought it would be well worth while to see what could be done for the bird. If his legs would heal, he might be ready for the spring corn-planting, even if he could not overtake his mates on their southern trip that fall.

When there is a break in that part of an extremity where there is a single bone, the muscles pull upon the fragments so that they overlap. To correct this deformity in the human thigh after a break of the femur, a weight is attached below the knee by a cord running over a pulley. Traction is thus

exerted upon the muscles, causing them to relax, which allows the broken ends of the bone to slip into place. This stretching of the muscles checks the spasm excited by the injury and thus relieves the pain.

Since Crows have but a rudimentary fibula, the tibia is the supporting structure of the leg, and in a break of this bone the conditions are similar to those that occur in a break of a human femur.

In the case of our Crow there was a great over-riding of the fragments of the tibiae, so traction was indicated. To secure it we took a box about eighteen inches long and twelve wide. Across the middle of this box we tacked for six inches a piece of cloth pulled tight. Two holes were cut at such points that the legs and thighs of the Crow hung down through them, while the body rested upon the tight cloth as upon a stretcher. In a reserve piece of this cloth, in front, a third hole was cut, through which the Crow's head and neck were passed. This piece of cloth was then turned backward over the Crow's wings and tacked down; thus the Crow was restrained above and supported below. Stockings of cloth were sewed about the bird's tarsi, and to the tops of the stockings strings were attached, which led backward and out through holes in the back of the box. Weights were now attached to the ends of the strings, and when they became tightened the broken fragments of the tibiae were drawn into their normal position. A coarse string for a foot-rest was also drawn tightly across the box, some distance below the bird's body. We did not disturb the dried blood clots over the wounds, trusting that nature had protected the injured parts from infection.

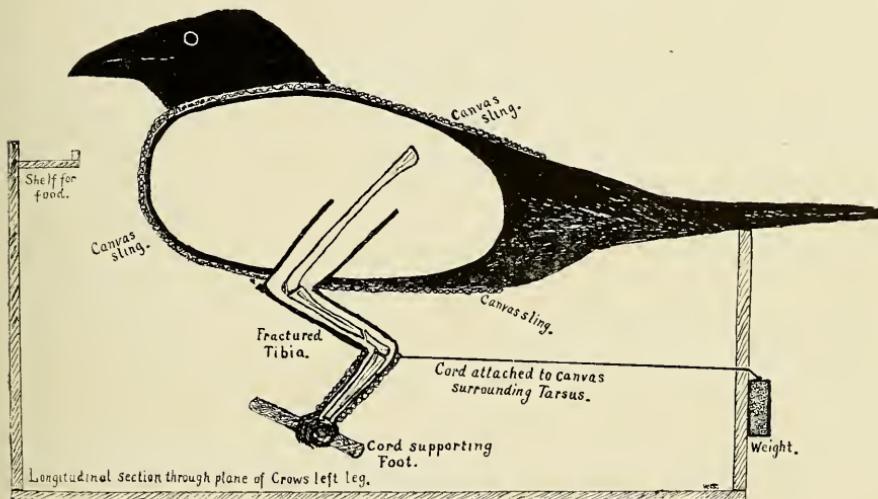
The bird made but little fuss, and after he had become quiet a shelf for food was placed within easy reach. Two hours after the extension, as it is called, had been applied, he drank water and ate some meat. For a few days he did very well, and then suddenly died. At autopsy, besides the injuries to the legs, we found a punctured wound of the abdomen, causing general peritonitis. We feel that if it had not been for this wound we might have saved him, and we recommend this apparatus, as set forth in the drawing, if any one should have an opportunity to apply it.

The next bird we found was a very fine male Red-tailed Hawk. This, again, was in the fall; and since, to my knowledge, no Red-tails nest in our vicinity—northern New Jersey—the bird probably was a migrant. He was alive but unable to fly when we found him. He died the next day. We found that this bird also had been shot; as in the case of the Crow, a single pellet penetrating the abdomen had caused peritonitis.

Last fall we came upon a tree, just cut down. In a hollow limb the choppers had found a Barred Owl. On examination we found that the bird had a broken femur, again a compound fracture, as in the case of the Crow. The break was so near the joint that there was no displacement of the bone. It is hard to explain why the Owl did not leave the tree as soon as the chopping commenced, but since the fracture was recent it seemed almost certain that his

thigh was broken when the tree fell. This bird was the most magnificent Barred Owl imaginable. His feathers were in perfect condition. For years we had known a pair of Owls in this wood, so I believe, since we no longer hear them, that the bird was one of them, and was therefore of considerable age. As with the Crow, we tried to help him but without better success. We placed sterile gauze over the wound and enclosed the whole in a plaster of Paris splint; since there was no overriding of the broken bones, traction was not required.

Our Owl occasionally presented a strange appearance, when we found him sitting quietly on the edge of the bureau, his back turned on us and his face looking directly at us. He ate meat and drank and out of a spoon at the first



AN ADAPTED BUCK'S EXTENSION

opportunity. At no time did he offer to bite us, and he hardly ever seemed frightened. From increasing experience with Barred Owls I am coming to believe that they are all very gentle birds. He lived in a room with the windows open, and for several nights he called to his mate who was down in the woods. The *Hoo! Hoo!* was really a terrific sound when heard so close at hand. This bird lived ten days and we heard the mate calling for many nights after this, but in vain—no answer now resounded from the box on the floor.

In the following spring, one noon, as we were eating our lunch in the woods near the Hackensack, there was a male Scarlet Tanager moving about in the bushes. To our amazement we were able to walk right up to the bird and one of us picked him up. He made but a feeble struggle and was quiet. We found that there was a deep wound in the base of the neck in front and also one on the top of the head. When an angleworm was held out to him, he ate without hesitation, and when we held him up to an insect on a tree he

picked it off as freely as ever. On our way home the bird put his head under his wing and then it was at once noticed that the wound on the top of the head and the one in front of the chest bore such a relation to each other it seemed reasonable to suppose an Owl had tried to catch the Tanager with his claws, while the latter was asleep, his head under his wing. We put the bird to bed that night but the next day he was dead.

This same spring, off on a day's outing, just as we crossed the West Shore railroad, a small huddled-up mass of feathers, at the end of a sleeper, took shape as we looked, and became a little Screech Owl. One of us was able to put his cap over the bird. We then found that one wing had been recently torn off, and the lids of the eye on the opposite side were tightly closed. The eyeball itself had been crushed and was badly inflamed. It seemed likely that the bird had flown into the headlight of a passing engine a night or so before, and had thus received his injuries. After we reached home we placed him on an andiron, and as long as he was with us he made the fireplace his home. The little Owl grabbed the first dead mouse handed to him, even though a house mouse, as if he had seen one before. All his movements were deliberate after he actually had his prey within his grasp, but up to that moment they had been as quick as the proverbial flash of light. He enjoyed sitting on the back of a chair and looking slowly around the room. First he would stare for a time at one thing, and then, with all the deliberation in the world, change his gaze to something else. His single wide open eye and a certain lopsidedness, owing to the loss of a wing, made him present a strange appearance, as he sat and stared one out of countenance. He would drop like lightning upon a small bunch of brown cloth drawn with a jumping motion across the floor, but what excited him intensely was scratching on any rough cloth or a noise like the squeak of a mouse. When we gave him a dead English Sparrow, he would settle himself upon his andiron, and then pull out the stiff wing and tail feathers, one or two at a time; then pull off the head, crush it and swallow it whole; after this, by degrees, he would pull the bird into shreds and gulp them down.

This Owl was tame from the first and would sit on a finger and look about, as if he had been long accustomed to the procedure. After he had been with us for some time, we commenced setting him upon a lilac bush by the piazza, to get the air. While our backs were turned one day, he dropped off the bush and ran away. Although we hunted diligently for him, we never found him. I am afraid that, in his incapacitated condition, after he deserted his home, his time was short.

It was a remarkable fact that all of these birds took the food offered them with such readiness and were so submissive in their new environment. This was particularly true in the case of the Owls, and it was quite surprising that the old Crow became so friendly. The docility of the Scarlet Tanager may possibly be ascribed to stupidity, but not so with the Crow. It is really hard

to explain the submissiveness of the Crow, especially, as Crows, constantly harassed by man, have certainly a fear, and probably an intense hatred of him. Also it cannot be explained by the fact that animals and birds *in extremis* show remarkable submission when captured, for most of our birds were in fairly good condition during the first few days.

It seems too bad that all the injured birds except the little Screech Owl died, and he ran away, so only the first half of each bird's experiment with man can be told.

A Yellow-throat Family

By ALFRED C. REDFIELD, Wayne, Pa.

IT WAS a fascinating old fence-row stretching down the hillside from the woods to the railroad track. The fence itself had long since crumbled to pieces, but a straggling row of young cherry trees, sumachs, and sassafras saplings, and an impenetrable tangle of blackberry briars formed a thick hedge separating the broad pastures on each side. Surely such a place was worth a whole afternoon of nest-hunting.

I conducted my search thoroughly, Chats' and Indigo Buntings' nests being my object. One side had been covered, and I was halfway up the other with only a couple of Field Sparrows' nests for reward, when from a bunch of grass at the thicket's edge darted a small dusky bird. I had almost stepped on her four delicate, fresh eggs. The little mother would not come back to reveal her identity, so marking the place I continued my search of the fence-row.

On the following day, May 27 it was, I returned and approached more cautiously. There, on the nest, was a little olive-backed bird, a female Maryland Yellow-throat, looking up at me with fearless, shining black eyes. I leaned over, and when my hand was almost touching her, she slipped from the nest and crept silently through the grass to the shelter of the briars, from whence I saw her watching me with anxious eyes.

The nest was lodged in a thick bunch of grass. The outer part was a collection of weed-stems, coarse grasses, dead leaves and strips of grape-bark rather loosely put together. The lining was of very fine strips of grass and horse-hairs compactly woven into a deep bowl. On the side away from the briars, the thick grass rose, completely screening it from view. Indeed, it was a most proper setting for the beautiful little eggs.

On every visit the mother bird had shown the same fearlessness. On June 1, when I tried to photograph her on the eggs, I had little trouble in setting up my camera and making some pictures from within two feet of the nest. Even when, in removing some obstructing grasses, I frightened her off, I had only to wait half an hour for her return. Nothing can give the bird photographer so

much satisfaction as such a demonstration of confidence on the part of his subjects.

On June 6, three of the eggs hatched. The fourth was addled and remained in the nest until after the young had left. The nestlings were typical young Warblers, blind and naked, their pink skin covered only by the finest gray down. No wonder the brooding mother was reluctant to leave them unprotected at my approach.

Almost immediately the pin feathers began to appear on all the feather tracts, even protruding a little from the extremities of the wings. Four days



"BOTH BIRDS WENT TO THE NEST AT ONCE"

later their eyes opened, and the following day the feathers commenced to burst from the ends of their sheaths. Now, for the first time, the male put in an appearance. Incubation had been carried on altogether by the female. The male, however, was no shirker, and soon showed that he could do his share in caring for the young.

At 9.30 A. M. on June 12, I set up my green umbrella tent within three or four feet of the nest, no attempt being made to conceal it. At half-past ten, I entered the tent with my camera. Both birds appeared at once; the male with a moth, the female carrying a spider. After ten minutes of excited hopping about, the female summoned up courage and fed one of the young ones.

The male was still shy. At eleven o'clock I left the tent but returned fifteen minutes later. Both birds were scolding anxiously when I entered again. I did not see them go to the nest up to noon when I left for lunch. When I again returned to the tent, I found the male carrying a small insect. Ten minutes later both birds went to the nest at once. The female remained to clean the nest. Soon the male was back again with more food. Now for three hours the birds came regularly and apparently without fear. As I look over my notes, it all comes back to me; the hot sun filtering through the tent, the stifling air, my cramped legs, the rickety soap-box on which I sat, the busy trips of the birds, and the constantly decreasing pile of unexposed plate holders.

In three hours the male made fifteen visits and the female six; an average of one visit every eight and a half minutes. The food consisted of small moths, spiders, grasshoppers, soft brown grubs, green worms and some insects too small to be identified. The nest was cleaned on the average of once every half hour. This operation occurred more frequently as the parents became accustomed to the presence of the tent. Both birds shared equally in this task. The sacs of excrement were carried away in the birds' bills. Often the female would stand on inspection for fully five minutes, if unrewarded leaving only when her mate made his next visit. Several times I saw her pick at the plumage of the young as though trying to remove lice. In going to and from the nest the birds communicated with one another by low twitters. Occasionally the male paused in his work to give a faint song.

On one occasion the male fed two of the young. Before he had left, the female arrived with an insect. He held his bill toward her as though wishing to take the food from her. Not heeding him she proceeded to feed the young one last favored by the male. Quickly her mate removed the food from the young one's mouth and thrust it into the bill of the third young one, which had received nothing. This would make it appear that the parent birds do actually keep some account of which young they have last fed. In the case of another species, however, I have known one young to be fed six times to his brother's once. Another time both parents arrived at the nest at the same time. Having fed the young, the female reached into the depths of the nest and brought forth a large sac of excrement. The male promptly seized it and tried to take it from her. What the result would have been I do not know, for just then the shutter clicked and they flew away.

The next day I found the feathers of the young ones had developed greatly. The sheaths were almost all gone and the little birds were covered with a coat of soft feathers; greenish brown above, buffy beneath. They were now eight days old. I photographed them without taking them from the nest. Two days later they were gone, but the anxious calls of the parents told me that they were safely hidden away somewhere in the shadow of the old fence-row.

The Migration of North American Sparrows

ELEVENTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey
With Drawings by LOUIS AGASSIZ FUERTES
(See frontispiece)

BLUE GROSBEAK

The line dividing their summer ranges agrees approximately with the eastern border of the Great Plains. The following migration rates refer to the Eastern Blue Grosbeak, as well as to the Western Blue Grosbeak. Both forms pass the winter in Central America. In migrating northward, most of the birds that are to summer in the eastern United States avoid the West Indies and southern Florida, and fly across the Gulf of Mexico to its northern shore.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Tortugas, Fla.			April 14, 1909
Savannah, Ga.	6	April 15	April 12, 1885
Central Alabama	4	April 23	April 18, 1908
Kirkwood, Ga.	3	April 27	April 21, 1900
Columbia, S. C.			April 21, 1907
Raleigh, N. C.	21	May 2	April 25, 1888
Lynchburg, Va.	4	May 5	May 2, 1902
Washington, D. C.	5	May 5	May 1, 1878
Carlisle, Pa.			April 29, 1844
Mille Vaches, Quebec			May 7, 1862
Chacala, Durango			February 27, 1899
Chalchicomula, Puebla			March 17, 1894
Teapa, Tabasco			April 5, 1900
Santa Catarina, Nuevo Leon			April 8, 1902
Victoria, Tamaulipas			April 9, 1888
Linares, Nuevo Leon			April 14, 1891
Rio Grande City, Texas			April 9, 1880
Kerrville, Texas	9	April 19	April 15, 1901
San Antonio, Texas	4	April 20	April 13, 1894
Gainesville, Texas	5	April 25	April 18, 1885
New Orleans, La.			April 8, 1898
Southern Mississippi	2	April 17	April 13, 1902
Monteer, Mo.	6	April 30	April 24, 1908
Onaga, Kan.	15	May 5	May 1, 1892
Northern Nebraska	5	May 14	May 12, 1903
Yuma, Col.	4	May 23	May 17, 1907
Southern California	5	April 20	April 17, 1873
Hayward, Cal.			May 1, 1876
Fort Mojave, Ariz.			May 6, 1861

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Washington, D. C.	5	September 16	September 20, 1884
Raleigh, N. C.	7	September 14	September 27, 1887
Badger, Neb.			September 22, 1901
Onaga, Kan.	4	September 17	September 25, 1897
Monteer, Mo.	4	September 29	October 5, 1904
Biloxi, Miss.	2	October 26	October 29, 1903

INDIGO BUNTING

The Indigo Bunting winters in Central America south to Panama, and ranges in summer over the United States east of the Great Plains, and north to southern Canada. It will be noted that the dates of spring arrival at the mouth of the Mississippi river are decidedly earlier than at corresponding latitudes in either Texas or Florida, showing conclusively that the early migrants do not reach Louisiana by a land journey, from either the east or the west, but by a direct flight across the Gulf of Mexico.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Warrington, Fla.			April 3, 1885
Savannah, Ga.	6	April 16	April 13, 1902
Central Alabama.	5	April 22	April 6, 1878
Kirkwood, Ga.	10	April 26	April 10, 1907
Central South Carolina.	5	April 26	April 22, 1906
Andrews, N. C.	4	April 26	April 25, 1903
Asheville, N. C. (near)	3	April 30	April 27, 1893
Raleigh, N. C.	23	May 1	April 23, 1900
Lynchburg, Va.	4	May 4	April 29, 1902
Variety Mills, Va.	5	May 4	April 30, 1886
Waverly, W. Va.	4	April 30	April 29, 1905
French Creek, W. Va.	4	May 1	April 23, 1891
White Sulphur Springs, W. Va.	7	May 2	April 29, 1893
Washington, D. C.	8	May 1	April 29, 1907
Waynesburg, Pa.	5	May 3	April 29, 1891
Beaver, Pa.	7	May 6	April 30, 1887
Swathmore, Pa.	7	May 9	May 5, 1903
Philadelphia, Pa.	9	May 9	May 6, 1885
Renovo, Pa.	16	May 9	May 2, 1902
Williamsport, Pa.	6	May 12	May 9, 1896
Morristown, N. J.	8	May 10	May 5, 1886
Englewood, N. J.	6	May 11	May 6, 1886
New Providence, N. J.	8	May 13	May 1, 1887
New York City, N. Y. (near)	15	May 10	May 3, 1891
Ballston Spa, N. Y.	10	May 13	May 9, 1892
Alfred, N. Y.	12	May 15	May 4, 1902
Ithaca, N. Y.	8	May 16	May 9, 1905
Lockport, N. Y.	5	May 18	May 12, 1889
Portland, Conn.	5	May 10	May 6, 1894
Jewett City, Conn.	13	May 14	May 8, 1905

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Hartford, Conn.	18	May 14	May 5, 1887
Providence, R. I.	9	May 16	May 8, 1905
Springfield, Mass.	7	May 12	May 9, 1896
West Roxbury, Mass.	5	May 18	May 11, 1889
Beverly, Mass.	6	May 19	May 17, 1909
Randolph, Vt.	9	May 17	May 11, 1895
St. Johnsbury, Vt.	14	May 20	May 15, 1900
Monadnock, N. H.	3	May 15	May 11, 1905
Phillips, Maine.	6	May 23	May 17, 1905
Lewiston, Maine.	5	May 26	May 23, 1900
Montreal, Canada	6	May 22	May 11, 1889
Quebec City, Canada			May 6, 1903
Scotch Lake, N. B.			May 25, 1902
Point de Monts, Quebec			June 8, 1884
New Orleans, La.	9	April 1	March 26, 1899
Rodney, Miss.	4	April 12	April 5, 1890
Helena, Ark.	10	April 21	April 17, 1894
Chattanooga, Tenn.	7	April 23	April 18, 1902
Athens, Tenn.	7	April 26	April 15, 1902
Eubank, Ky.	11	April 25	April 20, 1894
Lexington, Ky.	4	April 28	April 23, 1904
Monteer, Mo.	6	May 2	April 28, 1908
St. Louis, Mo.	7	April 25	April 16, 1909
Odin, Ill.	7	May 2	April 26, 1896
Rockford, Ill.	6	May 6	May 1, 1890
Chicago, Ill.	10	May 9	April 30, 1896
Bloomington, Ind.	9	April 30	April 22, 1886
Brookville, Ind.	7	April 30	April 26, 1886
Frankfort, Ind.	10	May 4	April 25, 1902
Waterloo, Ind.	10	May 6	April 27, 1888
Waverly, Ohio (near)	5	April 27	April 24, 1899
Columbus, Ohio.	4	May 2	April 23, 1885
Youngstown, Ohio.	5	May 6	May 1, 1905
Wauseon, Ohio.	7	May 7	May 4, 1896
Cleveland, Ohio.	7	May 9	May 7, 1881
Oberlin, Ohio.	12	May 2	April 26, 1902
Petersburg, Mich.	9	May 7	May 3, 1887
Palmer, Mich.			May 16, 1894
Houghton, Mich.			May 19, 1908
Plover Mills, Ont.	7	May 10	May 5, 1885
Guelph, Ont.	5	May 15	May 11, 1895
Toronto, Ont.	7	May 21	May 15, 1893
Ottawa, Ont.	6	May 23	May 13, 1893
Hillsboro, Iowa	5	April 29	April 23, 1896
Keokuk, Iowa	16	May 6	April 30, 1895
Sabula, Iowa	9	May 5	May 2, 1896
Iowa City, Iowa	8	May 6	April 30, 1888
Grinnell, Iowa	5	May 8	April 30, 1887
Sioux City, Iowa	9	May 14	May 4, 1902
La Crosse, Wis.	5	May 11	May 3, 1909
Madison, Wis.	8	May 16	May 11, 1893
Lanesboro, Minn.	6	May 7	April 28, 1888
Minneapolis, Minn.	7	May 24	May 12, 1888
Elk River, Minn.	4	May 25	May 19, 1883
Corpus Christi, Texas			April 13, 1891
San Antonio, Texas	3	April 15	April 6, 1889
Kerrville, Texas	10	April 21	April 17, 1906

SPRING MIGRATION, continued

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Gainesville, Texas.....	3	April 23	April 20, 1885
Thomas, Okla.....			April 20, 1902
Onaga, Kan.....	13	May 6	April 28, 1895
Southeastern Nebraska	5	May 6	April 25, 1896
Badger, Neb.....	4	May 10	May 8, 1903
Vermilion, S. D.....			May 10, 1901

FALL MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Nebraska City, Neb.....			September 18, 1900
Onaga, Kan.....	3	September 22	September 28, 1896
Lanesboro, Minn.....	6	September 24	September 30, 1888
Grinnell, Iowa.....	4	September 23	September 28, 1889
Hillsboro, Iowa.....			October 3, 1897
Ottawa, Ontario.....	4	August, 29	September 12, 1887
Point Pelee, Ontario.....			October 14, 1906
Palmer, Mich.....			September 17, 1894
Detroit, Mich.....	2	October 6	October 7, 1905
Wauseon, Ohio.....	5	September 28	October 2, 1884
Oberlin, Ohio.....	8	October 1	October 9, 1897
Waterloo, Ind.....	7	September 29	October 19, 1889
Bloomington, Ind.....			October 17, 1885
Chicago, Ill.....	4	September 21	October 6, 1906
Monteree, Mo.....	3	September 24	October 5, 1909
St. Louis, Mo.....			October 17, 1885
Athens, Tenn.....	5	October 9	October 10, 1906
Biloxi, Miss.....	2	October 15	November 1, 1905
New Orleans, La.....	7	October 22	November 1, 1903
Montreal, Canada.....			September 2, 1891
Phillips, Maine.....	3	September 11	October 4, 1909
Randolph, Vt.....	3	October 1	October 6, 1892
North Truro, Mass.....			October 6, 1888
Hartford, Conn.....	10	October 1	October 4, 1887
Providence, R. I.....			October 4, 1904
Morristown, N. J.....	5	October 7	October 13, 1906
Renova, Pa.....	12	October 6	October 19, 1903
Philadelphia, Pa.....	7	October 8	October 15, 1887
Washington, D. C.....	6	October 9	December 13, 1887
French Creek, W. Va.....	3	October 1	October 4, 1889
Raleigh, N. C.....	6	October 7	October 19, 1907
Savannah, Ga.....			October 11, 1908
Tallahassee, Fla. (near).....	3	October 16	October 20, 1903



Notes on the Plumage of North American Sparrows

TENTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Indigo Bunting (*Passerina cyanea*, Figs. 1-3). In juvenal or nesting plumage the Indigo Bunting is a sparrow-like bird, brownish above and obscurely streaked with dusky below. When the tail is fully grown, the outer margins of the feathers are usually faintly tinged with bluish or greenish in the male, but in the female there is generally no trace of these colors.

The first winter plumage is acquired by partial molt (post juvenal). The underparts are now more or less washed with brown, slightly or not at all streaked, the back is warm, rusty brown. In the male, the lesser wing-coverts are bluish, and the rump and upper wing-coverts are usually bluish basally. This winter plumage is worn until February or March when, as Dwight has shown, through the spring or prenuptial molt most of the body feathers, the tail, and a varying number of the wing-feathers (but never the primary wing-coverts) are lost and the first breeding plumage is acquired. This is usually more or less mottled with remains of the winter plumage, though some individuals look as blue as fully mature birds; but the presence of brown (instead of blue) primary coverts always distinguishes this first breeding plumage.

The post-nuptial molt, as usual, is complete and the bird now passes into adult winter plumage (Fig. 2) which differs from that of the first winter in having more blue. The following spring, or at the approach of its second breeding season, the bird acquires its mature plumage (Fig. 1) by molt of most of the body and wing feathers, those of the tail being retained.

In winter plumage the female generally shows no blue, but after the first spring molt there is usually a tinge on the tail and less frequent in the wings (Fig. 3).

Blue Grosbeak (*Guiraca cærulea*, Figs. 4-6). The nestling Blue Grosbeak, unlike the nestling Indigo Bunting, is unstreaked below, while the first winter plumage is usually wholly without blue. At this season the bird is much like the female figured in the frontispiece (Fig. 6), but lacks the blue tinge on the primaries, there shown. The spring (prenuptial) molt affects most of the body feathers and usually the wings and tail, bringing the bird into the mottled costume shown by Fig. 5 in the plate. At the fall (postnuptial) molt, the adult blue plumage is acquired. It is, however, widely margined, particularly above, by rusty brown, which wears away as the season advances and brings the bird into adult breeding plumage without a spring molt.

The adult female is figured on the plate (Fig. 6), but even the small amount of blue there shown is often wanting.

Notes from Field and Study

The Keeping of Notes

Although ornithologists have done their whole duty in urging upon us the importance of keeping careful notes of all things seen in bird life, and have suggested many helpful methods for recording observations, yet many people are unmindful of the lessons they have tried to teach. Probably many of us have remonstrated with friends, who witness numerous fine chapters in the lives of birds about them, yet will not make these observations valuable by means of daily notes.

Often women, whose duties keep them closely about home, have better opportunities for some sorts of observations than do their husbands, whose working hours are spent in offices far from the birds; and for some studies, the more years they are pursued in one place the better the results. Among teachers, few are so fortunate in the character of their classes as is one not far from here, who can drop her class-work and run off to identify any strange bird that flits by her windows.

When the notebook habit has become firmly fixed, how to preserve the records in the most accessible shape becomes an urgent question; how to keep data from becoming buried beneath masses of heterogeneous, or even homogeneous, matter. The methods pursued by others may be helpful to many, and it is hoped that some of these may be given in *BIRD-LORE*.

The writer has found it advantageous to keep several notebooks in hand at the same time. First there is the journal that has a dozen pages ruled. On these are kept all the facts necessary for filling out the schedules for migration, besides several other facts, such as whether the bird is seen at home or abroad, by the observer, or by some other person. The rest of the book is devoted to daily records of a miscellaneous character. Another notebook contains items relating to the feeding of birds—the winter notes in one portion of the book, and those concerning summer

feeding in another, so that any record can be easily found. The same book has been used for four years, and has space for the observations of another season.

Separate books are kept for recording observations on the nidification of birds. Some species furnish so many interesting facts that a notebook containing twenty-two thousand words (estimated) is filled each year about a single species during its summer stay with us. Year after year there are frequent repetitions in such notes, but these often become the most valued part. About the nesting of some other birds much less can be seen, and one notebook will hold all the data gathered about that species in several years.

The only disadvantage in this system is that sometimes three or four books must be used daily and the date of the record must be written down in each; the over-balancing advantages become very obvious when one wishes to refer to the notes of former seasons.

A surprisingly large number of things may be found worthy of note in any nest. Many people record carefully the color and spotting of the eggs; yet how many notice the difference in color of the flesh of the newly hatched young, or in the shades of gray in their natal down? Some birds that come from the shell with very little or no down are wonderful in their coloring; there is the liquid glow of a jewel, to which is added the warm flush of life.

In the lining of their mouths there is a great range in shades of red and yellow. Some mouths are of a pale and quite uninteresting shade of yellow; from this shade the yellow mouths deepen in color to the richer hue of the lemon, and some even to that of a pale orange, with a texture that suggests the smooth undried oil paints of the artist. The red mouths vary from the silken pink of the rose leaf, to the liquid depths of rose madder as it is spread unmixed upon the artist's canvas. One who revels in color may well pause a few minutes to enjoy these wonderful tints, and

reflect that the pleasure of seeing such mouths fly open ought to repay the parent birds for their long hours of toil in feeding their young.

That some observers have failed to note these things is apparent. That was the case when one of the most distinguished of our living ornithologists, in writing of nestlings that have beautiful rose-pink colored mouths, described them as yellow. Still another ornithologist could never have enjoyed the deep, glowing salmon color of other nestlings, or he would not have accepted lantern slides on which the skins of these newly hatched young were represented with the color of dressed chickens just after they have passed the singeing operation.

Corvus americanus sitting in a tree or on a fence, or even cawing over-head, probably would never have suggested a nickname for a dusky tenth of our population, but one good look at Crow babies with their red mouths and black skins will convince any one, that the term Jim Crow has more than the color of fancy about it.—

ALTHEA R. SHERMAN, *National, Iowa.*

A Balloon Bird

The mishaps to young birds are so numerous and so varied that ordinarily they are not matters of special interest, except in so far as they may suggest the means for lessening the destruction of bird life.

One day last June I found a fledgling, out of the nest, but unable to fly, whose condition was so remarkable that I have thought that a description of it might be of interest to the readers of BIRD-LORE. The bird, as is usual, was crying for food. Its throat was apparently much swollen, but, on closer inspection, I found that the skin was puffed up and seemingly full of air. On the second day, the inflation was much extended, and the bird chirped as if hoarse.

There was no redness or appearance of inflammation. The skin was dry, and looked somewhat like closely drawn oiled tissue paper. With certain movements, the dis-

tention partially subsided, but only for a moment. I surmised that there was a rupture somewhere; and I concluded that the little creature's breathing apparatus was pumping the opening under the skin full of air. With no skill in diagnosis, I did what seemed to be the common sense thing and attempted to allow the air to escape by puncturing the skin with a needle. But this afforded no relief, for the reason, as I afterwards saw, that the tissues at once closed on the very small punctures.

On the third day, the bird's condition was most pitiable. The little creature did not seem to be suffering much; and as it cried, lustily as it could, fanning its little wings, it was easy to imagine that it was appealing for relief, as well as for food.

The inflation was spreading over its breast, head and shoulders; and large blisters were appearing under its wings. Its little black eyes, like two round-head tacks, were in two depressions, from which the skin seemed to be at the point of pulling away. The skull and slender neck were visible through the transparent membrane, on which were a few feathers; and the tension was so great that the bill was drawn down toward the breast. It was a fairly good X-Ray exhibit—a scrawny little thing with its tender skin blown up like a bladder. And the distressing part was in the apparent fact that a little pair of lungs, probably through a rupture in the windpipe, were serving as bellows that were slowly skinning the little bird alive. I saw that something must be done, and without delay, and with a pair of clean, sharp-pointed scissors, I made a slit under the throat. Immediately the skin went down, but only to be partly blown out again. Another incision, then another and another, on the breast, at the side of the neck—wherever the air was pressing for release. A trained eye might have found the leak and a skilled hand might have stopped it.

I had neither, but what was lacking in expertness was possibly made up in sympathy; and I saw that I was working along fairly correct lines. I could not hold the skin down, or tack it or glue it; but I could soften it with a little sweet oil—then the

job was done. It was a successful operation though requiring, of course, a little after treatment. Within a week, the bird was apparently in normal condition; and, a little later, was able to take care of himself.

I very much regret that I did not have an opportunity to have the little patient photographed, for I am sure that a good picture would have been a remarkable one and would have shown more than I have been able to describe.

I believe, too, that it might have served a useful purpose. For a long while it has been known—or, at least, believed—that birds in their flight have aids other than the use of their wings. Even the bones, we are told, and possibly other parts, by some involuntary action, are inflated with air.

In this case, I am quite sure that the skin was not torn from the flesh; but still a good part of it—probably the covering of as much as one-fourth of the surface of the bird's body—was loose, and seemingly capable of serving a purpose in forming a kind of balloon.

May it not be, after all, that just how birds fly is one of the things concerning which there is much yet to be learned?—R. F. O'NEAL, *St. Louis, Mo.*

A Bit of Siskin Courtship

On April 29, 1909, in company with a bird-loving friend, I came upon a large flock of Pine Siskins in a raspberry patch. Many of them were feeding on the seeds of the chick-weed which grew luxuriantly in the rich soil. Others were sunning themselves on the cross-bars of the trellises, while the remainder of the flock had taken possession of a blossoming alder tree, and were filling the soft spring air with music. No one who has heard only the call note of these birds can realize how sweet and mellow a Siskin chorus can be, though the wheezy notes are freely interspersed throughout. Through the chinks in the tall, close fence that enclosed the field, we could watch the flock without danger of being seen. Our attention was called to three birds on a cross-bar about seven feet from

where we stood. Two were close together and the third a little apart, and all three were opening and closing their bills, stretching them wide as if yawning and closing them with a snap. Before we had time to consider what it might mean, the two turned toward each other and touched their bills in a most lover-like manner. They were quiet a moment, then one opened his bill wide again and they both flew away followed by the third, leaving us in a bewildered state of uncertainty and delight. It was only after comparing observations that we convinced ourselves that we had had the privilege of witnessing an interesting bit of courtship.—MAY R. THAYER, *Everett, Washington.*

A Vireo Tragedy

On July 9, 1910, a dead Warbling Vireo was found by some little boys while at play. The bird was a victim of one of those accidents that sometimes befall our avian neighbors. Having caught one foot in a long piece of coarse thread, it had entangled the thread on a twig of an apple-tree. Many twists and loops in the thread gave evidence of the long struggle made by the unfortunate little creature before it succumbed. The accident may have occurred at nest-building time, for the flesh was as hard and dry as that of a mummy.—ALTHEA R. SHERMAN, *National, Iowa.*

A Confiding Red-eyed Vireo

Some years ago I spent a summer in Maine, on a farm, and needing out-of-door life, I began to study and notice birds, with increasing enthusiasm. I would place building materials in a little tree just outside the window, and watch from a couch the different birds that took cotton, feathers, strings, etc., thus often tracing the nest. Chippies, Kingbirds, Phoebe, Swallows, Robins, Orioles and Yellow Warblers bore away their choice until little was left. One day late in May, when only a few scraps of cotton were remaining, there appeared a small, greenish bird, clinging to the lower side of the limb, col-

lecting cotton, with which it flew to the orchard.

I knew it for a Vireo, but was not sure which species it was, and did not stop to look at my book, but was out of the house and in pursuit, just in time to see the bird light in the remotest tree in the orchard. On walking about this tree, I came directly to the nest, scarcely five feet from the ground, practically completed, firmly laced to a forking branch, semi-pensile. It was a very dainty affair of pine needles, dried grass, lichens, cast off spider cocoons, bits of newspaper, shreds of birch bark and an occasional string and bit of cotton.

I was not sure which Vireo it was, but was surprised to find the nest so low. With the purpose of determining, I went, a day of two later, to look at the egg I thought might be there. It was toward early evening and I walked straight up to the nest with no idea of the bird's being on it. When within a few inches of it, she flew off but did not leave the tree. I hastily examined the two white eggs, speckled chiefly at the larger end, and left. I visited her several times on succeeding days, always finding the bird on the nest, where she remained though I stood close to her. The most noticeable thing to me was the red iris. One day I recalled Bradford Torrey's delightful account of a Woodland Intimate, or the feeding of a solitary Vireo, and it flashed over me that I could perhaps feed this Red-eye, since she was so confiding that she had never left the nest on my account except the first time.

I hastily caught a small, succulent green grasshopper and slowly, cautiously, advanced my hand till the grasshopper was within easy reach of the bird. The male kept up a constant scolding in the top of the apple tree containing the nest, while I stood trying to win his wife's confidence. It seemed many a weary minute that she sat motionless or with a slight suspicion of fear in her little red eye, cowering closer to the eggs. Then, just as my hand ached intolerably and I was about to withdraw it, she made a slow movement of the head towards me—and hastily snatched the grasshopper. I was delighted and praised

her audibly for her discrimination and confidence. She devoured several more grasshoppers very readily, once the ice was broken. The male bird all the time seemed anxious and kept up a continual scolding. I made visits once or twice daily thereafter, and she was perfectly fearless about taking food, eagerly accepting small flies and grasshoppers, invariably refusing worms, and showing a preference for grasshoppers.

She would allow me to stroke her, close my hand about her, almost lift her from the eggs, reach under her, etc. Once or twice she left the nest and flew at her mate when he was making demonstrations of fear and distress, knocked him smartly off his perch, snapping her bill and scolding vigorously, then took her place again on the eggs. It was exactly as if she told him that she would not be interfered with and that he could attend to his own affairs.

Day after day I visited her during the all too brief sitting, occasionally taking one or more companions, when my pride was hurt by her accepting food just as readily from others.

Not to be outdone by Torrey, I gave her water to drink from a silver spoon, and she drank readily, but seemed alarmed when her beak struck the spoon, half rose, uttering a low, anxious note. When she had had enough, she would turn her head away, utterly ignoring me, but could sometimes be prevailed on to take one more drink or grasshopper, if touched lightly on the beak.

One day, after several days' absence, I found two uncouth little fledglings—where were the other two? There had been four eggs. I suspected that some Crows might have breakfasted off them, as a pair of robber Crows had devoured the contents of a Robin's nest nearer the house that week.

The parents were feeding them, and, to my disappointment, the mother paid no attention to me, coming and going as if I were not in sight, and never again, with one exception, while she was brooding the young, did I have the pleasure of feeding her. When the young were about ten

days old, I was confined to the house for two or three days, and when I returned, the nest was empty.

I tried to feel that the young birds had left the nest safely, but always had misgivings that they had been devoured, as I could see nothing of them in the vicinity. Later, I found two young, querulous Vireos calling for food, and tried to believe they were mine. I watched next season in vain for her return. It has been a great regret to me that I did not have her photographed. I preserved the dainty little nest in memory of a very pleasant incident.—ANNE E. PERKINS, M.D., *Gowanda, N. Y.*

Bell's Vireo

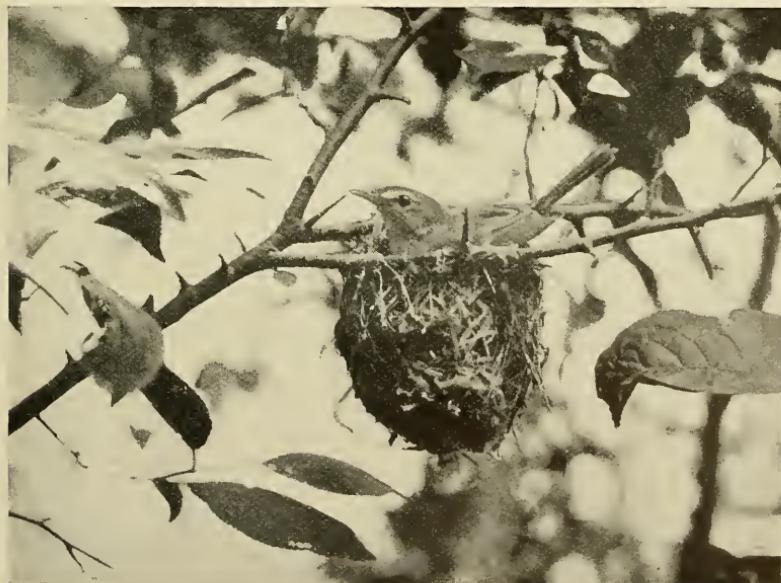
Bell's Vireo has the characteristic retiring habits of all the Vireos, but differs from them in regard to its association with man. It is not found in cities or towns, but in some plum thicket on a country hillside, or among the wild gooseberry bushes in a ravine. There, too, it usually builds its home and rears its family. Issuing from such a place, his coarse, but brisk and pleasing, song greets the bird enthu-

sast as he tramps over the hills in the hot mid-day sun.

Its nest is suspended from a horizontal crotch of a wild plum tree, usually about three feet from the ground. Sometimes, however, it places it in a gooseberry bush or in a patch of 'buckbrush' (snowberry). It resembles very much the Red-eye's nest, perhaps it is slightly smaller, and is much deeper than that of the Warbling Vireo. Leaves, plant fibers and fine grasses are used in its construction.

On June 1, 1910, I found an unfinished nest of this species. On June 11, when I returned with some companions, the bird was sitting on three eggs.

My next visit was on June 18, and again I found the old bird sitting. After several exposures from a distance of a few feet, I placed the camera so that the lens was only about eighteen inches distant, making a number of exposures at one-half second each, one of which is the picture herewith printed. The day was hot, so that the bird was standing in the nest and had its bill slightly opened while panting. It seemed so tame that, out of curiosity I cautiously reached out my hand and touched the end



BELL'S VIREO STANDING ON NEST

of its bill with my finger. Though it would have its picture taken, this was too much, and it flew away. Probably the bird had become accustomed to people passing by about a rod away, so that I was nothing out of the ordinary.

While I was going homeward I heard the song of one of these birds nearby. In almost the exact spot from which the notes seemed to come I found the nest containing one egg. Had this bird been singing on its nest as the Warbling Vireo often does? Surely, circumstances would point to this, for many times before I have found the nest in the same place where I have heard the bird singing. The next time I came to these nests was on June 22, and I made it a point to discover whether my belief was true. From some distance away, I approached silently behind a bank over which I soon was able to observe the bird in question, through a glass, from about five rods away. It was unaware of my presence and, of course, acted in a natural way. From the nest it watched for insects, and occasionally sang, thus confirming my suspicions.

But to return to the nest first found. On this same day I found the bird on its nest as usual and just as tame as ever. This time, after taking a couple of pictures at close range, I again reached out my hand and stroked its tail, then its back and finally the top of its head. At this it flew off but was soon back again at the edge of the nest while I was looking at the eggs. Doubtless the bird would soon have discovered that I could be trusted, but unfortunately I was now obliged to leave home and therefore had no further opportunity to gain its confidence, or learn the history of its family.—WALTER W. BENNETT, *Sioux City, Ia.*

An Inexpensive Birds' Bath

My birds' bath cost me nothing, except a few minutes' work, and though the conditions were perhaps exceptional, an account of it may contain a suggestion or two for some reader. In a certain spot on my lawn the grass "burned up" in dry

weather, and left an unsightly place among the green. It was over a "dry well" for roof water, and I saw a chance to accomplish two things at once. (I was going to say "to kill two birds with one stone," but the figure would be out of harmony with BIRD-LORE's motto!) Finding an old wash-bowl in my neighbor's barn, left over from a renovation of the bathroom, I plugged up the overflow and put a removable cork in the outlet. Then, taking up a circular piece of sod from above the dry well, and removing a few stones beneath, I sank the bowl flush with the surface. I then procured a round, flat stone from a wall near by and placed it in the bowl, so that when the latter was full there should be an inch or so of water for a bird to wade in; and the bath was complete. The bowl is filled every day, and from time to time—once a week or oftener—I clean it out by removing the cork and turning the hose into it. The water runs off below through the stones of the dry well. (If the bath is not emptied frequently, it may become, as I discovered, a breeding-place for mosquitoes).

The birds soon began to avail themselves of the drinking and bathing privileges afforded them, though I think they were at first a little shy of the glaring white rim of the bowl. This was soon overgrown with grass, however; for now the grass flourishes there, and from being dry and unsightly the spot has become one of the greenest on the lawn. So my two objects were accomplished; and the bath has performed a third service besides, for a small leopard frog made his home in it for some time last summer. Before winter, I removed the bowl and filled the hole up with stones.—FRANCIS H. ALLEN, *West Roxbury, Mass.*

Shovelers in Massachusetts

On April 18, while spending the day at Marshfield, Mass., I came across a pair of Shovelers (*Spatula clypeata*) and watched them for over three hours. They were feeding in a fairly good-sized pond on the salt-marshes, which at the time was hardly

more than two feet deep anywhere. When I first noticed them, they were in close to the bank, but of course they saw me the moment I started to approach and swam out into deeper water. The female was the shyer of the two, and seemed to communicate some of her uneasiness to her mate. At the end of an hour, during which I made several attempts to get near enough to identify them, I accidentally flushed the pair, and they flew off to another nearby mud-hole. However, in less than five minutes, both of them came back and once more fell to feeding. I now startled them once more and they repeated their former tactics. This gave me an idea as to how to proceed; accordingly I flushed them a third time, and while they were gone waded out and crouched on a partially submerged mud flat in the center of the pond. Although absent longer than before, I soon had the satisfaction of seeing them fly over my head and alight a very short distance away. And now for at least an hour I watched them at a distance not exceeding eighty-five feet at any time. Part of the hour they dabbled in the shallow water, then they arranged their plumage, and finally the female went to sleep while the male kept watch. Neither seemed in the least afraid, except when I moved my cramped position. At about three-thirty the female awoke and, after looking around for some time, they sprang into the air and disappeared in the direction of the river. Although I waited almost half an hour longer, they did not return and I was forced to leave.—ARCHIE HAGAR, *Newtonville, Mass.*

Blue-Gray Gnatcatcher in Massachusetts

I wish to record the occurrence of a Blue-gray Gnatcatcher in Seaview, Marshfield, Plymouth county, Mass., on April 30 of this year. I found the bird at about half-past seven, feeding in company with several Chickadees in a fairly thick growth of wild cherries, birches and maples on a sunny hillside facing the south. It occasionally picked some small object from a crevice in the bark, but more often darted

into the air after a passing insect as the Redstart does. The song, which I heard several times, was rather broken and evidently not the best effort of the bird. The alarm-note was uttered constantly.

Twice, in the space of three-quarters of an hour, I approached within five feet, although the bird stayed pretty well to the tops of the trees or, more properly speaking, saplings. Except for the Chickadees it was entirely alone.—ARCHIE HAGAR. *Newtonville, Mass.*

Additional Evening Grosbeak Records

NORWICH TOWN, CONN.—I first saw Evening Grosbeaks at Norwich Town, March 13, 1911, four days after they were last seen in Taftville. I have seen them almost every day and they are still here (May 3, 1911). The first day I counted thirty-six on the ground at one time. Later fourteen males on the ground within a few feet of me. I have found them in hemlock and arborvitæ trees and often in maples or on the ground under them.—ALICE L. ALLIS.

FAIR HAVEN, N. J., on the North Shrewsbury River, four miles from the coast.—With another bird lover, I have had a new pleasure this morning (April 26, 1911) in watching three Evening Grosbeaks,—one male and two female,—which have spent several hours in the wild cherry trees on our place. They seemed quite unmindful of our near presence. Sitting in stolid quiet for fifteen minutes at a time, with the clear light showing every feather of their beautiful coloring. They were feeding on the cherry buds, the females uttering occasionally a strong, clear note which I can still hear, as I write.—BELLE CHENNEY COOKE.

PITTSTON, LACKAWANNA Co., PA.—On the afternoon of February 22, 1911, eight Evening Grosbeaks, five of which were adult males, were seen feeding in a poplar tree at this place. Among others the birds were observed by Dr. W. L. Hartman, Dr. Harold J. Gibby, Mr. H. W. Roberts, and Professor Marvin, all of Pittston.—E. W. CAMPBELL.

Book News and Reviews

UNDER THE ROOF OF THE JUNGLE: A Book of Animal Life in the Guiana Wilds. By CHARLES LIVINGSTON BULL. With 60 full-page plates and many minor decorations from drawings from life by the Author. L. C. Page & Co., Boston. 1911. 12mo. xiv + 271 pages.

Mr. Bull tells us that, after reading Waterton's 'Wanderings,' he was filled with a great desire to add to the details of the "amazing landscape" but faintly traced by the pioneer English naturalist, and as a result of a journey to Guiana he gives us here, in "story form, fourteen bits of detail."

Mr. Bull writes entertainingly, and his illustrations, have unusual charm and spirit as well as high artistic merit; and if by the words "story form" we are to believe that his imagination, stimulated by a brief experience in the tropics, has in this book been given full play, we may commend the work of his pen and pencil in describing and portraying scenes from tropical life, most of which are within the bounds of probability.

If, however, Mr. Bull asks us to accept this volume as a serious addition to Waterton, and hence to the literature of natural history, and furthermore would have us believe that all his drawings, as the title-page states, were actually made "from life," by which we assume he means from nature, then we should suggest that the book would make a more fitting appendix to Munchausen than to Waterton.

To go no further than the illustrations, we find therein shown, for example, a jaguar "playing with" an armadillo, "striking at bats," "clutching Muscovy Ducks, or following an ocelot "as far out on the branch as he dared,"

Again, a tapir which had rushed into the water to free itself from a jaguar which had alighted on its back, is shown as being devoured by caribe fishes, a howling monkey is depicted in the jaws of a boa, an Ibis in the grasp of a jaguarondi, a Cock of the Rock just evading the talons of a Hawk, a Trumpeter in the jaws of a

puma, while a Black-necked Swan (a species, by the way, heretofore unrecorded north of southern Brazil!) is being "dragged" from the water by an ocelot. The text abounds in even more remarkable incidents. Indeed, we think we can safely say that one might spend his life in Guiana or any other part of tropical America and not see a fraction of the events which Mr. Bull here records after a few weeks' experience.

Possibly Mr. Bull would not have us consider his work too literally—artists are apt to ask for license with pen as well as with brush—but if his text is *not* to be taken as an addition to Waterton, and if his illustrations are *not* from life, he owes it to himself and to the public to say so in terms which leave no doubt as to their meaning.—F. M. C.

PHOTOGRAPHY FOR BIRD-LOVERS. A Practical Guide. By BENTLEY BEETHAM. Witherby & Co., 326 High Holborn, W. C., London. 1911. 12mo. 18 half-tones, 126 pages. Price, 5 shillings.

The chapter headings 'Apparatus,' 'Nest-Photography,' 'Photographing Young Birds,' 'Photographing by the Stalking Method,' by the 'Concealment Method,' by 'Concealment and Artificial Attraction,' by 'Rope-work on the Cliff-face,' 'The Photography of Birds in Flight,' 'Bird Photography in Color and in Cinematography,' 'Photographing Birds in Flight' indicate the nature and scope of Mr. Beetham's book.

The requirements of bird photography vary so endlessly that one's methods are apt to be developed by one's experience. Possibly, therefore, many photographers might not always agree that Mr. Beetham's apparatus or methods were the best. We, for instance, find it difficult to believe that "a few lengths of stout cane" which are to be "thrust into the ground" make a better framework for a blind than an umbrella with its single supporting rod, or, when used in trees, with none at all. This, however, with many other things in

these earlier years of nature photography, is a matter which each worker will want to settle for himself, but in selecting and developing his outfit we know of no better book by which to be guided than Mr. Beetham's.—F. M. C.

THE FACE OF THE FIELDS. By DALLAS LORE SHARP. Houghton, Mifflin & Co., Boston and New York. 12mo. 250 pp.

We have here a series of nine essays, all of which have previously appeared in magazines. They are, however, well-worth perpetuating in book form. Now that we hear from Bradford Torrey—to our great regret—so rarely, Mr. Sharp has become New England's leading 'Nature-writer.' He has the courage of his convictions and a style quite his own. At its best it is distinctly literary and sincere, but at times it impresses one as being merely clever, too clever perhaps.

But at least Mr. Sharp holds our interest where many an equally good observer and thinker might fail to arouse it. We commend particularly to those whose love of nature seeks expression in written words, his chapter on 'The Nature-Writer.' —F. M. C.

EAST AND WEST: Comparative Studies of Nature in Eastern and Western States By STANTON DAVIS KIRKHAM. G. P. Putnam's Sons, New York and London. 1911. 12mo., 13 half-tones. x + 280 pp.

'Cape Ann,' 'Cypress Swamps,' 'Chaparal,' 'Live Oaks,' 'The Giant Cactus Belt' are chapter headings which reveal the extent of countrys on which Mr. Kirkham draws for the eighteen essays in this volume. It is interesting to have these "Comparative Studies" of the widely different parts of our country, as they impress the nature lover. Mr. Kirkham is too good an American to make his comparisons displeasing, and he sees the best as well as the most characteristic features of his surroundings, whether they be on the Atlantic or the Pacific slope, in swamp or desert. His love of nature is genuine, simple and direct and he has a by no means small measure of success in conveying a sense of it to his readers.—F. M. C.

RECENT PUBLICATIONS OF THE BIOLOGICAL SURVEY.—The publications of the Biological Survey can be obtained from the Superintendent of Documents, at Washington, D. C. They contain too much material of value to be reviewed adequately in the space at our command, and we, therefore, refer to them briefly, with the suggestion that those who are interested make application for copies before the papers mentioned are out of print.

Circular No. 79, 'Our Vanishing Shorebirds,' by W. L. McAtee, calls attention to the economic importance and startling decrease of our Sandpipers, Plovers, and other limicoline birds. Mr. McAtee states that the economic value of these birds is so great "that their retention on the game list and their destruction by sportsmen is a serious loss to agriculture."

Bulletin No. 37, on the 'Food of the Woodpeckers of the United States,' by F. E. L. Beal, is an exhaustive paper of 64 pages, with six plates (five colored) and three text figures, in which the economic value of most of our Woodpeckers is placed on a firm scientific basis. Professor Beal remarks, "Of all the birds that further the welfare of trees, whether of forest or orchard, Woodpeckers are the most important. The value of their work in dollars and cents is impossible to calculate."

Circular No. 80, 'Progress of Game Protection in 1910,' by T. S. Palmer and Henry Oldys, the ninth annual report on this subject, is one of the most important publications issued by the Biological Survey. It contains information much of which is not elsewhere available, and, in addition to its reference value, this authoritative summary must indirectly exercise no small influence on matters relating to game protection and propagation.

In Farmers' Bulletin 456, 'Our Grosbeaks and Their Value to Agriculture' W. L. McAtee concludes: "Few of our birds are to be credited with more good and with fewer evil deeds than the Grosbeaks."

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

Contributing Editor, MABEL OSGOOD WRIGHT

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

WITH an income which permits it to accomplish only a small portion of the work in view, the National Association of Audubon Societies was sorely tempted by the offer of \$25,000 a year for five years, lately made to it by the manufacturers of arms and ammunition. There is no reason to doubt that the offer was made in good faith, and, beyond the fact that it was to be applied solely to the protection or increase of game birds, it was made without restriction. Nevertheless, there can be no doubt that the Association acted wisely in refusing it. It has been said that in this refusal the Association has put itself on record as opposed to game protection, but there is no ground whatever for this belief. On the contrary sportsmen's clubs may be assured, the continued and earnest support and co-operation of the Association in their efforts to protect the game animals. This, however, is a very different matter from devoting at least one-half of its energies to this end. Clubs for the protection of the birds ranked as game abound, but the Audubon Society is practically the only organization effectively engaged in the protection of non-game birds.

The protection of bird-life, however, is only a preliminary if necessary step in the Audubon Society's activities. It protects birds not only because of their economic value but also because of their esthetic importance.

It believes that the bird is not only one of the most valiant allies of the farmer but one of the most potent bonds between man and nature. It, therefore, would be improper, if not impossible, for an organization of this nature to give a large share of its efforts to increasing the number of certain kinds of birds for a certain number of months each year in order that there would be just that many more to kill during the remaining months of the year.

In our opinion it would be just as logical for the Audubon Societies to accept a sum of money from the milliners to protect Egrets ten months each year with the understanding that at the end of this time there should be an open season of two months, as to become the paid agents of interests whose ultimate object is not bird-protection but bird-destruction.

THE Editor apologizes to many correspondents whose communications have thus far only been accorded mere formal acknowledgment of receipt. The expedition to Columbia, in the interests of the American Museum of Natural History, announced in an earlier number of BIRD-LORE, occasioned an absence of slightly over three months. And a report on manuscripts, with which we have been favored during this time, has of necessity been delayed.

Incidentally, it may be added, that the journey in question was made without undue difficulty, and proved to be supremely interesting. Colombia was entered at Buenaventura, on the west coast, two days' sail, south of Panama. Studies were then made on the summit of the Coast Range, at an elevation of from 6,000 to 8,000 feet in the Central Andes, and in the Cauca Valley lying between these two chains of mountains.

The return trip was made down the Cauca river to Cartago, thence over the Central Andes to Giradot, on the Magdalena river, which was descended to Barranquilla, near its mouth. In all, about 1,500 miles were covered in Colombia alone; a reconnaissance which will enable the museum to direct its explorations effectively.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

A Practical Demonstration of Protected Home Resources

SHOULD every local Audubon Society arrange to rent, buy or obtain by gift some restricted but favorably located area, inclose the same with a cat-proof fence, label all trees and shrubs, put up scientifically constructed nesting-boxes, lunch-counters and drinking-fountains for birds, and invite young and old to assist in keeping up such a birds'-eye demonstration of *protected home resources*, all classes of people might be drawn into closer touch with nature.

Bees, toads, spiders, fishes, small mammals and other forms of life may be judiciously introduced, their increase regulated and economic value illustrated in such an experiment plot.

The demonstration method works admirably in other fields. It should serve as well in this case, and, properly carried out, might be made to advertise nature most attractively to many people who are now isolated from the real, *living world*.

At this season, when every city-dweller who can possibly leave town is striving to fit into some niche or corner of nature, it is all too apparent that many people, both in town and out, seem to have no place in nature.

While it is true that the all-the-year-round country-dweller, for the most part, becomes more and more satisfied with his natural environment, there is a large proportion of our population which needs a practical demonstration of nature.



A BOY AND A BIRD-TABLE—A YOUNG FLICKER HAS JUST TAKEN A BATH
Photographed by S. Louise Patteson, Fairmount, Ohio

A good time to begin this kind of work is in the early fall, when nesting-boxes are best put up and lunch-counters arranged.

In many places, coöperation with city park commissioners, village improvement societies and civic leagues could be advantageously sought.—A. H. W.

NOTE.—Reports along this line are invited by this department.

FOR TEACHERS

During vacation days, when the teacher is seeking change by travel, or increased efficiency in summer-school training, why not *mul* over the regular school program at odd moments, and see what impetus might be gained by correlating nature study with other branches, in the interests not only of the school, but also, of the community.

In a recent article entitled, "What Nature Study Does for the Child and for the Teacher," one of the most experienced investigators of this problem sums up the results of introducing nature study into the public schools, first, from the point of view of its actual effect upon pupils, and second, with reference to its possibilities for teachers.

The conclusions drawn by this observer that nature study, *well taught*, lays the foundation for a keen interest in science, gives a superior preparation for advanced work, stimulates the imagination, fosters truthful perceptions and accurate observation, aids in expression, cultivates a love of the beautiful, and puts the child into a proper relation with nature by emphasizing nature's laws, on the one hand, and the joy of companionship with nature, on the other, are verified in a most helpful and practical manner, by a teacher of art and literature, whose inspiring work in a public school of our largest city is described in the following communication.

Those teachers who feel that there is neither time nor suitable opportunity for taking up nature study, under present conditions, will find many suggestive ideas in this extremely workable plan, based on *correlation*.—A. H. W.

EDITOR OF SCHOOL DEPARTMENT OF BIRD-LORE:

In the March-April number of BIRD-LORE you write, "With all the money and effort now expended to educate the children of the land, very little has yet been done to bring them into vital touch with the world in which they live." I endorse this statement without reservation. The world around us is not properly correlated with the school curriculum, and that is perhaps one reason why such an important subject as conservation is not of vital interest to the average citizen of today. In school the boy did not feel that "vital touch," and in the school of life the man never tried.

Feeling the lack of this correlation, some three years ago I began, in a small way, to bring home to the hearts and minds of the children under my tutelage a knowledge of some of the forces agitating the world around us. I began with bird conservation. In mechanical drawing, the boys stopped making "the dry-as-dust" plans of racks, pin-trays, match-boxes, pen-wipers, *ad nauseam*, and began to draw plans of bird-houses instead. Having a working knowledge of the habits and enemies of the Wren and the

Martin, the children built bird-boxes so well that pictures of them have appeared in *BIRD-LORE*, in "The Arbor Day Annual" of the state of Illinois, and in a bird book by a New Jersey author.

When completed, the boxes were placed in back yards and public parks, where the lads watched their feathered tenants. I recall with pleasure the refreshing accounts of the youthful bird-observers. Those compositions were not labored, but were penned with intense earnestness and willingness. I noticed, too, that these juvenile reports were better written than the average compositions, due no doubt to the absorbing subject.

In drawing, the children loved to color birds, to sketch them, to make posters of them, and in fact to do anything the teacher would permit. In poetry, they have become acquainted with such poems as 'To the Cuckoo,' by Wordsworth; 'To a Skylark,' by Shelley; 'To a Water Fowl,' by Bryant; 'Ode to a Nightingale,' by Keats., etc. A selected list of books on birds has fed the interest of the children between times.

Of all days and seasons, Audubon Day, however, has brought forth more knowledge and enlightenment upon the true scope of this movement of bird protection. May 4 is always a "red-letter" day in P. S. No. 5, Bronx. A large picture of Audubon, a photograph of his birthplace, an exhibit of bird-posters, drawings, plans, bird-houses, and stuffed specimens from the Museum of Natural History, form an attractive display. To this exhibit flock the children from all parts of the school. The happy faces and animated conversation manifest their appreciation.

For the Assembly of the children of the higher classes an interesting program is always arranged, consisting of original compositions, recitations and songs. A dozen headings from former programs will give one some idea of their scope. Almost every phase of conservation is represented.

1. Audubon and His Work.
2. Why We Celebrate Audubon Day.
3. What the Government Has Done to Protect Birds.
4. What We Can Do.
5. The Work of the Audubon Societies.
6. The Enemies of Birds.
7. The Aigrette and the Millinery Interests.
8. Bird Legislation.
9. What P. S. No. 5. Has Done To Protect the Birds.
10. The Bird in Literature.
11. The Wrens Who Lived in My Bird-house.

VINCENT HILBERT. (Original paper by a pupil.)

12. Roosevelt's Bird Reservations.

These enumerations may seem to indicate too ambitious an undertaking for the comprehension of elementary school children, but this has not been the case. I have found that this campaign of education has been a leavening process to influence and formulate the convictions of the youthful minds. This fact was recently demonstrated in a most convincing manner.

Sometime ago I received a circular from Mr. T. Gilbert Pearson, entitled, 'A Call for Help.' I posted it conspicuously on the bulletin board, where the children gathered to read and discuss the letter. The following day, and for some time thereafter, the boys and girls brought me clippings from the daily papers bearing upon Assembly Bill No. 359 and Senate Bill No. 513. Receiving a copy of "The Wild Life Call" by Dr. Hornaday, I read parts of it to the boys and girls. They were mightily aroused and longed to do something. Forthwith they directed letters to their Senator and Assemblyman. There was no need for urging. They composed feelingly and fervently, and I

dare say no letter was so well penned or so cheerfully composed as that one, for it had that "vital touch" which most themes of composition lack. Of the one hundred and seventy-eight pupils who recite to me, one hundred and forty-one sent two letters each. The scholars took their epistles home and sufficiently interested their big brothers, fathers, uncles and friends so that they signed too, making a grand total of four hundred and forty-six signatures to the Senator and the Assemblyman of the district. What more practical lesson in civics could one desire than this? I enclose a few taken at random. These are copies of the originals. Note the sincerity, the childlike fervor and the interest displayed. They are the untrammeled expressions of a child's love for bird life. The girl who signs herself, "Mary Sibera" is thirteen and a half years old (which, by the way, is the average age in these classes). This is her own unaided work.

2462 Webster Ave., New York City, April 7, 1911.

HON. ANTHONY J. GRIFFEN, Senator of 22d District.
891 Cauldwell Ave., New York City.

Dear Sir: Although I am only a school-girl and have no vote in legislation, I am interested in the two bills that concern the protection or destruction of our wild birds. I want to urge you to do the utmost in your power to defeat Assembly Bill 359, introduced by Hon. A. J. Levy, which is intended to cripple and destroy the present plumage law. I write to you because I cannot help it. The results that will accompany the passing of this measure are brought before me and I fully realize them. Therefore, I appeal to you to energetically oppose the passing of this misleading and cruel law. This bill, once passed, will benefit a few sordid and unfeeling men and vain women, but it threatens to bring havoc to New York State in general.

My personal belief is that no man has the privilege to shoot one wild bird, because they are public property. God placed them on the face of the earth for common enjoyment, not to be turned to a profit by several greedy persons, nor either to adorn ladies' hats. God created them and therefore they have as much right to live as we ourselves.

In addition to this the birds are useful to mankind in various ways. They destroy the insects that beset the fields which must produce our food. Were the birds allowed to be exterminated, insects would increase, and not many months would elapse before the enormity of the error would be discovered.

Can you at all imagine the desolation that would follow if our wild birds were cruelly to be exposed to death? On early summer mornings who would not miss the swelling chorus with which the happy little birds herald the rising sun, filling the human heart with such exhilarating gladness that it almost leaps from its bonds and soars high in happy delirium with the songsters? If Bill 359 is passed, the birds, so useful, so harmless, so beautiful and pleasant both to the ear and to the eye, instead of being protected by us as a gift entrusted to the public, are to be exposed to the destructive weapon of the milliners' man. Oh, dear sir, by all means vigorously oppose the bill, which is so inhuman, so erring and so unjust both to God and man. And do not fail to ask those people who are deceiving themselves, silencing their consciences by the thought of 'profit,' to put themselves in the birds' places, and let them try to imagine the little beating heart of the mother bird quaking with fear when she hears the report of the gun.

I also pray that you can cast your vote for Senate Bill No. 513, introduced by Hon. Howard R. Bayne. The passing of this Bill will help bird conservation in all states where they are killed to supply the New York market. Enlist all your energies for the passage of this bill, for we regard the public welfare above private millinery interests.

Very truly yours,

MARY SIBERA.

375 East 183d St., New York, April 7, 1911.

Dear Sir: On hearing of the Assembly Bill No. 359 and the Senate Bill No. 513 at P. S. No. 5, I write to ask you to vote in favor of the Senate Bill No. 513, for the protection of the birds.

Birds are a great deal more beautiful when they are alive and free and in the woods than when they are dead and being used for trimming. So if they are left alive they will make more people happy by songs in summer than if they were on hats.

Therefore, sir, take it upon yourself to help protect these birds, that during the summer days give you so much pleasure by their songs, and vote for the Senate Bill No. 513, and against Assembly Bill No. 359.

Yours respectfully,

JULIA F. RICHARDS.

New York, April 6, 1911.

HON. ANTHONY J. GRIFFIN, Senator of 22d District, Bronx.

Dear Sir: I am in favor of getting passed Senate Bill No. 513, introduced by Senator Howard R. Bayne for the protection of birds.

These poor birds which are slaughtered by the hundreds should be protected.

The birds have a right to live. Sometimes they are killed just for sport and fun. The mother birds are killed and the poor fledglings are left to die from starvation, because there is no one to care for them.

I am interested in birds and I am building bird-houses. I was taught to be kind to birds. Every morning when I wake up they are singing and it's a pleasure to watch them.

I ask you, therefore, to vote against Assembly Bill 359.

Yours truly,

MORRIS LERMAN

MAX LERMAN

4582 3d Ave., Bronx, N. Y.

Such has been the method I have pursued to correlate Art and Literature with one important factor in the outside world. I feel sure much good would result in this vicinity, and even in the state, if the Audubon Societies would invite the teachers to a series of lectures upon bird protection, given by such representative men as Messrs. Hornaday, Chapman, Beebe and others.

If the Audubon Society, without relaxing its admirable legislative program, could concentrate its batteries more effectually upon the teachers and convince them of the value of birds, I feel sure that they would respond and coöperate with the Society to arouse the minds of present and future citizens to the vital interests hanging upon the fate of bird conservation. While it is necessary to combat the destructive tendencies of the present generation, ultimate success will depend upon the attitude of future generations. Bend all efforts now to mold the plastic minds of the young. When the child has attained to man's estate, we may rest assured he will be found on the right side of the question. Remember what Wordsworth said,—“The child is father to the man.”

If under my supervision one hundred and forty-one children reached four hundred and forty-six people, under the inspiration of a hundred teachers, fifty thousand and more people could be influenced.

This week the boys have returned from their Easter vacation, and have surprised me with the bird-houses, which are a marvel. I feel sure that lads who will spend many

hours from their play to construct elaborate bird-houses, containing windows, Ionic columns, doors, porches, complicated roofs, etc., must really love the winged creatures and prefer to protect them with houses rather than kill them with bean-shooters. When one considers that not one minute of assigned school time was expended in their construction, it is truly wonderful. The boys manufactured them at home, with their own tools and with their own material. Here is a potential energy for bird-protection as inspiring as Niagara.

If in after life the boys not only of this school, but of all schools, will persist in protecting the wild birds, and if the girls will refuse to wear the feathers of slaughtered birds, protection for our little friends is assured. Very truly yours,

C. ARTHUR BORKLAND
Public School No. 5, Bronx,
2436 Webster Avenue, New York.

FROM YOUNG OBSERVERS

Winter Notes on the Starling

On a clear day at Cold Spring Harbor, Long Island, large flocks of Starlings, ranging from one to four hundred, are seen and heard on a hill about half a mile from the shore. There are many old apple orchards near, and they gather to eat the rotten apples and drink water from a nearby pond. About four o'clock they are seen flying south to their roosts in some spruce trees. Another favorite place is a high piece of ground overlooking the village of Huntington. They gather here in flocks of twenty or thirty, and sometimes two or three hundred. They are often seen and heard singing here.—JANET DAVENPORT (Age, 13 years.)

P. S.—I don't know much about the Starlings and cannot find out anything about them in text-books. I have heard they eat fruit-buds, and if you would please tell me if this is true, I would be much obliged.—J. D.

[This is the kind of information which it is desirable to keep with reference to the habits and food of the Starling in this country. Compare with notes given below. Can any reader of BIRD-LORE answer the inquiry about fruit-buds?—A. H. W.]

In an English publication, "Ornithology in Relation to Agriculture and Horticulture," the following table on the food of the Starling is quoted. This table was compiled by M. Prevost and published in the *Zoologist* of 1863.

- Jan. — Worms, grubs of cockchafer and grubs in dung.
- Feb. — Grubs, snails and slugs.
- Mar. — Grubs of cockchafer and snails.
- Apr. — Grubs of cockchafer and snails.
- May — Grubs of cockchafer, snails and grasshoppers.
- June — Flies and grubs of various flies.
- July — Grubs, and fresh-water shell-fish.
- Aug. — Flies, glow-worms and beetles.
- Sept. — Green locusts, grubs of carrion beetles and worms.
- Oct. — Worms and beetles.

Nov.—Snails, slugs and grubs.
Dec.—Snails, slugs and grubs.

The Starling is said to eat "ticks" in large numbers, perching on the backs of sheep to find such food.

It is not fond of grain, but is called useful as a scavenger, wherever carrion is found. Fruit does not form an important part of its diet in its native habitat.

According to the above data, it is a useful bird in relation to agriculture and horticulture.

During midsummer, it is reported on truck-farms near Cold Spring, Long Island, where it has been observed eating cabbage-worms.

Although useful as an individual, this species, by reason of its gregarious habit, is likely to become a greater pest than the English Sparrow.—A. H. W.

Further Notes on the Starling from Adult Observers

Mt. Holyoke College, South Hadley, Mass.

The Starlings have reached our campus. They were seen by some friends of mine in the first week of March, a little flock of 6 or 8. I have seen only 2; these I saw on the campus the fifteenth of March.

NETTIE B. FAIRBANKS,
Director of Residence Halls.

South Swansea, Mass., June 8, 1911.

When we came down to the country on April 26, there was a pair of new birds in possession of our lawn. At first sight we took them for blackbirds, but their bright yellow bills convinced us we were wrong.

Some friends from New York identified them as Starlings. They were out looking for a home and took possession of a hole which some Flickers had made just under the eaves of the house, and then abandoned. I watched them carrying in bits of grass and twigs.

In about two weeks the baby Starlings were heard from. The first chirps soon became loud and lusty, and both mother and father were kept busy all day.

On the steps below the nest I found samples of their lunch, earthworms, larvæ and grasshoppers that had been dropped in the hurry.

After the first week, the calls for food were unceasing. The chattering began at five in the morning and did not stop until after sundown.

I sat and watched the nestlings one entire morning. In a week's time they had become quite bold. Two days before I had seen a bill poked out, but now the whole head came through the hole. At the least sound of the approaching parent, the mouth was opened. Sometimes the mother dropped the worm in as she flew by, without even stopping.

There were four young in the nest. Often three appeared at once, contending for the place of advantage.

After two weeks they flew away, apparently well able to care for themselves, judging from their size and well-developed vocal cords.

Just five days after, the parents came back, intending to raise another family; but they had been too noisy tenants and were greeted by a piece of wire netting.—REBECCA WATSON.

[The nesting-site described above is a common one with this species, according to the English work before quoted. The Starling does not, however, ordinarily raise two broods; still it is not uncommon for it to do so. More data on this point, as to its habit in this country, would be valuable.—A. H. W.]

NOTE.—In the September-October number of *BIRD-LORE*, 1907, data were given upon the status of the European Starling in America up to that time. On March 6, 1890, 80 Starlings were set free in Central Park, New York City, and a year later, 40 more. This original colony at first spread to the north and south more rapidly than to the east or west.

Stonington, Conn., marked its eastward, Poughkeepsie and Newburgh, N. Y., its northward range. Plainfield and Morristown, N. J., limited the southern extension, although by the fall of 1906, a report appeared of the occurrence of this species in Baltimore, Md.

Of 100 Starlings placed in Forest Park, Springfield, Mass., in the spring of 1897, few seem to have survived, or, if surviving, to remain in this locality.

In 1900, the Starlings appeared in Norwalk, Conn., and by 1907 had increased much in number.

The newcomer was reported from New Haven, Conn., October 26, 1901, where it became very common, spreading to several adjoining places.

A pair was seen as Bethel, Conn., in April, 1907, but after two weeks disappeared.

During the spring of 1906, the Starling was noted at Wethersfield, Conn., and a small flock wintered there.

May 28, 1907, 10 Starlings were observed in New London, Conn., part of whom were immature.

Some 20 individuals settled on Staten Island, N. Y., in the fall of 1891, and by 1907 had spread over the island.

By May 12, 1907, 2 Starlings had found their way to Orient, Long Island, reaching the limit of eastern extension at this point.

In March of the same year, a flock numbering about 20 individuals, appeared in Morristown, N. J., and by fall some 200 were noted in small flocks.

March 15, 1898, 2 starlings were found in Englewood, N. J. By 1907, the species had become "tolerably common" there.

At Plainfield, N. J., record was made of 7 Starlings, February 11, 1900. This small number settled, increased and became "common in the surrounding country."

May we not secure from our Young Observers a more complete record to date of the increase and dispersal of this species?

Strikingly conspicuous in song and plumage, every school-child ought to learn to recognize the Starling, wherever it occurs.—A. H. W.



SPOTTED SANDPIPER

Left-hand figure, young; right-hand figure, adult
(One-half natural size)

Order—**LIMICOLE**
Genus—**ACTITIS**

Family—**SCOLOPACIDÆ**
Species—**MACULARIA**

National Association of Audubon Societies
Educational Leaflet, No. 51

THE SPOTTED SANDPIPER

By HERBERT K. JOB

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 51

Somehow, though I can hardly explain why, the sight of a shore-bird has always given me a peculiar thrill. In my boyhood I always associated them with summer and fall outings on the seacoast, when I tramped for miles over the vast stretches of the firm-packed sand by the booming surf on 'the back-side of the Cape' (Cape Cod), or explored the great salt marshes, luxuriating in briny odors, and listening eagerly for the pipings of some approaching flock. There was an added charm of mystery about these waifs that were even more at home on the shores of the arctic sea than on beaches made common-place by hotels and crowds. They seemed also to carry always, like a certain proverbial lass, that 'delicate air' which put them in a class by themselves, so clean, so trim, so graceful, always as though just out of a band-box, even when they dabbled in muddy margins. Even though the Spotted Sandpiper appeared not always in especially romantic surroundings, it was nevertheless a *shore-bird*, and seemed to bring just a sweet little whiff of the sea-breeze and salt air. Even when it appeared up in the potato field, it was a blessed shore-bird still, and it called up mental impressions of the whole salubrious tribe.

In many localities the shore-bird race would be unknown, vanished with the lost arts and extinct races, were it not for our dear little 'Teeter,' the Spotted Sandpiper. This species is by all odds the commonest and most widely distributed shore-bird in North America today. In answer to the inquiry as to where it is found, I would suggest the opposite question. Where is it *not* found? This is not to assert, in these days of decline of bird-life, that it is swarming in every locality. Far from it, alas. But there is hardly a place, except in deep forest, where one need be surprised to run across it. It breeds from the Gulf of Mexico to the Arctic Ocean, and is found, either in nesting or in migration, from Atlantic to Pacific,—from sea to sea (and from shore to shore),—and in about all open spots between, ever though there be little water, wherever it can find its insect food.

Like most other shore-birds, it is a great traveler. One would hardly suspect the little pair, settled down for the summer so tamely in the quiet farm pasture, of being restless, and of craving the excitement of foreign travel. Yet, for aught we can tell, it may be the selfsame birds that some explorer for one of our museums meets in winter away down in Peru, Bolivia, or southern Brazil. They seem erratic, at times, in their movements and desires. Though many of them remain in northern states well into October, other individuals take time by the forelock, and by the end of July show themselves in the West Indies, Venezuela, or in Mexico. Some few remain for the

winter in our southern states, along the Gulf of Mexico, as also in Arizona and southern California. In spring the returning tourists appear in northern Florida the third week in March. It takes them over a month to journey to the vicinity of New York, for there are no dining-cars on the routes they patronize, and they work their passage in thorough and leisurely fashion. The last week in May sees the more ambitious at the end of the journey, away up in northern Alaska. According to some data, their breeding time would seem to be rather uniform in many parts of their range, the earliest eggs being reported from Virginia to the Mackenzie river country during the last third of May, and far up in Alaska, at Fort Yukon, the middle of June. But Audubon records well-grown young in Texas in early May, and in Newfoundland as late as mid-August.

Our little friend is one of the birds that are readily recognized. As it runs along the ground, or by the margin of a pool or stream, you know it is a Sandpiper from its very gait, slender legs and small size. All our Sandpipers are clad in grays and browns above and white below. This Spotted Sandpiper, in adult plumage, has conspicuous streaks and spots sprinkled over the otherwise white plumage of the under parts. The young bird of the first summer and fall, however, lacks these spots, and has instead some nondescript gray on the breast and sides. But both on ground and in air does the Spotted Sandpiper advertise its identity by its movements. Alighted, when it ought to take things easy, it almost never seems at rest, for it has contracted a very unhygienic nervous habit of tilting its body incessantly. Standing on the shore, it bows, bobs, jerks, tilts, its body, yes, '*teeters*,' we may as well call it, and be in fashion. When it flies, too, it proclaims its identity. The wings are held below the level of the back, tips well down to the water, and given a tremulous, hovering motion, accompanied by loud cries of 'peet-weet, peet-weet,' or 'weet, weet, weet.' These traits have given it the names by which it is better known, even than by its book name,—'Teeter,' 'Tip-up,' 'Peet-weet,' and so on. I almost dislike to record these various local names of birds and thus help to perpetuate them and the confusion they cause. It would be so much better if all these familiar birds were known everywhere by but one universally accepted name, rather than a different one for every section of the country.

Haunts In common with other Sandpipers, this species is to be looked for in the vicinity of water. At the same time, it is perhaps less particular as to the amount of water than any other of the Sandpiper tribe. The merest puddle or rill will suffice, nor is it confined to the immediate margin even of such. Often we may run across it in a pasture or on a piece of ploughed land. Just a little wetness of low ground often suffices to satisfy it for the choice of a summer home. Yet it is far from averse to more water. One is almost sure to find it running along the margin of pond, lake, or river, and also the ocean beach, particularly if rocky, is attractive to it. In such places, when the nesting season is over, and the young are able to take care of themselves, we may meet them in parties or small flocks, keeping somewhat

scattered, not in compact bodies, like various other Sandpipers, though individuals are sometimes found associated with flocks of other species. When alarmed, the scattered company starts suddenly from the shore, with reverberating 'peet-weet' cries, circles out over the water, and returns to a spot not very far from the starting-point. Here they are sometimes pursued by gunners, and become really quite shy, though ordinarily they are tame enough.

On the small inland waters there is but one species with which it could readily be confounded. This is the so-called Solitary Sandpiper, a bird not at all plentiful, which appears, usually singly or in pairs, as a migrant in May and in August and September. A careful observer will readily distinguish them. Once I had a fine opportunity to see both species together and note the differences. It was in late July, on Lake Chautauqua, New York, on the grounds of the Chautauqua Institution. The bird-study class was out before breakfast, and was delighted to see, on a sand-flat, quite a flock of shore-birds,—Kildeers, Spotted Sandpipers, and several Solitary Sandpipers, more of the latter than I had ever seen before together. Behind some large trees we made a close approach, and could see splendidly the distinctions. The Solitary Sandpipers were a trifle larger, darker on the back, and with green legs instead of the yellowish hue of those of the Spotted Sandpiper. They were also quieter in voice and manner than the latter.

During the last half of May we are liable to happen upon the **Nest** earlier sets of eggs of the Spotted Sandpiper. Under a bunch of weeds or in the shelter of coarse grass, a few yards or rods back from the shore of a pond or stream, is perhaps the likeliest site. Often the chosen spot will be almost anywhere in a moist pasture, or even back in a field of potatoes or corn. Time and again I have found nests on islands, both in lake and ocean. In such cases the birds seem to colonize, and there may be upwards of a dozen or twenty nests on one islet. On sea islands they build in a tussock growing from the crevice of the rock, and may be seen running nervously over the rocks, teetering, as usual.

Some nests are concealed very carefully, amid thick foliage, while others are merely in the shade of some straggling weed. The best concealment is afforded by the demure little brownish bird that blends so perfectly with the color of the ground, and sits so motionless upon her treasures. But let one innocently walk quite close, and away she goes, with the shrill 'peet-weet' alarm. The secret is out, and there the trespasser may examine the four eggs, large for the size of the bird, whose creamy-white background is plentifully sprinkled with dark brown spots, especially at the larger end.

One day, early in June, my wife and son were following an overgrown cart-path, just in from the bank of a river, and flushed one of these Sandpipers from a nest with four eggs, situated under a small clump of weeds. Close to it was a pile of slag and rock, dumped from an old foundry many years before. It seemed to me, when I examined it, an ideal place to secure photographs of the

bird on her nest. So I proceeded to hide the camera, with slag and weeds piled over it. Connecting a thread with the shutter, I hid behind a thicket of bushes, some fifteen yards off, to watch. In a few moments the little Sandpiper appeared trotting about and jerking her body, I thought, even more nervously than usual. She maneuvered around for some minutes till she felt assured that I had gone. Then she walked straight to her nest, going within a foot or two of the camera, which she failed to notice at all, so well was it concealed. She was not still for an instant when she reached the eggs, but settled over them at once, bristling her feathers and pushing her treasures with bill and wings this way and that, till everything was arranged to her satisfaction. Then came my chance, and I pulled the thread gently, taking her picture. Even the slight click of the shutter sent her off in a hurry, but she came back several times for me, and then I left her in peace. She safely brought off her young, and I afterwards met them scurrying along the margin of the river.

Like all baby Sandpipers, the little Spotted Sandpipers are quaint and amusing. They look like tufts of cotton stuck up on tooth-picks, as they race over the sand, attempting to escape when discovered. First, though, when the stranger approaches, they squat flat on the shore, or hide in the grass. The parent birds throw themselves on the ground before their supposed enemy, and make believe wounded, so as to decoy him away from the young. At these times, and at others, when they have young in the vicinity, they are apt, in their solicitude, to alight in all sorts of places, even on trees or bushes, something which they would not think of doing at any other time than in the nesting season. In this habit they are not alone, for various other shore-birds do it, in breeding time.

The usual food of most species of this class is aquatic insect life of all sorts. This is in part the diet of the Spotted Sandpiper. But as it is also a bird of field and pasture, its range of insect food is very wide, including grasshoppers and locusts. Probably almost anything in the insect line is grist for this hopper, and thus it is a most useful bird. Indeed, some of our shore-birds are not given credit enough for the good that they do to agriculture. Such 'shore-birds' as the Killdeer, the Upland Plover, and Spotted Sandpiper really should be classed with the Meadowlark and Bobolink, and not be put in the game class at all. The fact that they are classed as shore-birds, or *Limicolæ*, does not alter the case. It is truly a shame the way that the shore-birds have been exterminated. Such tiny species as the Least and Semipalmated species are too small for food, and no self-respecting sportsman should shoot them. In fact, it is high time to "let up" on all the shore-birds, and give them considerable, or, for a time, absolute protection, lest species after species, now seldom seen, go the sad way of the once abundant but now probably extinct Eskimo Curlew. These most attractive forms of bird-life are among the great charms of shore and sea-coast, and should continue for us and our posterity. May the time never come when lovers of Nature shall look for them in vain.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1974 Broadway, New York City

President Dutcher

President William Dutcher continues very ill at his home in Plainfield, New Jersey, but little change having been noted in his condition of late. The paralysis of his right side apparently shows no sign of abating and his speech has not as yet been restored. One who knew well the active, vigorous, kindly man of a year ago could hardly realize today the change which has come upon him. We hope, however, in fact we believe, that he is able to understand much of the progress being made in the Audubon work, the subject in which his interest was so much involved and to the larger establishment of which he gave many of the best years of his life.

—T. GILBERT PEARSON.

The Bayne Bill

Perhaps the most important game law enacted by the General Assembly of New York state in 1911 was the so called Bayne Bill. In brief, it prohibits the sale of wild game native to the state, whether coming from within or without the state. In fact, it prohibits the sale of all game, except that imported from foreign countries, and this must be properly tagged or labeled, and the tags retained on each individual game bird or animal until the same is consumed. The one exception to the above is the provision whereby properly accredited persons may secure permission from the Forest, Fish and Game Department to breed certain game birds and animals in captivity. When the owners of such game desire to kill the same, they must have present either a magistrate or a game protector, and the killing must be done in some other way than by the use of a gun. Pheasants,

Mallards, and Black Ducks reared in captivity, when properly tagged or labeled, may be sold between October 1 and March 1, of the following year, both inclusive, and American elk, Virginia deer, European red deer, fallow deer and roe-buck reared in captivity may be sold for food during the open season and up to and including March 1.

This new law is an exceedingly important step forward in the struggle which is being made to preserve our native wild life. The person interested in game protection cannot help but reflect with pleasure on the fact that the immense shipments of Quail and Wild Ducks which have hitherto been made from the southern states to New York City must now be discontinued. As long as there was an open door for the sale of game in this great city, there was abundant inducement for unscrupulous persons to violate the laws of other states by smuggling their products illegally to this market. This new measure, therefore, will surely have a most important bearing on the preservation of our wild life.

Many of the friends and members of the Audubon Society gave their earnest support to the measure, and they will learn with pleasure that the Bayne Bill is now a law.—T. G. P.

Saving the White Herons

The generous response to our recent call for help to save the aigrette-bearing White Herons of the United States has already enabled the Association to accomplish some exceedingly encouraging results. Although the funds thus far received are entirely inadequate to cover the field properly, enough has been accomplished to show that the plan of locating the re-

maining colonies and guarding them is altogether feasible. We employed an agent to explore the localities in North Carolina which have formerly been inhabited by these birds. Another carried on similar work in the coast regions of South Carolina and Georgia, and a third has been investigating the low country of Texas. We have also extended the work in Florida and Louisiana. At the present writing eleven colonies have been reported; three of these are on the land of members of the Audubon Society and these gentlemen see that the birds are not molested. The other eight groups of breeding birds are now under the daily care of the wardens which we have been able to employ with the funds sent in by our friends and members who feel that it is worth while to save these wonderfully beautiful birds.

The following contributions to the White Heron campaign were made between May 1 and July 1, 1911.

Allen, Miss Mary W.....	\$30 00
Baldwin, Mr. Roger N.....	2 00
Codman, Mr. J. S.....	5 00
Cox, Mr. John L.....	5 00
Doremus, Mr. R. P.....	25 00
Farwell, Mrs. J. W., Jr.....	5 00
Gault, Mr. B. F.....	2 00
Goodwin, Miss Amelia M.....	3 00
Haskell, Miss Helen P.....	1 00
Hoe, Mr. R. M.....	100 00
Hubbard, Mr. Lucius.....	5 00
Iselin, Mrs. C. Oliver.....	25 00
Johnson, Mr. J. W.....	5 00
Kuser, Mr. John Dryden.....	5 00
Long, Mr. F. W.....	2 00
Mills, Dr. Herbert R.....	2 00
Phipps, Mr. Henry.....	200 00
Reed, Mrs. W. H.....	5 00
Stoughton, Mr. John A.....	5 00
Tinkham, Mr. J. R.....	10 00
	<hr/>
	\$442 00

The total paid subscriptions to date amount to \$1,386.00.

New Members

From May 1st to July 1st.

Life Members.

Smith, Miss Alice Weston,
(In Memoriam.)

Sustaining Members.

Aldrich, Mr. Frank W.
Bigelow, Mr. Albert F.

Cammack, Mr. Huette,
Concord School, The,
Craig, Mr. W. R.,
Fiske, Mr. E. W.,
Gaston, Miss Sarah H.,
Gifford, Mr. O. P.,
Gray, Mrs. Horace,
Hall, Mr. E. K.,
Miller, Mrs. C. M.,
Palmore, Mrs. Geo. W.
Palmyra Nature Study Club
Phillips, Dr. C. E. H.
Roosevelt School, The
Taintor, Mr. Charles W.
Vandergrift, Mr. S. H.
Whitney, Mr. Caspar

Junior Audubon Societies

June 1, 1911, marked the close of the first year of work in the schools of the southern states under the plan supported by the contributions of Mrs. Russell Sage. The experiment of forming Junior Audubon classes among the children has proven to be very successful, and many teachers write that the children have greatly enjoyed the work. The largest class was that formed by Miss Lucy K. Little, of Memphis, Tenn., and numbered one hundred and twenty. Lexington, Kentucky, shows the greatest number of classes in one city, ninety-nine having been organized with a total paid membership of one thousand, two hundred and thirty-two.

The number of classes in the various states and the number of pupils enrolled is given in the following summary.

States	Classes	Members
Tennessee.....	109	2,974
Virginia.....	130	2,537
Kentucky.....	108	1,475
North Carolina.....	48	987
Georgia.....	36	721
Louisiana.....	38	736
South Carolina.....	38	681
Alabama.....	16	344
West Virginia.....	5	88
Texas.....	3	54
Maryland.....	1	15
Mississippi.....	1	10
<hr/>		
Total—12	533	10,595

No one can estimate the good accomplished by the systematic instruction in bird study and bird protection given to these ten thousand, five hundred and ninety-five children.—T. G. P.

Manufacturers' Offer Declined

An offer to contribute to the National Association \$25,000 a year for the next five years, the sum to be expended for game protection, was recently made through Mr. H. S. Leonard, of the Winchester Repeating Arms Company. The funds were to be contributed by a dozen or more firms which manufacture firearms, cartridges, powder, shot and hunting accessories. In his letter making the offer, Mr. Leonard pointed out that no one can possibly be more vitally interested in the preservation of wild life than the manufacturers of arms and ammunition, for if the game should be exterminated, their business would necessarily suffer.

The Board of Directors at first thought it would be well to accept the offer, as there is such an urgent demand for means with which to extend the work of bird and game protection, and as the offer was made in such apparent good faith. After further consideration, however, the Board, on June 16, decided that it would not be wise to accept large sums from this source for the purpose indicated. The work of the National Association has always been in the line of bird and animal protection for the sake of preservation, and the new principle involved, viz., protecting for the purpose of killing later, was regarded by many as being foreign to the real purposes of the Association. It was also feared by some that the using of so large a sum for game protection alone might have a tendency to cause the Association to lose sight of the important work of conserving the valuable non-game bird life of the country, to the preservation of which the Association has always devoted the major part of its efforts. There is great need for more work to be done for game protection, and we learn that these companies are intending to go on with the game protective movement under another leadership.

—T. G. P.

Notes From the Field

OREGON.—Following the recent strengthening of the Oregon game laws, Gover-

nor West appointed Mr. William L. Finley, Field Agent of this Association and President of the Oregon Audubon Society, to a position as one of the Board of Fish and Game Commissioners. When the time came for this Board to select a State Game Warden, there appeared to be no one of the dozen or more applicants, good men as many of them undoubtedly were, whom the Board felt justified in supporting for the position. There was but one man who, to them, stood out above all others in the state as being especially adapted for this work and that was Mr. Finley, and he was not a candidate. The other commissioners, ambitious that Oregon should have him as its chief game warden, insisted that Mr. Finley resign as a member of the Board in order that they might appoint him warden. Others united in the request, and in the end, his resignation was handed in and he was appointed to this important post of duty. Speaking of his selection, the Portland (Oregon) Evening Telegram says in its leading editorial of May 27, 1911:

"The *Telegram* believes that the appointment of W. L. Finley as State Game Warden will meet with general, if not unanimous, approval. Mr. Finley is a man of the right spirit for the position. In the first place he is enthusiastic in the general work of game preservation, and beyond that he is possessed of the technical knowledge regarding the wild denizens of the woods that cannot be otherwise than helpful in that office. Secondly, Mr. Finley is a man of excellent judgment in all matters pertaining to the office for which he has been selected. And finally, he is that type of man who seeks in his administration of the office to do the thing that is best; always bearing in mind that efficient and economical protection of game and fish in the state of Oregon is the paramount duty imposed upon him. This paper believes that it bespeaks the general sentiment when it says that a better selection for this particular office could not have been made."

TENNESSEE.—The East and West Tenn-

essee Audubon Societies have combined in advocating a rather unique plan for extending interest in bird protection. Circulars have been issued which, supplemented by appeals in the public press, call upon "all farmers and other persons who wish to aid in bird and game protection," to proclaim their lands, if of five or more acres in extent, as "Audubon Bird Refuges," and to post notices embodying such declaration. On these "bird stations" the owners are encouraged to allow no bird nesting by boys or promiscuous shooting by irresponsible persons. It is also urged that bird-boxes, drinking-fountains, and shelves for feeding birds be placed in suitable localities. A plan similar to this has been sanctioned by law in Indiana, and the results in that state indicate that the idea is a perfectly practical one. Details of the plan in question may be obtained from President H. Tullsen, Knoxville, Tennessee.

CALIFORNIA.—When the Legislature of California adjourned on March 27, 1911, there was a distinct feeling of relief in the minds of many of the friends of bird protection, for some very strenuous efforts had been made to adversely amend the state law protecting non-game birds. The bill of this character which attracted most attention was designed to remove protection from the Western Meadowlark. Its advocates charged this useful bird with being a serious menace to agriculture and horticulture; in fact, some even contended that it was a voracious eater of grapes! The California Audubon Society combated this bill with great vigor and at length it was defeated in the Assembly by a vote of forty-nine to twenty-three.

In the Senate a bill made its appearance which provided for removing protection from Kingfishers, Grebes, Terns, Night Herons, Bitterns, Pelicans and Cormorants. The Senator who was responsible for this startling undertaking decided subsequently not to push his bill and allowed it to remain uncalled on the calendar. This happy change of plans on his part was undoubtedly brought about

largely through the untiring efforts of Miss Gretchen L. Libby, School Secretary of the California Audubon Society. Miss Libby spent nearly two months in Sacramento in the interest of bird-protective legislation, and the outcome of the campaign was chiefly due to her work. There is a deserved tribute to Miss Libby's ability and success as a public speaker in the fact that a position as field worker and lecturer has recently been provided for her by the State Board of Fish and Game Commissioners.—T. G. P.

Levy Plumage Bill

The Levy Plumage Bill which the friends of the millinery interests have been seeking to push through the New York Legislature this year, failed of passage on the night of June 29, 1911. The object of this proposed measure was to seriously cripple the Shea-White Plumage Law enacted by the Legislature last year. This Association backed by many other organizations in the state, as well as thousands of patriotic individuals, has most earnestly combated the Levy Bill since its introduction several months ago. It was late at night, just two days before the new plumage law was to go into effect, that Assemblyman Levy called for a vote on his bill. Apparently the Democratic organization in the Assembly chamber drew the line as tightly as possible over the Democratic members, but when the roll was called, only sixty-six responded in favor of the passage of the measure. As seventy-two votes are required, the bill "failed of passage." It now remains to be seen whether Mr. Levy will be able to muster enough votes at a later date in order to secure the enactment of his bill. On July 21 the Legislature took a recess until September 6. The Levy Plumage Bill can, of course, again be voted on at the adjourned session. In the meantime, it is now illegal to sell Heron aigrettes and the feathers of many other birds which were formerly offered in abundance in the millinery markets of New York state.—T. G. P.



A Building for You, By You

YOU ARE respectfully and earnestly requested to contribute to the cost of the site and construction of this building—it and its surroundings known as Arcadia—the Home of The Agassiz Association. The editor of this magazine has contributed this space wherein this appeal may be made to you. You also are in sympathy with it because you love nature, the great outdoors, education, recreation, inspiration, health, happiness and humanity.

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THE AGASSIZ ASSOCIATION, Arcadia, Sound Beach, Conn.

EDWARD F. BIGELOW, President, and Managing Editor of "The Guide to Nature"

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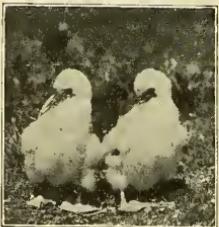
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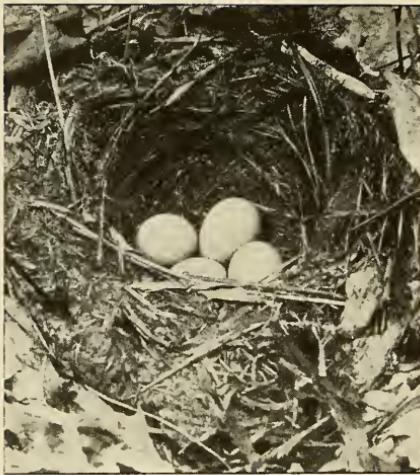
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Vol. XIII

SEPTEMBER—OCTOBER, 1911

No. 5

Birds and Seasons in My Garden

V. FLOCKING AND MIGRATING

By MABEL OSGOOD WRIGHT

“Silently, among the trees,
The Thrushes flock and disappear.
We hear their notes upon the breeze
And then—the singers are not here.”

AT last the drought of nearly the summer’s length was broken. The weather rooster, that had pointed at the honeysuckle trellis to the southwest so long that he had grown stiff in the joints, turned sharply to face a tall spruce that stood between him and due East. The rain that came as a vagrant shower saw the parched garden and the cattle in Bluebird Farm, petulant from cropping growing hay, hesitated, and, losing its careless impulse, settled into the steady rain of a week. When finally the clouds were pierced by the sharp edge of the quarter moon, the land lay lush and green once more, penetrated to the heart, the life-blood of rain reaching the life-blood of the springs. Yet all unseen, unknown, a change had come.

Not a colored leaf tinged the Virginia creeper draping garden and hedge, but still autumn had taken possession with its advance guard. A Canada Nuthatch was performing its mouselike antics in the old apple-tree, and, at the first burst of morning sunlight, the Grackles settled by the hundred in the spruces, and then dropped, with the rustle of stout wind-blown oak leaves, to the lawn.

Year after year, this same flocking goes on, and yet somehow it always comes as a surprise, especially in these later years when protection has swelled the Grackle borders to rather appalling proportions. When, added to this mob, we have an equally great flock of the alien Starlings, it makes one pause and, in good faith and understanding, ask the question, “Has not the time arrived when the protection given these birds should be limited, outside of the breeding season?” Should not the landowner be allowed some discretion in the matter, when the Grackles suddenly leave the lawn, to settle on a field of sweet corn in the tender milky stage, and wreck all of the topmost ears. Of course, even

as I write, I hear those who might be called uncompromising general defenders say that Grackles do not eat corn, and then follow the statement with a list of the noxious things that they do eat. Be this as it may, the Grackles eat *my* corn, and the Starlings frighten away *my* Robins, and fight *my* Flickers, and poke out other nesting, insectivorous birds too numerous to list. Also, Grackles ate fresh corn in Audubon's day, for a much-valued plate done by him, that hangs in my hall, has forever shown them in the act. Protection, to be in the highest degree effective, must be rational, not fanatical. The Grackle must be held in check in well-settled communities of gardens and

small farms; while, if the Starling is allowed to multiply as it has done the last half-dozen years, another disturber of the peace of the rural morning will be established, and a spoke added to the fast-revolving modern nerve-rack wheel.

The autumn signal given by the Grackles in farm and garden is taken up by the Swallows along the wayside and wide marsh meadows. In fact, there are some sizable Swallow flocks in early August; but hereabouts the first week in September sees the great, smoky, cloudlike flock of the Bank Swallows settling



YOUNG BLACK-CROWNED NIGHT HERON IN THE MARSH PIT BEYOND BLUEBIRD FARM

on the beach edge, where the campers so recently reigned, and, even at low tide, mingling with the 'Peeps' that patter about the water-edge. A sudden fright will separate the flocks, and show the great difference in flight,—the Sandpipers skimming low over the water, while the Bank Swallows settle on the bay-bushes, or else cling to the rough roofs of a shore cottage, like an array of close-set, feathered shingles.

Exactly what form of animal life drew the Swallows to the sand had been for some time a mystery until, a few days ago, chancing to be at the beach when a quantity of broad-leaved seaweed, fermented by the sun, was sending forth a particularly stale odor, I saw that the mass, edging tide-water for several hundred feet, was swarming with flies, and it was upon these that the Swallows were feeding so eagerly. After all, first and last, the food-supply is the great thing.

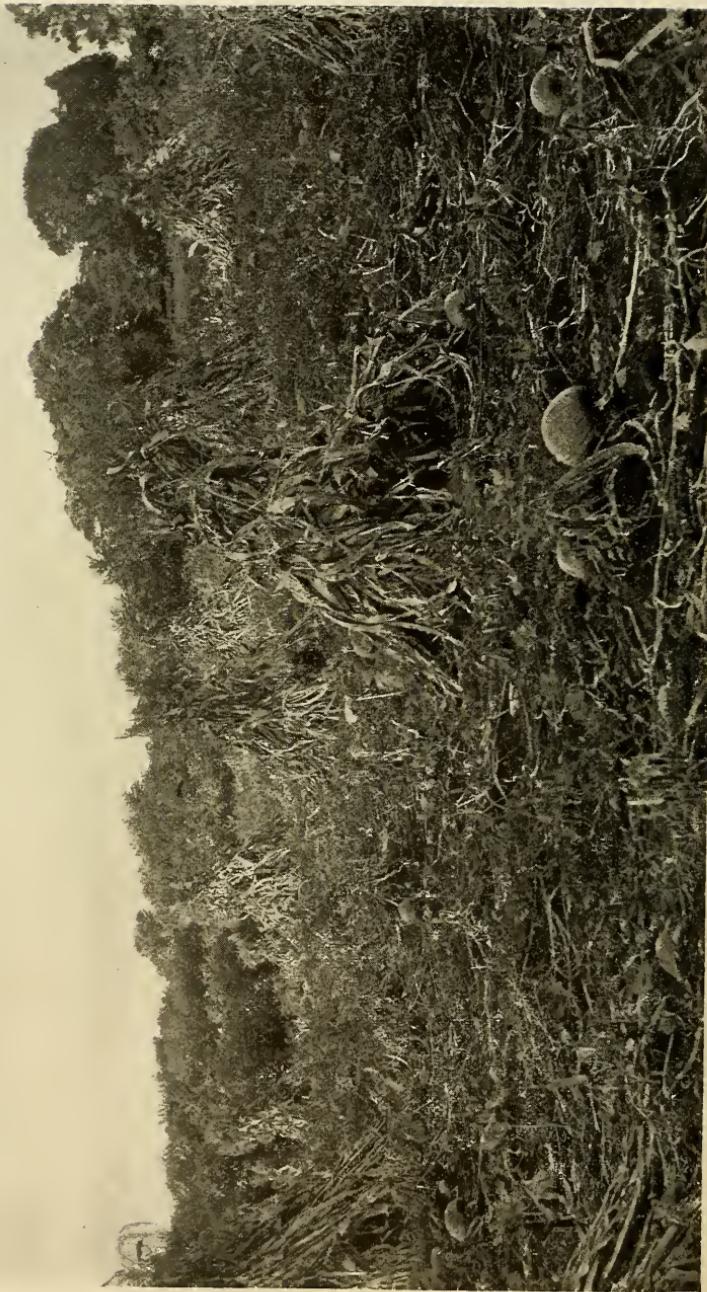
To a trumpet-vine that has made itself into an upright form by clinging to an old-fashioned summer pear tree, we owe the presence of Baltimore Orioles during the molting season, and up to the very last day of their stay, the latter part of the month. Their presence, to be sure, was at the price of the perfect beauty of the flowers; for, barely was one of the long clustered buds ready to unfold, when it was pierced at the base by the Oriole's slender bill, even as he attacked the apple blossoms in May. Then, when the flower-supply fails, these birds move to the grape arbor below the Thrasher's Shrubbery, where are gathered the derelicts of the garden grapes, profuse in yield, though deficient in table quality, upon which all the birds are welcome to feast. One of the great secrets of a happy garden (or garden happiness, if you prefer the wording) is to have plenty of gleanings alike for man and beast. A too-clean sweeping of the corners of things, a too-precise counting up of the uttermost grains and blossoms, somehow cramps the spiritual focus of both eye and soul, aside from leaving nothing for the gleaners, be they on foot or wing.

This year, a new bird has added itself to the early autumn company at the feeding station on the wall—the Brown Thrasher. Little by little, the Wood Thrush is becoming the fourth of the familiar garden quartet, the other three being, in point of familiarity, the Song Sparrow, Robin and Catbird; but this is the first season that the Thrasher (or rather five of them—two adults and three nestlings) has come almost daily to the feeding-board on the piazza railing.

This particular board, being close outside the dining-room window, affords a fine chance of seeing a few friendly birds in all the grotesque vagaries of the molt. Tommy Tucker—a name given by the Commuter to a particularly cheerful Song Sparrow, who, like the little boy in the rhyme, always sings, not only before, but after supper, having a peculiar long-drawn note by which we identify him—has been having a very hard time with his tail. For some time he had none at all. Then a solitary outside quill grew at almost right angles to its proper place. This evidently annoyed Tommy, and one day, when in plain sight, he plucked it out, and shortly a symmetrical array of feathers put forth and grew nicely.

For what reason I cannot guess,—unless that the drought and a consequent poor food-supply have kept the birds more in the open, where they are under observation,—this has been a particularly tailless season. The most conspicuous subject has been a Crow, who, in trying to fly against the wind, became utterly demoralized, and, after affording an interesting study of wing-steering for several minutes, suddenly plumped down into the garden, much to the joy of some Jay cousins.

Warblers galore are coming in and through, but, when mingling their fall feathers with the turning leaves of the last half of the month, they represent what may be called confusion worse confounded, even to one who has a fair spring acquaintance with them. A few stand-bys we may always recognize—



THE CORN-FIELD WHERE CROWS, JAYS, GRAY SQUIRRELS, MEADOWLARKS AND BOB-WHITES
COME AND GO FOR FOOD AND SHELTER

the Black and White, the Myrtle Warbler, the Redstart, who if it turned sky-blue, could not disguise its flickering flight, and the Blackpoll.

In the greenest of seasons, the leaves of creeper and swamp maples will be turning when the first of the half-dozen small, but most characteristic, winter birds arrive. These we greet with a wholly different feeling from that called forth by the migrants, who, though interesting, are but marks of the passing season. There is something about the winter birds that makes for a sturdy sort of permanence. They may, to a certain extent, come and go; but, as long as we remember them with food and shelter, they are quite sure to abide.

When, in late September, a little feathered something bobs in and out among the apple twigs, I know, without looking in detail, that the Golden-crowned



WHERE ALL UNKNOWN TO ME AN OVEN-BIRD HAS NESTED

Kinglet has arrived, and that it is time to expect the Winter Wren about the wood-pile, the White-throat in Thrush Lane, and the Junco hobnobbing with both Song and a few unabashed English Sparrows on the feeding-board. Now, at any time, I watch for flocking Purple Finches in the honeysuckle,—a spectacle often repeated in all but the severest weather of January and February.

As the leaves fall away, there are many surprises and the finding of empty nests in wholly unexpected places, one of the greatest of these having been the ground nest among the ferns from which the Oven-bird takes its name.

We always have these birds in the spring. In past times a few have nested, but lately they have left the place for near-by woods; yet, in raking leaves from

beneath a triple birch tree where the ground was thick with Christmas ferns there was the oven-shaped nest still holding an unhatched Cowbird's egg. Instantly the question asked itself—one of those irritating, unanswerable questions—"Did the Oven-bird hatch and rear a brood within a span of a garden footpath? Or did the alien egg alarm their desire for privacy to such an extent that the builders left silently for more remote haunts? If the last was the case, our lack of sight, insight or intuition, whichever it may be called, was less inexcusable.

The gathering of many sweet peas is a daily occupation, involving both time and patience, both of which the Commuter gives to them; and yet when the dead vines were torn from the brush and both removed to the burning heap, three well-worn nests revealed themselves exactly at the level where they should have been the most discernible—two belonging, probably, to Song Sparrows, and one the hair-lined home of the Chipping Sparrow, while the number of Robin's nests revealed each autumn is a constant proof of the wonderful protection that nature gives to one of the most vociferous of her feathered children.

From the last of the month, until winter fairly sets in, we watch for the Hermit Thrush. For him the garden has ample lure of dogwood and magnolia berries, his chosen autumn food. So, with food and plenty of spruce shelter, we have a good month each year in which to become friends, and though the acquaintance must be rebuilt each season, it is well worth the trouble, and it is quite easy to know this beautifully groomed Thrush at a six-foot range.

The Chickadees, though resident, come into open view again in proportion as the leaves disappear, also the White-breasted Nuthatches and the Downy Woodpeckers.

Once we had Quail, as a regular thing, on the place, and even now an odd brace of Ruffed Grouse have come to feed, and a year ago established a dusting place across the fence; but it was left to the first day of the last open season to present a picture that belonged to the golden age of New England game.

About eight o'clock of a gray morning following the first white frost, a tap came at the front window, and a finger beckoned me out, at the same time warning caution. Tiptoeing about the house, I stood literally transfixed, for there, crossing the lawn, walking toward some brush, in a close brood, like little Turkeys, was a great flock of Quails. Though they kept on the move, their motions were so deliberate that, as they spread and then lined up on entering a gap between some trees, we could count them—forty-two in all!

From where did they come? Was it a gathering of coveys that report said were reared in a few protected spots? Were they migrants *en route*? For, of a certain, the Quail migrates far beyond the commonly recognized limits.

Be as it may, we spread buckwheat and cracked corn in many places, and all that day the birds remained on the grounds. Next morning found them in the

cornfield over the garden fence, where for two weeks they hid among the shocks and had good eating among the weeds along the borders, then—they were gone; but all this time no gun had been fired at them,—that is, within the sound of several pairs of acute ears.

The ebb and flow of autumn bird-life, how can it be told or pictured? A single book would not hold it all, or the rhythm and rhymes of the truest poet serve as a cage for it. Of how the Ducks fly over the garden to the swampy margins of a near-by tide pond, or of the strange shadowy shapes of the fearless young Night Herons, standing stupidly watchful by the same water until the crucial moment comes, and the seemingly immovable beak darts forward to seize a luckless frog or fish. Then the day arrives when the Gulls return to the beach, and the Grebes once more flush and dive, and the lure of the garden is divided with the lure of the sea. Yet the garden is home—the home where one is host. There is a table to be spread, the table of winter brotherhood. For winter is the great time of drawing together; of purification and the survival of the spiritually, as well as physically fittest; the conservation of forces against the Great Awakening.

The Nesting of the Whip-poor-will

By H. E. TUTTLE, Simsbury, Conn.

THE guinea-hen had stolen her nest, as guinea-hens do. I had searched the brush heap, sure of finding her, and had come away sore in mind and body, for I had fallen through the pile of stumps and branches to no purpose.

I walked along, thinking evil thoughts about guinea-hens, shuffling my way through a small tract of stunted second-growth oak and chestnut saplings, which lay close beside the henyard, and into which the wind seemed to have swept all the dry leaves in the land. Then, up from my very feet, fluttering lightly, like some gay butterfly, and colored like the chestnut leaf, wavered a Whip-poor-will. I looked closely and found her eggs, two elongated eggs with markings of lilac-gray. I thought no more of guinea-hens. The Whip-poor-will fluttered along, waving her long wings outspread on the leaves. I marked the spot and hurried away to tell the camera man.

We walked up to her during the next day, armed with cameras, tripods and string. She floated away, making guttural noises in her throat, and sat crosswise of a limb watching us. She rarely sat in the orthodox Whip-poor-will fashion, which is lengthwise of the limb or nearly so. We set the cameras and went away to wait her return. After an hour or so I came back to spring the shutters, but the bird was still sitting on the limb, and sound asleep? I woke her by clapping my hands, and when I returned again she was covering her eggs. I pulled the string and heard the shutter click, but my photographs, in this instance, were all failures. I never knew until after the young had flown,

that a faulty shutter was responsible, only two pictures resulting from almost a dozen attempts.

When the young Whip-poor-wills hatched, we built them a wattling of sticks, as they run about almost from the egg and are difficult to find. The newly hatched birds were attractive-looking little chicks so long as they kept their mouths shut. They were a uniform buff color, which matched well with the leaves, and the instant their mother left them they each ran in opposite directions and squatted. In this maneuver the old bird seemed to aid them materially by the vigorous flip which she gave them as she rose, often tumbling them over on their backs. The concealing coloration of the chicks made them difficult subjects for the photographer, and it was only by placing the two obstinate youngsters on a bright green oak leaf, that a sufficient contrast in



WHIP-POOR-WILLS TWO DAYS OLD

color to show them up was obtained. The trials of getting them both on that oak leaf were manifold. Several times when we thought that at last we had succeeded, the old Whip-poor-will would hover overhead, uttering a guttural *quup* which was sufficient to scatter both young ones and which made it necessary for us to begin all over again.

The old bird paid no attention to our wattling, hovering over the young for a moment, and then dropping quickly into the enclosure. She always looked more like a big moth than a bird.

Meanwhile, the downy chicks of yesterday had become grown birds, and, feeling their importance, they had quite literally "flown the coop." I found the mother brooding one full-grown bird a day or so later. She was not far from the enclosure, but well under a laurel bush. What became of the other young bird I never knew.

During the next year, in June, I again stumbled on a Whip-poor-will's nest. I was hunting for the nest of a Ruffed Grouse and found instead My

Lady Whip-poor-will. She fluttered up lightly from between my feet and flopped along the ground, trying vainly to draw me away from her eggs. The situation of the "nest" was much the same as the one found the year previous, a light second-growth woods and lots of wind-blown chestnut leaves. There was, however, a considerable difference in the coloration of the bird herself from the one whose eggs I had found before. The Whip-poor-will of a year ago resembled a piece of fire-charred wood, being very dark-colored, while the bird whose nest I had just found was merely a piece of the leaves she nested on, light chestnut, brown and buff. This second bird was also very fearless, allowing me to touch her back and making it necessary for me to



A SITTING WHIP-POOR-WILL

shove her gently off the young when I wanted a glimpse of them. Perhaps the sleepy temperament of all nocturnal birds during our daytime had something to do with her fearless attitude. It was of this bird that I secured my best pictures. She was a very easy subject, and, though I scored a good number of failures, they were mainly due to my own carelessness. I was using a 3A Kodak with portrait lens and films, so that all my focusing had to be done by measurement, a very unsatisfactory method and productive of many failures. Though handicapped by this equipment, enough exposures were made to insure some good negatives. The Kodak was set up on a tripod, the focus obtained by measurement from the lens to the eggs, and a thread or cord attached to the trigger of the shutter. After an hour or so, the bird would return, and, if on approaching the situation I could see through my field-glass that she was back on the eggs, a pull of the string released the shutter. Then, bar accidents in the darkroom or miscalculation in focus, the bird was mine,

photographically. Some there be who consider the results not worth the effort, and from their point of view they are right. The male Whip-poor-will I saw only once, and that was after the young were fully grown. He was very conspicuous in the dusk as he sat on a log, uttering rasping sounds in his throat and opening and shutting his tail, brilliantly marked with white at the edges. It was only a day or so after seeing the male bird that I lost sight of the young birds altogether.

In the spring, before the birds mate, one can often call the Whip-poor-wills by imitating their evening song. Once I watched two males fighting and singing at intervals on a fallen birch sapling. I was quite close to them,—within a yard—but they did not seem to regard me as dangerous, and when I tried to imitate the guttural noises they were making, they circled round my head so closely that one touched me with his wings. In the darkness I was probably no more than a charred stump. The song of the Whip-poor-will, when heard at close range, say within a rod or so, is a rasping, guttural sing-song ending with a jerk.

Few people know the Whip-poor-will; he is merely a wandering voice, a cry in the night. Some think of him as closely connected with bats, and the country folk will tell you that the Whip-poor-will and Nighthawk are one and the same bird. Some day in late May or early June you may startle a Whip-poor-will from the chestnut leaves, and if you seem to have stepped on her and the bird heightens the illusion by fluttering painfully along the leaves, stop right where you are and look for the eggs from which she started. Don't move your feet, for you may crush an egg or even a young chick. So you will come to know Lady Whip-poor-will and appreciate the wandering voice.





MACHIAS SEAL ISLAND

Machias Seal Islands

By **FRANK A. BROWN, Beverly, Mass.**

With photographs by the author

SOME ten miles off the extreme northeastern end of the United States, about equally distant from the Maine coast and from the southern head of Grand Manan, lies an English light station built on one of two islands, which, strangely enough, are the territory of the United States.

Such is their peculiar position that many a navigator of the inland-coast channels is even unaware of such islands; for they are sufficiently distant from the shore to be excluded from many of the local government charts, and their only commercial value is to the British government for fog-signals and lights, protecting vessels navigating the entrance to the Bay of Fundy. Two towers, thirty or forty feet in height, and a steamer whistle warn approaching ships of danger; although, as a rule, few pass within close proximity of the islands, as they do not lie directly in the main highway of commerce.

A yacht, now and again, lost in the fog off-shore, a stray fisherman from the local coast, and the launch which brings the mail and supplies, each two weeks in summer and monthly in winter, comprise about all the visitors to these distant islands.

Their greatest interest, however, is in the abundant bird-life that fairly teems there from April to October or November of each year. Especially are they important as the most southern breeding ground of the Puffins or 'Sea

Parrot,' one of our most curious birds,—in fact, I believe they form the only breeding-place of these birds in the eastern United States.

For the interest I bore the birds, as well as from curiosity to see the lonely station whose distant lights I had watched flashing across the water so many times from the Maine coast, I set sail in a twenty-seven feet sloop from Machias Bay, of a fair and calm morning in early July, bound to the low-lying islands. 'Tide rips,' in the local fishermen's parlance, surround them on every side; and with tide running contrary to wind, it makes a very disagreeable, and sometimes dangerous, sea. Even in the calmest of summer days, such as I had the good fortune to select, the furious Fundy tide sends big rolling swells against the rockbound shores, where they are churned into white spray on the light



THE PUFFIN COLONY

gray rocks. On near approach, it looked rather dubious to attempt a landing in the surf; but my skilled boatman, in the usual manner of the Maine coast lobsterman when hauling his traps, facing the bow of the tender and watching chances, put us to the rocks close beside the iron boat-ways, in a moment of calm, after three combing waves.

The smaller island of the two is merely a bare, smooth ledge, having on one side a beach, if such it may be called, composed of round, smooth stones, the smallest ten or twelve inches in diameter, and varying up to two or three feet,—and all so slippery with fine seaweeds as to make it nearly impossible to walk. The main island, on which is the light station, I found to cover about fifteen acres, with short grass and a few hardy flowers in the center, and edged and bound by smooth gray ledges, on which in places were piled, helter-skelter, immense boulders, in one part, near the fog-signal house, cover-

ing about an acre. Here was located the colony of breeding Puffins, estimated by the light-keeper to number some three hundred birds, and at once hither I directed my steps, followed overhead by a cloud of complaining Arctic Terns, whose nests, with eggs, were among the rocks and by the edges of the grass. Some fifty or sixty of the Puffins were sitting on the tops of the higher boulders, continually shifting positions as some came in from the sea and others went down to fish. At my near approach, they flew in scattered flocks to a distance of some few hundred feet off-shore, where flocks were continually sitting during my two days' stay on the islands. To observe them more closely, I placed my umbrella blind between two big boulders in the center of their



PUFFIN. NOTE THAT THE BIRD, UNLIKE MURRES AND AUKS,
STANDS ONLY ON ITS TOES

resting-places, and, retiring, spent an hour or so in arranging the tent on the other side of the island, in preparation for the night.

On returning to my blind among the ledges, I was pleased to find the Puffins well accustomed to it, even to alighting within twenty or thirty feet, which distance was halved and quartered in another hour's waiting motionless inside. First alighting for a moment, as they came in twos or threes in a great circle from just off the breaking surf, they soon were resting almost motionless on the tops of the rocks, and at times within a few feet of my reach, to the number of twenty or thirty or more at a time. The wind shaking the cloth of the shelter was at first startling; but, after a few hurried departures of the whole alighted flock at once, they settled themselves to the new conditions, peering sharply now and then at an extra-hard shake, or starting a moment at the click of the

camera shutter. Sometimes, in their flight, their wings would scrape the top of my blind. They flew very swiftly, feet dropping down a little behind, and body perfectly straight, head turning this way and the other, to watch the strange object. I think my shelter was over a nest or two, for one bird came many times with small shining herrings in his bill, resting for a moment near



PUFFIN WITH FOOD FOR ITS YOUNG

me; then would fly in a wide circle over the water, only to return to the same spot. After repetitions of this, it finally disappeared, crawling, body held stiffly close to the rock, just behind the big boulder on which I rested,—reappearing in about a minute without the fish, and flying seaward.

When

resting, they frequently squat, with feet and body flat to the rock; but the usual position is upright, with the tail well up and head erect. In starting to fly down to the sea, the head is held down and the body and wings seem arched. The flight ordinarily is more after the manner of a duck.

Most of their food seems to be obtained within a short space of the nesting-place, as I could note none of the birds flying out any great distance; nor did I see any in approaching until within a half-mile or so of the land. They are wonderful swimmers and divers, and, unlike some water-birds, equally at home in air or water.

They are very regular in the dates of their arrival, each year appearing off the islands about May 17, where they keep to the water for four or five days, then come ashore and take up their habitation among the rocks. The young are reared, and about October 1 the entire colony departs for the South.

Having obtained what pictures I desired of the birds, I was eager to secure, if possible, some of the eggs and young. The nests are built of grasses and small sticks, and placed down in the deepest crevices and holes—as an almost invariable rule, under much the largest boulders to be found,—making it not only difficult to find, but, as well to get a photograph, even should I succeed in locating one. After searching nearly an hour, I had about concluded it would be impossible to find one, when, by merest chance, I undertook to lift a large sheet of heavy, rusted boiler iron that had in some way been left in the vicinity. It was partially covered with small rocks, and some five or six feet in diameter,

but at least movable,—which was better success than I had had in the previous hour with anything under which a nest might be concealed. Once moved and thrown back, a short search rewarded the labor, and a Puffin's nest, with one egg, was discovered deep under a big overhanging rock, the egg being about a foot back from the opening. The problem of photography came up next, which was solved by borrowing a small round mirror of the lightkeeper; and by pulling out many small rocks, a sufficient opening was made to throw the early morning sun-rays across the egg in the nest (with the result shown in the accompanying picture). I photographed the egg as well, laid out into the sunlight, and, carefully replacing everything as found, left them to the peaceful company of the Terns and their own kin. My disappointment was great in being unable to locate any young.

At the ending of the long summer twilight, while the lights in the towers dominated the immediate darkness, and distinguished each succeeding breaker in front of me, standing in the front of the little open tent, pitched close to the edge of the grassy sward, I was made aware of a different class of birds come to replace the Puffins and screaming Terns, whose cries had ceased with the darkening night. The flight of Leach's Petrels from the sea had begun, and, like erratic flying bats, they brushed my tent, my coat, flying almost full



PUFFIN'S NEST AND EGG

into my face, until the air seemed fairly alive with them, uttering their peculiar staccato, cooing sounds. To the monotonous chanting of these sounds, which came from the birds in swift, circling flight, in an hour I had dropped asleep, waking again at about midnight, to find the flight notes entirely succeeded by a different song, apparently proceeding from the ground, and some birds evidently but just separated from me by the side of my tent. Crawling on hands

and knees with the utmost care, I was unable to see the birds in the act of singing, although I could just make them out as they rose from the ground. The song, while of a similar tone, was absolutely different from the early evening,—softer, somewhat liquid, and was nearly continuous. I judge it was uttered at the mouth of the nesting burrow. The cool night air of the ocean soon drove me again to my blankets, where I slept till the reddening dawn brought the first note of a stirring Tern. But the Petrels were gone, and the islands given over again to the legions of the day. The belief is current among the island residents who live near the Petrels' breeding-grounds that the young birds stay in the ground all winter; and one informant stated to me that he had dug out young in the downy state in November. However that may be,



A PETREL-HUNTING DOG

they undoubtedly breed late, as eggs were fresh as found near the middle of July.

In walking over the grass-land of the island, it is almost impossible in many places to step at all without treading into the entrances of the burrows of the Petrels. A most conservative estimate of the number of those birds whose homes are there would be 2,000 or 3,000, and Mr. Harvey, the keeper, who aided me in every way and tendered every courtesy, sets the number at 5,000 pairs. The tough, dry turf affords a home safe from ordinary attack at the end of a burrow some six to twelve inches underground, and one to three feet long; but in this individual island lives a small black dog, that "drives dull care away" by digging out and killing an average of perhaps ten Petrels a day throughout the summer season. The red fluid which is ejected from the nostrils

of this bird when handled (as shown in the photo) is evidently not sufficiently disagreeable to mar his pleasure. Knowing my interest in the birds, the boy brought me a live Petrel that had just been dug out, with its egg. My desire to photograph him saved at least this bird from death, although losing its nest and the solitary white perfect-oval egg at the end of the destroyed burrow. I trust that my talk to the dog's owner, as well, did something toward his restraining further slaughter, although I must admit he did not seem over-impressed. [Through the efforts of the National Association of Audubon Societies the dog was removed. See Mr. Pearson's note beyond. Editor.]

In point of numbers, I think the Petrels well exceed the other combined residents of the territory, although the Arctic and a few Common Terns take a close second.

The greater number of the Terns breed on the smaller island, although very abundant, as well, on the main one. The number nesting is probably at least 2,000. I found them very tame, showing little molestation or shooting, some alighting within a few feet, and those with young in



RESCUING A LEACH'S PETREL

the nest very bold, even flying down and striking my hat with their wings. Some sheep feeding near, as well, were attacked by them, and, after several sharp digs of the bills, took notice of better feeding in other localities. Some of these eggs were laid on the bare rock, without the slightest semblance of a nest; while others were carefully deposited in well-constructed nests of grasses and seaweed. Numerous pairs of Spotted Sandpipers, also, had their home on this lonely island, and, alighting near me on small rocks or mounds of grass, would display great anxiety during my stay.

The big Saddle Backs, or Great Black-backed Gulls, visit these islands to feed, although nesting elsewhere, and a flock of some hundred or more, mostly young, alighted on one of the rocky points as we set sail.

A Wayside Thrasher

By J. W. LIPPINCOTT, Bethayres, Pa.

With a photograph by the author

WHEN a bird flies up on two different occasions from exactly the same spot, and the season is spring, one may expect to find something interesting there; so, when a Brown Thrasher flitted a second time from a roadside briar, I jumped from the motor, just to take a look.

Sure enough, there was a nest hidden under the trailing briar, and resting directly in the center of what might be termed the gutter, were this not a fine, sandy, country road. There were eggs, four of them, bluish white and finely spotted with brown, particularly at each end. And here a Thrasher dared to build! Right on the ground, almost in the narrow road along which motors thundered day and night.

And such a nest! Perfectly round, fitted neatly into a hollow where the briar leaves formed a fair sunshade, and made of the finest roots and a few black horsehairs curled around and in and out, to make a firm mass.

The mother bird had vanished entirely, nor could I see the mate. The banks rose steeply for several feet on each side of the road, merging into wheat fields above. On one side was a rail fence, with several little oaks planted at intervals, and bearing profuse foliage six feet from the ground. It was in one of these that the two birds were hidden while they watched me. Not a sound did they make.

Later the mate sang his wild, erratic notes from the top of a buttonball a whole field away. At least thirty feet up in the air, on a dead limb that had suffered from lightning years ago, he caroled away for half an hour, or perhaps more, while the Chimney Swifts dodged about him, and far below in the gutter the faithful little mate sat and listened.

Upon a sunny day, the twenty-sixth of June, when I once more came to see the nest, the mother slipped off with a good deal of reluctance and left only one egg and one little one. Where had the other two eggs gone to?

The next day, and the next, the same thing happened. The mother slipped off and ran across the road, flitted onto the fence, hopped from there into one of the little oaks, and then commenced making a noise somewhat like a Tomtit, only much exaggerated. The mate then invariably came from somewhere, and joined in with a trifle harsher note. The other egg had not yet been hatched, and the young one was growing astonishingly.

I began to wonder, then, if the mother were trying to hatch that lone egg, since she was always found on the nest and, when disturbed, immediately returned, allowing the mate to do all the feeding. I cannot believe that in roasting weather the young one needed her added warmth, since he would not remain under her, but struggled to one side and fairly gasped from heat. Whether the sun shone or not, there she sat, often with bill wide open; and now

a motor could whir past with wheels only two feet away, obscuring her entirely in yellow dust, but not causing her to stir.

The parents showed how active Thrashers can be in destroying insects. With only one youngster to feed, the mate was constantly dodging about the roadside weeds, chasing jumping insects of various kinds that can usually succeed in eluding a chicken, but were no match for his quick turns. The long, strong tail comes in well as a balancer, and allows of astounding agility in the bird's movements. It was also noticeable that, when either bird darted to a tree, its momentum could be checked suddenly by lowering the tail and throw-



A WAYSIDE THRASHER

ing up the wings. Once in a bush or tree, they were even more at home than the Cuckoo.

On July eleventh the road seemed unusually peaceful. Two Flickers were dusting themselves serenely, but there was no anxious calling or tuneful whistle from the Thrashers. They had entirely vanished. Under the briar, in the neat nest, lay the one indomitable egg; but already a brown spider was shrouding it with a web, a big blackish affair, a fit covering perhaps. The dust gave little trace of the birds. There were tracks of several kinds, but no Hawk or Crow marks. Only the print of a cat's stealthy paw on the far side of the road gave me an instant's qualm; but I think that the little Thrasher, more wise than his parents, had sought safer ground just as soon as his legs felt strong.

The Migration of North American Sparrows

TWELFTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey

With Drawings by LOUIS AGASSIZ FUERTES

(See frontispiece)

LAZULI BUNTING

The Lazuli Bunting takes the place in the West of the familiar Indigo Bunting of the eastern United States. It winters in Mexico, and is one of the latest migrants to move northward.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Kerrville, Texas.....	5	April 24	April 23, 1903
Tucson, Ariz. (near).....	4	April 20	April 14, 1903
Los Angeles, Cal. (near).....	10	April 16	April 4, 1896
Hayward, Cal. (near).....	6	April 21	April 15, 1886
Portland, Ore.....	3	May 15	May 7, 1908
Pullman, Wash.....			May 13, 1910
Southwestern British Columbia.....	7	May 14	May 9, 1889
Fountain, Col.			May 2, 1872
Yuma, Col.....	6	May 15	May 9, 1905
Boulder, Col. (near).....	9	May 15	May 8, 1905
Beulah, Col.....	7	May 21	May 11, 1906
Lincoln, Neb.....			May 6, 1899
Salt Lake City, Utah.....			May 3, 1909
Fort Custer, Mont.....			May 20, 1885
Indian Head, Saskatchewan			May 18, 1903
Fort Providence, Mackenzie.....			July 4, 1903

FALL MIGRATION

Some dates of the last ones seen are: Southwestern British Columbia, average September 1, latest September 6, 1905; Beulah, Col., average August 14, latest August 28, 1903; Yuma, Col., September 18, 1906; Pasadena, Cal., September 17, 1897; San Pedro, Ariz., October 2, 1873.

VARIED BUNTING

The Varied Bunting is a summer visitant from Mexico to the Rio Grande Valley of southern Texas, where it arrives in the vicinity of Brownsville, on the average, April 20; earliest, April 6, 1890.

A slightly different form, known as the Beautiful Bunting, occurs in southern Arizona as a rare wanderer from its Mexican home.

PAINTED BUNTING

Most of the Painted Buntings winter south of the United States, but a few spend that season in southern Florida, and it is probably such wintering birds

that were noted early in spring at Miami, Fla., March 3, 1909, and at Canaveral, Fla., March 4, 1902. As will be seen by the table below, the species, as a whole, is one of the late migrants.

SPRING MIGRATION

PLACE	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Amelia Island, Florida.....			April 16, 1906
Savannah, Ga.....	5	April 15	April 9, 1885
Charleston, S. C.....	3	April 20	April 19, 1909
Southern Louisiana.....	10	April 17	March 23, 1894
Biloxi, Miss.....	2	April 14	April 12, 1904
Rodney, Miss.....	3	April 16	April 15, 1888
Helena, Ark.....	14	April 23	April 10, 1897
Corpus Christi, Texas.....			April 13, 1886
San Antonio, Texas.....	8	April 17	April 12, 1889
Kerrville, Texas.....	5	April 27	April 25, 1901
Austin, Texas.....			April 9, 1894
Bonham, Texas.....	5	April 26	April 17, 1885
Thomas, Okla.....			April 22, 1902
Southern Kansas.....	3	May 2	April 28, 1902

FALL MIGRATION

The average date of the last one seen at Bonham, Texas, is October 7; latest October 12, 1888; New Orleans, La., October 27, 1895; St. Marys, Ga., September 30, 1905, and Fernandina, Fla., October 20, 1906. One struck the Fowey Rocks Light, November 20, 1887, showing how late in the fall the birds continue crossing to Cuba.

Notes on the Plumage of North American Sparrows

ELEVENTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Lazuli Bunting (*Passerina amoena*, Figs. 1, 2). The nestling (juvenile) Lazuli Bunting is grayish brown above, whitish buff-tinged below, with, usually, some obscure streaks in the breast. Apparently all but primaries, secondaries, and tail-feathers are lost at the postjuvenile molt, which brings the bird into first winter plumage. This resembles that of the adult female (Fig. 2), but is wholly without trace of blue, except for the faintest indication on the outer margins of the tail.

I have seen no specimen in spring molt, but examination of a large series of breeding males reveals none without the blue and white and ochraceous colors of Figure 1. In some, however, the primary coverts, inner primaries, and secondaries, resemble those of the first winter plumage. Doubtless, therefore, the

first prenuptial molt is complete except for these feathers. In fresh-breeding plumage the feathers of the back are margined with rusty, which wears away as the season advances.

At the postnuptial molt, the remains of the first winter plumage in the wings are lost with all the rest of the feathers, and the fully adult plumage is assumed. In this the back is margined with rusty, which gradually wears away, bringing the bird into full breeding plumage (Fig. 2) apparently without a spring molt.

Painted Bunting (*Passerina ciris*, Figs. 3, 4). The juvenal or nestling plumage of the Painted Bunting, or 'Nonpareil,' gives no hint of the brilliant colors which a year later will be assumed by the male. It is dusky grayish brown above, grayer below, with the belly whitish or buff-tinged. This plumage is soon followed by the first winter plumage acquired by molt of all the feathers. Both sexes now more or less closely resemble the adult female (Fig. 4), but males not infrequently have a few feathers about the head.

There is no spring (prenuptial) molt, and consequently, during their first breeding season, males resemble the females, except for the occasional presence of blue feathers just mentioned.

At the fall (postnuptial) molt, the usual complete change of plumage occurs, and the bird assumes a dress more or less like that of Fig. 5. In some specimens, however, a few yellow feathers on the underparts indicate youth, while it may be at least three years before the somewhat exceptional plumage in which all the wing-feathers and wing-coverts are the color of the lesser coverts, and some wing-quills of the bird figured (Fig. 4). Once having acquired the striking adult male plumage, the bird keeps it. Adults, therefore, are alike in winter and in summer.

Varied Bunting (*Passerina versicolor*, Figs. 5, 6). Although the American Museum possesses an exceptionally fine series of this beautiful bird, it is lacking in specimens taken during the molt, which would show beyond question just when and how the various changes of plumage are made.

So far as the material at hand goes, however, the Varied Bunting resembles the Lazuli Bunting in its sequence and manner of acquisition of plumages. That is, the male during its first winter and first nesting season resembles the female. Some specimens show a tinge of reddish below or a few blue feathers in the head; but, as a rule, the male, prior to its first postnuptial molt, is not distinguishable from the female.

At this molt, essentially, the adult plumage is acquired. It is, however, broadly tipped with rusty both above and below. This gradually wears off, bringing the bird into the plumage illustrated by Figure 5.

During the first winter and breeding season the plumage of the female is without trace of blue.

Notes from Field and Study

Notes on the King Rail

The following notes, taken from observation of a King Rail on August 1, may be of some interest, the bird being rather uncommon in southern Indiana. With a companion, I was following the shore line of a low-lying, open, muddy bayou. While we were observing some Least Sandpipers, our attention was attracted by a much larger bird, the size of a Coot, in the tall weeds growing on the swampy ground near the water's edge. It was emitting a series of loud, abrupt squawks,—not in alarm, however, as it walked about deliberately and eyed us with perfect unconcern. It disappeared behind a large pile of brush, presently became quiet, and then I walked and waded out over the boggy ground. Craning my neck, I saw the bird feeding at a distance of only five yards. Even then it showed no alarm, but merely walked away, rather awkwardly, with the old squawks, so sharp and clear cut we could hear the echo from the neighboring hill every time. It was soon lost to sight again in the weeds, and this time took flight upon my approach—flying low with dangling legs, and disappearing on foot in the tall grasses of the opposite shore. The tameness of the bird was astonishing, as it allowed close approach, and we had it under observation for fully half an hour. Perhaps this tameness accounted for the extreme deliberation of all its actions.—**JULIUS C. PETER, Seymour, Ind.**

A Clever Trick of the Downy Woodpecker

It was in the first few days of the month of April, 1908, that I had occasion to go to my uncle's in the country, whose farm is about six miles from a small railroad station in southern Indiana. While there, I spent part of the time at my uncle's brother's farm which adjoined.

My uncle's brother is quite a bird student, and one of his amusements is to feed the many different birds that have been in the habit of wintering on his farm. He arranged a wooden platform about two by four feet, with a small rail around it, to prevent the food from falling to the ground, and attached this to the outside of the window-sill. After having cracked nuts (13 bushels cracked during the winter), including walnuts, hickory nuts and butternuts, he would raise the window about three inches, or just enough to allow the nuts to be scattered over the platform and, after lowering the window, would wait for the birds to alight, and then watch the eat and pick the nuts. They would soon fly to the platform from the evergreens that surrounded the house, and there would eat and chatter to each other, enjoying their fine repast.

The various kinds numbered about fifteen, among them the Red-headed Woodpecker, Junco, Chickadee, Blue Jay, Sapsucker, Cardinal, House Wren, Song Sparrow, Downy Woodpecker, and a strange fellow who would not eat nuts and was fed raisins until the supply was exhausted, and then finally, after several days of fasting, began eating the nuts—no other than the Mocking-bird. She built a nest in the orchard there the next summer and raised several young Mockers, and the whole family departed later in the season.

I was told to throw a cracked nut into the air and see what followed—I did so, and, to my surprise, the Downy darted after it, not allowing it to touch the ground, and then returned to the evergreen, where he proceeded to pick the kernel from the hard shell. It is astonishing how tame birds will become if treated as they should be. We can all have many pleasant moments with them if we give them half a chance, simply by providing food, water and places to build their homes.—**ELLIOTT R. TIBBETS, Indianapolis, Ind.**

A Chicago Bird-list

It may be interesting to the readers of BIRD-LORE to have my record for the season of 1910 of the birds seen from or in my back yard in Chicago. The list is certainly an encouragement to those who complain that unfavorable environment prevents a study of bird life, or even the listing of any extended number. There are worse places to see birds than in a city.

During the season, 78 species of birds were listed, and of these 53 alighted in the yard, feeding on the ground or in the shrubbery. All such in the list are marked by a star. My location is six and one-half miles from the center of the city, and about one and one-half miles within the boundary of closely-built-up territory. A double row of large trees extends for one-half mile north and south, and my home is in the line of these trees. This seems to form a highway, for the Warblers in particular, twenty different kinds of this group being noted. An interesting note on a Warbler was made this fall, when a Northern Water-Thrush remained in my corn-patch a whole week, departing promptly with a second, which arrived on the eighth night.

The flying birds were certainly identified by a powerful glass, or they were not listed. The first of this group was the Herring Gull, Jan. 10, and the last a flock of Canada Geese, Dec. 1. Many Warblers were identified, both in spring and fall migration, but by far the larger number of species was noted before May 25.

The list is in the order of the bird's occurrence, from spring to the end of the season, and is as follows:

Herring Gull	*Flicker
Ring-billed Gull	*Fox Sparrow
Crow	Killdeer Plover
*Downy Woodpecker	*Goldfinch
*Song Sparrow	Brown Thrasher
*Robin	*House Wren
Meadowlark	*Baltimore Oriole
*Bluebird	*Sapsucker
Mallard	*Red-headed Woodpecker
Lapland Longspur	Red-wing Blackbird
*Blue Jay	*Hermit Thrush
Canada Goose	*Ruby-crowned
*Bronze Grackle	Kinglet
Cowbird	*Golden-crowned
*Junco	Kinglet
Blue-winged Teal	

Martin	*Blackpoll Warbler
American Bittern	*Blackburnian Warbler
Mourning Dove	*Wilson's Warbler
Sharp-shinned Hawk	*Redstart
Chimney Swift	*Worm-eating Warbler
*Least Flycatcher	*Wilson's Thrush
Bobolink	*Canadian Warbler
*White-throated Sparrow	*Pine Warbler
*Chipping Sparrow	*Black-throated Green Warbler
*Towhee	*Oven-bird
*Rose-breasted Grosbeak	*Maryland Yellow-throat
Barn Swallow	*Red-eyed Vireo
*Black and White Warbler	*Blue-headed Vireo
*Olive-backed Thrush	*White-eyed Vireo
*Gray-cheeked Thrush	*Yellow-throated Vireo
*Myrtle Warbler	*Scarlet Tanager
*Palm Warbler	*Cape May Warbler
*Yellow Warbler	Whip-poor-will
*Black-throated Blue Warbler	Nighthawk
*Magnolia Warbler	Kingbird
*Chestnut-sided Warbler	Phoebe
*Bay-breasted Warbler	*Hairy Woodpecker
	*Brown Creeper
	Pine Siskin
	Tree Sparrow
	*Northern Water-thrush

—H. S. PEPOON, 3842 Byron Ave., Chicago, Ill.

Birds in a Milwaukee Garden

For nine years—March 15, 1902, to Dec. 31, 1910—the undersigned have kept a record of the wild birds seen on or over their home lot. This lot is a half-mile within the nearest city limit (the city is thickly built up to the limit), is not near any water, and is 50 x 180.4 feet in size. There is a large house on the lot, and the adjoining lots have large houses on or near the line. The only trees or shrubs on the lot were set out about the time the record began.

To be recorded, birds must be on or within the limits of the lot, or those limits extended vertically.

One hundred and twelve species of birds have given us the pleasure of conforming to our requirements in the time above mentioned. An American Bittern was seen in the garden the spring before the record was begun. This would make 113 species seen thus far. Of these, 111 species have been seen on or over the garden proper, which is south of the house and 50 x 100 feet in size, reaching from the back door to the back fence.

The keeping of the record has been a fine stimulus to careful observation, and a source of pleasure in seeing and knowing our wild bird callers.—MR. AND MRS. I. N. MITCHELL, 2921 Cedar St., Milwaukee.

A Discovery in Regard to the Towhee

One day during the last week of May of this year, my attention was attracted by the cry of little birds in the dense vines of a honeysuckle on the front porch of a country home near Knoxville, Tennessee. I began looking for the father and mother birds, which I knew must be somewhere near-by. In a few minutes I discovered them on the ground under a near-by tree, scratching and hunting industriously for food. Judging from their form and color, they were strangers to me, so I made a careful note of both. They were smaller than a robin; their upper parts, throat and upper breast, were black; underneath was grayish white, with patches of rusty red, or chestnut on the sides, and on the wings and rounded tail were patches of white.

When I moved to get a nearer view of them, they became panic-stricken, gave up their search for food, and flew to a bush nearby, with the cry 'Chewink! Chewink!'

I had never seen the Chewink, but knew his call. But these babies in the vines surely could not be theirs, if they were Chewinks, for all authorities on birds which I had ever consulted distinctly stated that Chewinks never built anywhere except on the ground in thickets or blackberry patches. I then decided that the hungry little nestlings in the honeysuckle vines could not be theirs. I sat perfectly quiet for a few minutes, and the birds, after looking nervously around a number of times, flew down to the ground, secured the worms they had dropped, and flew into the vines, whence issued loud cries of joy.

I watched these birds for several days, and, in the meanwhile, consulted every book and magazine I could find in regard to them. The size, color, form and

call, all declared them to be the Chewink, but the location of the nest contradicted it.

Besides the call 'Chewink!' the male would often perch on the top of a low cedar or shrub, and repeat again and again 'Wink—pilla-willa, willa!' as the mother bird fed the little ones.

Another pair appeared, and built in another honeysuckle vine near the rear of the house. From a thicket, just a short distance from these vines, came numberless cries of 'Chewink! Towhee! Chewink!'

I met the president of the East Tennessee Audubon Society a few days after this, and told him of these birds, giving color and size, but omitting the nest, and he immediately said that it must be the Chewink; but when I told him where the nest was, he was puzzled. A day or two after this, he came out from town, through the hot summer sun, to see if he could solve the problem. Both nests were now deserted. After much work in trying to penetrate the labyrinth of vines, he discovered the nest and brought it forth. It was a loosely thrown-together affair of sticks, dry leaves and grass. It was the Chewinks' nest, and proves that they do not always build on the ground.

At this country home where these birds built, there were no children, cats or dogs, to frighten birds, and the inmates of the home were all lovers of birds; so this may account for the selection of the location of these nests.—NELL HAMPTON DICK.
Knoxville, Tenn.

A Chipping Sparrow Family

On June 19, 1911, an interesting family of Chipping Sparrows graduated from a boxwood tree standing in a tub on our front porch.

It was some days after Mrs. Chippie's first appearance there before she quite decided to build. She would get into the tree, fuss around a few minutes, then fly away, occasionally bringing a hair or bit of fuzz. After three or four days of indecision, she went to work in earnest.

When the nest was completed, she laid

an egg. Every day there was one more, until she had four.

In about nine days the birds were hatched; and now the parents were busy. All day long, at short intervals, they were bringing food—great, fat, green worms, etc. One wonders how such tiny things can eat so much.

Three weeks from the day the last egg was laid, the little birds were ready to fly.

On Sunday afternoon I noticed one bird sitting on the edge of the nest, fluttering its wings.

Monday morning there were only three little ones in the nest, and, upon examination, I found the fourth one caught in the tree just below the nest, one shoulder badly torn, and quite dead. A short time afterward I saw only two, then only one. I soon discovered one in a young elm tree in front of the house, and the other in the grass across the street. The last one remained quietly in the nest for several hours. Finally he got up, picked his feathers, fluttered his wings (the mother coming repeatedly to feed him, and fluttering about the tub, as though showing him how to fly), and away he flew across the tennis-court into the top of a basswood tree.

The neighbors back of us have a family of Song Sparrows in the middle of the strawberry bed, where they are picking strawberries every day.—ANNA E. AGATE, Pittsford, N. Y.

A Northern Turkey Vulture

In view of the fact that Princeton, N. J., is said to be the limit north of the range of the Turkey Buzzard, you may be interested to know that I had a long look at close range at one perched on a fence-post, evidently watching some wood-chuck holes close by, at Pompey, Onondaga Co., N. Y., August 12, 1911.

I am wondering if the exceptionally warm summer has anything to do with its presence so far north. It stamped one foot, snapped its beak and hissed repeatedly,

raising its wings several times, before flying to the top of a dead tree across the meadow.—WILLIS G. BOOTH, Syracuse, N. Y.

A Patient Robin

This Robin built her nest on the picket gate between the chicken yards, and it was torn down several times, as this gate has to be constantly used, and she could never sit in peace, but she rebuilt patiently until the poultryman transferred it to a part of the fence a little less public. Here



she sat, without minding the presence of five hundred chickens, and all the attendance thereon, and safely reared her young.

This year there were several Robins around the Hospital, on a level with the second, and even the fourth floor, outside the noisiest wards, and one high on the water-tower. In destroying the nests of English Sparrows, it was necessary to caution the men about these. A pair of Loggerhead Shrikes spent much time on the telephone wire, and did great execution among the English Sparrows.—ANNE E. PERKINS, M. D., Gowanda, N. Y.

Book News and Reviews

REVEALING AND CONCEALING COLORATION IN BIRDS AND MAMMALS. BY THEODORE ROOSEVELT. Bull. Am. Mus. Nat. Hist. XXX, 1911, pp. 119-231.

This paper is, in effect, a criticism of Abbott H. Thayer's views in regard to the protective value of the coloration of animals, as set forth by Gerald H. Thayer, in the volume entitled "Concealing Coloration in the Animal Kingdom."*

An Appendix (pp. 221-231) presents a reply to Mr. Thayer's criticism (Popular Science Monthly, July, 1911) of earlier comments on his work by Mr. Roosevelt, in 'African Game Trails.' (App. E.)

While admitting that some animals are protectively colored, Mr. Roosevelt emphatically denies the truth of Mr. Thayer's assertion that "patterns and utmost contrasts by color (not to speak of *appendages*) on animals make wholly for their 'obliteration'." This controversion is based primarily, indeed almost wholly, on its author's field experiences with various species of birds and mammals (particularly those ranked as game) in North America and in Africa, which, as they serve to illustrate his point of view, are given, often at much length. The paper, therefore, is not merely a criticism, but an important contribution to the subject of the significance of animals' colors, containing much new and original material. Since the medium of publication will not give to this article the circulation which the widespread interest in its subject warrants, we reprint here Mr. Roosevelt's tentative 'Conclusions,' the most important of which are said to be "those which state the limitations of our present knowledge."

RECAPITULATION

"(1) Speaking roughly and generally, there is a tendency for certain general types of coloration to be found among all the birds and mammals affected by the

same physical conditions. Those of the tree tops are apt to have a lighter, brighter, more varied coloration than those dwelling in the more somber and uniform surroundings near the ground, beneath the forest trees. There is a tendency for arctic and alpine animals to be light-colored, and, in many cases, white, in winter; there is a tendency among desert animals to have very pale tints; there is a tendency for mammals and birds that dwell on or near the ground in thick forests to be dull-colored; and animals of the semi-arid regions tend to be paler than those of cold or temperate humid regions, which tend to develop dark, lusterless hues, as compared to the gorgeous hues so apt to be found where humidity and heat go together. There are multitudes of exceptions to all these tendencies, exceptions so numerous that it is out of the question to speak of the tendencies as laws that are always binding; and there are many areas where the types of coloration are so varied that it is impossible to state the case generally, the types of coloration being of what looks like haphazard incongruity, showing that many and conflicting principles of selection have been at work.

"As regards this type of tendency, it is possible that it represents the result of natural selection picking out for the majority of birds and mammals colors which may conceal them. It is possible, and to my mind much more probable, that the major part of the tendency is due, as regards birds and mammals, not to natural selection for this purpose at all, but to the effect of physical surroundings upon all the individuals of a very great number of species. In any event, there remain as to each locality many exceptions,—that is there are in each locality many species the coloration patterns of which have developed along directly opposite lines to those along which the coloration patterns of most of the other species of the locality have developed. Such exceptions include the musk-ox, Raven and wolverine of the

*For a review of this work, see BIRD-LORE, July-August, 1910, pp. 153-155.

boreal regions; the cock Ostrich and Black and White Chat among desert animals; the skunk, Yellow-headed Blackbird and Lark-bunting of the semi-arid regions of the United States; the Tanagers, Cardinals, and innumerable other birds in the moist temperate parts of North America. Moreover the general coloration tendency, where it exists, seems to affect alike birds and mammals which might possibly be benefited by it, and birds and mammals which because of their nocturnal habits or for other reasons cannot possibly receive such benefit. The Eagle Owl of America, for instance, tends to be gray in the semi-arid region, and whitish toward the north; but its habits are such that it is impossible that these slight differences in its coloration can have any advantageous effect upon the individuals so colored. The same statement applies to the black Duck-hawk of the Puget Sound region.

"(2) There are certain birds and certain mammals whose coloration is unquestionably concealing, either for most of the time, or at certain vital periods, as when nesting, or, in the case of nocturnal birds, when crouching motionless during the daytime. Nighthawks and many Grouse are striking examples of this. So, to a much less degree, are most rabbits, although these rabbits when in motion have a highly advertising rear-end coloration. All these animals deliberately strive to escape observation by remaining motionless. The chief factor in enabling them to do so, aside from cover, is their actual tint, whether uniform, or varied, or so minutely varied as to convey at a very short distance an impression of uniformity; but in some cases the concealing power of the coloration is probably slightly helped by countershading. These mammals and birds of unquestionably concealing coloration, where the concealing coloration is a principal factor in their concealment, are not many in number.

"(3) Many mammals are advertisingly colored. This is true of many of the dog family, of most of the highly predacious weasel family, of many arboreal squirrels, and of very large numbers of the

big grass-eating animals. Some of these animals live in the open plain or on high mountains, and are very conspicuous and easy to see. Others live in thick forests, and yet are exactly as hard to see as if they were obliteratively colored, because of their wariness and their ability to take advantage of the deep cover in which they dwell.

"(4) Most small mammals, especially those of the forest and the thickets and the tall grass, have a coloration which can hardly be called especially revealing or especially concealing; they rely on the cover and on their habits, and not upon their coloration, for concealment. The utmost that can, with any show of reason, be claimed as regards these is, that the law of natural selection, or whatever law it is that is responsible for their coloring, has set wide coloration limits, which the species cannot transgress, but within these wide limits has allowed each species to develop any kind of coloration pattern. It is, of course, very difficult to define the exact boundary lines separating the large classes of animals with a very slightly concealing or very slightly revealing coloration from the still larger class where the coloration can scarcely be called either revealing or concealing. Many birds, such as many of the Sparrows which live in the grass, are inconspicuous, and may be said to have a concealing coloration; and yet their close kinsfolk, with a somewhat similar coloration, may live under conditions which make their coloration really possess little of either revealing or concealing quality.

"(5) As regards the majority of birds and mammals the prime factors in securing their safety are habit (including bodily capacity) if they do not trust to concealment, and habit and cover if they do trust to concealment. Among these birds and mammals the coloration is always a minor, and often a negligible, factor, and the countershading has no effect whatever, one way or the other.

"(6) A large majority, probably at least three-fourths, or over, of the birds of temperate North America, have coloration

patterns which, either in whole or in part, either all the time in both sexes, or all the time in one sex, or some of the time in one sex, are advertising and not concealing. This is also true of those birds of Africa to which I paid attention, that is, the Water Birds, the Bee-Eaters, Sunbirds, and the like. Often the female is concealingly colored, or at least has a non-advertising coloration, where the coloration of the male is highly advertising. There are large numbers of birds, including various species of Woodpeckers, Crows, Blackbirds, Shrikes, Flycatchers, Swans, Pelicans, Herons, Cormorants, Gulls, Guille-mots, Puffins and Hawks, which have in both sexes, and all the time, a strongly advertising coloration. In many other birds the coloration may be advertising, over the whole body, but only in one sex and for part of the year. In yet others the advertising coloration, temporary or permanent, may be confined to one part of the body, such as the breast or head. The young birds may have a concealing coloration, even when the coloration of the parents is at all times, including the most critical moments of their lives, as when on the nest, highly advertising (as examples, take the Skimmers, Stilts, Terns, Gulls); or they may have a coloration as revealing, or almost as revealing, as that of the parents; this being true of Pelicans, Herons, Cormorants, and Anhingas, for instance.

"Among the Ducks, ordinarily, one sex develops strongly advertising coloration for almost all the year. The male Cardinal has a strongly advertising coloration all the year. The Tanager and Bobolink have strongly advertising coloration patterns for part of the year. There are numerous other small birds possessing highly advertising patterns of body coloration. There are still larger numbers of birds, including many Sparrows and most Warblers, where the males, at least in spring, possess a coloration which is highly advertising on certain parts of the body, usually the breast and around the head and neck. Taking all these classes together, they make up very much more

than a majority of American species, each of which either all the time as regards both sexes, or, as regards one sex, for all the time or part of the time, are in whole or in part advertisingly colored. In the semi-arid West, for example, the male Lark Bunting has a plumage pattern which is advertising in its entirety, just as much so as a Raven's; the male Longspurs possess such an advertising pattern only on the head, neck and breast; whereas, for instance, the Baird Sparrow lacks it entirely, both sexes being similar and both seeking safety in actual physical concealment in the grass.

"(7) These advertising colors represent several different principles or tendencies. As regards many of the Crows, Woodpeckers and Blackbirds, it is evident that in the development of the different species, the tendencies, whatever they are, that have made for a concealing coloration, that is, for a coloration that would be in harmony with the landscape and the immediate surroundings of the birds, have been completely overcome by other tendencies that have acted with equal force on both sexes, or, if not with equal force, at least with sufficient force to make even the female, though perhaps less brightly colored, not concealingly colored. If, as in the Red-headed Woodpecker, where both sexes are alike, the bright coloration of the male is due to sexual selection, then either the same principle has been at work as regards the female, or else some other principle has affected both sexes in such a way and with such strength as to completely overcome any tendency to produce a concealing coloration. In the case of many Ducks and Tanagers, where, unlike what is true of Ravens and Red-headed Woodpeckers, there is a strong sex difference, and where the male is much more advertisingly colored than the female, it is of course possible that the principle, whatever it may be, which is working for concealing coloration has been powerful enough to overcome any other tendencies as regards the female, but that the principle of sexual selection (or whatever principle it is which so frequently

gives superiority in brightness of coloration, in ornamentation, and in bodily vigor, to the male) has been so strong as completely to overcome all tendencies that make for a dull or concealing coloration in the male. The white so common on the outer tail feathers of birds, which is only shown in flight, must represent a totally different tendency or set of tendencies; it is advertising; it is sometimes displayed in courtship; it may serve as a recognition mark, when the birds are in a flock; by its display in flight and its disappearance the instant a bird alights, it may mislead a pursuer; and of any pair of closely allied species, such as the Vesper Finch and Savanna Sparrow, or Mocking Bird and Catbird, one may possess it and the other lack it, without any apparent difference in habits being produced thereby; while even in the same species, as in the Robin, one form may possess these white markings, while another form lacks them.

"(8) There are only rarely cases in which under the same conditions, all the kinds of concealing coloration tend to be of the same type. This is another way of saying, both that the principle of natural selection working toward a concealing coloration is in every case complicated by the workings of other principles and tendencies, and also that even birds and mammals of comparatively restricted life-areas live under conditions of sufficient variety to make it impossible to develop coloration patterns showing such complete mimicry of their surroundings as are shown by the coloration patterns of certain insects and even reptiles. Under most conditions of bird and mammal life, one pattern seems about as good as another if of the right general tint. Observers who get obsessed by their theory often pick out with triumph peculiarities which have no effect whatever, or even the reverse effect of that which they ascribe to them, and speak as if these peculiarities were essential to concealment. Thus it is alleged that the black tip of the ermine's tail, and the black tails of certain species of Ptarmigan, are concealing; yet the Arctic fox has no black tip to its tail, and

there are white-tailed Ptarmigan. It is evident that either the black on the tails of the weasel and of some Ptarmigan has no especial effect, or else that the lack of it on the tails of the fox and of other Ptarmigan, does have a special effect. If the black tail is concealing, then the white tail is revealing; and vice versa; or else no particular effect is produced either way. Doubtless the last is the case. Not only are minute patterns rarely of any real weight in concealing their wearers, but wide differences of pattern have no effect, if the general hue is one in sufficient harmony with the ordinary surroundings. This becomes apparent when we consider the utterly different coloration patterns of different Sparrows, Warblers, and Thrushes which live under substantially the same conditions and are equally hard to make out. A careful examination of those birds which really do have a concealing coloration, and may be beneficially affected thereby, goes to show that with the possible exception of a very few cases, it is out of the question that all the widely varying types of coloration, in any given set of surroundings, can have been produced by the same agency. In so far as the principle of natural selection, working toward the production of a concealing coloration, has affected all these numerous species of birds, it has done so, not by producing each of the countless and totally different types of coloration, but by setting bounds beyond which the coloration cannot vary in any advertising direction, and allowing other circumstances to determine the exact pattern within these bounds. As already shown, countershading, among birds and mammals, generally plays an insignificant or negligible part in helping produce a concealing coloration.

"(9) In many situations, the quality of the landscape, or the quality of the cover, is such that neither any concealing quality in the coloration, nor any advertising quality, is of more than infinitesimal consequence to the animal compared with the development of other qualities—wariness, shrewdness, courage, speed, insistence

upon living in the densest cover, or ability to take advantage of comparatively scant cover. A study of the big antelopes that live in the reeds, and of the big and small antelopes that live in the jungle, and of most of the birds of the tree tops, will show that in all these places with very thick cover, or with varied cover, concealing coloration plays little or no part; for the animals that do not possess it thrive as successfully as those that do.

"(10) It is easy to understand that advertising and concealing coloration should alike be indifferent to animals that live in such cover as to hide both them and their coloration. But many mammals and birds live absolutely or practically in the open, or under conditions where advertising coloration does in fact advertise them at a much greater distance than would be the case if they lacked it; and yet even under these conditions hundreds of species of highly advertising coloration prosper as well as, although apparently no better than, those with a concealing coloration. Gulls, Cormorants, Loons, Grebes, Guillemots, Fulmars in the water; Herons, Storks, Ibises, Plover on the plains or the edges of marshes, lakes and rivers; big antelope and zebra on the plains; Blackbirds, Grackles and Bobolinks in the meadows and pastures; all illustrate this fact. The numerous species of Bee-eater which I saw in Africa all had an intensely advertising coloration, and lived under conditions which accentuated the advertising quality of the coloration. The topi, with its very bold and inversely countergraded coloration, is no more nor less at home in the places where it dwells than is the countershaded eland, with its much less conspicuous coloration. A male Grants' gazelle, which is countershaded and not very advertisingly colored, is no less and no more at home than the female of the same species, which has an advertising black stripe along the body, or than the smaller Thompson's gazelle, which also has the black stripe, together with the habit of perpetually twitching its tail whenever it is standing up. The Yellow-

headed Blackbird has an extraordinarily advertising coloration; but I cannot see that it affects the welfare of the species one way or the other.

"Among certain species of birds, however, there is a contrast in the behavior of those that are advertisingly colored and those that are not. On the plains, Thrashers always skulk and seek cover in which to hide, while Blackbirds, which of course are infinitely more conspicuously colored than the Thrashers, walk and sit boldly in the open. The Meadowlark, which has a highly advertising breast coloration, but a concealing back coloration, skulks and takes advantage of cover in a way which the Robin never does. On the other hand, there are other cases where birds that are concealingly colored take no advantage of their coloration, and behave exactly as do their kinsfolks that are advertisingly colored. The Kingbirds, and especially the Scissortailed Flycatchers, are very conspicuous, and are good examples of advertising coloration, when in their ordinary surroundings. Most of their near kin, the Phoebes, are inconspicuously colored; but neither the Phoebes nor the Wood Pewees seem to take advantage of their coloration in order to try to conceal themselves. Most of the small Flycatchers do live in thickets, where their inconspicuous coloration may be of benefit to them; but the great-crested Flycatcher, which is colored substantially like the Western Kingbird, is unlike the Kingbird in its habits, and at least sometimes seeks to take advantage of cover. There are innumerable instances of this kind.

"(11) In short, as one might anticipate, when we deal with the coloration of birds and mammals we deal not with any one cause, but with a varied and complex tissue of causes. Forces have been at work to develop concealing coloration in many species, and countervailing forces have worked with greater or less strength to counteract the influence of the first, in some species completely succeeding and in others partially succeeding. Some birds and mammals

are so colored that normally or at certain important times their coloration helps to obliterate them from the sight of their foes. Others are so colored that their coloration under all normal conditions and from every viewpoint, and at the most critical periods of their lives, tends to reveal them to their foes. In others the coloration is of little consequence, one way or the other. Birds and mammals living under precisely the same conditions have totally different types of coloration, and display totally different traits and habits when seeking to escape from enemies or to capture prey. No universal laws can be laid down. Tentatively, it is possible to give adherence to the conclusions which I have sketched in loose outline above. We know that many birds and mammals are concealingly colored. It is hard to say, at least in some cases, whether this concealing coloration has been produced by natural selection, or whether, however produced, it has merely then been taken advantage of by the animals, which have conformed their habits thereto, so as to get the utmost benefit from it. In many birds and mammals, sexual selection or some similar principle has completely obscured in one sex the workings of the law which tends to produce concealing coloration. In many other birds and mammals, both sexes are advertisingly colored, and whatever be the cause that has produced this advertising coloration it is evident that the circumstances of their lives are such that their habits and traits of mind are such as to render the question of concealing coloration a negligible element in their development.

"The species of birds and mammals with a complete ^{obliterative}, or concealing, or protective, coloration, are few in number compared to those which possess (either all the time, or part of the time, or in one sex for all the time or part of the time) a conspicuous or revealing or advertising coloration, and to those in which the coloration is neither especially advertising nor especially con-

cealing. As regards the great majority of the species, the coloration, whether concealing or not, is of slight importance from the standpoint of jeopardizing or preserving the bird's or mammal's life, compared to its cunning, wariness, ferocity, speed, ability to take advantage of cover, and other traits and habits, and compared to the character of its surroundings.

"So much for the conclusions to which, it seems to me, our present knowledge of the subject points. But the most important conclusion is that as yet we do not know enough to be able to explain all, or anything like all, the different kinds of coloration and their probable origins; and that we are not as yet by any means in a position to say with any certainty, in reference to large classes of birds and mammals, whether they do or do not possess a concealing coloration. We can say with certainty that hundreds of birds and mammals possess a revealing, and other hundreds a concealing coloration; after even a slight effort to look at the facts honestly there is no doubt on this point; and, after such effort has once been made, it is as idle to discuss whether for instance Flamingoes, Spoonbills, Ravens, Egrets, Red-headed Woodpeckers, Scissor-tailed Kingbirds, Yellow-headed Blackbirds, Cormorants, prongbucks, skunks, sable antelopes, are concealingly colored, as it would be to discuss whether the world is flat, or whether every extinct and existing "species" came into being by a special act of creation."

While we believe, with Mr. Roosevelt, that many animals rely on other factors than color to aid them in escaping from their enemies or catching their prey, we feel that he has underrated the importance of the part played by color, and particularly counter-shading, in concealing an animal from its foes or food. His paper, however, cannot fail to arouse widespread interest, particularly among field naturalists, who, whether or not they accept Mr. Roosevelt's views, cannot fail heartily to endorse his oft-repeated

plea for that "conscientious and exhaustive study of the many groups of birds and mammals, in their own native haunts, under natural conditions," on which all theories concerning the significance of coloration should be based.—F. M. C.

THE EVENING GROSBEAK IN MINNESOTA.
By THOMAS S. ROBERTS. Bull. Minn. Acad. Sci. IV, No. 3, 1910, pp. 406-414.

Dr. Roberts gives us here a model for what may be termed a bird's State Biography. Nearly a page and a half is devoted to references covering the records of the bird's occurrence in Minnesota, and these records are so annotated that the nature of the articles to which they refer is made clear. Then follows a detailed description of plumages (prepared by Mrs. F. W. Commons), and paragraphs on 'General Range,' 'Minnesota Range,' and 'Migration Dates,' the latter under 'Fall' and 'Spring.'

After this preliminary matter, we have some five and a half pages of biographical matter relating in the main to the bird's habits while in Minnesota, but including also a description of its nest and eggs, and some data of historical interest.

The paper obviously contains all the available information in regard to the Evening Grosbeak as a Minnesota bird, and the more important facts of its general life-history. We are assured that every bird student who reads it will share our hope that its author may find time to treat the remaining birds of Minnesota in the same admirable and thorough manner.—F. M. C.

NATURE SKETCHES IN TEMPERATE AMERICA. A Series of Sketches and a Popular Account of Insects, Birds and Plants Treated from Some Aspects of Their Evolution and Ecological Relations. By JOSEPH LANE HANCOCK. With 215 illustrations in the text and 12 colored plates by the author. 8vo., 451 pp. A. C. McClurg & Co., Chicago, 1911.

This attractive volume contains a store of information arranged in a manner which is at once interesting and instructive. While it deals mainly with

insects (birds occupying a comparatively small part of the text), it uses them to illustrate, or discuss such fundamental subjects as evolution and natural selection, adaptation, protective resemblance, warning colors, sources of life after the glacial period, relations existing between an animal and its environment, etc., which possess an interest for all naturalists, whatever be the especial group of animals to which they are devoted.

The book should also appeal to the general reader who, while he may be repelled by the form in which technically scientific papers are presented, is still too discriminating to read with satisfaction the host of so-called nature-books and alleged animal biographies which of recent years have flourished on our lately awakened interest in life out-of-doors.

We commend Dr. Hancock's volume as eminently worth while.—F. M. C.

BIRDS OF CALIFORNIA IN RELATION TO THE FRUIT INDUSTRY. Part 2. By F. E. L. BEAL. Bull. No. 34, Biological Survey, Washington, D. C. 96 pages, 6 colored plates, by L. A. FUERTES.

Part 1 of this report was published in 1907, and treated of the food of thirty-eight species of California birds. In the present and concluding part, the economic states of thirty-two additional species is discussed.

Professor Beal remarks "all the birds whose food habits are discussed have direct relations with husbandry," and it is a matter of the first importance that this relation be ascertained by a qualified expert from a comprehensive view of all the facts involved.

Four species, the Linnet or House Finch, California Jay, Steller's Jay and the Red-breasted Sapsucker, are regarded as of doubtful utility, "but," Professor Beal adds, "the more the food habits of birds are studied the more evident is the fact that, with a normal distribution of species and a fair supply of natural food, the damage to agricultural products by birds is small compared with the benefit.

"A reasonable way of viewing the rela-

tions of birds to the farmer is to consider birds as servants, employed to destroy weeds and insects. In return for this service they should be protected, and such as need it should receive a fair equivalent in the shape of fruit and small grain. Nothing can be more certain than that, except in a few cases, any farmer who is willing to pay the toll collected by birds for actual services rendered will be greatly benefited. In the long run, no part of the capital invested in farm or orchard is more certain to pay big interests than the small sum required for the care and protection of birds." This is the statement of a man who for over twenty years has devoted himself continuously to a minute study of the food of birds, both in the field as well as in the laboratory, and who doubtless knows more about the subject than any other man.—F. M. C.

The Ornithological Magazines

THE CONDOR:—Two numbers of 'The Condor' have appeared since the last review. The opening article of the May number, by Milton S. Ray, bears the somewhat ambitious title 'Literary and Other Principles in Ornithological Writing.' The author objects strongly to the publication of descriptions of species in Latin instead of English, considers it a mistake to abbreviate any Latin name, and favors "set vernacular names based on the true relationship of birds." He adds: "I am opposed to calling, for instance, a Falcon a Sparrow Hawk, or a Turkey Vulture a Turkey Buzzard, simply because the latter names are the most familiar to the general public. The public needs education, not misinformation." The futility of attempting to foist book names in the public, to replace names in general use, has been demonstrated too frequently to require illustration. In this, as in several other matters, the point of view is merely personal, as shown by the occurrence of the pronoun I forty-five times in the course of the article. Readers will doubtless find other points of interest, espe-

cially, the effort "to show that the possession of the poetic temperament does not necessarily incapacitate one for scientific work," and the accompanying illustration in the form of an original poem on the 'Birds of the Farallones.'

H. Tullsen contributes an extended paper on 'My Avian Visitors: Notes from South Dakota'; Mrs. Myers has a brief article on the 'Nesting Habits of the Western Flycatcher' in the San Gabriel Cañon, Los Angeles county, Cal.; and John E. Thayer an important account of 'A Nesting Colony of Heermann Gulls and Brewster Boobies' on Ildefonso Island, Lower California. The definite location of one of the breeding-places of Heermann's Gull is a matter of considerable interest.

The July number contains four important papers. Loye Miller's 'Synopsis of Our Knowledge Concerning the Fossil Birds of the Pacific Coast' is very brief, but shows that the avian fossils thus far studied from eight different horizons include 115 species. A Flamingo formerly ranged as far north as Oregon, and a Peacock, a Stork, and a Jabiru occurred in southern California. Miss Louise Kellogg's account of 'A Collection of Winter Birds from Trinity and Shasta Counties, California,' contains some valuable notes on the winter birds of a little-known region.

In 'Nesting Notes on the Ducks of the Barr Lake Region, Colorado,' Rockwell shows that eleven species breed in this locality. Of these the Green-winged Teal, Pintail, Redhead, and Canvas-back are additions to the list, and will be treated at length in a future paper. Van Rossem's 'Winter Birds of the Salton Sea Region' comprises two briefly annotated lists, one of 101 species found in midwinter, and the other of 72 species found at Mecca during the last two weeks of March.

The number closes with a Directory of the Members of the Cooper Ornithological Club, containing the names and addresses of five honorary and 369 active members.—T. S. P.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Contributing Editor, MABEL OSGOOD WRIGHT
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

ON October 15, 1911, a year will have passed since the National Association of Audubon Societies was robbed by illness of the guidance and counsel of its President and Founder, William Dutcher. During this period, Mr. Dutcher has lain helpless and speechless at his home at Plainfield, New Jersey. His mental faculties, at first dimmed by the blow which fell so suddenly, were subsequently restored to him, and he now not only recognizes, but welcomes gladly, those of his friends who are privileged to see him.

As the leader of a great movement, the remarkable success of which is due to his untiring, unselfish, broad-minded efforts more than to those of any other man, Mr. Dutcher won the admiration and respect, not only of his friends and associates, but even of those whom he felt it his duty to prosecute for violations of the law, to the enforcement of which his life is pledged.

Deserving, however, as he was of the place he filled while in the full enjoyment of health and during a life of extraordinary activity, he never was more worthy the esteem of the friends or foes of bird protection than at this moment when, with almost more than human fortitude, unbroken by a year of sore trial, he faces the future with the patience and courage of a truly brave man.

NOTICE is given beyond (p. 273) of the annual meeting of the National Association of Audubon Societies. While the morning session will be devoted to routine matters, it is desired to make the afternoon session of interest and practical value to nature-study teachers. Suggestions toward this end are cordially invited. They should be addressed to Mrs. Alice Hall Walter, Editor of BIRD-LORE'S School Department, 53 Arlington Avenue, Providence, R. I.

THE twenty-ninth annual Congress of the American Ornithologists' Union will be held at the Academy of Sciences, in Philadelphia, November 13, 1911. During the past year, members of the Union have been pursuing their work in comparatively little-known regions, and there should, therefore, be an exceptionally interesting program at this coming Congress. South America, particularly, has been the scene of much activity, members of the Union having visited Trinidad, Venezuela, Colombia, Panama, and Ecuador, and a part of the public sessions of the Congress may consequently partake of the nature of a South American symposium.

Every American bird student is eligible as a candidate for Associate Membership in the A. O. U. Details regarding methods of nomination, etc., may be obtained from the treasurer of the Union, Dr. J. Dwight, 134 West 71st Street, New York City.

A QUESTION which not infrequently arises in what may be termed legal ornithology, is to determine on what basis a bird may claim rank as part of the fauna of a given state. Does purely accidental occurrence give it such rank, or should a species be among those which may be expected to occur, no matter how rarely or irregularly, before it, so to speak, may be legally added to the fauna of the state in question? The matter is purely ornithological, and might well be acted upon by the American Ornithologists' Union at its coming session.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

FOR TEACHERS

NEITHER the lover of birds nor the teacher of bird-study can afford to neglect that still undeveloped and undervalued branch known somewhat vaguely as "nature-study," and this for two reasons: first, because the study of birds properly belongs under nature-study, and, second, because any accurate knowledge of the habits of birds involves some acquaintance with other forms of animal life, particularly insects, as well as with vegetation and various correlated subjects, all of which are included under nature-study.

Not only the grade-teacher but the high-school teacher of biology, and even the college instructor, should be in touch with the true meaning and value of nature-study. "We shouldn't have to do so much work that belongs to the grades," a high-school teacher recently observed in a discussion on this very point, "if nature-study were taught as it should be."

This strikes at the root of the matter. Nature-study is, by virtue of its content, the birthright of every child in or out of our preparatory schools. It is not biology, or even "milk-and-water" biology, and should never be taught as such. It is simply a study to bring the child into true relations with nature: first, by learning to see, to hear, to smell and to feel the things about him, and, second, by learning to fill his own place in nature without violating those laws which are sacred to every living organism.

There is a gradual awakening, at last, to the need of the lower grades for inspired, spontaneous nature-study. Other studies may be taught from books. Without enthusiasm and freedom from the printed page, nature-study withers and decays. Equipment, training, experience and method even, all go for little, unless leavened by a far outlook and sincere enthusiasm.

It is not the *subject-matter* of nature-study which makes it difficult to present, but the *methods* by which it shall be taught. Its subject-matter is as broad as the universe itself, and attractive alike to the dullest and the quickest pupil.

How to teach this great subject is the important problem. As yet, its possibilities as a cultural study have scarcely been outlined.

Sometime, nature-study will occupy its true place in our grade schools, ranking with arithmetic, geography and other prescribed studies in the curriculum, and fulfilling its proper function, primarily, as a foundation for broad culture, and secondarily, as a stepping-stone to high-school and college science.

Recognizing the need of teachers to come into touch with each other regarding this important branch, the National Association of Audubon Societies proposes to devote half of its regular annual session to a Nature-Study Symposium. Not only teachers, but educators, are invited to join in a discussion of methods by which nature-study may be most successfully taught.

Those who are unable to attend the meeting and join in the discussion in person are invited to send to the program committee suggestions, questions, or a description of methods tested by actual experience.

This meeting will be held Wednesday, October 31, 1911, at the American Museum of Natural History, New York City.

In taking up this matter, the National Association hopes to be of real assistance to the many teachers who are now forced to meet the problems connected with a successful presentation of nature-study, and to bring about a clearer and more vital grasp of the entire subject.

To this end, an exhibit of nature-study books and equipment will be arranged, with practical demonstrations by qualified persons, of the best and most economical ways of arranging and presenting material in the schoolroom.

Will not every teacher who is doing work in nature-study contribute to the success of this novel symposium by attending the meeting, or by communicating with the committee?

This Department will be glad to have a report of similar meetings or conferences held elsewhere. In 1909, the Audubon Society of Rhode Island held a Nature-Study Conference at the State Normal School in Providence.

Some two hundred people, mostly teachers, were in attendance. In addition to a special program, an exhibit of books and pamphlets was arranged, with free distribution of much valuable printed matter.

The conference was the first of its kind ever held in Rhode Island and was a complete success.—A. H. W.

A Suggestion to State Audubon Societies

This is the season when Teachers' Institutes are held in many states, if not in all. Why not take advantage of such an opportunity to arrange an exhibit of nature-study equipment, with particular reference to birds, together with a table of books, pamphlets, charts and any practical devices for helping the teacher? Publishers are usually very glad to send sample copies for exhibition, while the amount of free printed matter available from State and Federal Departments of Agriculture makes it possible to distribute a good deal of valuable information at slight cost. It is now possible to obtain American-made nesting-boxes of the Von Berlepsch design. Every State Audubon Society should own at least one set of these boxes for exhibition purposes. *Begin the New Year now* with the opening of the schools, and strive to further

education by some practical work for the encouragement of teachers and the benefit of pupils.—A. H. W.

[For nesting-boxes, etc., address Mr. Ernest Harold Baynes, Sunset Ridge, Meriden, N. H.]

FROM YOUNG OBSERVERS

From a Little Girl in Massachusetts

Last winter I started a boarding-house for birds by putting suet out on our balcony. Our first arrivals were some dear little black-capped birds. They said their names plainly, so I knew they were Chickadees. They had many other interesting calls and habits.

Soon a Downy Woodpecker came. I knew it was a Mrs. Downy, because Mr. Downy wears a red cap. She would lie on the opposite branch from the suet and peck at it.

The Chickadees tried to imitate this habit. One would hold on with his feet, fluttering his wings while he did so, and peck with all his might. He could stay but a minute, and soon flew away.

The next arrivals were some Juncos. The first one I saw on a snowy day, flying at the garbage can. We threw him some crumbs, and he came and got them. Next day he brought more Juncos.

By the first of March, our winter boarders came less frequently, and soon the Song Sparrows, Robins, and Catbirds came. The Robins and Catbirds were around almost all the time, so I thought they might build nests nearby, and they did.

Up in Vermont, where I go every summer, I was playing on the rocks in a brook. I went near the bank to get some raspberries, when I discovered a Song Sparrow's nest, with four naked babies in it.

Farther up the brook mother and I saw a Rose-breasted Grosbeak. He was handsome, and I like his song next best to that of the Thrushes.

At twilight, we like to go up to the hill pastures and listen to the Thrushes. I had never seen one until we went up a mountain. At the top I saw one perched on a dead pine, and heard him sing.

These are only a few of the most interesting birds which have given me such a good time.—HELEN TAYLOR (aged 13½ years). 4 Central Street, Methuen, Mass.

[This little girl knows how to *see*, and to *enjoy* nature. She has learned something from the birds which will give her pleasure as long as she lives, and she will keep on learning new and beautiful things because she has made the *right start*.—A. H. W.]

An English Sparrow Which Was Beaten

One day I saw a Martin, whose family was occupying my bird-house, engaged in conflict with an English Sparrow. The latter would make as if he

were beaten; but, the moment the Martin started to enter the bird-house, he would leap back and begin the conflict anew. After doing this about four times, the Martin finally became exasperated, and turned on the Sparrow in a fury. He was not content with letting him fly a little distance, but followed him, gave him a good thrashing, and then came back and entered the box in peace.—ALEXANDER SPRANT (Aged 13 years). 60 Meeting Street, Charleston, S. C.

[This observation is interesting for the reason that the English Sparrow has now been settled in this country long enough to be regarded as a regular inhabitant, and not a newcomer. It is quite possible that not only the Martin described above, but many other birds whom the English Sparrow annoys, are becoming able to hold their own against the intruder. More observations along this line would be of value.—A. H. W.]

FROM ADULT OBSERVERS

The Starling at Huntington, L. I.

My first record of the European Starling, here, is on Feb. 4, 1907. I then saw a flock of six or eight in a tree, but was not able to watch them. Although I was in Huntington occasionally through the winter and spring, and during the whole of July and August, I did not see them again that year, and my next record was on March 31, 1908. By 1910, the Starling was so common that people in different parts of the village were inquiring about the name of the "new black-bird" which stayed around all winter. This summer, I have heard of a flock of one hundred or more being seen on the hill between Cold Spring Harbor and Huntington. On May 19, 1911, I saw a pair carrying food into a hole in a bracket under the eaves of a dwelling-house, their coming being welcomed loudly from within the hole.

During the past week, the Starlings have been eating wild black cherries in trees near the house. At one time, I saw two Starlings, three Robins and a Flicker in one tree, all appearing to be happily occupied, with no thought of molesting one another. In October, 1910, both Robins and Starlings fed in a dogwood tree as long as there were berries on it. I saw only one quarrel there, and in that the Robins came out ahead, the Starlings leaving the tree.

The calls of the Starlings are many and varied. Besides several musical whistles, it gives different sorts of squeaks and squawks, some of which may be imitated by rubbing a wet cork on a bottle. From the row of wild cherry trees, there came, on August 7, a whistle very like that of Bob-white, which I heard three times.

There have been no Bob-whites in this neighborhood for years, and the only birds I could find in the trees, then, were Robins, Flickers, Orioles, Sparrows, Cedar Waxwings and Starlings. Which one of these could give that whistle, if not the Starling?—CHARLOTTE E. LEE (Huntington, L. I., August 14, 1911).

[In the adjoining village of Cold Spring Harbor, L. I., a pair of Starlings brought off their brood, probably a second, on July 6, 1911. There were five in this brood, and the nest was in a crevice directly over a beam in an old building, with an exit through a hole to the south.

The Bob-white occurs very sparingly in the wooded areas about Cold Spring Harbor. Possibly, a few pairs are all that have survived of this once abundant game-bird. It is possible that the call of the Bob-white may have been heard by the Starlings in this vicinity, and imitated by them.

Two Starlings were observed eating wild cherries in the same tree with a Robin, so that Miss Lee's observation is corroborated. We may expect the newcomer to appropriate this kind of food-supply. Fortunately wild fruit is very abundant in the localities mentioned.

On August 2, a flock of over one hundred Starlings was seen on Lloyd's Neck, several miles north of Huntington. This flock flew in and settled among a herd of cows in an open pasture. Whether the birds found an attractive supply of insects around the cattle could not be definitely decided, but the field evidently offered sufficient food to give this large flock a ration.

Miss Lee's careful observations suggest the value of becoming intimately acquainted with the habits of the Starling at all seasons of the year. Will not young observers send in reports on this species from as many sections of its range as possible?—A. H. W.]

An Unexpected Record

My acquaintance with the Starling began July 22, 1909, when three were seen. On May 8, 1910, a flock came. Others followed, so that by June 1 they were quite abundant. Several times they were seen carrying what appeared to be nesting material, but they did not seem satisfied, for they began to leave, a few stragglers remaining into July. From August 31 to September 8, some young birds were seen. They have been entirely absent this year.

On May 21, 27 and 28, 1910, two European Goldfinches were seen. During their brief stay their pleasing song was heard.—RALPH BEEBE, Newberry, Michigan, June 12, 1911.

[In reply to your inquiries regarding my notes on the occurrence of the Starling in Newberry, Michigan, I confess that I am unable to account for its presence at this place. It is readily distinguished from our native birds, and I have had no difficulty in recognizing it, although I had never seen it before.—R. B., July 3, 1911.]

This morning, four Starlings passed me, flying rapidly southward. All were apparently adults. They uttered notes not unlike the sound which might be produced by striking a steel rail with a hammer.

A wind and rain storm occurred on this date.—R. B. August 7, 1911.

[Mr. Beebe's communications start the inquiry as to *how far west the Starling has now gone*. As yet, no clue has been found explaining its appearance in Michigan. The statement that European Goldfinches have once been observed in Newberry suggests that some one may have carried a few Starlings and Goldfinches to Michigan, or elsewhere to some adjoining locality, so that small and isolated flocks occurred for a year or two. From the above observations, it would seem that the Starling, at least, has survived.—A. H. W.]



LEAST SANDPIPER (Upper figure)
SEMIPALMATED SANDPIPER (Lower figure)
(One-half natural size)

Order—**LIMICOLE**

PISOBIA MINUTILLA (upper fig.)

Family—**SCOLOPACIDÆ**

EREUNETES PUSILLUS (lower fig.)

National Association of Audubon Societies

Educational Leaflet, No. 53

THE LEAST AND SEMIPALMATED SANDPIPER

By HERBERT K. JOB

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 52

These two dainty little species, the smallest of their tribe, may well be considered our representative shore-birds. The flocking of restless bands of nimble sprites along the sea-coast and the larger inland bodies of water is one of the unique and specially attractive sights of Nature. Such a species as the Spotted Sandpiper, though accessible to more people by reason of its summer stay, does not gather in large and compact flocks. It is rather through the two species we are considering that the majority of people who see shore-birds at all become familiar with the masterly flight-tactics of the shore-bird squadrons, and with the pretty company that races along and across the beach, chased by the waves. The larger shore-birds, alas! have been pretty well shot off, and in most sections of the country are found, if at all, in scattering numbers, only in favorable spots, and by the initiated. So these tiny species, least attractive to gunners, remain the commonest of their family.

They are too small for food purposes, and no one deserving of the name of sportsman will, in these days, fusillade their diminished ranks. They are in nothing like their former abundance. Instead of flocks of hundreds which I was formerly familiar with, two dozen now is a large flock in many localities, and rare enough at that. For want, though, of other bay-bird game, the pot-hunter still pursues these surviving flocks. Mr. Wilbur F. Smith, on a walk along the shores and marshes in a section near Bridgeport, Conn., not long ago, found many of these beautiful little birds dead or wounded along the shores. Some youths, for want of bigger game, were shooting up 'Peeps,' to see how many they could kill, not even bothering to pick them up. It is high time to put these small shore-birds in the protected class, and be able to stop this sort of vandalism.

Range There is a peculiar charm connected with the migrations of these birds. They are so tiny and delicate, yet withal so strong and sure in their flight, so able to dash with amazing swiftness past coasts and over trackless ocean, and to reach the extremes of continents. They come in April or May, according to latitude, with the aroma of the tropics, and return in late July to September with the tang of the arctic wild. In the southward flight, the semipalmated species gets as far as Patagonia, while the other is known to reach Chile. Not all go that far, however, for some winter as far north as the Carolinas, and I have found them common on the coast of Louisiana, in January. For breeding, they wing their way mostly

far northward, even to the shores of the Arctic Ocean. Some remain further south. The Semipalmated probably breeds in the Saskatchewan, and is said to do so commonly along the south and west shores of Hudson Bay. The Least breeds sparingly on Sable Island and elsewhere in Nova Scotia, on the Magdalen Islands in the Gulf of St. Lawrence, and northward. In migration, it is found over the entire continent, while the Semipalmated species keeps mostly east of the Rocky Mountains.

While I have not been privileged to study the Semipalmated Sandpiper on its breeding-grounds, I have had good opportunities with the other species. As both are said to be much alike in their nesting habits, an account of those of the Least Sandpiper may suffice for both. It was on the Magdalen Islands where I thus became intimate with the "wee" sandpiper. To appreciate the conditions, one must imagine a barren, open expanse, with a cool temperature, even in midsummer, with plenty of chilling fog. For miles it is moist ground, carpeted with sparse grass and spongy moss, and diversified with occasional patches of stunted spruce or low, sprawling juniper. There are also billowy elevations of sand-dune in the distance, grown up to beach grass. In these lower parts are numerous shallow lakes, anywhere from a few yards across to a mile long, the larger ones with borders and areas of reeds or rushes. Small parties of Least Sandpipers, or single ones, probably males, feed beside these lakes or pools. The females are closely hovering their eggs, which are, here on the Magdalens, laid during the first half of June, with temperature in the forties, fifties and sixties.

The experience of finding the first nest of this little arctic **Nest and Eggs** bird will always be memorable. As we tramp over the dark

arctic moss, we notice a pretty little twittering, and discover a tiny Sandpiper flying around in wide circles, on tremulous wings, pouring forth the music that represents the emotions of his little heart. It is the love-song to his mate, who is covering the eggs not far away. We long to find the bird-treasure, and tramp all about, hoping to flush the brooding bird. Our wish is gratified. Inadvertently we have almost trodden on the nest. Away flutters the tiny bird, almost from under our feet, not in rapid flight, but dragging herself over the grass as if she were almost expiring. The nest is a rather deep little hollow in the moss, lined with grass and bayberry leaves. The four pear-shaped eggs look very dark, a drab background, heavily mottled with brown or black. Madam soon returns with her husband, and both trot around nearby, piping their complaints at our intrusion. On one memorable occasion, by setting my camera focused on the nest, I secured a picture of the little brooding mother.

The chicks are the daintiest little mites that one can imagine; **Young** little brown balls, mottled with white, and comical enough they are, perched up on the rather long, slender little stems that pass for legs. Frequently they are hatched in the wet pasture-land close

to the cottages of the fishing settlements. While walking along the road and approaching the house where we were stopping, I saw a pair of these sandpipers acting very anxious, alighting on the posts and top-wise of the fence, piping their complaints. Well did I know what was up, and after a considerable hunt found the four chicks lying close together, flat on the ground. The little Sandpiper, apparently, might not be averse to civilization, if unmolested. But what chance does such a brood have near houses, with the prowling cats!

The nesting season of these Sandpipers—and, for that matter, of all the shore-birds—is very brief. Such small species do not take long to mature. Thus, surprisingly early in the summer, often by a not late date in July, they begin to straggle back to us, as though the arctic wilderness were too cold and lonely to interest them for long. As far as I am familiar with the shore birds, the adults seem to precede the young on the southward migration, leaving their guileless broods to follow as best they may. In species where differences of plumage between old and young are marked, this is very noticeable. The adults, for instance, of the 'Ringneck,' or Semipalmated Plover, pass us mostly in August, and seldom before September do we see the pale-banded youngsters. Similarly with the Golden and Black-bellied Plovers. With the Sandpipers, however, the differences are not apparent. But how do these unsophisticated young find their way to their unknown habitat to the southward? Who, indeed, can really tell!

These two tiny species flock more or less together,—as well **Migration** as in company with other shore-birds,—and it is not easy to tell them apart. The Least lacks the partial webbing between the toes, but this can hardly be observed at any distance. It is a trifle smaller than the Semipalmated, and is more of a reddish brown cast of plumage, while the other tends rather to gray. Also it is perhaps more fond of the marsh or meadow than the Semipalmated, which favors beaches and flats. Both, however, are often found on the marsh, so this sign is by no means of general application.

It is a wonderfully pretty sight to watch them scurrying away from the advancing waves on the grand, gray sea-beach, or paddling nimbly about on the flats or in shallow pools of the marsh. How they can make their little legs go! As we walk along, we may not notice them, they are so small. Suddenly there arises a shrill twittering or lisping, and up darts the scattered party of Sandpipers. Quickly they get together, and in a rather compact flock are off at a rapid rate, their little wings moving so rapidly that it takes a high speed of the focal-plane shutter to get them sharp on the plate. Circling about, they often return to alight near their starting-point.

Speaking of photography, the shore-birds are a hard class to catch successfully with the camera, being so small, restless, and frequenting wide expanses. Not many hunters with the camera can produce good photographs,

self-taken, of this tribe. It can be done, though, and these little Sandpipers make very pretty subjects. One can attract them to a blind with decoys. I have even had them fly close to Duck decoys, and secured good pictures of them thus, though it probably was mere idle curiosity that drew them. The best chances I ever found to photograph these and other shore-birds, aside from at nesting-time, was on the spring migration, among the Florida Keys, where the red mangrove grows right down to the water's edge, close to the sand-bars. In winter and spring they are numerous in such places, and all I had to do was to squat quietly and blaze away with my harmless weapon as the unsuspecting birds ran by me, fed, or rested.

These little nymphs are gleaners, rather than scavengers. Their food, of course, is of very small prey—larvæ, worms, minute shell-fish, insects, and the like—which they pick up on shore or flat, or probe for deeper down. Though we may not be able to assign any definite economic value to these species in dollars and cents, they have a value none the less real and great. Celia Thaxter found genuine happiness with “One little Sandpiper and I!”—and so has many another. They have afforded me, hundreds of times, most exquisite delight, and I know that they are worth while. Through wisely-directed effort, may their numbers be greatly increased.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1974½ Broadway, New York City

President Dutcher

The condition of President William Dutcher, who has been ill since October last, remains virtually unchanged. For many years, he has been the leading spirit in American bird protection, and his influence has been felt in a most pronounced way throughout the entire country. To his efforts are largely due the present efficient, organized system of Audubon Societies, and to be deprived of his leadership at this time is a loss which is most profoundly felt by bird protectionists everywhere.—T. GILBERT PEARSON.

Annual Meeting of National Association

The regular meeting of the National Association of Audubon Societies will be held on Tuesday, October 31, 1911, in the American Museum of Natural History, West 77th Street, New York City. The notices called for by the by-laws will be mailed to all members of the Association within the statutory time limit.

It is now expected that there will be an especially attractive program and attention is called to the proposed Nature Study Symposium mentioned by Mrs. Walter as on a preceding page. We hope that all members will bear in mind the date of the meeting and make every effort to be present.—T. GILBERT PEARSON, *Secretary*.

Canadian Bird Protection

In response to our recent request to the Deputy Minister of Marine and Fisheries, Ottawa, Canada, it is a great pleasure to be able to announce that that department of the Canadian Government has instructed all lighthouse keepers in Can-

ada to extend special protection to the birds found in the neighborhood of the lights which they occupy.

As many of these men are located on rocky islands, where the sea-birds are accustomed to gather for the purpose of rearing their young, it will be seen that this action by the Canadian Government officials should mean much additional protection to the wild-bird life to the north of us.

The New Georgia Law

Just before the adjournment of the recent session of the Legislature of Georgia, there was enacted an act for the establishment of a State Game and Fish Commission for the protection of the birds, game and fish of that state. Provision is made for a State Game Warden, with a large force of local wardens to operate under his direction. The machinery for the work is supported by a license tax, which is to be levied upon all persons who desire to shoot game in the state. A law of this character in Georgia is one for which the National Association has been working for many years. Time and again, our agents have toured the state in the interests of such a law. Year after year, we have drawn bills and appeared before legislative committees in their behalf, only to see the bills defeated or left to die on the calendar at the end of the session. The passage of the Georgia game law is the longest step forward in bird protection which has been taken in the southern states in many years, and an immense amount of good must result, not only in the better enforcement of the bird-protective statutes, but in the influence the action will have on the adjoining states.

There is scarcely a state in the Union which needed a game commission more than Georgia. Here Robins are probably shot as extensively as in any other single section of the South; it is here that the famous "Dove shoots" take place, sometimes resulting in the slaughter of thousands of Doves in a day in a single baited field. It is in Georgia that the trappers of live birds for market have their last stronghold. This trapping of song-birds has evidently been going on there for many years. We first discovered it in July, 1907. President Dutcher, who was always on the alert for an injustice done to the birds, discovered that caged Painted Buntings or Nonpareils were appearing in numbers in Philadelphia, and at once instructed the writer to locate the source of the supply. After visiting different points in the South the trouble was found to be at Savannah. There were a number of trappers in the vicinity. One of these, an old man named Adams, was visited in his home. His traps were examined and much information obtained from him. He stated that he and his wife had been in the bird-trapping business for thirty years, and he evidently furnished the entire supply of traps used in the region. He declared that about forty negroes were engaged in the business. He stated further, that the season for catching Nonpareils was from April 15 to June 1, and that after that date it did not pay to trap, as all the birds taken would quickly die in captivity. This he attributed to grief at parting with their mates, and being kept away from their nests. During the season which had just closed, he had caught over 400 Nonpareils, receiving \$35 a hundred for them. In the winter he and his wife trapped and shipped Cardinals in the same way.

This traffic in live birds was clearly in violation of the provisions of the Audubon Law enacted some time before, but we found it absolutely impossible to get the local authorities to take any action in the matter. No one seemed to care anything about the case. We found that

the birds were being shipped north on steamships, and the company operating the vessels agreed to use their efforts to stop the illegal trade. There is reason to believe, however, that the trapping and shipping of song-birds has continued. We shall look to the newly established Game Commission to right these, and many other evils.—T. G. P.

The Montclair Killing

In August of this year, during the 'flocking time' of the birds, the residents of a certain street in Montclair, New Jersey, were annoyed by the great numbers of birds which made the shade trees growing along the sidewalk their mighty rendezvous. It was not merely that the birds, at times, were noisy, which created the disturbance that followed, but the fact that, owing to their great numbers, the sidewalk beneath was rendered quite filthy, and the unpleasant odor pervading the neighborhood was exceedingly disagreeable. Some of the residents of the street who suffered the inconveniences of living in the immediate neighborhood of such a large roosting-place complained bitterly of the presence of the birds, and cast about for some means of ridding themselves of what they regarded as a nuisance.

One of them engaged a colored man, named Peter Stevens, to shoot into the trees at night. This the man did for two evenings in succession, killing a number of the birds, but without the desired effect of causing the survivors to seek some other roosting-place.

The matter was at once reported in the daily papers, and in an exaggerated form the story swept rapidly through the press over a large section of the United States. Some statements placed the number of birds shot as high as 500 on the first night of the killing. Everywhere the action was condemned as a cruel, wanton, unnecessary destruction of bird-life. As soon as the matter was reported the Secretary of the New Jersey Audubon Society made a personal investigation

and, securing all the available facts, laid the matter before the State Game and Fish Commission, with the result that, in the end, Stevens was prosecuted and fined \$100, this being the full limit of the law for killing five English Starlings. In addition to these birds, Stevens admitted to the shooting of a total of twenty-three English Sparrows, birds which are not protected by law. At this time there appears to be no evidence that any Grackles or Robins were killed, although it was widely reported that such was the case. Stevens took an appeal and the case will go up to the Court of Common Pleas of Essex County for further hearing.

The most significant feature connected with the Montclair incident is the perfect storm of protest which it has aroused throughout the country. The press, in its condemnation, has characterized the killing as "unnecessary slaughter," "butchery" and "inhuman." One paper refers to the "Barbarians of Montclair." A large number of letters have reached this office from persons who entered most earnest protests against the "needless killing" of the birds. It all bespeaks a widespread and profound interest in the cause of bird protection.

Ten years ago, the killing of a thousand birds would scarcely have caused more than a passing notice in a local paper. The change of sentiment for bird preservation is an evidence of the rapidly increasing refinement of sentiment that comes with advancing civilization. It is a most positive fact that, the more cultured the community, the greater is the esteem in which the wild bird is held.—T. G. P.

The Flocking Problem

Apropos of the flocking of birds to Montclair, for the purpose of roosting near human inhabitants, attention is called to the fact that this habit on the part of birds is not confined to one New Jersey town, but is more or less pre-

valent throughout the country. The fact that the birds often accumulate in such numbers as to annoy the residents of a town presents a problem to which bird lovers should give careful consideration. Every little while such a case is brought to our attention. For example, a dispatch to the *Hudson* (N. Y.) 'Republican,' from Hoyleton, Illinois, under date of August 30, 1911, gives the following information regarding the efforts made to rid that western town from what the people evidently regard as a scourge of Bronzed Grackles.

"The residents of this town spent the greater part of the night in an effort to exterminate Blackbirds, which have disturbed the sleep of the villagers for many nights.

"It was estimated that more than a million birds have nested in and around the village, and thousands of these already have been killed. Every sort of weapon imaginable was used in the battle."

Illinois, in common with a number of other states, does not protect by statutory enactment the "Crow Blackbirds," because of an ill-founded belief that the birds are of immense damage to growing crops. On the other hand, economic ornithologists who have studied the feeding habits of these birds agree that the service which they render the farmer in destroying injurious insects far outweighs the amount of harm done by them. The prejudice against Blackbirds is of long standing, and it may be many years yet before these much-abused birds are given the protection which they so richly deserve.

The early inhabitants of New England felt that they had a grievance against the Blackbirds for eating the corn in the fields; so laws were passed offering "a bounty of three pence a dozen for dead maize thieves." Dr. Benjamin Franklin is quoted by Peter Kalm, a Swedish naturalist, as saying that the Blackbirds were thus almost exterminated, "but, as in the summer of the year 1749 an immense quantity of worms appeared in the meadows, which destroyed

the grass and did great damage, the people abated their enmity, for they observed that these birds lived chiefly on these worms before the maize is ripe, and consequently extirpated them."

We have been taught to regard Dr. Franklin as a man who did not speak lightly on any subject. Legislators might well weigh his observations and conclusions in reference to Blackbirds.

But, whether the birds are good or bad, the inhabitants of Hoyleton complain of their presence in such vast numbers, and take the most drastic means known to rid themselves of the annoyance.

In some places, Purple Martins have the habit of accumulating in enormous flocks before starting on their southern migration. There would be nothing disturbing about this were it not that they usually choose a grove in the heart of a town as their favorite roosting-place. Many cases are known where the Martins have thus brought down upon them the wrath of a troubled community.

At Wrightsville, North Carolina, a great number of Purple Martins, in July, 1905, chose as their roosting-place the grove surrounding a summer hotel. The proprietor, wishing to rid himself of the birds, invited in a number of his neighbors, who, lying in wait for the birds until night, fired into the trees and continued to shoot until the ground was literally covered with the dead and dying birds, and for days after wounded Martins could be found fluttering about the neighboring lawns and roadsides. Estimates on the number of birds killed varied from 8,000 to 15,000. Upon hearing of this tragic violation of the law, the North Carolina Audubon Society sent an agent to prosecute the offending parties, twelve of whom were convicted and each man paid a fine of *one dollar*. A citizen of the place, who took no part in the killing, said it had been very noticeable that since the appearance of Martins there had been less mosquitos than for many years previous, and remarked that he thought the community should not permit these birds to be shot.

On August 16, of this year, the writer witnessed the evening gathering of a flock of Martins which must have numbered over 100,000. The birds settled to roost in the trees near the County Court House, at Greensboro, North Carolina. For six weeks they had been roosting here every night, to the great annoyance of the people living or having business in that part of town. There had been loud complaints that the birds were a nuisance and a menace to health. Many plans had been tried to get rid of them, but all had failed. About dark on the evening in question, a fire hose was brought to bear on the trees and the birds were drenched and frightened away. The next evening not over 1,000 or 1,500 birds appeared. The water pressure, while not sufficient to kill the birds, apparently had the effect of causing them to leave. It is just possible that this method would have won for the people of Montclair and Hoyleton and Wrightsville a complete and bloodless victory in the moment of their extremity, and the birds might still have been spared to beautify the land.—T. G. P.

A Petrel killing Dog*

In the mouth of the Bay of Fundy, on the far southeastern verge of the State of Maine, in fact, so close to the Canadian line that the British government maintains the light-house it holds, lies the little lump of rock and earth known as Machias Seal Island. Probably for centuries it has been the summer home of many sea-birds which frequent the waters of that region.

On July 15, 1911, the writer, in company with Mr. Arthur H. Norton, President of the Maine Audubon Society, visited the island and, as it chanced to be a day on which the sea was calm, a landing was effected without great difficulty. The tide was low as we approached, and on the weed-covered rocks along the shore, as well as on a rocky ledge nearby,

*See Mr. F. A. Brown's article on Machias Seal Islands in this issue of *BIRD-LORE*.

large numbers of Terns were resting. Perhaps five thousand of these birds were nesting there. Many of them appeared to be Arctic Terns, and probably they were mostly of this species. Puffins were continually seen feeding off-shore, or flying over the rocks with objects in their bills which may have been food for their young. Some of their nests were found in the crevices or under the gigantic boulders which covered one part of the island. Seventy-four of these birds were counted, and the light-keeper stated that the colony contained about three hundred. So far as we are aware, this is the most southern point where Puffins now breed on our Atlantic coast. One Razor-billed Auk was seen.

It was estimated that soil covered the rocks in the neighborhood of four acres. This was honeycombed with the numerous burrows of the Leach's Petrels.

The light-house keeper's boy was the proud possessor of a dog which evidently was a great pleasure to him, living as he does far from the companionship of other children. This dog, however, was a scourge to the Petrels. It was an easy matter for him to dig out their burrows, and there was abundant evidence of his activities in this line. Petrels which had

been killed were lying everywhere in the grass. The writer picked up several which lay within a radius of ten feet of a rock and photographed them on it. In the space of less than an acre, he counted



LEACH'S PETRELS KILLED BY DOG ON
MACHIAS SEA ISLAND

the bodies of 147 dead Petrels. To save the colony, it was necessary to restrain the dog at once, and, after a lengthy conversation with the keeper and his boy, an agreement was reached whereby it was arranged that in return for a money consideration the dog was to be kept in close confinement in an outhouse, until it could be removed to the mainland. A dog in a breeding colony of birds is evidently second in destructiveness only to a cat.—T. G. P.



ENTRANCE TO NESTING-BURROWS OF
LEACH'S PETRELS

Aigrette Traffic

For two or three years, this Association, in connection with the Audubon Society of South Carolina, has been exerting every possible effort for the protection of those plume-bearing White Herons which inhabit the coast country of South Carolina. Reference in the past has been made in the columns of *BIRD-LORE* to the 'shooting up' of some of these rookeries by plume-hunters.

To those who are following closely our

fight for the preservation of these exquisite birds, the enclosed quotation of a letter written by Mr. James Henry Rice, Jr., Secretary of the South Carolina Audubon Society, will be found of interest, as it indicates something of the activities of a couple of typical plume-hunters, and the difficulties which surround the Audubon officers in their efforts to see that the laws protecting plume birds are enforced.

"On May 3, 1911, Warden Jake Ward, with assistants, overhauled Jackson Mitchum (who has many aliases), Jake Jordan and Luther Mills, forcing their way into the preserve of the Santee Gun Club, on South Santee river, where is situated the rookery of American Egrets, photographed a few years ago by Mr. Chapman.

"On being ordered by the Audubon wardens to halt, these men opened fire with high-power rifles, which was vigorously returned. Thereupon Mitchum and Jordan fled through the marsh, took boat and escaped. Mills surrendered. Nobody was seriously hurt. A week before this, as I wrote you at the time, Mitchum and Jordan fired upon a warden at Dean Hall, on Cooper river, on the plantation belonging to Mr. R. B. Kittridge, of Carmel, Putman county, New York. The shot penetrated the warden's clothing at several places, but without injuring him.

"Last year the same men fired on Magistrate Royall of James Island, opposite Charleston, afterward escaping by pushing their small boat far into the marsh where a launch could not follow. They are without doubt the same men who have repeatedly shot up the rookery at Secessionville, near Charleston. The Egret plumes they get are, I understand, sent to New York and Boston.

"From the Santee rookery, these men, Mitchum and Jordan, made their way to Charleston, where a warrant was at once sent, charging assault with a deadly weapon. The warrant, however, was not served until within the past few days. The case will have to go to a higher

court, as the penalty is a term of years at hard labor in the state penitentiary, and a magistrate can not try cases in which the penalty exceeds \$100 fine and thirty days' imprisonment. Both men are now in jail."—T. G. P.

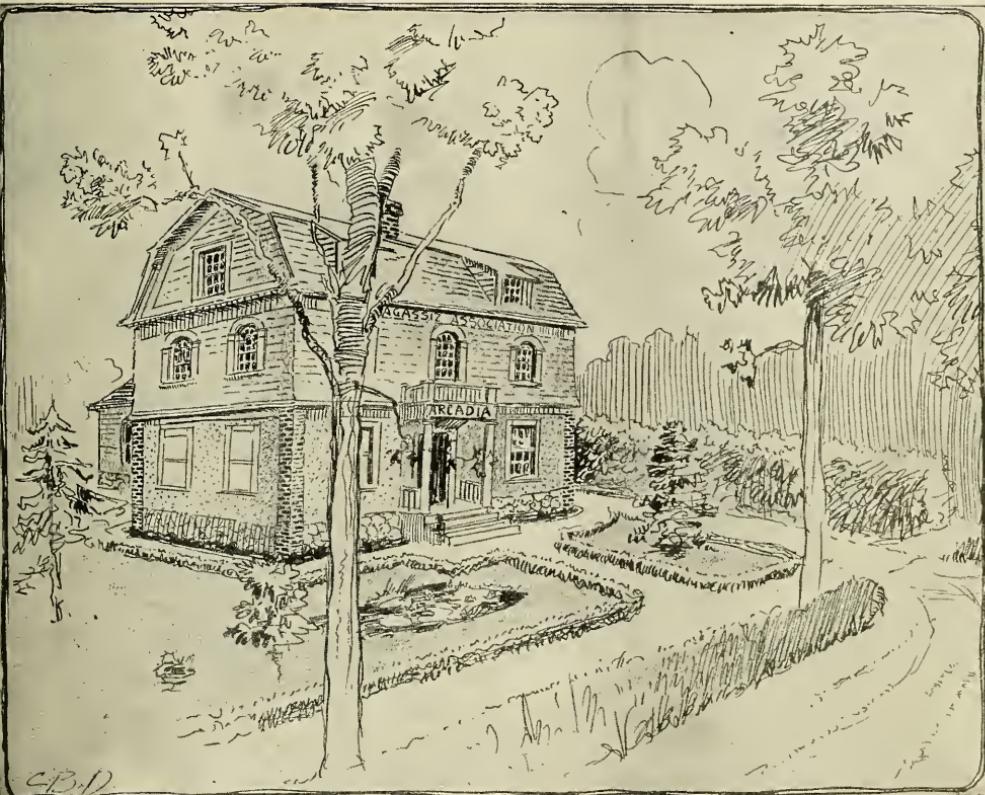
Michigan

Mr. Henry Ford, of Detroit, has for several years been a warm supporter of the Audubon work in Michigan. He is a man of large acquaintance, and his influence as well as his financial support has been of much aid to the Society. Mr. Ford has an extensive estate near Detroit, and he is now seeking to make it a veritable bird paradise as far as lies within his power. One of the many attractions which he is offering to the birds, to induce them to dwell with him, is a systematic arrangement of nesting-boxes. Five hundred of these have already been put in place.

In order to ascertain just the character of bird-life with which he must deal, he has arranged with Mr. Jefferson Butler, President of the State Audubon Society, to make an ornithological survey of his lands. When this census has been taken, additional means will at once be adopted to attract the birds.

Another set of prizes has recently been distributed by the Michigan Audubon Society to children in an essay contest on the subject of bird protection. Here is the story submitted by a little girl, Mary Van Slembruck, which won the first prize of \$25.

"I was walking along the street one day, when, all at once, I saw a crowd of boys shooting at a poor little bird. I said to them, 'Do you think it is right to shoot at such a little bird, who can only protect himself by flying. It has as much right to the world as you have, so why don't you let the poor little creature alone.' The boys had pity on the little creature, so they let it alone, and did not shoot at any birds since that, because they felt sorry for what they had done."—T. G. P.



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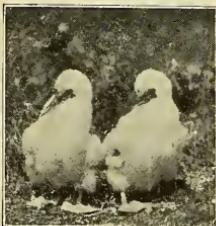
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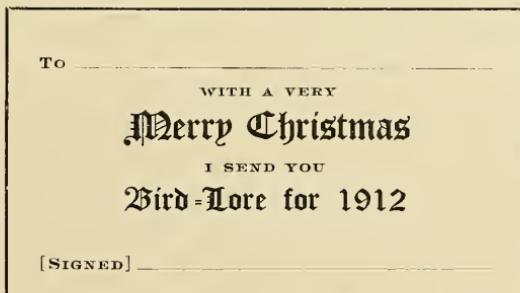
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No. 6

Birds and Seasons in My Garden

VI. THE COMING OF WINTER

By MABEL OSGOOD WRIGHT

IT WAS the first of November, and, though the birches and maples were leafless, the oaks and beeches were still completely clothed in russet, and the deep crimson glow of the smooth-leaved sumachs in the vista from the south window would not have shamed early October.

The great flocks of the southward migration had passed, and the winter birds, finding food plenty, were holding rather aloof. Juncos had reappeared and, mingled with Song Sparrows at the various feeding-places, a few Kinglets explored the old apple-tree, while a marvelous flock of Myrtle Warblers had arrived, with every apparent intention of making a long stay. We knew that it was well past middle autumn, and yet could not realize the fact with bees in the chrysanthemums, and the White-throats giving typical, if not perfectly clear, spring notes. All these days, the wind was blowing so incessantly that black frost dared not creep up from the lowland in the face of it.

Then fell a night when, as the moon came up out of the east, the wind fell before the piercing light, so clear that I could see wild-fowl in silhouette as they crossed the path of it, and then Black Frost slipped up and did his work.

Next morning at breakfast time, an unfamiliar bird form walked along the piazza floor—the White-bellied Nuthatch. Unfamiliar because it moved about on the level like the Sparrows, yet having the same furtive, mouselike motion with which it circles tree trunks. What had attracted it? As I neared the window, a second, and then a third Nuthatch followed the gyrations of the first, and began pulling something from the spaces between the floor-boards, that were laid slightly apart.

Children playing there, the day before, had dropped hickory-nut shells that still held some bits of meat, and these had been detected from afar by the Nuthatches. Could there be a better example of the luring qualities of specialized food? At once I hung the lumps of suet on their nails in the apple-

tree feeding station, and this means the coming of winter for the birds in my garden.

This morning, in the luminous dusk of frosty dawn, I chanced to look out over the glittering lowland pastures, when I saw a small flock of Fox Sparrows drop from flight that brought them over the house, and settle in the low bushes above the flower corner. At nine o'clock, apparently rested and vigorous, they were feeding about a great brush-heap down in Bluebird Farm, where all the dry litter of seeded coreopsis, cornflowers, zinnias and other composites, pea-vines and brush, is collected for burning. This conflagration had long been



A FAVORITE FEEDING-PLACE

one of the features of autumn nights until I discovered in it another disadvantage of too-great garden neatness—that is, if one wishes birds,—for the great heap of light, dry brush, against which we lay a few spruce boughs, makes not only an ideal winter shelter for birds, great and small, but yields a food supply to many of the shy species that look askance at the formal feeding-station. Already we have seen a Ruffed Grouse run to cover there; from it a pair of Hungarian Partridges have flown several times, and a small covey of Quail include it in their list of hiding-places; and yet this pile has only been a month in growing. Is this not a proof of the importance of food and shelter? Beyond lie acres of thrifty pasture-land, without bush or break, and several strips of woodland, posted and protected, yet stripped of underbrush and



WINTER AMONG THE SPRUCES

pruned to the last degree; but they are birdless now, and, even in May, hold but few nests, and those evidently of inexperienced young couples. Then, too, when the shallow water in the stone drinking-basin freezes through, and the pool also has turned to ice, there is, below Bluebird Farm, a tiny brook, fed by surface water and melted snow, that not only gives the Meadowlark his last obtainable drink, but draws the first Redwings that venture to return to their old haunts in the alders.

There is something in old apple trees so attractive to winter birds that one comes to search out even old stumps, and use them for feeding-places. Such an one fell on its knees behind the wall, and, being very comfortable and much appreciated for its picturesque attitude, decided to live a little longer, and put forth fresh wands that are wreathed in pink each May. A few large lumps of suet, carefully lashed with wire, make the derelict a favorite borderland feeding-place. Is this not a much better use for the old native than cutting it up for kindlings, and baring and repairing the tumble-down wall that has been its boon companion these many years?

For a certain group of winter birds, evergreens are a necessary lure; and among these are the Crossbills, Pine Grosbeaks, Cedar Waxwings, the Pine Siskin, the Owls, great and small, and the rare and surprising Cardinals.

Winter is always cheerful among the spruces, for there is no sound more in harmony with the gentle drip of melting snow than the snap and rustle of the cones, as the Crossbills strip them in their feasting. More than once, among these spruces, I have come suddenly face to face with a somber Barred Owl, sitting upon a sharply horizontal branch, but yet so close to the trunk that it appeared to be a part of it and they are the winter roost of the Night-Heron.

The Owl is a bird more often heard than seen. Many a time I have said there are no Owls about the place this winter, only to find the needle mold under the pines and spruces covered with 'Owl balls' of their undigested and ejected food, compounded chiefly of rodents,—that is, as far as the Screech Owl is concerned. As for the Long-eared and Barred Owls, I am sorry to say that I have found Meadowlark, Bluebird and Flicker feathers among the garnishing of their balls of skulls and bones! Make ready, before the snow comes, for the flocks that either fly from the north before it; or else are driven from their haunts by the covering of their food supply. Always have one food-station in the lea of house or outbuilding, and see that the daily supply is kept up, and the shelves swept clean after a storm.

A good broom is as necessary a garden tool in winter as a rake in summer. Before thaw has turned the snow to ice and barricaded friendly bushes, knock it off with sharp strokes from your broom (it is, by the way, this freezing and thawing of the snow that clings to box bushes that kills them).

Brush little spaces bare, and scatter chickfeed on the ground. Break a path open to the brush heap in the garden, and use the broom freely, to keep the snow from weighing too heavily and making the shelter sodden; also add

hulled buckwheat to the food-supply, and do not forget to save the 'nubby' ears of chicken corn and put them in the haunts of the gray squirrels.

As for the rabbits, do not pull up all the old cabbages, spinach and seeded lettuce until spring, and then the bark of your young peach trees will be spared.

Will the Screech Owl come back to his winter box, from which a gray squirrel drove him in March, only, in turn, to be dispossessed by a Flicker in April?

This morning, very early, I saw a brown bird fluttering inside the well-house, where a claw caught in the net held it prisoner. Quickly grasping it,



THE WINTER BROOK IN BLUEBIRD FARM, WHERE THE MEADOW-LARK
TAKES HIS LAST DRINK AND THE RED-WING HIS FIRST

I freed the claws, and held the tired, fluttering thing loosely between my hands, until it should recover itself; and then, as it seemed numb with cold, I breathed softly upon it, holding it to my face until it quite relaxed—a beautiful Hermit Thrush! All day it has been in and out among the dogwoods feeding upon the berries. Is it the pioneer of a flock, and will tomorrow bring its companions?

It is such expectations as these that make the winter birds of a garden so precious; for there is no really dead season, with the Winter Wren in the wood-pile, the Chickadee and Tree Sparrow chattering overhead, when any day, on looking closely at what a careless glance named a flock of English Sparrows in the bare ash, you find two-score Cedar Waxwings, who have spied the berries on the mountain cranberry; while in February, the dreariest

of months, the Redpoll and Snow Bunting will come, and you must look for the footprints of Longspur and Shore-lark in the open fields. As for the Downy, the Blue Jay, the Goldfinch, the Junco and the Purple Finch, the restless Brown Creeper and the Golden-crowned Kinglet,—are they not always with us, if we have but the eyes to see and the hearts to know them?

Then, last, and yet, in one sense, the best of all, come the winter soaring Hawks, wild and free as the scope of the north wind itself. Of these, only the Sharp-shinned is a despicable marauder, and it does not soar but skulks, and can be easily separated from its noble kin. Then, too, in winter even the Crows have a certain dignity, and would be missed if they ceased their daily flights across to the bar for clams and mussels.

Ah! what grace each season brings to some overlooked place or thing! The winter, the time of pause, of stripped draperies, lets us see the body of things, the true perspective; and today, as in the days of old, behold it is very good! A commotion in the spruces, forms tumbling, others flying, what is it? Red squirrels objecting to sharing the cones with some Crossbills,—as if they had not been despoiling the spruces of their cones and juicy green tips all the season! The graceful little pests, mammal equivalents of the English Sparrow, how shall we ever be rid of them? Never, probably; for this same red squirrel is surely the serpent in the birds' garden of Eden! And serpents there must be, if only for the sake of contrast.

Good-night, world of growth and pushing! The garden is asleep, but not its birds,—they are the living lamps of hope that light us through the dark, short days, and, breaking the deathlike quiet of the glittering, moonlit silence the Owl, with

“His velvet wing sweeps through the night:
With magic of his wondrous sight,
He oversees his vast domain,
And King supreme of night doth reign.”



Photographing the Virginia Rail

By ALFRED C. REDFIELD, Cambridge, Mass.
With photographs by the author

Five years ago I found a Virginia Rail's nest. Since then the camera has come into my use, and I have sought in vain for an opportunity to renew my acquaintance with this elusive bird.

On July 18, 1910, long after I had given up hope of finding a Rail's nest that year, a friend told me that he had found a nest, and with a light heart I followed his guidance across the rolling New England pastures, over tumble-down, vine-clad walls, to a quiet lane that wound among the swamps which separate the fields from the salt-marsh. By the side of this lane lay the meadow in which the Rails were nesting.

At one time a cranberry bog had been here. Long since, it had been abandoned, and coarse grass now carpeted a level plane, hemmed in by thickets of wild cherry, bay-berry, and sumach. Two drainage ditches, now choked up by rank weeds, and flooded only at the highest tides, crossed the marsh at right angles. I had not expected the Rails in such a dry place, yet here, near the end of one of the ditches, they had built their nest.



VIRGINIA RAIL ON NEST

The nest was a shallow bowl of dry reeds, lodged six inches above the moist mud. The surrounding reeds were drawn together in an arch above, and hid the nest so completely that I could not see the bird as I stood over her. Not until I parted the reeds did she creep off and fly to the bushes at the swamp-edge.

It was growing late, so I made preparations for my camera-work of the next day. I cut three sticks and set them up near the nest. Over these I



VIRGINIA RAILS ONE DAY OLD

draped a green cloth, in rough imitation of a camera, and bound it round with cat-tails, more to hide it from the by-passers than from the bird itself. All this time the Rail had been calling anxiously, as she crept about the under-brush, now with deep, gurgling noises, again with high, piping notes, such as one hears on clear nights during the autumnal migration. When I withdrew, the scolding was silenced, and twenty minutes later she was back on the nest.

The next day I returned and set up my camera in place of the dummy. I ran a long thread from the shutter to the shade of some bushes at the edge of the swamp, and there sat down to await the return of the mother bird. A Bob-white was calling from a near-by willow, and a Green Heron flew from time to time to her nest in the bushes across the swamp. The delicious swamp blueberries growing within reach made the time pass quickly. After half an hour of quiet waiting, I set off the shutter and, creeping up behind the camera, saw the mother rail sitting peacefully upon her eggs.

That evening I discovered that several eggs were slightly pipped. The following day the pipped marks extended entirely around the shells, but not

until the morning of June 22, over sixty hours after the first pip marks appeared, did the young hatch. My friend made the discovery in the morning, and reported that four of the young had slipped out of the nest at his approach. That afternoon I appeared on the scene with my camera. As before, all but three of the young ones scrambled into the grass and disappeared before I could intercept them. The remaining three I gathered up and photographed while they lay in my friend's hand.

They were bright little mites, mere bunches of iridescent black down, from which the tiny white bill, with its dark band, projected inquisitively between the beady eyes. Although they were very lively, they seemed to object to the light and huddled together, hiding their heads. Having made my pictures, I returned them to the nest and left them to the care of their mother. Poor little things! In nine days the protection of the law would be removed. I shuddered as I thought of their chances of escaping dog and gun.

A few days later I visited the swamp again. The nest was empty, and a few feet from the ditch lay the dead body of one of the parent birds. What had become of the young ones I could only guess.

But the next day my fears were confirmed. As I drove past the swamp, the glowing eyes of a crouching cat peered at me through the marsh-grasses. Surely there are some cases when the ornithologist is justified in the use of a gun!



WINDOW FEEDING-STAND USED BY THE DANISH SOCIETY 'SVALEN'

Bird-Life on the Everglades

By ALANSON SKINNER

With a photograph by the author

DURING August, 1910, it was my privilege to head an Ethnological expedition into the interior of Southern Florida. The purpose of the trip was to visit the remnant of the Seminole Indians who inhabit the region. In order to reach these people in their homes, it was necessary for our party to invade the remote fastnesses of the Big Cypress swamp, and to completely cross the Everglades, a feat only five times before accomplished by white men. We also made a journey of some sixty or seventy miles through the pine barrens.

My companions were Mr. Julian A. Dimock, the well-known nature photographer, Frank Brown, the son of a Florida Indian trader, and Wilson Cypress, a full-blooded Seminole Indian. Dimock and I met Brown and Cypress at Fort Myers, on the west coast, near the Gulf of Mexico. From this point we set out for the Big Cypress in a prairie schooner, drawn by two yoke of undersized oxen.

The first part of our journey lay, for about seventy miles, through alternating pine barrens and damp prairies, with occasional morasses, or 'sloughs,' as the 'crackers,' or native whites, call them. It was the rainy season, and to a northerner who had never before endured a Floridian summer it was a novel experience. The sun would rise on skies of the deepest, warmest, softest blue imaginable; downy clouds of intense white contrasting markedly with this lovely background. The sun shone with ever-increasing intensity. The water through which we waded, ankle- to knee-deep was so hot that it parboiled us painfully. Then suddenly, without a moment's warning, there would come down upon us a galloping cohort of inky clouds. The wind blew fiercely, and raindrops pelted down with the velocity of rifle bullets. Thunder roared accompaniment to furious lightning flashes; and then, just as suddenly, the warm blue sky, and cottony clouds again, with the fierce old sun causing the steam to roll like smoke up out of our clothes, and from the watery fields, as though they were on fire. In the distance, perhaps, you might see the storm racing away, and hear the far-off blasting of the thunder.

All through the pine barrens there was no lack of animal life. We lost count of the vicious water-moccasons that generally refused to flee at our approach. The great diamond-back rattlesnake was not in evidence. Of the small ground rattlers we saw two. Other snakes were abundant, but we gave them a wide berth.

From every bush, tussock, or tree, our ears were assailed by a deafening chorus of frogs and toads; large pea-green tree-frogs, and tiny ones with the same pea-jackets; big warty toads, reminding one of their northern relatives, and all sorts of pond-frogs. Salamanders we did not see, but occasion-

ally, in high, dry spots, we encountered an *Anolis*, or a more somberly dressed lizard, resembling one of our northern forms.

Deer were abundant, but shy. And no wonder. Every man, panther or other predatory beast, is always watching for an opportunity to prey upon them. Those we saw were smaller than the northern species. Panthers were abundant, although we saw none. But at least three times we heard them roaring (the male panther does not scream, he roars, like a miniature lion) in the night. Bears were said to be about, and we heard of one wolf, although wolves have here long been considered to be almost extinct.

Of all the fauna of the pine barrens, the birds were most in evidence. First in point of abundance was the White Ibis (called 'Curlew' by the crackers). On several occasions we encountered flocks of two or three hundred, although



A CANOE TRAIL IN THE GLADES

they were usually seen in much smaller numbers. They seemed to be eminently gregarious, and I do not remember that we often found one alone. I observed that the old birds, in the adult white plumage, usually flocked by themselves; and the immature birds, in the gray garb, also associated with others of their own kind. Like everything else that is edible in Florida, they are shot by every passing person.

Let me say here that the cracker loves to shoot at every thing that lives,— and he usually hits it, too, by the way. He does this merely to improve his aim, or to "see something drop." Not so the Seminole. He would far rather let well enough alone, unless he is hungry. I did not see an Indian kill anything wantonly, of his own initiative. One rebuked me for killing some toads, which croaked so loudly that I could not sleep. "Indian think so holowakus (no good) flogs (frogs) killin. Big Man up Above mad ojus (much)."

Not so noticeable, but always present, were the Turkey Vultures. The moment we camped, they lit in the nearest trees, to await our dinner scraps. In the Glades they continually followed the canoes. They have learned that a moving canoe usually means a dead alligator, sooner or later.

The morning after I left Myers, I heard a Wild Turkey gobble in the distance at sunrise, and Cypress promised me that he would soon show me "Fi-te ojus"—(Turkey, plenty). And he certainly kept his word. Early in the morning, after sunrise, or just before dark, the Turkeys, which spend the day concealed in the dark Cypress Heads, or swamps, come out to feed in the wet prairies, close at hand. I believe that I saw, altogether, in the Pine Barrens and the Big Cypress, at least 120 Wild Turkeys! That means at least four flocks of, say, thirty each, and, as I saw quite a number of small flocks and individuals, 120 is too small an estimate. They are a much smaller bird than I supposed, and, unfortunately, they are very palatable. Every wayside camping ground is littered with their bones. Why they are still abundant is a miracle. The young birds, being very tame, suffer the most. I often got within fifteen or twenty feet of them, but the old birds are more wary. I inquired about Paroquets, but neither Indians nor whites even knew what they were. Ivory-billed Woodpeckers were said to have been extinct in that locality for the past ten years. The Snowy Egret has also passed away within that period, and we saw possibly a dozen of the 'Long-whites,' or American Egret. Sandhill Cranes were less uncommon than I had expected; I saw them on at least two occasions. The first day out from Myers, we saw a flock of eight. Poor birds, they also are good eating. We saw a few Florida Blue Herons and some Water Turkeys. Every day we ran across the curious little Florida Quail. One day Brown stumbled on a brood of young.

Crows were uncommon. In fact, we saw more in the Everglades than in the uplands. They were mostly Fish Crows. Once in the Big Cypress, we saw fewer birds; and those we did see were mainly the same species that inhabited the Pine Barrens. In the Everglades, however, there were very few birds, indeed; they were nearly as scarce as alligators. Think of it! Alligators are now so rare, owing to the relentless persecution of the hide-hunters, that we saw only one in the Glades, and had to make a special trip to see him!

The Everglades are remarkable for two things: First, the absolute purity of the water there, which, contrary to the popular idea, is as clear as crystal, and perfectly drinkable at any place; and, second, for the absence of animal life.

In the water, to be sure, there are some fish, alligators, snakes, and turtles and frogs, but above the surface one sees scarcely anything. A few Vultures, a Fish Crow or so, a Duck, and possibly a Limpkin, is a very good day's record for birds in August. There is nothing to attract them. To be sure, there are myriads of little fish, but so there are in the Big Cypress where there is also admirable cover.

The Indians call the Glades "Pi-oki," or drowned prairies, and this is an admirable name for them. Mile after mile, they stretch away, barren, grassy wastes, level as a billiard table, with occasional hammocks, or meadow islands, to break the monotony, and scarcely ever a living thing in sight.

In the Glades we saw Kingfishers not infrequently. Occasionally we ran across a small, dark-colored Duck—a noisy chap. Vultures and Hawks were most abundant. If I am not mistaken, we saw some Hawks, which appeared to be Ospreys. We also saw a few Limpkins, but bird life was very sparse. I do not believe that this is so much because they have been hunted to death as that they have never been abundant there. There is little food to attract them.

I am happy that I have been able to visit this little-known region. With such comparatively populous places as Palm Beach and Miami on their very threshhold, the Everglades and the Big Cypress remain less known than British East Africa. Several bands of Seminoles, one of our last "wild" Indian tribes, still maintain a remarkably primitive existence in these swamps. Neither wards of the United States nor citizens, they are a care-free, manly, upright people, cleanly, moral, truthful, and hospitable, even to those who they have reason to suspect are their enemies. They are not responsible for the great slaughter of the innocent that has been waged against the unfortunate animals.

As we floated down the newly-dug drainage canals, past the great dredges, into the Miami river, on our homeward journey, I noticed a sad expression on the face of Jack Tigertail, the Indian who was accompanying me at this point. I know what he was thinking.

The Snowy Egret, the Paroquet, the Ivory-bill, are gone; and soon the alligator will be as mythical as the Dodo. Now the ever-hungry maw of civilization—or better, speculation—is stretching out to grasp the Everglades. They will, no doubt, be drained; that I believe is possible. Near Miami for a few miles there is muck enough to justify this undertaking; but further inland the rock bottom is so nearly devoid of earth that I should not care to invest in Everglade land. But there are those who will. Then the Indian will follow the other unfortunates of my list.



A Shrike and Its Prey

By BERNERS B. KELLY

With a photograph by the author

WE SUFFER from the Sparrow curse to an almost unmitigated extent; unmitigated, that is, except for such relief as we get from the free use of poisoned wheat and from occurrences such as the photograph shows.

Fortunately, a fair sprinkling of Northern Shrikes stay with us throughout the winter, during which time, as my observation goes, Sparrows form their exclusive bill-of-fare.

The method of killing employed by the Shrike, which I have observed with great care on many occasions, is quite interesting and always the same. A few undulating spirals, to acquire the requisite height, a slanting glide down upon the flying Sparrow, the stroke—an absolute blow—apparently, and the victim falls to the ground, dead. In spite of every effort, I have never been able to reach his prey before the slayer, so have never been able to ascertain the exact cause of death; but I take it to be that either the back or the neck is dislocated.

The slant at which the blow is given precludes, I think, the possibility of a beak shaped like that of the Shrike inflicting a punctured wound; and if, as



NORTHERN SHRIKE AND ITS PREY

I doubt, the talons were used, I cannot think that death would always be so instantaneous. From my observations, I am inclined to think that the Shrikes' assault is practically a 'buff' in the small of the back. At least I will vouch for one small fact, and that is, that I have never seen the smallest flutter from the Sparrow from the time of the stroke being given.

Reaching the ground with a spiral glide, the Strike is there almost as soon as his victim, whom he seizes by each shoulder, and heavily laden, with the body pendent (this in every instance), wings his low flight to a convenient feeding-perch.

The sequel to a successful foray of this kind is illustrated in the photograph, and took place immediately outside of my dining-window. The Sparrow's head was fitted into a small fork of a branch, and when this was successfully accomplished the Shrike proceeded to pluck his prey, and then to devour it with considerable speed. I feel sure that twenty minutes sufficed for the entire proceeding. I was amazed to find not one trace of a bone or even a claw on the unbroken snow-bank at the foot of the small elm in which the bird fed.

After the head had served its purpose as an anchor, it too was devoured; nothing, indeed, but the merest shred of skin being left.

So bold was the 'butcher-bird' that he allowed me within six feet, to take the pictures; and, though he did once leave his prey, he returned immediately, to finish his repast. The thermometer stood at 25 degrees below zero, Fahr., at the time.

I hold the cheering idea that it must take two Sparrows per diem to satisfy an able-bodied Shrike.

Notes on Birds of the Red River Sand-bars

By F. B. ISELY, Tonkawa, Okla.

With photograph by the author

DURING July and August, 1910, the writer and two assistants made a mussel survey for the U. S. Bureau of Fisheries of the Texas-Oklahoma and Arkansas portion of the Red River. Over four hundred miles of the river were traversed, working down-stream by boat from the mouth of Wichita River to the east line of Texas.

Bird observation was, of course, a very incidental matter; but, as a number of species not commonly met with in garden, forest, and field were so constantly before us during the eight weeks of our trip, a few observations concerning some of these birds may be of interest.

One of the most common birds, especially of the first part of our trip down the river, was the Least Tern. These swallow-like birds would fly back and forth over our boats for hours, constantly squeaking and chattering. Some-

times they would rest for some moments suspended in mid-air, and then dart down into the water after their prey, quick as a flash. At other times they would gather in small flocks on the sand-bars, and hold a noisy caucus. Considerable variation was noted in the dark markings of individuals of the species. Solitary individuals of the Black Tern were seen on two occasions.

The Spotted Sandpiper was with us daily, usually as solitary individuals. This little Sandpiper seemed always to be busy looking for food on the stream margin. The names "teeter" and "tilt-up" are quite appropriate, and its merry *weet-weet weet-weet* always signals its presence. Related forms to the little Sandpiper were rare. One time a small flock of Upland Plovers was seen,



BLACK AND TURKEY VULTURES

and another time four Willets were shot by a ferryman with whom we were stopping during a rainstorm.

Several kinds of Herons were seen almost daily. The White Herons were the most numerous in the lower part of the course passed over. The Snowy Egret sometimes appeared in flocks of a dozen or more, and often in company with the American Egret. These Herons were quite tame, and could be more readily approached for observation than other Herons. The White Herons seemed more abundant on the tributary streams than on the master stream. The Great Blue Heron was fairly abundant; sometimes two or three would be seen at once, but not near together as a rule. These birds were rather shy, and did not permit very close observation. The Little Green Heron was seen quite often, but was not so common as the Blue Heron, along the Red River. A few other Herons were seen, but, as they were very shy, the species could

not be certainly ascertained. While true of many other river birds, the Herons give the observer some advantage by the habit they have of flying ahead a short distance as one comes near to them with a boat. As a result, one often gets a half dozen chances to observe the same bird; after a mile or so they finally tire of this process and make a wide circle back up-stream.

The Sandhill Crane was seen only a few times, and not at close range. These birds seem to be associated with the drift sand, and not especially with the bars near the river.

The American Coot, although common in the lakes and bayous near the river, was not often seen in the river itself. Ducks were seen on only two occasions, and, from specimens we secured, proved to be the Green-winged Teal. The Belted Kingfisher, while rather common along the banks of the tributary streams, appeared only at rare intervals over the master stream.

The most abundant bird, in number of individuals, on the sand-bars was the Turkey Vulture. These large birds sometimes appeared in great flocks of fifty to a hundred, basking in the hot sun on the river bars. As far as I could make out, they frequented the bars as a loafing-place, and not to seek food. In the upper half of our course, the Vultures always appeared when we were in the near vicinity of high bluffs; in the lower course, they were frequently found roosting in the tall dead trees near the river bank. Below Dennison, the Black Vulture was often found associated with the Turkey Vulture. These birds are very tame, allowing one to approach as near as twenty yards before taking flight. The Black Vulture, especially, has the habit of standing with outstretched wings for some moments before taking flight, and seems to find no little advantage in a short run and spring before leaving the ground.

The common song-birds were seldom seen near the river. Various Hawks, Road-runners and Woodpeckers were frequently seen, but these were not associated with the birds of the river sand-bars. The Rough-winged Swallow may be mentioned as a bird, not belonging to the group under consideration, that was at times quite common, skimming after our boats and perching in great numbers on the cable wires of the ferry-boats. In this group the Purple Martin was also abundant at times. On the whole, however, the avifauna of the river zone is a distinct one, keeping to its rather narrow belt and moving up- and down-stream, having little in common with its prairie and forest neighbors.



Bird-Lore's Twelfth Christmas Bird Census

BIRD-LORE'S annual bird census will be taken as usual on Christmas Day, or as near that date as circumstances will permit. Without wishing to appear ungrateful to those contributors who have assisted in making the census so remarkably successful, lack of space compels us to ask each census-taker to send only *one* census. Much as we should like to print all the records sent, we find it impossible to use two from the same person.

Reference to the February, 1901-1911, numbers of BIRD-LORE will acquaint one with the nature of the report of the day's hunt which we desire; but to those to whom none of these issues are available, we may explain that such reports should be headed by a brief statement of the character of the weather, whether clear, cloudy, rainy, etc.; whether the ground is bare or snow-covered, the direction and force of the wind, the temperature at the time of starting, the hour of starting and of returning. Then should be given, in the order of the A. O. U. 'Check-List,' a list of the species seen, with exactly, or approximately, the number of *individuals* of each species recorded. A record should read, therefore, somewhat as follows:

Yonkers, N. Y. 8 A.M. to 12 M. Clear, ground bare; wind west, light; temp., 38°. Herring Gull, 75. Total, — species, — individuals.—JAMES GATES.

These records will be published in the February issue of BIRD-LORE, and it is particularly requested that they be sent the editor (at the American Museum of Natural History, New York City) not later than December 28. It will save the editor much clerical labor if the model here given and the order of the A. O. U. Check-List be closely followed.

Notes on Bird-Lore's Eleventh Christmas Census

By FRANCIS H. ALLEN, West Roxbury, Mass.

BIRD-LORE'S 1910 Christmas census records the presence of Pine Grosbeaks, Redpolls, Pine Siskins, and Robins, with rather interesting results, which may be summarized as follows:

Pine Grosbeaks are represented only scatteringly, as single birds, except for one record of two, another of three, and another, at Spencer, Mass., of eleven. Outside of the census, those I have happened to hear of in the neighborhood of Boston have all been of single birds, I think. The only time I myself saw the species in the season of 1910-11, it was a solitary bird. Mr. William Brewster tells me he thinks it probable that, when the Pine Grosbeaks are present only in such very small numbers, they are birds bred in near-by localities, as in the White Mountains, rather than visitants from farther north.

Redpolls were abundant in New Hampshire, Vermont, Massachusetts, Connecticut, New York, Michigan, Wisconsin, and the Dakotas, and were

found in smaller numbers as far south as New Jersey and Colorado. Pine Siskins, on the other hand, which in the fall had been abundant in eastern Massachusetts, had almost abandoned that region, and had gone farther south and west, being most numerous in Connecticut, Long Island and Wisconsin.

The Robin makes a strange showing in the tables. As is well known to Massachusetts ornithologists, these birds were very unusually, if not unprecedentedly (for the winter season), abundant in this state during the winter of 1910-11, and especially during late December and early January. It is to be hoped that some one will investigate the causes of this before the conditions have faded from the memories of observers. The census shows that this abundance was very local. Out of 522 Robins, 353 were reported from Massachusetts—all from the eastern half of the state; 69 from Orient, L. I., and 100 from Palma Sola, Fla. Elsewhere the largest numbers found were 8 at Westville, Conn., and 12 at Plainfield, N. J. Only one bird was reported from Pennsylvania, one from Maryland, and two from South Carolina; and none appears from any other Southern State except Florida. In Florida, the 100 at Palma Sola is the only record; none were seen at Coronado Beach, Daytona Beach, or Jacksonville. This apparent scarcity of the Robin between Long Island and Florida is not very unusual, however, as a reference to the other Christmas censuses shows. Indeed, even in Florida, the reports of the Robin are very irregular from year to year, the bird sometimes being entirely absent from a given locality, while the next year it may be present in large numbers. The only abnormal thing about last Christmas' showing, therefore, is the very unusual abundance of the species in eastern Massachusetts and at Orient, L. I. Mr. Nathan Clifford Brown, in the April, 1911, '*Auk*', notes the remarkable numbers of Robins in Maine this last winter. He says that the food of those that he watched in Portland consisted mainly of mountain-ash berries, of which there was a heavy crop. I know of no exceptional conditions in eastern Massachusetts which would have provided an unusual amount of food for Robins here, where the mountain-ash is found only as a planted tree, and is not particularly common. It is possible, however, that an abundance of this particular crop to the north of us may have detained the birds there until the impulse to migrate south had passed, and that when food began to fail there they wandered to Massachusetts in search of it. In support of this view is the fact that though, in my immediate locality at least, Robins were present in unusual numbers *early* in December, they increased greatly in abundance in the month or six weeks following. (Usually they have practically deserted us before the middle of November.) This is thrown out as a suggestion; but I hope that some one may have investigated the case more thoroughly than it has been possible for me to do.

The Migration of North American Sparrows

THIRTEENTH PAPER

Compiled by Professor W. W. Cooke, Chiefly from Data in the Biological Survey
With Drawings by Louis AGASSIZ FUERTES
(See frontispiece)

EVENING GROSBEAK

The Evening Grosbeak has been separated into two forms. The western, *montana*, breeds in the mountains from southern British Columbia and northwestern Montana south to southern Arizona. During the interim between the breeding seasons, these birds wander over much of the district from the eastern foothills of the Rockies to the Pacific Ocean, but their movements are so irregular that no average dates can be calculated. On the plains near Denver, Colorado, they remained, in the spring of 1909, until May 24. After breeding in the mountains, the earliest returned to the plains August 8.

The other form of the Evening Grosbeak, *vespertina*, breeds in the Rocky Mountains north of the United States, and is strongly migratory. But instead of moving in approximately north and south lines, as is the case with most birds, these Evening Grosbeaks migrate east and southeast in the fall, and return west and northwest in the spring. The following table will give an idea of the usual time of migration in the district in which the birds occur nearly every winter.

FALL MIGRATION

PLACE	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Manitoba.....	5	October 31	October 26, 1901
Minnesota.....	11	October 21	October 11, 1880
Iowa.....	5	November 18	November 2, 1898
Wisconsin.....	9	November 11	October 10, 1903
Michigan.....	4	November 22	October 21, 1909
Ontario.....	5	December 18	December 5, 1906

SPRING MIGRATION

PLACE	Number of years' record	Average date of the last one seen	Latest date of the last one seen
Manitoba.....			June 3, 1907
Minnesota.....	13	May 14	May 22, 1890
Iowa.....	4	May 2	May 7, 1890
Wisconsin.....	7	May 14	May 20, 1891
Michigan.....	4	May 9	May 17, 1890
Ontario.....	8	March 23	May 26, 1890

How irregular are the movements of the Evening Grosbeak can be judged from its record at Chicago, Ill. Dates of arrival: December 20, 1883; Decem-

ber 5, 1886; October 10, 1906; November 7, 1908. Dates of departure: May 16, 1896; May 13, 1897; April 20, 1900; April 28, 1907; February 22, 1909.

Still farther east and southeast the Evening Grosbeak can be considered only as a wanderer, but sometimes it appears in large numbers and spreads over an immense area. The most extensive of these incursions occurred during the winter of 1889-1890, when the species for the first time invaded New England. Some of the principal dates in connection with this event have been collected in the following table.

DATES OF OCCURRENCE, 1889-1890

STATE	ARRIVAL	DEPARTURE
New Jersey.....		Summit, March 6.
Connecticut.....	Sheffield, February 10	Sheffield, April 4.
Massachusetts.....	South Sudbury, January 1	Reading, April 7.
Vermont.....	Burlington, January	South Randolph, April 1.
New Hampshire.....	Milford, January 6	Henniker, May 1.
Maine.....	Orono, February 28	Bucksport, March 27.
Quebec.....	Montreal, January 28	Quebec City, March 14.
Pennsylvania.....	December	—April, 12.
New York.....	—December 14	Ballston Spa., March 30,
Ohio.....	Granville, December 12	Berlin Heights, January 30.
Indiana.....	Whiting, January	Fort Wayne, April 12.
Illinois.....	Champaign, November 12	Lacon, May 10.
Iowa.....	Davenport, November 25	Coralville, May 7.
Ontario.....	Hamilton, December 19	Toronto, May 26.
Michigan.....	Detroit, November 16	Fort Gratiot, May 17.
Wisconsin.....	Lake Mills, November 5	Wauwatosa, May 18
Minnesota.....	Lanesboro, October 27	Elk River, May 22.

The winter of 1908-09 witnessed a pronounced movement eastward, but not so extended as that of 1889-90. This invasion was noted at Lake George, N. Y., January 30, 1909; Ballston Spa, N. Y., May 4, 1909; Williamstown, Mass., January 26-March 28, 1909; Rutland, Vt., February 12, 1909; Orleans, Vt., February 24, 1909; Phillips, Maine, March 1, 1909; Bouchette, Quebec, November 4, 1908; Ottawa, Ontario, May 15, 1909; Houghton, Mich., November 20, 1908-May 3, 1909; Onaga, Kan., November 13, 1908; Kil-larney, Manitoba, November 17, 1908.

Some other dates of appearance that it seems advisable to put on record are: Plainfield, N. J., January 29, 1911; Williamsport, Pa., February 27, 1911; Litchfield, Conn., February 1-13, 1905; Hartford, Conn., October 23, 1909 and February 12, 1911; Clark County, Mo., December 14, 1887; Hickman, Ky., March 18-25, 1887; Callaway, Neb., September 24, 1902; and Red Cloud, Neb., April 20, 1904.

The Evening Grosbeaks of Sundance, Wyoming, where they have been taken from October 26, 1903, to April 2, 1906, belong to the Canadian form, and must have made a long migration from Alberta; though the other form breeds but a short distance to the westward.

Notes on the Plumage of North American Sparrows

TWELFTH PAPER

By FRANK M. CHAPMAN

(See frontispiece)

Evening Grosbeak (*Hesperiphona vespertina*. Figs. 1-3).—The nestling plumage of the Evening Grosbeak, whether male or female, bears a general resemblance to that of the adult female, but is buffier below and browner above. The male shows no trace of black crown or yellow forehead, but at this age can be distinguished from the female by the lack of white spots at the end of the tail-feathers which characterize that sex.

From this nestling or juvenal plumage the bird, at its first fall (post-juvenal) molt, passes directly into essentially adult plumage. From fully mature or highly plumaged individuals the male, in first winter plumage, differs in its dusky or grayish tertials and in its more brownish back. There appears to be no spring molt, and the slight difference between winter and summer specimens is due to wear and fading.

The Western Evening Grosbeak (*H. v. montana*), of the western United States and northern Mexico, closely resembles the more eastern race, but the male averages browner below and the female is more buffy. The Mexican Evening Grosbeak (*H. v. mexicana*), of the coniferous forests at the southern end of the Mexican table-land, resembles *montana*, but has the yellow band on the forehead decidedly narrower.

The Evening Grosbeaks of Leominster, Massachusetts

By EDWIN RUSSELL DAVIS

NEVER before have the people of Leominster and vicinity been able to enjoy the rare treat that was theirs during the past winter and spring.

On December 10, last, a flock of Evening Grosbeaks, containing some thirty-five individuals, made its appearance in Leominster. The birds were first seen feeding on the seeds of a box elder tree, standing in the yard of Mr. Chase, on Grove avenue.

The news of their arrival was quickly circulated, and people from all parts of the town, and even from adjoining towns and cities, with and without field-glasses, were soon flocking to the place, hoping to get a glimpse of these most beautiful of winter visitors. In most cases they were successful, for the birds seemed to be almost wholly without fear, and it was an easy matter to approach to within a few yards of them before they would take flight. Then they generally flew for only a few yards, when they would alight again and resume feeding.

I was apprised of their coming at the very first, and from that time until their departure I took a lively interest in them, studying their habits and making notes of their actions from day to day. They were extremely methodical and regular in their habits. Just before sunrise, each morning, they were sure to appear, always coming from the same direction, which seemed to prove that they roosted in the same place every night. Their arrival was unmistakably announced by a chorus of sharp, crisp calls. Occasionally one or two of them would break out with a clear, robin-like song, which was sure to catch the ear of the listener or passer-by, and cause him to stop and gaze in wonder at the beautiful author, whose cheery song seemed so strangely in contrast to the bleak surroundings of wind, snow and sleet.

At first the birds seemed to confine operations to the well-seeded box elder tree standing in Mr. Chase's yard. They did not leave it, the whole of any one day, until the last seed was eaten; then they betook themselves to a row of large trees, ash, box elder and mountain-ash, on either side of Washington street, and only a few steps from my home; and here they were sure to be found, some part of each day, as long as they remained in the town.

Their choice of food was decidedly in favor of the seeds and berries growing on the ash or elder trees, yet they by no means ignored the scraps and crumbs that were saved from a goodly number of tables, and thrown to them. Dishes containing pure water were daily placed on piazzas or fence-posts, and these, too, were well patronized by the Grosbeaks.

They were singularly regular in their movements, coming at an early hour each morning to their feeding-place, and remaining in the vicinity until about the middle of the afternoon, when they would disappear, not to return again until the next day. The flock was composed largely of females, yet there were among them seven or eight males.

For the past three or four winters, a few small flocks of Grosbeaks, some four or five individuals, have visited this town. Their stay has always been very short, only a few days at most, and so all bird-lovers were urged to make an effort to see this large flock at once, as it was presumed that they, too, would be with us for only a short time; but, as the winter wore on, they seemed to be perfectly satisfied with their surroundings, and it soon became evident that they intended to remain with us at least as long as the cold weather lasted. As their place of rendezvous was only a few steps from my house, I had ample opportunity for watching them and noting the time of their departure.

As, each day, the sun ran higher and higher, and the snows melted away, I would say, "Surely, this will be their last day;" but the spring came on apace, and the early migrants began to arrive, until it was no uncommon thing to see Robins, Bluebirds and Evening Grosbeaks among the branches of the same trees, while, in the thickets underneath, the notes of the Song Sparrows, Juncos and Fox Sparrows were much in evidence.

About May 1, it was noticed that the flock had grown smaller by some ten or twelve of their number, and a few days later about as many more were missing. A dozen or more of the birds yet remained, and came with the same regularity to the feeding-ground each morning.

The trees were fast putting on their summer garments of leaves; pear, peach and apple blossoms were forming magnificent bouquets everywhere; Orioles, Summer Warblers sang and Hummingbirds flitted among the flower-laden branches,—still the Grosbeaks remained.

It was plain to see, however, that they were greatly affected by the hot weather; for in the middle of the day they might be seen perched among the branches of the trees, screened by the thick foliage from the direct rays of the sun, yet with beaks open, panting with evident discomfort from the intense heat.

Still, they seemed to evince no desire to leave, and speculation became rife as to whether or not they would stay all summer, and perhaps breed here. Some even went so far as to aver that they saw them picking up sticks and straws, as though in the act of nest-building; but, when these statements were sifted down, it was found that they were not to be relied upon.

In reply to a letter that I sent to the American Museum of Natural History, New York, it was stated that in 1890 Evening Grosbeaks were seen in Pennsylvania as late as May 11, but that there was no evidence to show they nested there; so it was with considerable interest that I watched these birds, to see if they would remain here as long as they did in Pennsylvania, in 1890. It was, therefore, with no small degree of pleasure that I saw them appear on the morning of May 12, and still greater joy, when, for several days afterward, they were still to be seen at their usual feeding-place.

On May 15, at noon, they were last seen. At that time some eight or ten of them were feeding on the lawn directly under the window of a near neighbor of mine. Their actions appeared normal and, after their usual noonday meal of seeds and crumbs, they took wing, and were gone. The next morning no Grosbeaks appeared, nor were they again seen here.

It is highly probable that during the night following the fifteenth they started on their long journey to the far-away Rockies.

Besides the keen pleasure and enjoyment that these birds gave to hundreds of people, the good they otherwise did is incalculable; for many persons, who until last winter had taken absolutely no interest in birds or their protection, by watching and studying these beautiful creatures, have developed into ardent bird-lovers, and enthusiasts in the matter of bird protection. And now in homes, where, only a few months ago, a worthless, prowling cat was kept, there appears, instead, a suitable bird-house, feed-box, or bathing-fountain. Wherever these conditions prevail, our song and insectivorous birds are not slow to appropriate them, and become useful, tame and confiding.

Notes from Field and Study

A Strange Partnership

I cannot remember the time when a brood of young House Wrens was not raised in our garden, and even this year we had the Wrens and their bubbling song all through the spring and early summer, and the loss of the young is partly atoned for in the strange partnership entered into between the Wrens and a pair of English Sparrows.

Early in the spring, I put a box, having a removable side, on the side of the barn, an invitation to any pair of Sparrows coming along, as I wished to put a Cowbird's egg in their nest, to study and photograph results.

In early April, a pair of Sparrows began carrying grass and hay into the box until it was half-full, when they stopped building, though still hanging about near the nest.

The Wrens came back to the garden during the morning of April 28, and went singing about, inspecting their ancestral home on the end of the grape arbor. They had half a mind to build in the Woodpeckers' hole in the birch stub, until the Bluebirds asserted their right of possession, and drove the Wrens away.

The Wrens found the Sparrows' box with the half-built nest, and built a nest of sticks on the Sparrows' foundation of hay. The Sparrows did not interfere with the Wrens; in fact, one might have believed that they had given up the nest, or else looked upon the Wrens' finishing their nest as one huge joke, and in their apology for a song were saying, "He sings best who sings last."

The nest finished to the Wrens' liking, the Sparrows gave it the finishing touch by adding a lining of chicken feathers from the yard next door.

Buffeted and bullied, and driven from much of their former range by the Sparrows' interference at nesting-time, it was a strange sight to see the Wrens and the Sparrows building a partnership nest;

but surely, now that it was finished, there would be a falling out and a fight for possession with the odds in favor of the Sparrows.

Strange to say, there was no fighting. Both pairs of birds sang as though nothing unusual was happening, and on the morning of May 24 I found that the Wren was a point ahead of the Sparrow in the race, with the first egg in the nest; and the next morning she was still ahead, with two eggs to the Sparrow's one.

Before seven o'clock the next morning, there was another Sparrow's egg in the nest; but at noon the Wrens were ahead again, with three eggs to the Sparrows' two.

The following day the Sparrow laid another egg and the Wren rested; and the next day both Sparrow and Wren laid another egg,—and they were still even, four each.

Four small, finely speckled, pinkish Wren's eggs hopelessly jumbled with the Sparrow's eggs in the fluffy mass of feathers.

It gave one much the same feeling as, when finding some dainty Warbler's nest, to see one or more of the eggs of the vagrant Cowbird crowding the Warbler's eggs out of position. I could have removed the Sparrow's eggs with as good grace as I would the Cowbird's eggs from the Warbler's nest, but I wanted to see the end of the partnership, and to know which bird, or if both birds, would feed the mixed brood.

The Sparrow flushed from the nest the next morning when I looked in the box. She had laid another egg, and all nine eggs were carefully arranged in the nest, the Sparrow's eggs on the outside, and it was evident that the Sparrow was incubating.

The Wrens stayed near the nest during the days of incubation, and their song sounded as jolly as ever, as though they were now saying, "The joke is on the Sparrows now. We are spared the long

days of sitting in that little box, hatching our eggs; and, when our little ones come from the shell, we will graciously relieve the Sparrows by feeding our own young."

The morning of June 14, all of the Sparrows had hatched and two of the Wrens, and it was with difficulty that I could tell them apart.

Returning at noon, I hastened to look again into the box, and found that another Wren's egg had hatched; but, alas! all three of the Wrens had disappeared, and the last Wren, hatching before seven o'clock the next morning, suffered the same fate, and disappeared in less than an hour. While I did not see the Sparrow carry the young Wrens from the nest, I am sure that she made way with them in some way.

The story is told, the Sparrows had once more come out victors, proving that they could win over the Wrens any way the fight was fought, and one more brood of young Wrens was lost to the world.

The Wrens partly built a nest behind a blind on the house, deserting it for a site in the well-house. Leaving this nest, they disappeared from the garden, and I found them in middle August with a full brood of young in the sleeve of a scarecrow in my neighbor's garden.—
WILBUR F. SMITH, *South Norwalk, Conn.*

A Unique Experience With the Ruffed Grouse Family

It happened in the Snake Den Country. This secluded and wild bit of Rhode Island is entered by an old cart path, a perfect arcade winding through gorge and swamp, and leading up to an abandoned gold mine. The way passes through pine and hemlock, alder and huckleberry, sumach and cedar, with dogwood, laurel, maple and chestnut in abundance. It is a delightful cover, and one where the quiet wanderer will feel that something out of the ordinary must happen if he but be on the watch. At least, that was the feeling which possessed me on a beautiful morning in August last, when

I entered the charm of its shade in quiet and leisurely pursuit of a tiger swallow-tail. I was foiled in my attempt to net this splendid butterfly because of its erratic and dazzling flight. I managed to capture a couple of Thysbes from a wayside thistle, and, as I quietly resumed my walk, the calm of the summer morning was shattered by a tremendous thrashing of bushes in the swamp to my left. I thought I had jumped a whole deer family. At the same instant, a Hen Grouse dropped down out of a cedar thicket to the right, and trailed off with her wing dragging. I was strongly tempted to pursue the old lady, but remembrance of many fruitless chases of younger days brought me to a sudden halt. After waiting a few moments, during which the din in the swamp was in no way diminished, I very gingerly stepped into the thicket, hoping to be able to detect the young Grouse in their posture of 'freezing.' As soon as I started to do this, a bomb was exploded in the swamp and projected directly at me. It proved to be the cock. He came straight on until within ten yards, where he lit on the ground and, with head stuck straight out, neck feathers ruffed, tail erected, it seemed as if he was actually going to do me bodily harm. When he was within six feet of me, he evidently considered "discretion the better part of valor," for he turned and made down the cart-path with a constant *chuck chuck* accompanying the *quit quit* of the hen a little farther along. Both disappeared in the thick brush, but continued calling, while I very carefully, step by step, advanced to see if I could not locate the chicks. There was little need of caution, however, for I soon flushed them, and found them to be over half-grown and very able of wing. They flew in all directions. I crept over to a nearby ledge, and by keeping very still was able to partly observe the old birds gather the brood together. It was the first and only time that I have ever found the cock Grouse aiding in protecting and rearing the young chickens.—CLIFTON W. LOVELAND, *East Providence, R. I.*

Bohemian Waxwings and Evening Grosbeaks in Chicago

Bird students who spent much time in the field in and about Chicago, the past winter, had an excellent opportunity to observe the Bohemian Waxwing. Its occurrence here is not a matter of surprise, yet, as years often pass without one being seen, its abundance during the past season seems worthy of note.

Generally speaking, the winter was mild and open, the temperature ranging from about 10° to 40° , being but a few degrees below the freezing-point most of the time, and with considerably less snow than usual.

The Waxwings appeared in Chicago as early as November 24, one being reported in Washington Park on that date. On December 3, the writer saw a flock of twenty-five in the south part of Jackson Park, and, from that time on until April 18, they were seen at frequent intervals. At times the flock numbered from twenty-five to thirty, at others only about half that many, and it is not unlikely that there were two distinct flocks in the park during at least a portion of the winter. Their favorite resort was a field of asparagus a short distance south of the park, where they were often seen feeding on the berries of this plant.

Others were reported from Highland Park, Ill., and from Gary, Ind. I observed a flock at New Buffalo, Mich., on December 26, and reported the same in *BIRD-LORE*'s eleventh Christmas census. They were first seen flying about in a patch of juniper, probably for the berries. On another occasion, I saw them experimenting on the hips of the wild rose as an article of food, but evidently with unsatisfactory results, as they soon flew away.

One naturally compares this bird with its near relative the Cedar Waxwing, and, when the glamour of rarity has been dispelled, the latter, in my estimation, has the better of the comparison. The notes of the Bohemian are uttered in much the same manner as are those of the Cedar

Waxwing, but are louder and more complaining, and, while possessing more of the clear quality of a whistle, lack much of the pleasing lisp and illusiveness of the other. Then, too, the white wing-patches and chestnut under tail-coverts of the former seem to detract from that neatness and trimness of plumage which is so marked a feature of the latter. However, I saw the Bohemian Waxwings in their least favorable season, when their sole occupation was catering to an insatiable appetite. Had the observations been made in the nesting season and in their summer haunts, the impression might have been different.

On October 29, 1910, I saw a flock of eight Evening Grosbeaks on the Wooded Island in Jackson Park, and I learned from other observers that they had been seen October 23, the earliest date, according to such information as I have at hand, that they ever appeared in this locality. They remained in the park about six weeks, and then disappeared.—

F. A. PENNINGTON, *Chicago, Ill.*

Two Towhees Wintering at Englewood, N. J.

During the past winter, the writer has observed two male Towhees wintering at Englewood, New Jersey. They were first observed January 22, 1911, with a flock of about twenty White-throated Sparrows, which came for food, more or less regularly, through the winter, to a board in a grove of Norway spruces beside the house. It was a cloudy morning after a light snow-fall, and the Towhees' parti-colored plumage was very striking in the unwonted wintry surroundings.

In February and the first half of March, one or both birds were seen almost daily. From first to last, they were always observed less than a block away, and generally when they came to the feeding-board with the White-throated Sparrows.

A paragraph giving the dates on which they were observed will be interesting. Dates when both were seen at one time

are marked B; dates when a Towhee was heard, but not seen, are marked H. January 22 B, 29B; February 5, 6 or 7, 8B, 9, 10, 12B, 13, 15, 16B, 17B, 21B, 23B, 25B, 27, 28B; March 1, 2B, 3B, 4, 5B, 6, 8, 9, 10, 11, 12, 14B, 15, 16B, 17H, 25, 26; April 9H (after a late snow-fall), 17H.

The first three dates are Sundays. If the writer had not been out of town during the week, he doubtless would have had intermediate ones. Later, as the sun rose earlier, the birds were in evidence before he started for town in the mornings. Still later, as the dates become irregular, it may be that the birds were about before he was up; but probably they did not come near the house so regularly, as the season opened. It may be questioned if the April dates were the wintering birds, and not migrants, as they are such a short time before the regular invasion of Towhees from the South. Towhees were noticed shortly afterward, but not about the house in the regular haunts of the wintering birds, and April 17 would be very early for a migrant in this latitude.

A point worth emphasis is that these wintering individuals of the migratory Towhee stayed in one locality for so long a period. Their both being males is interesting, as most of the records of northern-wintering Towhees which have come to the writer's attention have been for this sex. The fact that the two birds kept together through the winter is evidence of a certain social instinct in these non-flocking, directly colored birds.—JOHN TREADWELL NICHOLS, Englewood, N. J.

Pine Grosbeaks in Southern Maine in August, 1911

Pine Grosbeaks were first observed on August 10. I first saw them on August 27. On two occasions, I was able to observe them from very near at hand. On September 2, on Baker Island, about five miles from Mt. Desert Island, I saw two—an adult male and an adult female. They were at the top of a twenty-five-foot spruce tree, and were quite easy to approach.

On September 7, on Mt. Desert Island, I saw six Pine Grosbeaks—one adult male, two adult females, and three young ones, and these were also at and near the top of a spruce tree.

The accompanying photograph of a Pine Grosbeak was taken by my brother on September 7.—B. FRANKLIN PEPPER, Philadelphia, Pa.



PINE GROSBEAK

Notes on Hawks

On October 8, it was my fortune to have an unusual number of experiences with birds of prey. The locality was part swampy, part heavily wooded, and rather remote—facts which probably accounted for the presence of the Great Horned Owl. His deep 'Hoo-hoo' bore a fancied resemblance to the far-off howling of a dog. Two Marsh Hawks were seen at intervals, beating low over the fields, and a single large Red-tail.

More interesting, however, was the pursuit of a Flicker by a Sharp-shinned Hawk. A number of these Woodpeckers, together with a few Bluejays, were flying in and about a small tree near the fence-row, on a post of which the Hawk was perched. Suddenly he set out after a Flicker, and the pair raced across the field in our direction, the Flicker giving full voice to his terror as they flew. The Hawk veered off, and his intended victim escaped. Later, as we were emerging from the woods into the open swamp, we

heard several harsh, rasping cries, and immediately a Little Blue Heron streaked it past us at a rate of speed far different from that of his usual lumbering flight. He was closely pressed by a Cooper's Hawk, which wheeled abruptly at the sight of us and disappeared behind a nearby clump of poplars. These two encounters were interesting to me as showing several things: (a) the ferocity of these Hawks in attacking birds as large, or larger than themselves; (b) the fact that both pursued birds gave full utterance to their terror in flight; (c) the fact that it was, in each case, one of our only two commonly destructive species of Hawks that was caught in the act of attacking, first, a bird of positive value, and second, one whose economic position is at least neutral.—JULIUS C. PETER, *Seymour, Ind.*

Notes from Connecticut

The severe storm of the last of August brought many bird visitors to the Connecticut shore. At the height of the storm, I saw a Laughing Gull, together with several Common Terns, flying about the harbor, and an old seaman reported seeing a Petrel in the harbor.

Yellow-leg Snipe and the smaller Sandpipers and Plover were more plentiful than in years, and there was an occasional Curlew in the flocks.

On the Fairfield beach, I saw a Sanderling which was unable to close its bill, the ends of the bill being at least half an inch apart; and the bird was searching for food and seemed unusually tame, allowing us to approach to within a few feet.

Immense flocks of Starlings are performing wonderful evolutions over the salt marshes, some of the flocks surely containing more than a thousand birds.—WILBUR F. SMITH, *So. Norwalk, Conn.*

Twenty-ninth Annual Congress of the American Ornithologists' Union

The Twenty-ninth Annual Congress of the American Ornithologists' Union was

held at the Academy of Natural Sciences, in Philadelphia, November 13-16, 1911. The first day, as usual, was devoted to a meeting of the Council of the Union, followed, in the evening, by a business meeting of its Fellows, when the following officers were elected for the ensuing year.

President, Frank M. Chapman; Vice-presidents, A. K. Fisher, H. W. Henshaw; Secretary, J. H. Sage; Treasurer, J. Dwight, Jr.; Members of the Council, Ruthven Deane, William Dutcher, F. A. Lucas, W. H. Osgood, Charles W. Richmond, Thomas S. Roberts, Witmer Stone.

Owing to poor health and the increasing demands made on his time and strength by his official duties in the American Museum of Natural History, Dr. J. A. Allen tendered his resignation as Editor of 'The Auk,' after a term of service of twenty-eight years as editor of this journal, and of eight years as editor of its predecessor, *The Bulletin of the Nuttall Ornithological Club*. Dr. Allen's resignation was accepted with reluctance, and Mr. Witmer Stone was appointed in his stead.

Five Honorary Fellows, four Corresponding Fellows, and eighty-one Associate Members were elected.

In addition to the 110 members registered as present, the open sessions of the Union were well attended by the public, and, as the program shows, the papers presented were of exceptional interest.

On the evening of the 14th, the members of the Union were entertained by Mr. and Mrs. W. L. Baily at their home at Ardmore, and on the following night they were given a 'Smoker' at the Academy of Natural Sciences. Thus abundant opportunity was afforded for the social intercourse which forms so delightful and so important a part of meetings of this kind.

PROGRAM.

1. In Memoriam, Henry A. Purdie, William Brewster, Cambridge, Mass.
2. The Validity of the Red-legged Subspecies of Black Duck, by Dr. Charles W. Townsend, Boston, Mass.
3. Description of a New Ptarmigan from the Aleutian Islands.

tian Islands, by Arthur C. Bent, Taunton, Mass. 4. Some Notes on the Egg-laying Habits of the Cowbird, *Molothrus ater*, by Chas. W. Miller, Shawnee-on-Delaware, Pa. 5. New Light on the Name of the Traill Flycatcher, by Harry C. Oberholser, Washington, D. C. 6. Field Notes on "Recognition Marks" in Certain Species of Birds, by John Treadwell Nichols, New York City. 7. The Relation of Genera to Faunal Areas, by Dr. Spencer Trotter, Philadelphia, Pa. 8. The Status of the Blue-eared Jay (*Aphelocoma cyanotis*) in Texas, by Harry C. Oberholser, Washington, D. C. 9. The Gulls of Four Brothers Island, by B. S. Bowditch, Demarest, N. J.

10. Recent Field Studies of some Ecuador Hummingbirds, illustrated with lantern slides, by S. N. Rhoads, Haddonfield, N. J. 11. Exhibition of Lantern Slides and Moving Pictures of Birds, by Clinton G. Abbott, New York City. 12. Some Nesting Habits of the Least Sandpiper, illustrated with lantern slides, by Robert Thomas Moore, Haddonfield, N. J. 13. Autochromes of Land and Sea Birds, illustrated with lantern slides, by Dr. Frank Overton, Patchogue, N. Y., and Francis Harper, College Point, N. Y.

14. Report of the "American Bird Banding Association," by W. W. Grant, New York City. 15. Results of a Brief Visit to the Aleutian Islands and Bering Sea, illustrated with lantern slides, by Arthur C. Bent, Taunton, Mass. 16. A Last Word on the Passenger Pigeon, by Prof. C. F. Hodge, Worcester, Mass. 17. Probable Cause of the Extinction of the Labrador Duck, by E. H. Forbush, Westboro, Mass. 18. Bird Notes from Pisgah Forest, North Carolina, illustrated with lantern slides, by Harry C. Oberholser, Washington, D. C. 19. Flight Maneuvers of the Gannet and Kittiwake, illustrated with lantern slides, by Robert Thomas Moore, Haddonfield, N. J. 20. Notes on the Flight of Gulls, by William Brewster, Cambridge, Mass.

21. An Ornithological Reconnaissance in Colombia, illustrated with lantern slides, by Frank M. Chapman, New York

City. 22. Call-notes of Tropical American Birds, audibly illustrated, by Louis Agassiz Fuertes, Ithaca, N. Y. 23. A Trip to the Magdalens, illustrated with lantern slides, by William L. Baily, Ardmore, Pa. 24. The Propagation of Bob-White, illustrated with lantern slides, by Herbert K. Job, West Haven, Conn.

25. Do Birds Change Their Routes of Migration? by E. H. Forbush, Westboro, Mass. 26. An Automatic English Sparrow Trap, by Chas. W. Miller, Shawnee-on-Delaware, Pa. 27. Bird Life on the Paramo of Mount Pichincha, Ecuador, by S. N. Rhoads, Haddonfield, N. J. 28. The Classification of Kingfishers, with Particular Reference to the Genus *Ceryle*, by W. DeWitt Miller, New York City. 29. Notes on the Laysan Finch, by Hubert Lyman Clark, Cambridge, Mass. 30. Last Days of the Wild Pigeon in Sullivan County, Pa., by Herman Behr, Jennings, Md. 31. The Golden Plover (*Charadrius dominicus dominicus*) on the Coast of South Carolina, by Arthur T. Wayne, Mt. Pleasant, S. C. 32. Bird Photography from Staten Island; In New York City; Gardiner's Island, N. Y., and Certain Virginia Coast Islands, illustrated with lantern slides, by Howard H. Cleaves, New Brighton, N. Y.

33. Bird Life in the Arizona Desert, illustrated with lantern slides, by Wm. L. Finley, Milwaukee, Oregon. 34. Notes on the Birds of the Panama Canal Zone, illustrated with lantern slides, by Edward A. Goldman, Washington, D. C. 35. Some Birds of the Orinoco Delta, Venezuela, illustrated with lantern slides, by Stewardson Brown. 36. Vagaries in Nesting of the House Wren, illustrated with lantern slides, by Wilbur F. Smith, South Norwalk, Conn. 37. Certain Asiatic Birds, illustrated with lantern slides, by C. William Beebe, New York City. 38. The Hooting of the Blue Grouse, illustrated by lantern slides, by Vernon Bailey, Washington, D. C. 39. Birds in the Markets of Southern Europe, by Dr. L. B. Bishop, New Haven, Conn. 40. A Scheme to Increase Insectivorous Birds by W. R. Lord, Rockport, Mass.

Book News and Reviews

INSTINCT AND INTELLIGENCE IN BIRDS. By FRANCIS H. HERRICK. Popular Science Monthly, 1910; Part I, June, pp. 532-556; Part II, July, pp. 82-97; Part III, August, pp. 122-141.

Professor Herrick bases his discussion of instinct and intelligence in birds, in the main, on his detailed studies of the nesting habits of certain species, the results of which have been presented in his 'Home-Life of Wild Birds.' He deals, therefore, only with that part of the birds' year which embraces the season of reproduction. This he terms the breeding cycle. In it are exhibited the "cyclical instincts," in which are included the following activities: 1. Migration to Breeding Area. 2. Courtship and Mating. 3. Nest-building. 4. Laying Eggs in Nest. 5. Incubation and Care of Eggs. 6. Care of Young in Nest. 7. Care of Young out of Nest. 8. Migration to Feeding Area.

"It is evident," Professor Herrick remarks, "that these serial instincts must be in relatively perfect harmony, or if regular perturbations occur, new and permanent adjustments must be forthcoming to meet them, if the species is to continue to exist. One act, or series of related acts, must be performed in preparation for that which follows. The nest must 'anticipate' the eggs and not the eggs the nest. Upon the whole," he continues, "the serial instincts of birds are well attuned, yet disturbances more frequently occur than is commonly supposed, and by conditions of this kind much that is anomalous or eccentric in the behavior of birds can be explained"

If the orderly development of these instincts be prevented, certain acts may be repeated. Thus, if the nest and eggs of an incubating bird be destroyed, it may rebuild, lay a second set of eggs, and resume incubation, thus repeating activities 3, 4 and 5. With two-brooded birds such repetition is normal.

The Yellow Warbler's well-known habit

of building over a Cowbird's egg which has been laid in its nest is attributed to a break in the cyclical instincts, which have been interrupted by the intrusion of the strange egg.

The absence of the nest-building instinct in the Cowbird is believed to be due to "lack of attunement" in the cyclical instincts, resulting in the premature appearance of the egg and the consequent necessity of using the nest of another bird if the species is to be perpetuated. A further factor in the development of such parasitism is the long interval between the laying of the eggs, such as is said to occur with the European Cuckoo.

Professor Herrick's discussion of this subject is novel, and his theory seems better grounded and more worthy of acceptance than any which has heretofore been advanced.

In short, without going into further detail, we may simply add that his whole paper contains much that is interesting and suggestive, and we commend it to the many bird students who are somewhat at a loss as to the channel into which they may best turn their energies. Its value to them would, however, have been greatly increased by a concise statement of the problem in hand, and of conclusions arrived at in regard to it. In default of a summary, one is somewhat at a loss to learn just what opinion has been reached. On page 536, of Part I, we are told that "the whole fabric of instinctive life is subject at nearly every step to the modifying influence of intelligence," but on page 138 of part III it is said that birds "seldom meet emergencies by doing the intelligent act." Nevertheless it is inferred from the character of the bird's brain (p. 534, Part I) "that, while birds are intelligent and able to form associations of some sort freely, they must be animals in which the instincts are developed to an extraordinary degree of perfection"—F. M. C.

NESTS AND NEST-BUILDING IN BIRDS. By FRANCIS H. HERRICK. Journ. of Animal Behavior, Vol. I, 1911, pp. 159-192; 244-277; 336-373.

In this extended paper Professor Herrick classifies birds' nests on the basis of the behavior of their builders, discusses the function of nests, some of the factors which aid in determining their site and character, and describes in detail the manner in which certain nests were constructed from the laying of the first twig or wrapping of the first fiber to their completion.

Parts I and II of this paper are suggestive rather than comprehensive. The marked variations in site and nests of wide-ranging birds in response to differing environmental conditions, or the relation between the type of the nest structure and the condition of the young at birth, for example, are hardly touched on or not alluded to at all. On the other hand, the descriptions of nest-building methods of the Robin, Red-eyed Vireo, Baltimore Oriole and others are admirable illustrations of intensive observation, which should stimulate those who have opportunity to definitely directed effort in this but little-worked field.

Professor Herrick concludes that nest-building with birds is a purely instinctive act, but states that there is "evidence that birds adapt means to ends, or do things to effect changes which they seem to desire to bring about. In other words, at times they seem to strive with an end in view, and continue to work until their aim is achieved. Whether such acts," he adds, "are really attended by association of ideas, or merely result from the gradual elimination of useless movements after successive trials, we cannot say."—F. M. C.

BIRDS OF ARKANSAS. By ARTHUR H. HOWELL. Bull. No. 38. Biological Survey, 1911. 100 pp.; 1 map, 6 pls., 4 text-cuts.

As Mr. Henshaw, Chief of the Biological Survey, remarks, in transmitting this report to the Secretary of Agriculture, it

"fills an important gap in our knowledge of the avifauna of the Mississippi Valley." Mr. Howell estimates the avifauna of Arkansas at 300 species and subspecies, and of these 255 have been recorded on satisfactory evidence. The species which doubtless occur, but which as yet have escaped observation by the very limited number of ornithologists who have worked in the state, are very properly included in this paper, with comments on their status in adjoining areas,—smaller type clearly distinguishing this interpolated matter.

Among the few resident observers in the state, Mrs. L. M. Stephenson, of Helena, is accredited with supplying the most valuable information, while Mr. Howell himself has made the most extended observations by visiting naturalists. (April 28 to July, 1910.)

One is impressed in looking over this list by the numbers of birds which have become rare or extinct in the state in comparatively recent years. Of the latter, one notes the Ruffed Grouse, Passenger Pigeon, Paroquet, and Ivory-billed Woodpecker; among the former the American and Snowy Egrets, Whooping and Sandhill Cranes, Long-billed Curlew, Golden Plover, Prairie Hen and Osprey.

It is to be regretted that, in so authoritative a publication as Mr. Howell's, the A. O. U. Check-List is not followed more closely. Uniformity is here of far more importance than the use or omission of an apostrophe, or the inclusion of races not recognized by the A. O. U. Committee; while the adoption only in part of modern trinomialism results in a hybrid type of nomenclature. *Junco hyemalis*, for example, according to current usage, is not the name of the Slate-colored Junco, any more than it is the name of any of the other nine forms which collectively make *Junco hyemalis*; and the mere fact that only one of these forms is known from Arkansas does not seem to warrant the use of a binomial for it, any more than it would warrant us in listing the species following the Junco (on p. 65) as *Pencaea bachmani*.



GULLS (*Larus canus*) FOLLOWING A PLOWMAN TO FEED IN THE OPENING FURROW

Photographed in Denmark by C. Rubow

An English edition of Rubow's 'Life of the Common Gull,' in which this illustration appears, has lately been published in London by Witherby & Co.

The method approved by the A. O. U in its last 'Check-List,' and indeed by advanced systematists generally, while cumbersome, is logical; but its true significance is lost if it be not employed consistently.—F. M. C.

WOODPECKERS IN RELATION TO TREES AND WOOD PRODUCTS. By W. L. McAtee. Bull. No. 39, Biological Survey, September 26, 1911; 100 pp.; xii plls.; 44 text cuts.

This paper is an admirable exposition of modern methods of research in economic ornithology. It contains a vast amount of data, with pertinent illustrations, and the conclusions reached seem to be based on an impartial consideration of the evidence presented.

Woodpeckers, other than Sapsuckers, have been found to injure trees, telephone and telegraph poles, and wooden buildings to a small extent. "To minimize this damage," Mr. McAtee recommends the trial of nesting-boxes (like the Berlepsch boxes) especially designed for Woodpeckers, since, on the whole, these birds are "chiefly beneficial."

Sapsuckers (genus *Sphyrapicus*), on the other hand, are declared to cause an annual loss to our timber interests of at least \$1,250,000. The facts on which this estimate is based are given at length, and they seem to warrant the verdict of "guilty" which Mr. McAtee renders.

We have become so accustomed to using the publications of the Biological Survey as arguments in proof of the economic value of birds that it comes somewhat as a shock to find a native bird condemned to death on such high authority. On purely economic, logical grounds, however, we should accept this verdict as we have received and endorsed those which have demonstrated the value rather than the harmfulness of birds.—F. M. C.

The Ornithological Magazines

THE AUK.—The July issue opens with a paper on the 'Distribution of the Mockingbird in California,' by Mr.

Joseph Grinnell. Much useful information is compressed into a few pages, and a map shows at a glance the areas inhabited by the bird. The map is reduced to the wrong size for binding conveniently, and binders should be cautioned. Mr. O. Widmann contributes a 'List of Birds Observed in Estes Park, Colorado, from June 10 to July 18, 1910.'—90 species well annotated, but no vernacular names are given, a practice that should be confined to highly technical papers, because the rank and file of readers obtain from the vernacular at least a working clue as to what they are reading.

A good deal of original observation will be found in Mr. J. C. Phillips' 'Two Unusual Flights of Canada Geese Noted in Mass. During the Fall of 1910,' in Mr. A. A. Saunders' 'A Study of the Nesting of the Cedar Waxwing,' in Messrs. P. A. Taverner and B. H. Swales' 'Notes on the Migration of the Saw-whet Owl,' and in Dr. C. W. Townsend's 'The Courtship and Migration of the Red-breasted Merganser (*Mergus serrator*).' Such field observations are of great value in these days, when the novice is inclined to believe that there is nothing left for him to do.

A contribution of interest to entomologists especially is one by Mr. H. E. Ewing on 'The English Sparrow as an Agent in the Dissemination of Chicken and Bird Mites.' Mr. A. H. Wright has delved into many old volumes, and from them has extracted 'Other Early Records of the Passenger Pigeon,' a vanished species that has always been more or less in the public eye in by-gone days. The numerous notes and reviews claim serious attention and are of a most varied character.

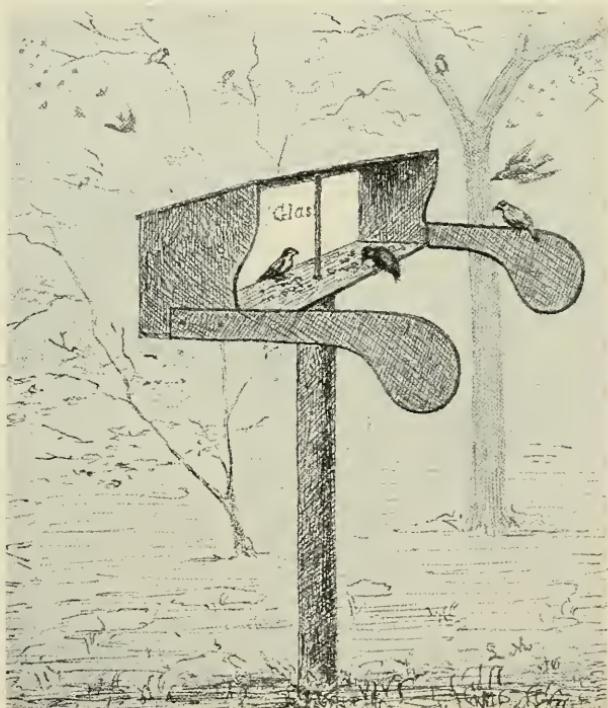
The October number of 'The Auk' completes Mr. A. H. Wright's 'Other Records of the Passenger Pigeon,' and also contains avairy observations upon birds of this species, by Mr. W. Craig, the title being 'The Expressions of Emotion in the Pigeons, III, The Passenger Pigeon (*Ectopistes migratorius* Linn.).' Mr. Craig says that "science has not yet reached the point where it can well understand

and record the language of any bird," and then proceeds to understand it and record it by musical notation—how well, each reader may judge for himself, and find out, at the same time, what "vestigial coos" are, and how they look in type! Mr. Craig also embalms in musical scores the notes of the Mourning Dove.

'Notes on Pelican Island,' by George Nelson, fill the early pages, and tell the latest news of this mecca of the bird-lovers. A pest of mosquitos caused the desertion of about 600 nests, in 1911, the young dying in consequence. Some good half-tones accompany the article. Mr. A. B. Howell furnishes 'A Comparative Study at Cobb's Island, Va.,' while Messrs. W. S. Brooks and S. Cobb deal with 88 species of birds in 'Notes from

Eastern Alberta,' and Mr. A. D. DuBois has 'A Note on the Nesting of the Whippoor-will.' Mr. A. H. Thayer comes to the defense of his theory of 'Concealing Coloration,' and Dr. J. A. Allen also enters the arena under the title, 'Roosevelt's Revealing and Concealing Coloration in Birds and Mammals'.

Mr. G. Eifrig reviews briefly 'Bird Protection in Foreign Lands,' and it is surprising to learn that "In May 1910 the 'First German Convention for Bird Protection' was held," etc. At all events, we know that German birds have long enjoyed protective privileges, to say the least. The reviews are a feature of this issue (as indeed of all other issues, for many years past) that the real ornithologist cannot afford to overlook.—J. D., JR.



FEEDING-TABLE RECOMMENDED BY THE DANISH SOCIETY 'SVALEN'

It is so constructed as to turn with the wind, thus protecting its contents and bird-guests from the weather

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

Contributing Editor, MABEL OSGOOD WRIGHT
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

LOOKING at the lengthening row of bound volumes of BIRD-LORE, it is difficult for us to realize that there are among its readers many who have entered this world since BIRD-LORE itself was born. As a matter of fact, however, we prefer to dwell on the magazine's growth in size rather than in years; and we are free to admit that, ignoring the little matter of dates, a comparison of Volume I with Volume XIII affords us no small satisfaction.

In view of the circumstance that we concluded our introductory editorial in the first number of BIRD-LORE (February 1, 1899) with a hope "that the near future will witness a material increase in the size of each number," we trust that we may be pardoned for calling attention to the fact that our first volume contained 206 pages, while the volume which the present issue concludes numbers 400 pages; and, we may add, is illustrated with twelve full-page colored plates, or exactly twelve more than appeared in Volume I!

Since this increase in size has been made possible only by the loyal support which bird students have given BIRD-LORE, it goes without saying that the magazine's growth is in truth a material expression of the growth of interest in the study of birds and of the movement for their better protection. It is pertinent, for example,

to recall that when the first number of BIRD-LORE was published there was no National Association of Audubon Societies, and only fifteen State Societies had been organized; while the Directory of State Societies on a succeeding page of this issue, shows that no less than thirty-eight State Societies are now in existence, and the Annual Report of the National Association, which follows, supplies eloquent testimony of the numerous and effective activities of that body and its state allies.

Certainly, we have abundant cause for thanksgiving; but, we are chiefly concerned with the past, as it it throws a light toward the future. Does this light give us any reason to believe that the birds will continue to attract a growing attention?

In our opinion, this question may be answered emphatically in the affirmative. The birds' claims are too real to be denied, and we believe that they will be exerted in an even wider and more potent degree as they become better known.

It was a pleasure to hear so experienced a teacher as Mrs. Comstock, in her recent address at the annual meeting of the National Association of Audubon Societies, say that children's interest in nature could always be more readily aroused through birds than through any other forms of life. Thus we have proof of a widespread, inherent interest in birds, and also of what may be termed their pedagogic value. As the Nature-Study movement gathers force, and as the National and State Audubon Societies, through coöperation with educational boards, and in other ways aid in its development, so a knowledge of birds will be brought within the reach of every student. And as the birds themselves, responding to protection and encouragement, become more numerous about our homes, and at the same time become real things in place of names, just so will their appeal to our interest become more definite, more personal and more powerful.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by ALICE HALL WALTER

Address all communications relative to the work of this department to the Editor, at 53 Arlington Avenue, Providence, R. I.

THE NATURE-STUDY CONFERENCE

IN THE last issue of BIRD-LORE, attention was called to the Nature-Study Conference which the National Association of Audubon Societies proposed to hold at the afternoon session of its annual meeting, especially for the benefit of teachers. This conference took place October 31 at the American Museum of Natural History, New York City.

The following programme was offered, which, by its timeliness and variety, proved highly suggestive to all present.

The Practical Basis of Nature-Study with a Brief Discussion of Effective Methods . . . Mrs. Alice Hall Walter*, 53 Arlington Ave., Providence, R. I.

How the American Museum of Natural History Aids Nature-Study in Greater New York . . . Mr. George Sherwood, American Museum, New York City.

Tested Methods of Teaching Nature-Study Mrs Anna B. Comstock, Cornell University, Ithaca, N. Y.

A Review of the Work of the State Library Association of Connecticut, with Reference to Nature-Study. . Mrs. Belle Holcomb Johnson, Hartford, Conn.

Nature-Study for the Blind . Mrs. Agnes L. Roesler, Am. Museum, New York City.

What the Teacher of Bird-Study Should Know Mr. J. M. Johnson, Brooklyn, N. Y.

The opening paper sought to establish the basic relation between nature-study and agriculture, and the ideal status which nature-study should have in the curriculum of our common schools.

As the logical foundation for high-school and college science, as well as for agriculture, nature-study is not only practical, but also of great civic importance in the development of the nation's resources and food-supply. It is a study sufficiently important to warrant a place among the required branches of our public school curriculum.

Some effective methods of taking up nature-study are by correlation with other studies, in limited areas and through a bird-migration bureau.

There is great need of trained supervisors to assist teachers in carrying out efficiently a well-planned course of work along this line.

Mr. Sherwood exhibited some of the traveling nature-study collections of the American Museum, demonstrating their usefulness in city schools, and explaining the simple but extremely successful way in which they are circulated throughout Greater New York.

*Addresses are given in order that any persons desiring to make particular inquiries may communicate directly with the speakers.]

As a pioneer worker in nature-study, Mrs. Comstock offered suggestions to teachers, from a long experience with the rural schools of the state of New York.

Although abundant material is at hand in the country, great ignorance concerning nature prevails; under present methods there is some danger of educating our children away from nature. Until our teachers are better prepared to teach nature-study, it cannot be introduced into our schools with general or uniform success. Teachers ought not to be blamed for this condition of affairs, but should rather be encouraged and assisted.

For these reasons definite outlines suited to the different grades of the common schools are desirable.

Since bird-study has been found to be the most attractive nature-study subject, begin in the primary grade to teach what a bird is and how it is adapted to its method of life.

Next, give definite lines of observation on the habits of our common birds. How far the pupils will be interested in this depends largely upon the teacher.

A step higher is the development of the note-book habit. Crowded field-trips are seldom successful, but individual note-books appeal to the pupil. Let each observer choose a bird for special study, when possible, one which frequents his home neighborhood, or whose nest he has found.

Start outdoor feeding of birds in winter, and keep a daily school-room calendar of species seen.

That most difficult point, namely, training the child-mind to study a single bird systematically, may be in part overcome by teaching a simple bird-topography, and by giving practice-work in field-identification by means of this.

The Audubon Society might well recognize the nature-study work of the children in our public schools by taking an active interest in its progress.

Mrs. Johnson, who is *Library Visitor* of the State Library Association of Connecticut, gave a careful and convincing report of the interest aroused in nature-study by means of traveling-libraries and collections of pictures and postcards.

The rural schools, in particular, are very effectively reached by this system. The cost of transportation is a matter of vital importance in circulating all traveling-material successfully. Some arrangement should be made whereby such expense should not be borne by the teachers.

The report on Nature-Study for the Blind was as suggestive as unique. This line of work is a new venture of the American Museum, but already several talks have been given to parties of blind children, with illustrative material which they could handle. Remarkable skill in recognizing different birds by feeling was shown, and also a keen comprehension in following the speaker.

Since the majority of blind children are very poor, the problem of carfare to and from the Museum is one which must be met.

It is now proposed by means of a special fund, to pay the carfare, when necessary, of blind visitors; to prepare a room in which nature-study material shall be arranged with labels in raised characters; to make small casts of large animals by means of which the blind may gain a correct idea of the proportions of forms they are unable to handle, as, for example, the giraffe; to send out traveling-collections, and to provide special guides for blind visitors to the Museum.

No comment is necessary to point out the value of this work. All teachers of blind, deaf or defective children would do well to test the possibilities of nature-study in their special lines of training.

What the Teacher of Bird-Study Ought to Know, may seem, to some, a very extensive matter; but, with a little extra study, any teacher, however handicapped in preparation, may grasp the important points of the following outline:

External Structure.—Distribution of feather-covering; plume and contour feathers; uses of the feathers. Bill; shape and uses. Feet and legs; number of toes; weak and strong feet. Senses; sight; smell; hearing.

Internal Structure.—Very little beyond a few general facts. Hollow bones; size of muscles attached to breastbone; wishbone; temperature of blood; teeth as gizzard.

Migration.—Something of the theories of migration, and the why, how and when of migration.

Nest-building.—Kinds of nests; shape, color, size of eggs, and their meaning; length of incubation; præocial and altricial nestlings; method of feeding, together with care of young; tricks of mother-birds to protect young.

Molting.—How? When? Causes of change of color in plumage.

Food.—Very important. Kinds of food; methods of obtaining food; economic value of birds.

Esthetic Value.—Shape; plumage; song. (Flight might be added.)

Bird-Protection.—Enemies and dangers; methods of protection.

At present the time set aside for nature-study means, in many schools, just so much extra time from other studies, owing to the teacher's lack of preparation in nature-study. A short summer course at some of the well-known schools, such as Storr's, Amherst, Cold Spring Harbor or Cornell, would profit any teacher of nature-study greatly.

The exhibit of bird-houses loaned by Mr. Borklund and Mr. Haney, to illustrate the work which may be accomplished in manual training when correlated with nature-study, the Von Berlepsch nesting-boxes and automatic food-bell, the traveling-collections of the Museum, together with the books loaned by publishers, and the colored wall-charts and pictures, interested all who found time to examine them. Special thanks are due Mr. Bowdish for arranging this exhibit.

Another year, it may be possible to hold a Nature-Study Conference on a larger and more complete scale. It is hoped that teachers will send to this department questions or suggestions concerning the teaching of nature-study.—A. H. W.

Suggestions for Teacher and Pupil

The English Sparrow is now our commonest winter bird in many parts of the country. It is not a handsome bird, but it is clever. Not gifted with song, like our native Song Sparrow, the English Sparrow nevertheless makes many musical notes, besides its querulous call. Few birds belonging to the seed-eaters have learned to eat as many different kinds of food as this Sparrow, and few birds of any kind have learned to build their nests in such a variety of places.

Now that we have the English Sparrow with us for good or ill, why not make a careful study of it, and compare notes?

Learn to tell the male from the female and the young birds; the kinds of food which it eats in your locality; the nesting-materials it uses; the number of times a year it nests; the places where it builds its nest; the amount of cold it can stand; its preference for city or country; its relations to other birds, including poultry; its call-notes and notes imitating other birds; how it is affected by molt, and any other observations which might aid us in deciding how much good or ill it is actually doing.

Notes on its increase or decrease, and its presence in poultry-yards where the fowls are affected with parasites or the disease among Turkeys known as "black-head," would be of value. Who will take up this line of work?—A. H. W.

FROM YOUNG OBSERVERS

How a Cowbird Was Hung

In January, 1911, I was walking by the side of a river. I happened to look up into a tree, and saw something hanging to an old Oriole's nest. At first I thought it was just part of the nest which hung down; but, on looking more closely, I saw that it was some bird hanging down. I climbed up and cut the branch, then pulled the nest toward me and cut it off near to the nest. I looked at it, and saw it was a female Cowbird, which had probably gone into the nest to lay an egg, and, when coming out, got a horsehair looped around her neck, and thus was hung.—EUGENE GILLIS (aged 12). *Ann Arbor, Mich.*

[A great deal may be learned about the habits of birds, not only in the nesting-season but afterward.

Has any one yet discovered whether the Oriole, in suspending its woven nest, uses some artifice in making entrance and exit to and from its pensile pocket particularly difficult? By watching the female Oriole enter and leave the nest, and by examining closely every detail of the structure of the nest after it has been abandoned, one ought to get a fairly correct answer to this question. Further, a comparison of different nests of our common Oriole would show whether the entrance is equally large and easy of approach in all cases.

Who will send in observations on this point?—A. H. W.]

FROM ADULT OBSERVERS

Some Experiences with a Bird Nursery

The two Rose-breasted Grosbeaks shown in the photograph were given to us by a neighbor, last June,—the one on the right, a male, on the sixteenth, and the other, a female, two days later. We named them Hansel and Gretel, and reared them until they were able to care for themselves. When first found, neither could have been long out of the nest.

It was a day or two before Gretel, the younger, could balance herself on a perch, and for about the same length of time she had to be fed, largely with milk from a fountain-pen filler, as she generally refused to open her mouth for food. She would give a plaintive, hungry cry every little while; but neither coaxing movements of the food-laden tweezers, nor encouraging chirps, seemed to have the necessary moral leverage on the stubby little bill. At last,



TWO BIRDS AND A BOY

the whistled imitation of the Grosbeak's song was tried, and—was it only a coincidence?—the hungry mouth opened at once. From that time on, the only reason to complain was from the bill's being open too much of the time.

A cage was made by rolling a strip of galvanized iron netting, with a half-inch mesh, into a circular cylinder about eighteen inches high and two feet in diameter. This was placed on a layer of newspapers upon a low table near a well-lighted bay-window, or sometimes taken on to the lawn. A square piece of the same netting was laid over the top, for a cover. Thin sticks, run through horizontally, served as perches. In point of simplicity and convenience, this left little to be desired.

Their food consisted chiefly of earthworms, moist bread, hard-boiled eggs, bits of raw meat, and berries, all of which were very acceptable. Water was, of course, frequently given. A long, slender pair of tweezers, of the kind used for mounting insects, proved to be a good "spoon" for food. After they had learned to pick up their own food, a supply of seeds was kept in the cage, as well as a dish of water.

On July 4, we were given the care of a young male Robin, just out of the nest. Worms and berries were soon found to be his most approved articles of diet. Moist bread was accepted up to a certain extent, also egg. Soon after this Hansel accidentally escaped, and the Robin was placed in the cage with Gretel. During the ten days that passed before the two were liberated, they utterly ignored each other most of the time. Once, however, while Gretel was picking up food, the Robin, now considerably larger than she, hopped up to her, fluttering his wings and begging as if she were his own parent. She snapped at him impatiently and I did not see the performance repeated.

It was most interesting to observe the difference in appearance and behaviour between the Grosbeak and the Robin. Gretel's dainty ways, her soft pleading tones, and the little note of satisfaction after she had been fed, as well as her habit of nibbling at her food with the sharp tip of her bill, contrasted strikingly with the Robin's greedy manners and his uncouth demands for more worms. No less striking was the difference between the coral-pink lining of Gretel's mouth and the yawning gulf of tawny yellow that opened whenever the Robin saw the tweezers coming his way. His ancestors having been brought up on soft worms and berries, he gulped everything down without preliminaries. When hard-boiled egg was served, he showed a preference for the white, she for the yolk, like Jack Sprat and his wife. It would be hard to say which was fonder of raspberries and blackberries.

For some days before they were liberated, they were given the freedom of the room each day, for a while, spending most of the time among the plants in the bay-window. The Robin was set free July 20, and Gretel on the day following. A bit of aluminum wire was bent in the form of a ring around the leg of each, for identification. For a number of days they stayed near the house, letting themselves be taken in the hand, if tactfully approached.

Whether the Robin learned the art of pulling up worms I cannot say, but he picked up ants from the gravel path, and was seen once or twice with a worm. Both birds answered when called, but they seemed lonely, having practically nothing to do with each other or with other birds. One morning, a young male Grosbeak, very tame, was seen in the same tree with Gretel. This was pretty certainly Hansel, whom we had not seen since his escape two weeks before. On the 22d both Gretel and the Robin were brought into the house for a while. They seemed very much at home, hopping around on the floor while we were at dinner. The next day the Robin, all too tame, was found dead, doubtless killed by the neighbor's cat. Gretel still came to the veranda daily to be fed, even taking berries from between one's lips. If any one whom she recognized walked across the lawn, she sometimes flew after. This continued until the 27th, when she disappeared. We can only suspect why, and earnestly hope that aluminum rings have a particularly unpleasant effect on feline digestive organs.—W. G. CADY, *Middletown, Conn.*

[There is no question that almost any species of wild bird may be tamed, as illustrated by the above admirable experiment. Whether wild birds, thus tamed, are able to look out for themselves when set free, is doubtful. In the sharp struggle for existence, food and protection from enemies must be gained by each individual which holds its own. Rearing young birds in confinement probably tends to unfit them for life in the open. Bird-lovers would do well to make a careful study of the actions of tamed birds, comparing them with those of wild birds of the same age.—A. H. W.]

A Starling "Roost"

In the tower of St. George's Episcopal Church, in Hempstead, L. I., there is a colony of Starlings, numbering, as a conservative estimate, fifteen hundred birds. The tower is perhaps twenty feet high, with eight tall windows inclosed by lattice-work and a wide ledge around the base. The birds roost inside the tower, and at sunset the vast horde hovers about, waiting to enter. They alight on the ledge in flocks of several hundred at a time, until it is black with birds, and wait till previous arrivals have entered the narrow openings. In the morning, the whole flock emerges and scatters to seek foraging grounds for the day, few remaining around the church.

The birds are not excessively noisy, except in the spring when they are mating. In spite of the damage they must do to crops, they are apparently unmolested by the townspeople; for, in the five years they have occupied the tower, they have multiplied rapidly and attained their present numbers.—MINNIE E. WATSON.

[It would be not only interesting but of value to know the exact feeding and nesting movements of this large flock of Starlings throughout the year. How far does this species roam from its nesting-area?—A. H. W.]

NOTE

The report of the Starling in Michigan (see BIRD-LORE Vol. XIII, No. 5, p. 268) has been found to be erroneous.—A. H. W.

THE HORNED LARK

By EDWARD HOWE FORBUSH

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 53

It is November. On Martha's Vineyard, a little island south of Cape Cod, the boiling surf pounds and roars along the lonely shore, shifting the sands upon the bars and rattling the cobbles upon the stony beaches; Surf Ducks dive and play amid the white capped seas, while the Atlantic stretches away in the dim distance to the home of the east wind and the storm.

Inland, among shrubby plains and rolling hills, nestles an isolated farm. Here, in a weedy field, sheltered somewhat from the searching winds of the Atlantic, a flock of little brown birds creep in and out among the stubble. They have come from their summer home, in bleak and barren Labrador, to their harvest home in this sea-girt isle. They are Eastern Horned Larks, the type of the species.

It is April. The setting sun lies warm over the wide prairie fields of Minnesota, and the light, free south wind gently breathes the breath of life over an eager land. A little bird sits on her sunken nest on the prairie sod, watching her mate as he springs aloft and gives himself to the buoyant currents of the air. He swings in loose circuits, and zigzags back and forth, singing, gently at first, then, fluttering upward, rises by stages, taking each upward step at an angle of about forty-five degrees, sailing, gyrating, mounting higher and still higher, pouring forth his whole soul in an ecstasy of song. Up and up he goes, swinging in spirals, pausing and fluttering at one height after another to send back to earth his finest music; and so he soars and sings until he fades from view in the clear, blue canopy of heaven, and the song is wafted down sweeter and fainter until, like the Skylark, he sings at "heaven's gate." Then, as the full flood of his ecstasy begins to ebb, and his strength wanes, he sinks slowly down; the far-away song swells on the listening ear, and, still fluttering and singing, he comes again into view. Swinging in wide aerial circuits, he drops by slow stages, until at last his hymn is ended and, closing his wings to his sides, he drops like a meteor from heaven, until near the earth, when he spreads his wings, checking his headlong rush, turns and swings along the sod until his toes touch the grass tops as lightly as the summer wind; and he comes to earth again near the little nest, the center of all his hopes.

Such is the song flight of the Prairie Horned Lark—a wonderful performance. The last stanza of Wordsworth's 'Ode to the Skylark' might well be applied to his American cousin:



HORNED LARK
(One-half natural size)

Order—PASSERES
Genus—OTOCORIS

Family—ALAUDIDÆ
Species—ALPESTRIS

National Association of Audubon Societies
Educational Leaflet, No. 54

"Leave to the Nightingale her shady wood;
A privacy of glorious light is thine.
Whence thou dost pour upon the world a flood
Of harmony, with instinct more divine;
Type of the wise, who soar, but never roam—
True to the kindred points of Heaven and Home."

The true Larks, of which the Horned Lark is one example, have a long, straight claw (the 'Lark-spur') on the hind toe, and a slightly crested head; but the Horned Larks have, in addition, over each eye, extending to the back of the head, a narrow, black, pointed crest, that ordinarily lies close to the head; but, when the male is excited by passion or surprise, these crests are erected, so that the head resembles slightly that of an Owl, with two little black ears sticking up.

Its Range The range of the Horned Lark and its several varieties extends throughout most of North America, Northern South America, Europe and Asia. Mr. Harry C. Oberholser, in a monograph of the species, gives twenty-three forms,—sixteen North American, five Mexican, one from Colombia and one from Eurasia.

Some form of the Horned Lark occurs at some season of the year in every part of the North American continent, excepting the Aleutian Islands, the southern coast region of Alaska, the extreme southeastern part of the United States, and Central America; but the Horned Lark is, normally, a bird of treeless lands.

In the time of Wilson and Audubon, only one form of the species was known in the East; this is the typical Horned Lark or Shore Lark, a bird of the coast regions. But, since then, a second form, the Prairie Horned Lark, has been recognized there, which gradually has expanded its range to the eastward. As the eastern country was cleared and settled, more open ground became available there for this sub-species; and, as the western country was settled, trees were grown, much land was put under constant cultivation, thousands of Larks' nests were destroyed, as the farmers turned the prairie sod, and there was less room for the Horned Lark there. Possibly for these reasons, it has extended its range east,—first through Ohio, then into New York and then to the New England states, until it has reached the Atlantic coast. The Prairie Horned Lark is now not rare in the summer in some suitable places in New England, and breeds there.

It is a rather pale variety, with some white about the head, in place of the yellow of the typical eastern bird. It is the Horned Lark commonly seen during the breeding season in the north-central and eastern United States. Almost everywhere in the treeless lands of North America, Horned Larks are found. In the East, they breed south to West Virginia, and in the West to Kansas, New Mexico and California.

The beginner in bird study may not recognize the Horned Larks by their

How to
Identify It

flight or by their whistled notes, for both resemble those of the American Pipit, or Titlark; but he may know them when they are on the ground by their pinkish brown color, their thick-set, square-shouldered look, their mouse-like movements, and the distinct black and yellow, or yellowish white, markings shown by the male bird on the side of the head. The black and yellow of the breast and neck are not so conspicuous when the bird is feeding, unless it is seen from the front.

The color and markings distinguish them readily from the Snow Bunting. They may be confused with the Pipit or the Vesper Sparrow because of the white outer feathers of the tail; but the white in the tail of the Titlark and Vesper Sparrow is more noticeable, and the Horned Lark is much larger than either of those birds. As the bird flies overhead, the black tail with its white corners contrasts with the white belly. All this refers to the typical Horned Lark (*Otocoris alpestris alpestris*), a bird of the northeast and Labrador; but all Horned Larks resemble the type in their markings. There is a great variation, however, in the shades of the plumage. It is rarely that two look exactly alike. The birds of the dry plains and deserts, as a rule, are paler than the eastern form, and many of the birds seen are not typical of any form, but intergrade between one and another. Nevertheless, they are all plainly Horned Larks.

The ordinary call-note of the Horned Lark is very similar to that of the Pipit, but not so soft. Dr. C. W. Townsend writes it *tsswee it, tsswt*,—a sibilant note. The flight song of the Labrador Horned Lark is described by Townsend and Allen as a series of squeaks and high notes, with a bit of a fine trill, the bird beginning his song when high in air and ending it there. The Prairie Horned Lark seems to be the best singer of them all. Its common song is a sprightly little ditty, with no considerable resonance or modulation. Dawson expresses its proportion and tempo by the syllables, *twidge-widge, wigity wigy-widge*, while the words *twidge, wigity, eelooy elooy idgity, eelogy e e w*, serve the same purpose for the rarer ecstasy song, which is sometimes given on the ground, but usually in air.

Nest, Eggs and Young The nest is built in a hollow dug in the ground or sunk in the moss, and is so deeply hollowed that the back of the sitting bird comes level with the surface. It is built chiefly of dried grasses. The Prairie Horned Lark begins her nest early in March or April, by digging a hole about three inches wide and nearly as deep. This is lined to a depth of nearly an inch with dry grass, and the top is usually left level with the surface, although it sometimes projects above.

The eggs, from three to five, are about one inch in length and from .60 to .75 inch in diameter. They are very variable in color, but are usually profusely and heavily marked with brownish gray or dark stone gray upon greenish bronze. When the eggs are nearing the end of the incubating period, the bird sits so closely as almost to allow the intruder to step upon her back.

Audubon found the Horned Lark breeding in high and desolate tracts

of Labrador near the sea, on dark rocks covered with mosses and lichens, where its protective coloration, as it sat on the nest, was quite as effective as it is among the pastures of New England, or on the western prairies. Mr. J. L. Davison, of Lockport, New York, found a nest of the Prairie Horned Lark built in the side of a manure heap in a field.

As the young approach maturity, they outgrow the nest, and, when it will contain them no longer, they leave it, usually several days or a week before they are able to fly; after which they wander about over the ground, and the parents continue to feed them for two or three weeks. While the young are still in the nest, the mother is very secretive about feeding them. She never flies to the nest when she apprehends danger, but always alights at a distance, zigzags up to the nest, creeps to it, feeds the young very quickly, and then steals away. The little ones, in their first plumage, are covered with light spots.

Its Habits The Horned Larks are ground birds. Although sometimes one alights upon a stump-root, fence-post, or rail, they never, so far as I am aware, have been seen in trees. In October, or when the chill winds of November blow, Horned Larks from the north begin to appear in the United States. They come down from Labrador and the fur countries, and become common along the Atlantic seaboard. They are seen usually in rather small, straggling flocks. The members of a flock keep company like a hen and chickens, the old birds leading. Sometimes as many as one hundred or more may consort together.

In the East, they frequent freshly ploughed fields, marshes, meadows, stubble fields, and weedy places along the coast, sometimes going to the higher pastures. When snow comes, they search for food along the shore, on bare spaces in roads, or near barns and haystacks. In winter, they are sometimes seen in the interior, with flocks of Snowflakes.

In autumn and winter, they are rather silent. When feeding, they keep close to the ground, where they creep about, picking up seeds. They are adepts at hiding, squatting low behind weeds or clumps of grass. The scattered flocks fly with an undulating motion and, when startled, they often rise, fly off and then turn about and alight near the point from which they started.

In the West, they live in desert valleys, on barren table-lands and level prairies, and also among the highlands and upon bare mountain peaks.

Its Food and Economic Value Mr. W. L. McAtee, in his Bulletin on 'The Horned Larks and Their Relation to Agriculture,' states that 20.6 per cent of their food is animal matter (all insects), and 79.4 vegetable. The quantity of grain taken is insignificant, except in California, where the food habits seem to be largely vegetarian.

The Horned Larks are interesting birds. They readily adapt themselves to farm conditions, and are distinctly beneficial to agriculture. They should be protected by law at all times.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by WILLIAM DUTCHER

Address all correspondence, and send all remittances for dues and contributions to the National Association of Audubon Societies, 1974 Broadway, New York City

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President Dutcher

For more than a year, Mr. William Dutcher, President of the National Association of Audubon Societies, has been confined to his home with serious illness. The effects of the paralytic stroke which he sustained in October, 1910, have not yet passed sufficiently to permit the return of his power of speech, but there is no doubt that he understands perfectly all that is said to him.

His numerous friends and admirers among the readers of *BIRD-LORE* will be pleased to learn that he now evinces the keenest interest in all phases of the work to which so many of the best years of his life were given with such unselfish eagerness. He is able to read many of the kind letters which are received during these days of affliction. However hard his unfortunate lot must be to bear, it can scarcely be more trying than that which his devoted wife is called upon to suffer, and her position is one which

makes a strong appeal to the sympathy of all who have known in any way of the years of happiness and usefulness which have been theirs in the past.—
T. GILBERT PEARSON.

The Annual Meeting

The seventh Annual Meeting of the National Association of Audubon Societies was held in the American Museum of Natural History, New York City, on October 31, 1911.

The morning session was called to order by First Vice-President Dr. T. S. Palmer. It was devoted to hearing the reports of the Secretary, Treasurer and Field Agents, and conducting such routine business as annually comes before the Association. The reports will be found printed in full in this number of *BIRD-LORE*. The terms of Mr. William Dutcher and Dr. T. S. Palmer as members of the Board of Directors expired at this time, and they were re-elected. The vacancy on the Board caused by the resignation of Dr. Hermon C. Bumpus, and which was temporarily filled by the appointment of Mrs. Mabel Osgood Wright, on February 28, 1911, was filled by the election of Mrs. Wright.

The following were elected to constitute the Advisory Board of Directors for the ensuing year:

Ralph Hoffman, Missouri.
David Starr Jordan, California.
Robert W. Williams, Florida.
Arthur H. Norton, Maine.
W. Scott Way, Maryland.
Mrs. Kingsmill Marrs, Florida.
John E. Thayer, Massachusetts.
Abbott H. Thayer, New Hampshire.
Ruthven Deane, Illinois.
Mrs. C. Grant LaFarge, New York.
Prof. H. P. Attwater, Texas.
Carleton D. Howe, Vermont.
Witmer Stone, Pennsylvania.
Amos W. Butler, Indiana.
William P. Wharton, Massachusetts.
Miss Alice W. Wilcox, Rhode Island.
C. W. Ward, Louisiana.
Howard Eaton, Wyoming.
Dr. T. S. Roberts, Minnesota.
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H. Tullsen, Tennessee.
Mrs. B. H. Johnson, Connecticut.
George E. Pollock, New York.
John H. Sage, Connecticut.

Fourteen life members and two hundred and eighty-five sustaining members, whose applications had been received during the past year, were elected.

Mr. William P. Wharton, of Groton, Massachusetts, gave an interesting report on the growth and present condition of the protected colonies of sea-birds located along the coast of Maine.

The afternoon session was devoted to the general subject of Nature Study in the schools, special emphasis being laid on methods of instruction in the habits and activities of wild birds. Papers were presented by Mrs. Anna B. Comstock, of Cornell University, Ithaca, New York; Mrs. Belle Holcomb Johnson, of Hartford, Connecticut; Mrs. Alice Hall Walter, of Providence, Rhode Island; Miss Agnes L. Roesler, of New York; Mr. George H. Sherwood, of New York, and Mr. J. M. Johnson, of New York. A report of the program will be found in the School Department on another page.

At 8.15 p.m., Mr. William L. Finley, Pacific Coast Agent for the Association and State Game Warden of Oregon, gave a most entertaining talk on 'Bird Reservations in the Northwest.' This was illustrated with a large series of slides made from photographs taken by the speaker. Following this lecture, Dr. T. S. Palmer spoke at length on 'The Scope of the Audubon Movement in America.'

The night session was held in conjunction with the Linnaean Society, and was presided over by its President, Dr. Jonathan Dwight, Jr.

The West Lecture Hall, where the meetings of the Association were held, provided accommodations for a Nature Study exhibit of unusual interest. The display contained bird charts, educational literature, and a large assortment of

books on various phases of bird and nature study. Professor C. Arthur Borklund, principal of No. 5 School, Bronx, New York City, very kindly loaned a large number of bird-boxes prepared by the students of his school. These represented a wide variety of architectural construction, and many were exceedingly beautiful. There was also on display an example of the unique barrel bird-nesting box, exhibited by Mr. Ernest Harold Baynes, samples of the von Berlepsch bird-boxes, and one of the American form of the von Berlepsch box, manufactured by Mr.

Philip E. Perry, of Massachusetts. Mr. J. Warren Jacobs, of Waynesburg, Pennsylvania, sent pictures, diagram and literature, in reference to the popular Martin-boxes which he so successfully manufactures. These materials, together with feeding-shelves, food-bells, and other devices for attracting birds, created much interest on the part of those who were present at the meeting.

All the sessions were well attended, and representatives from the following State Audubon Societies were also present, viz: New York, Connecticut, Rhode



MARTIN HOUSE MADE FROM FLOUR BARREL, ALSO BLACKSMITH WHO BUILT
AND PRESENTED IT TO THE VILLAGE OF MERIDEN, NEW HAMPSHIRE

Photographed by E. Harold Baynes

Island, Massachusetts, Pennsylvania, Oregon, New Jersey, and the District of Columbia.—T. G. P.

A Result of Stopping Spring Shooting

The New York Legislature, in 1910, enacted a law prohibiting the killing of Brant in spring, after January 10, thus making the Brant season conform with the statutory period allowed for killing other wild fowl in the waters about Long Island.

Before that time, these birds could be

aging Black Ducks to remain and nest in the region. We have the authority of Dr. Frank Overton, of Patchogue, New York, for the statement that, the past summer, over 300 of these birds nested on the meadows in the vicinity of Moriches alone. The photograph shows about three hundred resident Black Ducks, and Dr. Overton states that fully as many more were in this one flock, which the camera failed to record. What more concrete evidence does any one need to demonstrate the value of prohibiting the spring shooting of water-fowl?—T. G. P.



BLACK DUCKS, MORICHES, LONG ISLAND. RESULT OF
STOPPING SPRING SHOOTING
Photographed September 8, 1911

shot until April 30. Complaints were general that many gunners, under the pretense of shooting Brant, killed other water-fowl many weeks after the time allowed them by law. Hence this new restriction was designed not only to conserve Brant, but to throw an additional safeguard about those Ducks and Geese which pass here in great numbers while in flight to their northern breeding-grounds.

Stopping spring shooting on Long Island has not only tended to protect transient species, but it is also encour-

A Correction

The National Association of Audubon Societies recently issued a circular regarding the collecting of aigrettes for commercial uses, in which it was stated, on information from an officer of the Department of Paleontology of the Paris Natural History Museum, that M. Mayol Grisol was not known to that institution.

We desire to record that the President of New York State Audubon Society has since been advised by the Director of the Museum Naturelle Francais, Paris,

that M. Grisol did receive an honorary mission, May 2, 1908, from the Paris Museum, which fact was unknown to MM. Boule and Thevenin of the Department of Paleontology, to whom inquiry regarding him was originally addressed.—T. G. P.

New Members

Between July 1 and October 20, 1911, the membership of the Association was increased by one life member, 113 sustaining members, and 19 contributors. The names of these are all included in the Annual Report published in this issue of BIRD-LORE. From October 20 to November 1, 1911, the following applications for sustaining membership were received:

Althouse, H. W.
 Bridges, Miss Fidelia
 Brown, Philip Greely
 Carey, Arthur A.
 Cook, Charles S.
 Child, John H.
 Conant, Miss C. N.
 Crompton, George
 Devlin, Mrs. John E.
 Dickey, Donald R.
 Eaton, Charles Edwin
 Forbes, Mrs. J. Maholm
 Hughes, Miss Ada F.
 Janney, J. B.
 Nicoll, Mrs. Benjamin
 Norristown Audubon Club
 Palfrey, Miss S. H.
 Parsons, Agnes J.
 Post, Jr., Mrs. Carroll J.

The following new contributors have been enrolled:

Anonymous
 Allen, Mrs. Nathaniel T.
 Clapp, Mrs. C. R.
 Cranz, F.
 Hughes, Mrs. Dorothea M.
 Morrison, Mrs. J. H.

Australian Feather Trade

Another blow, and a hard one, has been struck at the millinery traffic in bird feathers. The Australia Gazette, No. 20, dated March 25, 1911, contains a proclamation issued by the Right Honorable William Humble, Commander-in-Chief of the Commonwealth of Australia, in

which the *exportation* (except for educational or scientific purposes) of the eggs, skins or plumage of the following birds is absolutely prohibited: Emus, Terns and Gulls, Egrets, Herons and Bitterns, Lorikeets, Cockatoos, Parrots, Dollar or Roller Birds, Kingfishers, Bee-eaters, Cuckoos, Lyre Birds, Pittas, Robins, Ground Thrushes and Chats, Wrens, Shrike Tits, Thick-heads and Shrike Robins, Sun Birds, Bower Birds, Rifle Birds, Grebes, Albatrosses, Finches, Orioles and Shining Starlings.

On that date also appeared a second proclamation from the same source, prohibiting the *importation* of the eggs, skins or plumage of the following species: Birds-of-Paradise, Hummingbirds; any one of the several species of Asiatic Pheasants of the genus *Lophophorus*, as the Impeyan Pheasant; any one of the several species of the Asiatic Pheasants of the genus *Argusianus*, as the Argus Pheasant; any one of the several species of large-crested or Crowned Pigeons of the genus *Goura*, inhabiting New Guinea and the adjacent islands; the Rheas, the Owls, the Kingfishers; any Parrot of the genus *Sittace* or *Macrocercus*; the Stork tribe, the Heron tribe, the Ibises and Spoonbills, the Todies, the Cock-of-the-Rock, the Quetzal or Resplendent Tropic.

One by one the strongholds of the despilers of earth's avian treasures are falling before the attacks of those who believe it worth while to preserve the birds for their economic and esthetic value.—T. G. P.

Enforcement of Aigrette Plumage Law

On September 5, 1911, the following advertisement appeared in the New York Evening Telegram: "Elegant fur rug cheap; aigrettes, and other things. Phone 2568 W. Morningside, 430 West 119th."

The word "aigrettes" in the above notice came to the attention of Mr. Joseph V. Sauter, Chief of Division, Forest, Fish and Game Commission, who immediately communicated with this office. As a result, a representative of the

Association went with Mr. D. C. Speenburgh, a Protector in the State Bureau of Marine Fisheries, to investigate the case. A woman, Mrs. H. B. McCulloch, was found, who had in her possession four bunches of aigrettes, which she offered to sell. She was at once arrested, and brought for trial on September 6, in the Harlem Police Court. The trial was postponed to September 7, when the case was again postponed to September 21. The lawyers asked for further postponement, to await the result of the injunction proceedings instituted by Sciama & Company in the Federal Court of the Southern District of New York; so the case was called for October 5. It was then postponed to October 19, and from them until October 23. At this date further postponement was refused, and the defendant, waiving examination, was held for Court in Special Sessions.

This is the first case for violation of the Shea-White Plumage Law which has come before the courts.—T. G. P.

Klamath Lake Reservation

The past season has been a splendid one for the birds on the protected reservations and other nesting colonies, guarded by this Association, often in connection with the United States Department of Agriculture.

By exercising great vigilance, the Audubon wardens were able to fight off with gun-fire the only two assaults made on the protected Egret colonies, and very few of the birds are known to have been killed. From Virginia southward and around the Gulf Coast to Texas, the seabird colonies are all located on low-lying islands more or less subject to overflow.

During the past summer, these have been subjected to very few high storm tides, and the birds have had little disturbance, except from egg-gatherers in isolated instances.

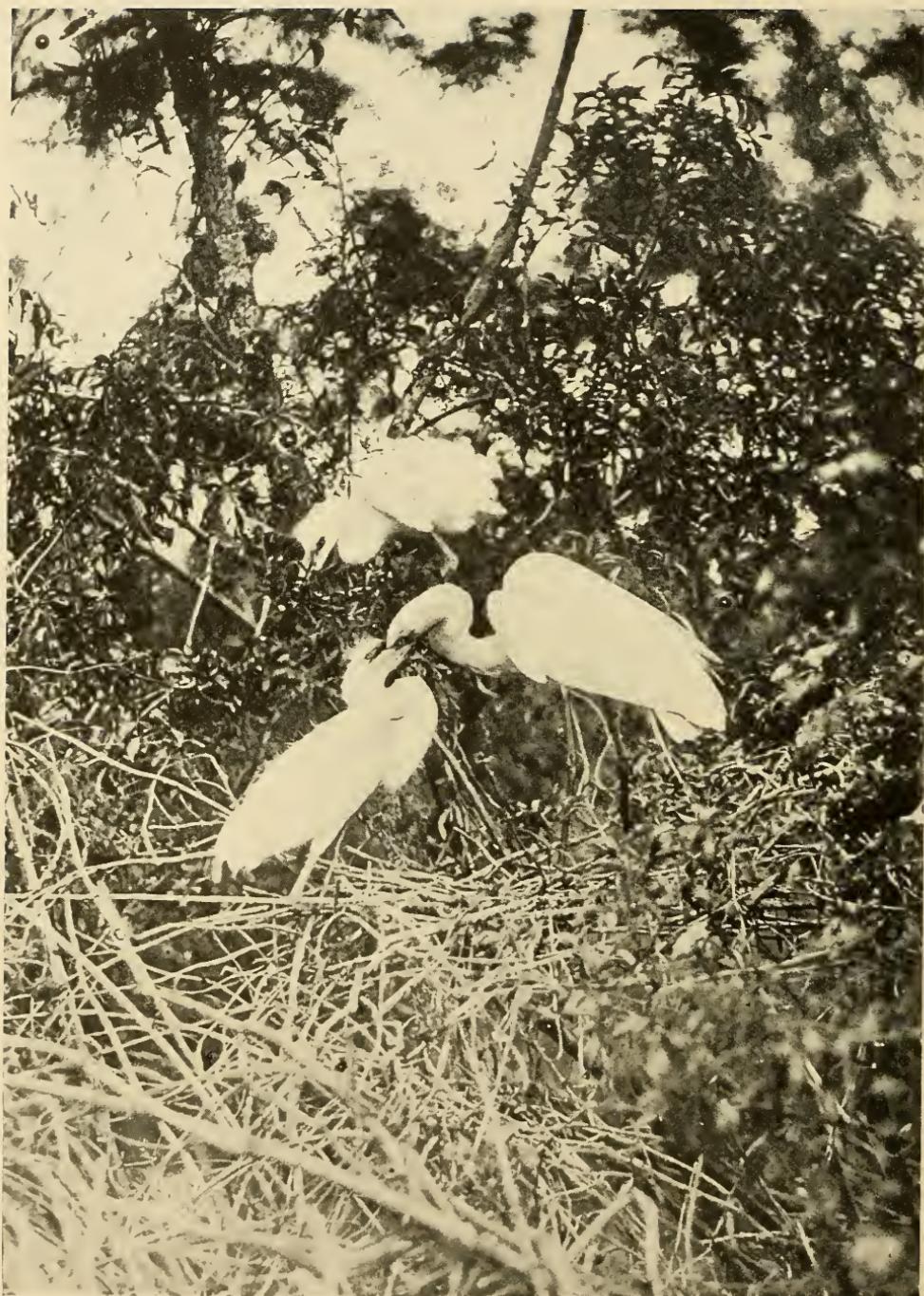
The inland colonies in the western states have also been unusually prosperous. The Klamath Lake Reservation, fifteen miles in length, situated in northern California and southern Oregon, and constituting one of the greatest bird resorts in the Northwest, has become a valuable paradise for nesting birds. The following from the field report of L. Alvah Lewis, the warden in charge, will give some idea of the prosperity of the colonies containing many thousands of birds in this interesting region :

“Warm weather in March and early April caused the birds to commence laying a little earlier than usual. By the last of April, young Cormorants were hatching; Pelicans had been sitting for about two weeks, and Gulls and Caspian Terns were preparing their nests.

“The number of Pelicans nesting on the reservation was increased this year by 25 per cent, the number of Gulls doubled, and Cormorants remained about the same in number as last year; the Caspian Terns again appeared, not having been seen on the reservation last season.

“Indications in the early part of the summer were that there would be close to a thousand nests. There appeared to be twice as many Grebes as there were last year. Mallards were more abundant, while other game-birds seemed to be holding their own. Pelican colonies were more widely scattered this year than formerly, making it impossible to visit all of the colonies from Klamath Falls and return during the same day.”—T. G. P.





AMERICAN EGRET FEEDING YOUNG, ORANGE LAKE, FLORIDA, ROOKERY
Photographed by Warden O. E. Baynard

Annual Report of the National Association of Audubon Societies for 1911

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California, Connecticut, District of Columbia, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, East Tennessee, West Tennessee, Virginia, West Virginia, Wisconsin.

LIST OF MEMBERS AND CONTRIBUTORS.

REPORT OF TREASURER.

REPORT OF SECRETARY

INTRODUCTION

The seventh year of the activities of the National Association of Audubon Societies (Incorporated) has drawn to a close, and we pause to take a backward glance before girding for the problems and opportunities which lie beyond.

It is no small privilege to live at this time in history, among the beginnings of so many things which make for material and spiritual uplift. Fortunate indeed are those of us whom the currents of life have drawn into the field, to form a line of defence as best we may between the wild creatures and the greed of thoughtless men. A reward enjoyed by all who contribute in any way to the success of the Audubon movement is the consciousness that, as true pioneers, they are helping to foster and upbuild a national sentiment

for the appreciation of wild animal life, which, in years to come, shall contribute prominently to the joy of human existence.

The Audubon work, today, is little more than in its infancy. It takes no very wide sweep of imagination to believe that the movement will grow to large proportions and with astonishing rapidity, nor need we go far afield to see abundant evidence that the tide of public opinion is setting strongly that way. Who, fifteen years ago, for instance, would have thought that the states of the American Union and the Provinces of Canada would now be employing, in the aggregate, whole regiments of agents to enforce the bird and game-protective laws? Who would have dreamed, nine years ago this fall, when a little band of bird lovers, headed by Mr. William Dutcher, gathered in a room in Washington city and formed the National Committee of Audubon Societies, that today we should see the splendid organization we now represent, with its wide range of specialized work, and which during the past year has expended a total of \$36,000 in behalf of the wild life of our country? Things like these do not simply happen, nor grow in a night, like a Norwegian gourd; they come to pass because many human beings, reaching forward for better things, are naturally drawn toward the light. To the great beacon of conservation which has been kindled on our shores, the National Association of Audubon Societies and the State Societies are contributing of their materials joyously and without stint. *

During the year just closed, your Board of Directors has conducted the work of the Association along certain well-defined lines of action, similar to those heretofore employed, under the leadership of our founder, William Dutcher.

LEGISLATION

In the field of legislation, results have been very gratifying. The New York Plumage Law, enacted in May, 1910, which prohibits the sale of the feathers of many native birds, or those taken from foreign species belonging to the same family as those protected in the state, was such a tremendous blow to the feather trade that no surprise was felt when, early in the legislative session of 1911, a bill to modify its provisions was introduced, to give relief to the merchants engaged in the feather traffic. The officers, directors and members of our Association instantly began to arouse the public to the danger which threatened the bird life of the Commonwealth. From the New York office, in addition to hundreds of letters, 21,000 printed appeals were distributed, asking bird protectionists to communicate at once with their Senator and Assemblyman. The New York Audubon Society took a strong part in this work, as did virtually all the active Game Protective Associations in the state; the Linnæan Society worked for the cause; the Camp-Fire Club of America was exceedingly helpful; the National Federation of Women's Clubs, through its Conservation Committee, rendered splendid service, as

did many local women's organizations. The press was also appealed to, and it wielded its mighty influence in favor of the birds. A pronounced public awakening resulted. Following the introduction of the Levy Anti-plumage Bill, the legislators were deluged with protests. One Assemblyman stated early in the contest that he had received over two hundred letters of protest from his constituents.

The campaign grew to large proportions, and for weeks the working ability of the office force of the Association was taxed to its utmost; for we were fighting enormous financial interests, supposed to have much political influence.

When, late in the session of the Legislature, a vote was called on the bill, the dominating political party drew the lines tightly over the members; but even the whip of the bosses failed to rally enough votes, and it was lost. The New York Plumage Law, therefore, went into effect July 1, 1911.

Now the series of contests in the courts has begun. On June 30, 1911, a millinery firm, Sciama & Company, filed a petition in the United States Circuit Court of the Southern District of New York, asking for an injunction, restraining Thomas Carmody, Attorney-General of the State, and James W. Fleming, Commissioner of Forest, Fish and Game, from enforcing the plumage law. The arguments why this should be granted were presented in a pamphlet of fifty-nine pages. The Association was invited by the Attorney-General to assist in his efforts to combat it. On October 13, 1911, Judge Ward refused to grant the injunction, and another battle was won in the fight for the preservation of our bird life.

The Association took a prominent part in the campaign which ended in the passage of the Bayne Bill, prohibiting the sale of native wild game in New York state. We also aided in the work which resulted in the defeat of the Long Island Duck Bill, intended to lengthen the season for killing wild fowl. The non-sale law is undoubtedly the most important statute for game protection which has been enacted in the United States for many years, for the restrictions it imposes take away the incentive for wholesale slaughter of game birds and animals, and encourages the rearing of the same.

In New Jersey, we coöperated with the State Society in a vigorous, successful fight for the enactment of a statute similar to the New York Plumage Law. Had the bill failed of passage, the Broadway millinery firms could easily have transferred their stock across the river to Jersey City, and gone peacefully on with scarcely an interruption in their business.

In Georgia, the past summer, our five years' campaign ended in the establishment of a State Game Warden force, supported by a hunter's license. One not familiar with the general lack of sentiment in that state in regard to bird protection can scarcely form an adequate idea of the tremendous importance of this step which has at last been taken in the Georgia Legislature.

In Oregon, the efforts of the State Audubon Society are largely responsible

for the rehabilitating of the State Department of Game and Fish Protection. Mr. William L. Finley, who for several years has been the President of the Oregon Audubon Society, and the Pacific Coast representative of this Association, has recently accepted the position of State Game Warden under most flattering circumstances.

Details of the splendid legislative work accomplished in New England will be found in the report of Field Agent, Mr. E. H. Forbush, and by reading the statements submitted by the Secretaries of the various New England State Audubon Societies.

In Florida, North Carolina, South Carolina, Tennessee, Texas, North Dakota, and elsewhere, the voices of the Audubon workers have been heard in legislative lobbies and committee-rooms.

To give a detailed statement of all the plans and operations in which the Association has taken part the past year, looking to the strengthening of the bird- and game-protective laws in America, or in defending from attack the existing statutes, would require space much greater than we are permitted to occupy at this time. This brief résumé, however, may serve to show something of the scope of our legislative activities.

FIELD AGENTS AND OTHER WORKERS

During the year, four field agents have been employed. These were Mr. E. H. Forbush, in New England; Mr. William L. Finley, on the Pacific Coast; Captain M. B. Davis, in Texas; and Miss Katharine H. Stuart, in Virginia. The efforts of all have been attended with splendid results, and their reports, to be presented later, will be found of great interest. Several other workers have been employed for short periods, or have volunteered their services on special missions. These include Mr. James Henry Rice, Jr., of South Carolina, and Mr. Stephen Bruner, of North Carolina, who rendered good service in searching out Egret colonies. Mr. Rice also gave many public lectures.

Dr. W. A. Plecker was supplied with a number of stereopticon slides, which he used in giving ninety lectures on bird protection throughout southern Virginia.

Prof. R. J. H. DeLoach, of Georgia, has spoken in Tennessee, as well as his own state, and has done good work in organizing Junior Audubon Societies.

Mr. Arthur H. Norton, of Portland, Maine, accompanied your Secretary in July on an exhaustive trip of inspection to the protected bird colonies along the coast of Maine.

Mr. Howard H. Cleaves and Mr. Francis Harper visited and reported on the colonies of birds we are protecting, on Gardiner's Island, New York, and along the coast of Virginia.

Messrs. P. B. Philipp and B. S. Bowdish visited and reported on the Orange Lake, Florida, rookery.

Mr. William P. Wharton and Dr. George W. Field, of Massachusetts, represented the Association at the National Conservation Congress, held at Kansas City, Missouri, in September last. Many others have also served the Association with equally good will.

STATE SOCIETIES

The State Society occupies an indispensable place in the plan of Audubon work in America. Your Board would urge the members of the National Association and the public generally to give them every aid and encouragement. A number of these have accomplished remarkable results during the year.

The reorganized New Jersey Society, with the Secretary, Mr. B. S. Bowdish, as the active officer, has built up a live membership, collected nearly one thousand dollars in fees, and is largely responsible for the enactment of the plumage law in that state.

The Audubon Society of Kentucky, under the leadership of Mr. James H. Gardner, was organized January 28, 1911. One of its several accomplishments has been the organization of over twelve hundred school children into Junior Audubon Classes, every one of whom paid a fee of ten cents and wore an Audubon button.

On February 11, 1911, the West Tennessee Audubon Society was organized in Memphis, with Dr. R. B. Maury as President. This, as well as the East Tennessee Audubon Society, headed by Mr. H. Tullsen, has done most creditable work in the matter of organizing Junior Audubon Societies, working for the establishment of private bird reserves and laboring for legislation, with special reference to protecting the Robin.

Probably in no state have the officers engaged in a more painstaking, laborious effort for the cause than have Mrs. W. E. Harris, President, and Mrs. A. S. Buford, Jr., Secretary of the Audubon Society of Virginia. Their work in co-operation with Miss Katharine Stuart, the Association's Field Agent, has made it possible for thousands of children in the state to receive systematic instruction in bird study.

Massachusetts, Connecticut, Rhode Island, Illinois, Oregon and California have also been engaged in their usual heavy volume of activity.

Lack of time forbids further discussion here of the work of the State Societies, full reports of which will be found in the following pages.

These brief references to State Audubon Societies, however, should not be closed without mentioning the fact that on October 10, 1911, the Audubon Society of West Virginia was formed at Parkersburg. We welcome this new Society, the organization of which completes the list of State Audubon Societies east of the Mississippi river.

BIRD COLONIES AND WARDENS

No work ever undertaken by this Association has shown more concrete results than the guarding of bird colonies. The increase of Herring Gulls, as a result of the protection of the splendid colonies on the Maine Coast, is apparent to all observers. One of the most valuable services our movement has rendered to the ornithological world has been the snatching back from the verge of extinction certain birds of the United States. Thus, the Roseate Tern in the Massachusetts colonies has probably been saved from extinction by the protection it has received, in part at least, from this Association.

In 1903, but sixteen eggs of the Least Tern were laid on the North Carolina rookeries, the bird having been nearly exterminated for its feathers. After nine years' protection, the warden in charge reports that, the past summer, 1,590 young were raised. This constitutes by far the largest nesting group of these birds on the Atlantic Coast of the United States. Here also is found the Cabot's Tern, the only place on our eastern shores where it nests today. It is so rare that only seven eggs were laid and hatched the past year.

In the Virginia colonies, there are probably less than one dozen pairs each of the Gull-billed Tern and the Forster's Tern. Despite the protection we have extended them of recent years, they seem not to increase in numbers, which raises the grim question as to whether these beautiful species are not on the point of passing from existence in Eastern North America.

Of the more numerous species of water birds, such as the White and Brown Pelicans, Laughing Gull, Common, Arctic and Caspian Terns, Puffins, Cormorants, and certain species of Ducks and Geese, the numbers are augmented every year by the protection they are receiving.

During the year, the Association has employed thirty-nine wardens to guard bird colonies. These are distributed as follows: Florida, 4; Louisiana, 2; Massachusetts, 1; Michigan, 3; New York, 3; New Jersey, 1; North Carolina, 1; Georgia, 1; South Carolina, 5; Virginia, 2; Oregon, 1; Maine, 15.

More complete statements of the conditions of many of these colonies will be found elsewhere accompanying this report.

At a cost of \$250.20, provided by interest accruing from the Mary Dutcher Memorial Fund, Bird Island, covering an area of thirty-five acres, and situated in Orange Lake, Alachua county, Florida, was purchased during the year; and Mr. O. E. Baynard, who conducted the transaction for the Association, guarded the colony of birds located there throughout the summer, without remuneration other than his living expenses.

From his report is taken the following list of the birds which occupied this remarkable rookery during the past summer. In each instance, the number given refers to mated pairs of birds, as determined by counting the number of occupied nests.

Water Turkey, 150; Wood Duck, 1; Glossy Ibis, 6; Least Bittern, 8; Ward's Heron, 1; American Egret, 66; Snowy Egret, 57; Reddish Egret, 1; Black-crowned Night Heron, 25; Yellow-crowned Night Heron, 25; King Rail, 2; Purple Gallinule, 30; Florida Gallinule, 10; Black Vulture, 1; Prairie Warbler, 5.

Of the following species, the numbers given are estimates: White Ibis, 4,000; Louisiana Heron, 1,000; Little Blue Heron, 2,500; Green Heron, 60; Florida Redwing, 100; Boat-tailed Grackle, 200.

EGRET PROTECTION

The Association has again taken up the subject of locating and guarding the few remaining breeding colonies of Egrets in the United States. Explorations for this purpose were made in four of the southern states and ten colonies were located and guarded by the wardens of the Association or members of an Audubon Society. These rookeries are located as follows: North Carolina, 1; South Carolina, 7; Georgia, 1; Florida, 1.

From the reports we believe to be fairly accurate, we are able to say that these guarded rookeries contained about 1,400 American Egrets and 250 Snowy Egrets.

The above does not include the splendid artificial colony built up by many years of protection by one of our members, Mr. E. I. McIlheny, of Avery Island, Louisiana, in which he estimates that "several thousand Snowy Herons" and "several hundred American Egrets" now gather in summer.

A few other colonies have been reported, and it is our purpose to push the work of finding and protecting these also, another year.

MRS. RUSSELL SAGE FUND

By means of the annual contribution of \$5,000, given by Mrs. Russell Sage for Audubon effort in the southern states, we have been enabled to conduct a wide, systematic educational campaign in much of that territory. The two Southern Field Agents have been paid from this source, and we have also been in a position to extend limited financial aid to some of the Southern State Audubon Societies.

The experiment of forming Junior Audubon Classes on the plan of financial coöperation with the children themselves, has been very successful, 533 having been formed in the schools, with a total paid membership of 10,595. A tremendously urgent need with which we are daily impressed is for a fund sufficient to extend the same character of work throughout the whole of the United States in coöperation with the State Audubon Societies. An additional \$10,000 a year would accomplish this result.

MISCELLANEOUS AND FINANCIAL

During the year, in addition to two circulars issued for special legislative purposes, the Association has published the following Educational Leaflets: No. 47, Bob-white; No. 48, Cedar Waxwing; No. 49, Chimney Swift; No. 50, Carolina Wren; No. 51, Spotted Sandpiper; No. 52, Least and Semipalmated Sandpipers.

We have issued 406,000 Educational Leaflets, 370,000 colored pictures of birds, and 361,000 outline drawings of these pictures.

Of the book by Martin Hiesemann, entitled 'How to Attract and Protect Wild Birds,' we have sold 293 copies, at cost.

We have paid for 2,036 subscriptions to the magazine "BIRD-LORE," thus enabling our members and Junior Secretaries to be the recipients of the benefit derived from reading this splendid magazine.

The public press has continued to show a most genuine interest in the efforts of the Association, and 1,162 different newspaper clippings containing notices of our work have been received in the office. More than twenty reporters and magazine writers have been furnished information regarding bird life and bird protection, and in a number of instances photographs have also been supplied.

The financial support of the Association has shown a healthy and continuous growth. Fourteen life memberships have been received, and the list of sustaining members has grown from 1,184 to 1,351. The contributors increased from 38 to 73.

In April, the offices of the Association were removed from our old quarters, 141 Broadway, to larger ones at 1974 Broadway, corner of 67th street, where, in the future, we hope to welcome our members and other friends of wild bird and animal protection.

REPORTS OF FIELD AGENTS

REPORT OF EDWARD HOWE FORBUSH

Owing to the pressure of legislative work in New England, during the past year, and to lack of financial support, the educational work done by your agent in this territory has been somewhat less than heretofore. Throughout the spring, legislative matters required so much attention that many engagements to lecture were of necessity refused. However, thirty lectures were given during the year; the audiences aggregating about 7,500 people. The series of articles heretofore published monthly in about one hundred different newspapers has been discontinued for the present, for want of means to pay for the type-writing, postage, etc., but during the year your agent has been devoting all his spare time to the History of Game Birds, Shore Birds and Wild Fowl, which will be published by the Massachusetts State Board of Agriculture. That work deals with the former abundance of these birds, their decrease and its causes, and the means of conserving them. It will form an illustrated volume of about five hundred pages, and will probably be available for distribution about the time that this report reaches the public. It may be obtained of Hon. J. Lewis Ellsworth, Secretary State Board of Agriculture, 136 State House, Boston, Mass. Let us hope that this work will help to awaken the people of New England to the necessity of more fully protecting many of the birds now known as game, and that it will do something toward inducing people to propagate certain species. Perhaps the work of obtaining sustaining members and contributors to the work of the National Association, may properly be considered educational. It certainly helps. The work that your agent has undertaken along these lines has not been an unlimited success. The Rev. Herbert K. Job, whose appointment as State Ornithologist of Connecticut was advocated by the National Association in 1910, has been doing excellent educational work through the newspapers, and in many other ways.

Most of the work of the past year in New England necessarily has been devoted to legislation. Every legislature in the New England states has been in session, and the work of advocating legislation for the protection of "wild birds and animals," and of opposing legislation inimical to their protection, began in Vermont early in October, 1910, and continued until it closed in Connecticut, late in September, 1911, when the General Assembly of Connecticut, of the year 1911, dissolved. Nearly a thousand bills relating to birds, game and fish, were presented to these six legislatures, a large part of which aimed to remove some protection now accorded, or to secure special privileges for certain interests. In addition to these, there were bills relating to the use of firearms, bills granting special privileges on public preserves, etc. The privilege-seekers sometimes avoid the regular channels, in pressing

their legislation, and bills are then referred to committees on judiciary, new business, harbors and lands, agriculture, metropolitan affairs, etc. There are so many tricks attempted in legislation and so many apparently harmless amendments to watch and combat, that, in order to keep the friends of the birds informed, that they may use their efforts to the best advantage, a man should be kept constantly in attendance at each session of each Legislature. Otherwise, some ground is almost certain to be lost somewhere in each session, notwithstanding that gains may be made elsewhere. Every good bill should be watched carefully at every stage of its progress; otherwise, good bills that have powerful enemies will be defeated, or will be so changed by amendments that they will fail of their object. Every bad bill should be watched and fought until it is finally defeated, and then a lookout should be kept to see that no substitute for it is introduced under another title, or in another branch of the Legislature. All bills must be scrutinized, to see that no bad legislation is introduced, and passed under a misleading title or one apparently foreign to its substance. Such tricks are attempted often. In some cases, a bill is introduced in proper form and referred to the regular committee, and, while the attention of its opponents is engaged in opposing it, another is introduced under a different title and referred to another committee, in the hope that it will pass unnoticed. Your agent for New England has not been able to give the close attention to legislative work the past year that such work requires. This was partly because some matters reached a critical stage on the same day in different states, necessitating his presence in two states at one and the same time, and partly because the Association could not spare the money to pay the necessary expenses of traveling, postage, printing, etc. The "sinews of war," alone, will enable an agent to keep closely in touch with all that is going on, and will also keep the people fully informed, so that their aid may be secured in influencing legislation at critical times.

This whole matter resolves itself down to a struggle between the destroyers of wild life and its protectors and propagators. In New England, excepting possibly in the state of Rhode Island, those desiring rational protection for birds and animals are in the great majority; all that is needed is to keep these people informed—to tell them what to do and when to do it. This done, our bird and game laws will be made everything that the protectionist can desire. Birds will be protected, game increased, the laws respected, and the lawbreaker generally detested. But, today, the seekers after special privileges and those who destroy birds and game ruthlessly for pleasure or profit, although in the minority, are better organized, better supplied with funds, and more apt at the political game, than are the protectors. What this Association now needs is the means to watch legislation more closely, and to keep the public informed regarding its progress. Notwithstanding the inadequacy of our resources, however, no great backward step has been taken in New England during the year, although we came perilously near such a step in at least two instances.

The minor losses to protection have been more than counterbalanced by substantial gains, and even these minor losses could readily have been prevented had the means been available to keep a watchful man on the ground in every state capitol. Public sentiment in New England has now reached the point where everything in reason will be granted us whenever we are in a position financially to attend closely to the detailed work required to get it. Even the majority of the game destroyers themselves realize the strength of the sentiment of protection, and do not presume to ask for so much as they demanded a few years ago. Representatives and Senators, even when asking in debate for an extension of the open season, recognize the popular feeling and pose as in favor of protection. They merely argue that it is not needed in the particular case in hand. One of the signs of the times is a "Gunners' Association," in Massachusetts, organized in 1910, to "save gunning" lest it be "nagged to death."

It is impossible in the space allotted to this report even to name and explain all the various bills that were advocated or opposed by this Association in New England during the past season, but a few of the most important may be mentioned, and their fate may be related.

VERMONT.—The sentiment for bird and game-protection is so strong in Vermont that no serious attempt was made to shorten shooting seasons or to take away protection now afforded any bird or animal, except deer and fur-bearing animals. Your agent advocated a bill to forbid the killing of does, which was finally enacted into law. Also, a bill introduced by Representative Allen of Westford, which established the office of State Ornithologist. After some delay, this bill was slightly modified, to meet the views of the State Secretary of Agriculture, Hon. Alonzo Martin, and was passed without opposition. Mr. Martin who, under the amended bill, was given the appointment of the Ornithologist, appointed Mr. Carlton D. Howe, Secretary of the Vermont Audubon Society, and a former Director of the National Association of Audubon Societies. Mr. Howe, who had previously written a bulletin on the economic relations of birds for the Department, is now at work on a manual of bird study for the school teachers of Vermont, to be published by the Department of Agriculture. Also, he is delivering lectures throughout the state to schools and teachers. His long experience as a teacher and school superintendent has given him a peculiar fitness for the work.

In 1908, our Association assisted in securing the passage of a Hunters' License Bill, in Vermont, which has since provided a fund for the enforcement of the game and bird laws, and in 1910-11 the Association supported the present Commissioner of Fish and Game, Mr. J. W. Titcomb, in securing the passage of a bill for the appointment of a State Warden and County Wardens, to be remunerated from the game fund provided by the fees for hunters' licenses. The bill met with considerable opposition, but was finally passed, with the provision for the State Warden stricken out. Protection of the Wood Duck

at all times was extended, and similar protection was granted the Upland Plover. In general, the laws protecting birds and the smaller mammals were strengthened, rather than weakened, and the result of the session's work was gratifying. The session was finished before February 1, 1911.

MAINE.—Your agent was able to spend very little time in Maine, and the legislative work there was left mainly in the capable hands of Mr. Arthur H. Norton, Curator of the Portland Natural History Society, and Secretary of the Maine Audubon Society. Mr. Norton was urged to secure a perpetual close season on the Wood Duck. This he accomplished. Further details of the work in Maine will be found in his report, and need not be repeated here.

NEW HAMPSHIRE.—At the beginning of the legislative session, the outlook for bird and game protection in New Hampshire was not good. The National Association used all its influence, in 1909, to secure the passage of a hunters' license law to provide funds for the protection of game and birds. The bill narrowly escaped defeat in its first stages, but was finally passed by a large majority; but the politicians wanted the money from the prospective licenses for other purposes, and, on the last day of the session of 1909, a measure was quietly passed, which, while not referring specifically to the hunters' license, resulted in placing all the money received for hunters' licenses in the general treasury funds. This left the Commissioners for two years without means to employ wardens to enforce the law. This year, an attempt was made to secure, for the use of the Commissioners, \$50,000 of the \$70,000 which had been collected as license fees and fines and turned into the treasury. After a long and tedious fight, the appropriation finally was made, but only \$8,000 was assigned for detective purposes. Another fight must be made in 1913, to secure every dollar paid in by the hunters for use in game protection. The close season on the Upland Plover and Wood Duck in New Hampshire expired in 1911. An attempt to renew it met with some opposition, but it was finally extended until 1916. Under the misleading title of a bill for the protection of trout, a statute was quickly enacted which, in its last section, removed all protection from the Great Blue Heron. It met with no opposition, as its title misled the friends of the birds. After its passage, there was a sudden awakening of the members of the New Hampshire Audubon Society. Your agent was appealed to; a bill was introduced repealing the act for the "protection" of trout and, after a well-attended hearing before the Committee on Fisheries and Game, it was passed and signed by the Governor, and the Great Blue Heron is still protected by law in New Hampshire. Mink, Sable, Otter, Muskrats, Skunks and Foxes, are now protected between April 1 and October 15, but the law allows a person to kill foxes and skunks at any time on his own land. This provision was inserted as a protection to the farmer. Acts were passed for the purpose of rendering hunters more careful of fire and firearms, and a large number of bills inimical to bird and game provisions were defeated.

MASSACHUSETTS.—The Association was put upon the defensive, in Massachusetts, by the large number of bills introduced in opposition to the interest of bird protectors. A very strong effort was made to extend the season on wild fowl beyond January first. Several bills were introduced for this purpose, naming different dates for the close of the season. But, after a long and tedious legislative fight, all of them were finally and decidedly defeated, as were all other bills intended to extend the shooting season. Included in these were bills to allow the killing of deer in sections of the state where they are now protected at all times. Several bills for the conservation of birds and game were passed. The close season on the Wood Duck was extended five years. Night shooting of wild fowl was prohibited. The use of live decoys for the hunting of wild fowl was forbidden in the county of Nantucket, and the law on hares and rabbits was modified by prohibiting the digging-out of these animals. The sum of \$10,000 was appropriated for one or more game farms. The Hunters' License Bill was redrafted and strengthened in some ways; but a provision was admitted which permits members of certain Massachusetts clubs residing outside the state to shoot within the state, under a license with a fee of only one dollar. The National Association of Audubon Societies has advocated, for years, laws establishing public reservations for the protection of birds. Massachusetts, following this idea, has made all public lands reservations for the protection of birds and game. This year, another act was passed, which enables the Commissioners on Fisheries and Game to take private lands, for a series of years, to declare them state game preserves, and to protect and propagate birds and quadrupeds upon them. The project to take Benson's Pond, a state pond in Middleboro, and turn it over to a corporation, was heard before the Harbor and Land Commissioners, to whom the matter was referred by the General Court of Massachusetts, in 1910.

Two hearings were held, one at Middleboro, Mass., where the Association was represented by its counsel, James A. Lowell, Esq., and the other at the State House in Boston. The hearings were largely attended, and much opposition to the plan was manifested. The Commissioners on Harbors and Lands reported impartially, but their report was rather against the plan. Nevertheless, a bill covering the project was assigned a hearing before the Committee on Harbors and Lands in the Legislature, but the petitioners finally withdrew. Apparently this disposes of the scheme to take a state pond from the public. Had the plan succeeded, it would have formed a precedent under which other shallow ponds which now offer breeding-places and bathing-places for birds could have been taken.

Another attempt was made this year to pass a law which would permit hunting on certain lands of the metropolitan water-board which are now public reservations. This was strongly opposed, and was defeated.

Several attempts were made, as in past years, to secure a change in the Fish and Game Commission. Bills were introduced to abolish it, and to con-

solidate it with another department, and to reorganize it with a single head. All of these attempts failed, and, the term of Commissioner John W. Delano having expired, the Governor appointed in his place Mr. George H. Graham, of Springfield. This excellent appointment gives to western Massachusetts a representative on the Commission—a privilege which that section has not enjoyed for many years.

RHODE ISLAND.—The volume of attempted legislation in Rhode Island was small. Only nine bills affecting the protection of birds and animals were presented. The Rhode Island Audubon Society presented a bill establishing an office of State Ornithologist. This bill was advocated before the Committee on Agriculture by representatives of that association and by your agent; it was favored by the Secretary of the Board of Agriculture, and met with no public opposition. Secret and powerful influences worked successfully, however, to defeat it. As a matter of necessary economy, and because of the great amount of work that was imperative in other states, your agent was obliged to spend as little time as possible in Rhode Island, and depended on others to keep him informed regarding the bills that were introduced. By a misunderstanding, one bill did not reach him until nearly the last of the session, when it had passed both houses. The part of this bill which is now a law prohibits the sale of shore birds, but extends the open season fifteen days. The advocates of protection believed that they were making a gain by conceding fifteen days more open season, and securing the prohibition of sale. Undoubtedly, however, the season might have been held where it was, and the sale prohibited, also, had the matter been taken up in time. An act for the extending of the open season of fifteen days on rabbits, hares and gray squirrels was passed. The others were defeated, as, although some of them contained good provisions, they also contained bad ones. The Hunters' License Bill was strengthened by prohibiting issuance of licenses to boys under fifteen years of age.

CONNECTICUT.—The mass of legislation proposed in Connecticut was somewhat confusing, owing to the number and variety of bills covering certain subjects. Some of these bills were legislative curiosities. One, for example, proposed to allow each town to regulate the protection of birds and game in any way that it might see fit. Such a law would have placed the State of Connecticut in a position worse than that of North Carolina, where a system of county laws now exists. Laws were proposed to allow night shooting, spring shooting, the shooting of birds from power-boats, etc. Twelve bills were introduced to change the present law regarding wild fowl. Most of these extended the shooting season beyond the first of January, and one was intended to abolish the present law altogether. These were all finally defeated except one, which proposed to close the month of September, and open the month of January, to shooting. The Committee on Fisheries and Game did not agree upon this, and made a divided report. After that, the bill was the football

of the Legislature for several months. Finally, near the end of the session, the House and Senate disagreed regarding the bill. The committee of conference failed to agree, both houses persisted in their respective positions, and the bill remains unenacted, leaving the law which this Association originally favored still on the statute books. Space permits only a very brief report on the legislation of Connecticut, but it is interesting to note that the activities of collectors were limited by an amendment to the present law. There is now a tendency among Fish and Game Commissions and gunners generally, to limit the scientific collection of birds, eggs and nests. A bill introduced in New Hampshire at the instance of the Fish and Game Commission, and passed, cuts off collecting in New Hampshire altogether. On the whole, the legislation in Connecticut during the past year has been progressive, and has tended toward better protection. Attempts to establish an open season on deer were defeated, although strongly advocated by a large number of people. Owing to necessity for retrenchment and a pressure of other work, your agent's absence from Connecticut was necessitated at some critical periods, and he has not yet been able to examine critically the result of the legislative work of the year; but he believes that the people of Connecticut are fully aware, today, of the importance of bird protection, and that the laws of the state, as they now appear on the statute books, well express the advanced convictions of the people.

REPORT OF WILLIAM L. FINLEY

The feature of Audubon work on the Pacific coast that is rapidly proving of most value is the permanent protection that is now given to wild birds on our government reservations. On the Oregon coast, Three Arch Rocks Reservation has been under the protection of Mr. George E. Leach. The season has been favorable, the birds have been undisturbed by hunters, and large numbers of young were hatched. Prof. M. E. Peck, of Salem, made a tour of inspection of the reservations off the Washington coast during the past summer, and reported favorable conditions. Klamath Lake Reservation has been in charge of Mr. L. Alva Lewis, who is a most efficient warden. Mr. Lewis is now supervising warden over the three reservations, Klamath, Malheur and Clear Lake, while Mr. C. O. Brown has been appointed as warden in charge of Klamath Lake Reservation. Mr. Harry Telford is warden in charge of Malheur Lake Reservation, and Mr. John A. Smith has been appointed for Clear Lake Reservation.

It is very fortunate that Clear Lake, in the northern part of California, has been set aside, during the past year, by President Taft as a wild-bird reservation. This is an important breeding-place for water fowl and one that needs protection, because a few White Herons, or American Egrets, still nest here. Heretofore it has been impossible to give these birds protection from plume-hunters, but now this can be accomplished.

In speaking of this new reservation, Mr. Lewis has the following to say: "With the completion of the dam by the Reclamation Service, the water of the lake rose, during the spring months, about eight feet, and has since receded over two feet, leaving the surface of the lake about six feet higher than normal. The marsh area at the eastern end of the lake has disappeared, with the exception of a growth of *wocus* which has managed to reach the surface. The dam will cause the water of the lake to rise close to fifteen feet, yet; so that thousands of acres of sage-brush land will be overflowed. On account of this rise, the value of the lake as a breeding-place may be temporarily destroyed; but, as new shore lines are established, vegetation will spring up, and the lake will become of even more importance than heretofore as a breeding-place for water fowl."

"During the past season, on one island of an acre and a half in extent, the keeper of the head-gate told me there were eight nests of the Honker Goose. There were likely several hundreds of nests of this bird in the vicinity. On the north and east shores of the lake can be seen thousands of Ducks, among which I noted the Mallard, Pintail, Shoveler, Ruddy, Canvasback Red-head, Green-wing, and Cinnamon Teal and Greater Scaup."

"On Clear Lake there are a large number of Western Grebes nesting. As an illustration of their numbers, I counted forty-two in sight at one time, while standing on the dam. This was in a strip of water about two hundred feet wide by two hundred and fifty yards long. From the center of the lake I counted eighty-seven without the aid of glasses, which is remarkable when it is known that there are less Grebe out in the middle of the lake than along the shores. That many Grebes nested on the lake is shown by the large number of young seen, nearly one-half, and many of these were still carried on the backs of old birds. The Grebes here are much tamer than on the Lower Klamath, and it is not uncommon to get within fifty feet of the old birds in open water."

"A few White Heron are still left on this lake. I saw three at one time. I am inclined to believe there are from six to ten left on the lake. The birds I saw were very wild. Large numbers of California Gulls nest on the lake, but it was noteworthy that I saw no Pelicans nor Terns."

After careful investigation, we have been able to discover but one other colony of White Herons, or American Egrets, in the lake region of southern Oregon and northern California. Besides the small colony at Clear Lake, there is another colony in southern Oregon. This is outside the boundaries of one of our reservations. Three years ago, this colony was reduced until it contained but five birds. During the past summer, there were twenty-one old birds and ten nests in the colony. There were forty young, making sixty-one birds for that locality. The Oregon Audubon Society is attempting to raise a special fund to protect this colony of White Herons, which is likely the only one in

the state surviving the thousands of White Herons that formerly lived in this extensive lake region.

Last spring, legislative sessions were held in all the Pacific coast states. In Oregon and Washington very few bills were proposed that were considered detrimental, and these were killed in committees. It was rather different in California, where, for the past few years, there has been complaint against certain birds in their relation to horticulture and agriculture. After a hard fight, Audubon workers in California succeeded in preventing the passage of laws removing protection from Meadowlarks, as well as Kingfishers, Grebes, Terns, Night Herons, Bitterns, Pelicans and Cormorants. By the employment of an expert to carefully investigate the relation of certain birds to farming and fruit-growing, steps have been taken by the California Fish and Game Commission to ward off difficulties of this kind in future. The employment by the commission of Miss Gretchen L. Libby, who has been so successful in school work, is a decided step for bird protection in this state. She will continue educational work, especially among the children.

The Oregon legislature passed a law giving the Governor of the state power to set aside by special proclamation all lands surrounding state institutions to be known as wild-bird and game refuges. As soon as this law went into effect, Governor West issued a proclamation setting aside these lands. The most important of these reservations is an area of about three thousand acres surrounding the institutions at Salem. This land is varied in character, partially wooded and part in cultivated fields, some hill land and some bottom land, all of which is well watered with springs and streams. Another reserve of about four hundred acres surrounds the State Hospital, near Pendleton. This land is thoroughly stocked with Bob-white. There are also many of these birds on the reservation about Salem, and other parts of the state are now stocked with Bob-white, which were imported from the East a number of years ago.

This same law gives the State Game Warden power to enter into a contract with the owner or owners of private lands to set aside these lands as bird reserves. Several large tracts have already been made into reservations, and there are other proposed reserves, so it is likely that Oregon will soon be provided with many sanctuaries for these wild creatures. The law provides both a fine and imprisonment penalty for violation by shooting or disturbing wild birds and animals protected by law.

The Oregon Audubon Society has been fortunate by being remembered in a bequest which was left by one of its friends. Mrs. Walter Dyer left a legacy to the Society of \$2,500. This amount is to be known as the Byron Holmes Bequest, and the income will be devoted to the protection of Oregon birds.

As lecturer and agent for the National Association, during the past year, I have given forty-seven different talks to audiences aggregating about 12,000

people. There is continual demand for bird talks, especially among the different schools and throughout the country, and there is a growing demand for bird-pictures and information concerning our native birds.

Last spring the manual training pupils of the Portland schools made several hundred bird-houses. An exhibition of these was held in Portland and attracted wide attention. Many of the houses were sold and the money turned over to the pupils. The interest in building bird-houses, and bird protection in general, has grown to such an extent that State Superintendent of Public Instruction, L. R. Alderman, has made it one of the requirements during the coming year that all the school children in the state shall build bird-houses.

REPORT OF CAPT. M. B. DAVIS

During the present year, the Texas Audubon Society probably doubled its activities, in some of the divisions of bird life, coming very near mastering the situation. We began the present year with a series of illustrated lectures, delivered in far west, middle west and central Texas, and we believe we accomplished very great good. The annual columns of transitory birds, such as Robins, Plover and Curlew, were being crushed out, and very active measures were applied to the case. All that we could do, with the means at our disposal, was done, and during the present year our lectures have been delivered in all of the places at which the migrants halted during the winter season.

I consider that the greatest achievement accomplished is the close affiliation we have made with the Texas Farmers' Congress. Under the powerful patronage of that organization, we have been popularly received in all of the farmers' institutes in the state. The effect of our active campaigning is plainly to be seen in the great increase in wild-bird life in the meadows, the forests and the fields, all over the state of Texas.

In the early part of the present year, we lectured before the State Nurserymen's Association, following that lecture up with lectures before the Corn Growers' Association, the Cotton Planters' Association and the Citrus Fruit Growers' Association. Our lecturers have been warmly received wherever we have appeared. During the session of the Farmers' Congress last July, Mrs. Davis and myself, with our stereopticon slides, charts and leaflets, bivouacked with the farmers and their wives on the spacious grounds of the Agricultural and Mechanical College. Not only did we lecture to the main body, but in all of the divisions of the Congress, as each division holds a meeting independent of the main body.

Beginning in April last, we kept half a dozen gentlemen and ladies in the field lecturing for the protection of all bird life, but paying particular attention to the aigrette-bearing Heron. In a complete survey of a large area of the coast land, we located a colony of plume-bearing White Egrets, and also large colonies of other Herons. We ascertained that the lumbermen and

their families had taken great interest in the Snowy and the American Egrets. In the one small colony of plume-bearing Herons located in a marsh in Jasper county, we counted nearly forty members. These went through the breeding season undisturbed, about doubling their number by the time the breeding season was over. In Sabine county, we beheld a dance of Egrets. This small flock of big Herons remained on the breeding-grounds for a long time after their breeding was over. They appeared to select partners and to change corners, going through all the maneuvers of a county ball. There were very few of these birds, the males outnumbering the females, and this led to fierce combats. I do not know how much uncut lumber land is left in Texas, but it is disappearing rapidly, and it will be necessary to establish sanctuaries for the preservation of the Herons, or they will disappear, if for no other cause, from the clearing up of the forests and the draining of the marshes. The move for the establishment of bird sanctuaries has been started, and we believe that we shall have a donation of about fifty thousand acres of high-grade pine land, donated to us for the purpose of giving ample protection to these beautiful and fast-disappearing birds.

Confining ourselves to no one division of the bird family, we are, nevertheless, making a special fight for the Plovers, Curlews and other migrants. It is very likely that we shall be able to give the Robins excellent protection this winter. In the coast lands of Texas, the Robins reach here as early as October, but the great volume of their migration spreads over all Texas east of the 100th meridian of longitude, and all over the northern states of Mexico, later in the season.

In addition to protection of birds, the Texas Audubon Society has worked hard to preserve a useful member of the lizard tribe, called the 'horned toad.' They may be ranked as among the best insect-destroyers in the world. Nevertheless, the farmers and cattlemen have permitted them to be captured and sold in crate-load lots, leading inevitably to annihilation. The Secretary of the Texas Audubon Society made three surveys for the benefit of the horned toad, one in Shackelford, one in Jones, and the third in Lampasas county. It was ascertained that the little reptiles were diminishing at an awful rate. By publishing articles in the local newspapers at these points, and by writing innumerable letters to influential educators and to farmers, we managed to bring this horrible work to a halt.

The ladies of Texas have organized against the use of what is known as metallized horned toads, adapted by the milliners, and forced into popularity as ornaments for buckles, and mounts for hat pins. Nothing that the Audubon Society has accomplished will prove of greater benefit in the southwest than the protection of the horned toad. Once, I have no doubt, in some localities, five hundred horned toads have been captured in a twenty-five acre lot. It has come to pass, through wanton destruction of the tribe, that it would now take a pretty large acreage to yield one hundred horned toads.

We are about to start out on a campaign for the organization of the Junior Audubon Clubs, and we believe we shall have better success in the future, because we have learned a great deal as to what is necessary to accomplish the purpose. The organization of these junior clubs will constitute the bulk of the work, for the present.

The Mothers' Congress and the State Educational Association are the next points where we will lecture with our pictures and our charts. Both these organizations have cordially invited the Audubon lecturers to appear before them.

REPORT OF KATHARINE H. STUART

It having been decided by the Virginia Audubon Society that the educational work was to be the first consideration, my energies have been largely spent in that direction, although the calls in all departments have been answered as far as time and strength would permit.

It was necessary to secure the coöperation of our Board of Education and, with their consent, to bring before the teachers of the state the importance of conserving our game and non-game birds, and to show that the school-room was to be the battleground in which the war was to be waged and the victory won, by training the young to see that 'the Bird in the bush is worth two in the hand.' Through the courtesy of Mr. Eggleston, State Superintendent of Schools, the opportunity was given me to address the teachers of the state, at the Annual Conference, held in Richmond, and, at the same time, to give out the "Announcements to Southern Teachers." And thus was launched our first work, under the Sage Fund, for bird study in our schools.

After the conference, I wrote to all the superintendents and principals of the schools, asking permission to visit and bring before the children our work. These letters were graciously received throughout the state, and the work has steadily increased, until it is safe to say there is not a school in Virginia where bird study is not a part of the class-work.

It is interesting to note that Virginia stands first in Junior Audubon Classes, and great credit is due our energetic President, Mrs. W. E. Harris, and our efficient Secretary, Mrs. A. S. Buford, for the vast amount of work done by them at the Richmond office. The largest number of classes were organized in Lynchburg and Staunton. The largest single class was organized in Biggers School, Lynchburg, by Miss Nowlin, and has a membership of one hundred and sixteen.

I have visited twenty-five counties, and given one hundred illustrated talks to thirty thousand teachers, school children and mixed audiences, since the first of the year. As Chairman of Conservation, Virginia Federation of Women's Clubs, I visited all the clubs of the state, and secured prizes for our

children who wrote the best essays on our Virginia birds. A number of these were awarded on May 4. The work done by the club women in this line, under their able leader, Mrs. W. W. King, and their readiness to assist me at all times, has greatly aided the movement in the state.

I have been in close touch with Mrs. Crocker and Mrs. Hornbrooke, representing the National Federation of Women's Clubs, in all their splendid work for the Appalachian Bill and the Conservation of our Birds. We sent a petition to the New York Assembly, at their earnest request, during the late controversy over the plumage bill.

In outside work, I gave a bird talk and outing to the children of Millbrook, Dutchess County, N. Y., and did some work in the White Mountains, to arouse interest in the National Association. I am glad to do such work whenever the opportunity presents itself.

The circular sent out to the Game Wardens, asking their coöperation, and urging the winter feeding of wild birds, did vast good, and the results are shown in an increase of Wild Turkeys, and Bob-whites and other game birds. The school children were asked to make and put up bird-boxes, and hundreds have united in this work, thus increasing our Wrens and Bluebirds, which have been quite numerous this season. There are many "lunch-tables" in the old gardens, and the interest is great all over the Old Commonwealth in better protection for our bird life. Dr. William Plecher, a distinguished member of the State Board of Health, has done splendid work in the counties of Mecklenburg, Lunenburg, Brunswick and Greenville. He has given ninety lectures to ten or twelve thousand people. His work is "a labor of love," and the thanks of our state is due him for his efforts in behalf of our "feathered brothers." Our Governor declared May 4, Audubon's Birthday, Virginia Bird Day, and called on all the schools to observe it. This we regard as the best result of our efforts this year, and in this act Governor Mann has greatly endeared himself to all nature lovers, and we see a brighter day dawning for Virginia in bird protection. The day was beautifully observed all over the state, not as a holiday, but a day to study and know these feathered friends as our schools never knew them before.

The increase of our song and insect-eating birds has been marked, especially the Mockingbirds, flocks of them having been seen in Bedford county and other places; and they have appeared in historic gardens near our old town, where they have not been seen for thirty-five years.

Our attention will be largely turned, during the winter, to getting a State Game Commission appointed. The time is ripe, and we feel sure that our next Legislature will better conditions on these lines. The Robin will be looked after by the children of the state, and we hope that he will be given his freedom on the 19th day of January, the birthday of our immortal Robert E. Lee, whose tenderness for his horse "Traveler," and love for the birds make him—to quote from Dr. Stillman, President of American Humane Association—

"an example for humanitarians, North and South." The children of Virginia will ask that the Robin, the friend of their childhood, shall be taken off the game list.

REPORT OF FRANCIS HARPER ON GARDINER'S ISLAND (N. Y.) BIRD COLONIES

It was my pleasure to visit Gardiner's Island, New York, during the past summer. My stay extended from June 8 to June 19, during part of which time I had as associates several enthusiastic bird-lovers from the neighborhood of New York.

The colony of Common Terns located on the beach and the marsh at the south end of the island numbered about 200 individuals. This is apparently an increase since 1908, when I estimated the number at 150. The colony may include one or two pairs of Roseate Terns, since I noted several of these birds in the immediate vicinity. The entire colony seems to be perfectly free from molestation of any sort. About seven or eight pairs of Piping Plover also breed at this end of the island.

On June 18, I spent most of the day at Cortright Island. This is a sandy strip, about half a mile long, which was formed only six or eight years ago, and lies just off the south end of Gardiner's Island. A vigorous colony of birds is located here. Perhaps 500 to 600 Common Terns and from five to ten pairs of Roseate Terns breed on the island, not to mention several Fish Hawks, Piping Plover, and Spotted Sandpipers. I noticed two or three dead Common Terns, but found no other evidence that the birds were disturbed in any way.

We were told by the fishermen that several hundred Terns nest around the old fortifications on Gardiner's Point, at the north end of the island, but we did not have an opportunity to visit the place. The fishermen also stated that a considerable number of eggs had been taken there in previous years.

In spite of statements to the effect that the Fish Hawks of the island are not increasing, my impression is that they are now more numerous than in 1908; an impression also shared by my companion, Mr. Howard H. Cleaves, who accompanied me. For instance, from a single vantage point I counted thirty-five nests. Full twenty nests built on the ground or boulders are to be found on Gardiner's and Cortright Islands.

There is a large and flourishing colony of Night Herons near Tobacco Lot Pond. It was found to contain 200 or more birds. Several Great Blue Herons were also noted here. We saw five or six Short-eared Owls almost daily near the south end of Gardiner's Island.

Mr. Cleaves recorded fifty-one species of birds on Gardiner's Island during the course of his stay, which extended over a period of seven days, beginning June 8.

REPORT OF HOWARD H. CLEAVES ON VIRGINIA COAST COLONIES

In company with Mr. Francis Harper, I left New York on the night of July 24, 1911, at nine o'clock, and at eight o'clock on the following morning we were on Cobb's Island, Virginia. Immediately after breakfast, we set out for a section of the marsh back of the Cobb's Island Club House, where Mr. George Isdell, the proprietor, assured us that we should find Laughing Gulls nesting.

The colony behind the club house we found to be a very small one, being made up of perhaps not more than a dozen pairs. After some searching, we



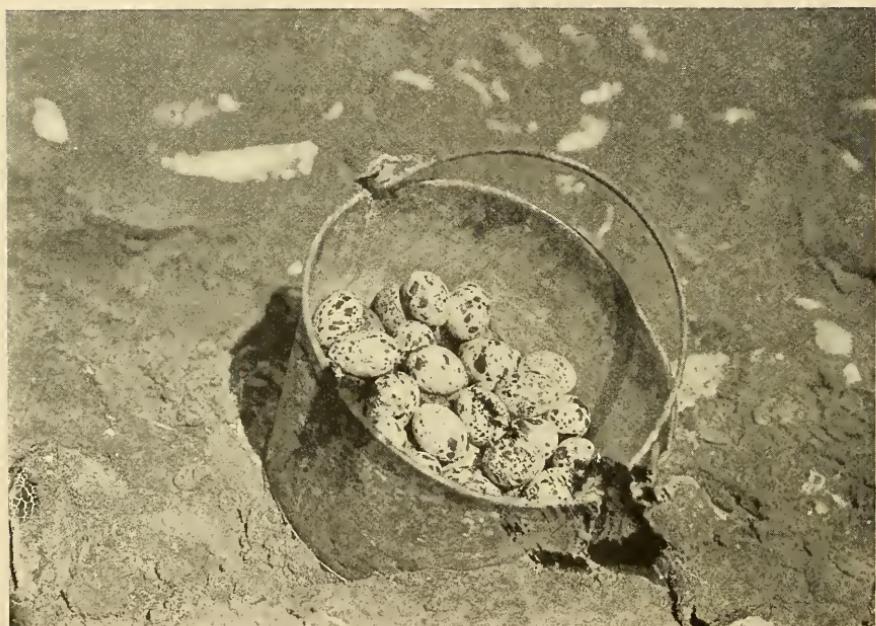
GATHERING SEA-BIRD EGGS FOR FOOD ON COBB'S ISLAND, VIRGINIA
Photographed by Howard H. Cleaves

succeeded in locating several nests, most of which had been wrecked, apparently by flood tides. We were informed that the main colony of Laughing Gulls was farther to the north, but we did not have time to visit this area. Mr. Isdell also told us that the Black Skimmers nested in the northern section of the island, in small numbers.

On the morning of July 26, we were transferred from Cobb's Island to Wreck Island, several miles distant, where we camped on the open sand-dunes, until Friday, July 30, studying and photographing the Black Skimmers that were attempting to nest there.

Upon approaching the colony, we were of the opinion that each bird of the solid masses seen was standing over her nest; but we soon came to the conclusion that this massing was simply one of the social traits of the Skimmer, for, shortly after a bunch of birds was disturbed, a few individuals would settle on the sand, and about this nucleus would reassemble the entire company.

We had not far to search to find our first Skimmer's nest, but, considering the numbers of birds present, we were highly disappointed in not discovering greater numbers of nests as our search progressed. There were scores of depressions in the sand that were evidently the deserted nests of birds. The reason for this was brought forcibly to our notice the next morning, for, just as we



BLACK SKIMMER EGGS GATHERED BY EGGERS ON COBB'S ISLAND, VIRGINIA
Photographed by Howard H. Cleaves

were preparing breakfast, we observed a very much perturbed cloud of birds above the southern portion of the island, and presently we made out the forms of three men walking about as they advanced toward us, stooping at frequent intervals to pick up the eggs of the 'Flood Gulls,' as the Skimmers are locally called. Through our field-glasses we could make out that one of the party carried a basket, in which all three men were depositing their finds.

On approaching the trio we found the 'eggers' to be quiet, congenial fellows, who had no more scruples about robbing the 'Gulls' of their eggs than any one might have about gathering the eggs of the barnyard fowl or collecting apples in an orchard. Egging had been indulged in for generations—fathers,

grandfathers and great-grandfathers had probably egged on these sandy stretches—and the tendency to do so in the present generation was as inherent as the inclination to eat three meals per day.

Not the slightest objection was raised to photographic operations, and no backwardness was displayed in answering any questions with which we chose to ply our new acquaintances. They had come all the way from Chincoteague by boat,—in fact were on a several days' cruise, principally for the purpose of gathering eggs. Where did they sell the eggs? Never sold an egg, had barely enough for family use. How many eggs were in the basket? Oh, about 550, counting those of the 'strikers,' (Common Terns). We now noticed that a considerable number of Terns' eggs were mixed in with those of the Skimmers.

There is a widespread erroneous opinion among the people of this coast that eggs can be legally taken until July 4.

As the eggers came within a few rods of our tent, they decided to retrace their steps and board their boat, fortunately leaving the area north of the camp undisturbed.

The following day a party of six men and boys came ashore in a small boat and began to search for eggs in the area that the previous party had left untouched for our convenience. The new comers were immediately approached and with very little trouble were persuaded to 'egg' to the south of the camp. No mention was made of the fact that this very region had been gone over very thoroughly the day before. Much to our surprise, these men came back with nearly half a pail full of eggs—about 150 in all. This demonstrated how the poor birds, undismayed by their previous experience, had, within twenty-four hours, done much to replace their stolen treasures.

One member of this party told me that sometimes egging is carried on until the first of August, and even after that date many of the birds persevere and succeed in rearing young. Said this same man, "If the eggs were not taken, the Gulls would get so thick you couldn't live here." This, however, was a mere speculation on his part, and he had no idea of trying the experiment of leaving the birds unmolested. They very generously offered us some Skimmer eggs for our breakfast. "Pick out twenty-five or thirty of them to fry," they said; but we declined.

When we first landed on Wreck Island, I should have imagined that there were at least five or six hundred Skimmers there; but they seemed to drift away as the days passed, until there were perhaps only three or four hundred birds there when we left.

The Common Terns were not found to colonize on Wreck Island, as on Gardiner's Island, New York. Their nests were more scattered, the greater number being distributed along the beach on the debris just behind the ordinary high-water mark. Of Gull-billed Terns, there were apparently none on Wreck Island, although we were certain of a few Forster's Terns. One Piping Plover, two or three Hudsonian Curlews which we were told were already

back from the nesting-grounds in the north, one or two Oyster-catchers and two Turnstones were seen while we were on Cobb's and Wreck Islands.

On July 31, we visited Smith's Island, situated about fifteen miles south of Cobb's Island. Here we also made the acquaintance of Captain Hitchins, of the Life-Saving Station situated there. At his suggestion, we were taken in a launch to Little Isaac's Island, two miles to the south, where we found Skimmers in an undisturbed condition. To be conservative, I should say that there were seven or eight hundred here, and also two hundred Common Terns. One Oyster-catcher was noted by Mr. Harper, and two Black Terns by the writer. On our way to Smith's Island, in the morning, we had noted one or two Gull-billed Terns. On the Isaac's—or Little Isaac's, as it is sometimes called—we found a Skimmer's nest containing four eggs; evidence that these birds had been left entirely to themselves.

REPORT OF P. B. PHILIPP ON BIRD ISLAND, ORANGE LAKE, FLORIDA, 1911

Bird Island, recently purchased by the National Association of Audubon Societies, is the breeding home of probably the largest colony of Herons left in Florida. It is situated in the southeastern part of the lake, a mile from the mainland, and close to the Atlantic Coast Line Railway at Orange Lake Station. Located as it is in one of the most thickly settled parts of the state, it offers a far better chance for suitable protection than most of the breeding colonies in Florida.

Bird Island covers about thirty-six acres, nine of which are, in an ordinary season, dry and grown up with a dense central growth of willow trees and bushes, with an outer growth of low elder. The remainder of the island is a wet marsh, covered with a heavy growth of rank grass and edged with lilies. Close to the main island are two similar smaller ones—Saw Grass Island of twenty-five acres, and Red Bird of five acres. Scattered about in the Lake, which here is very marshy, with many patches of lilies and rushes, are several large nameless 'tussocks,' or grassy, floating islands, all rich in bird life.

Our party camped on the shores of the lake, from May 4 to May 12, and the entire time was given to an investigation of the conditions on the islands and immediate neighboring territory, the results of which may be briefly summarized as follows:

On Bird Island, the subjoined species were found breeding, the numbers given being, for the most part, based on actual inhabited nests found and counted:

White Ibis.—This species forms the major part of the bird population of the island. They were nesting all over the island in the willow bushes, wherever the sticks were large enough to support a nest. Based on a count of nests in

two different parts of the island, we estimated there were 4,000 pairs of birds breeding. Nesting was well completed, most of the nests containing the usual three eggs. No young were seen. This species is increasing very fast, and this is the cause, the warden thinks, of some of the other Herons leaving the island.

Glossy Ibis.—This species, because of its rarity, is the most interesting of the birds of the vicinity. Six nests were found on Bird Island, and three on Saw Grass Island, the latter being found by the warden after our departure. At the time of our arrival, nesting had just begun, the nests



WHITE IBIS, ORANGE LAKE, FLORIDA ROOKERY

Photographed by P. B. Philipp

found having incomplete sets of eggs, this Ibis being the latest of the birds on the island to nest. The Glossy Ibis is extremely liable to be broken up by Fish Crows, four of the nests found by the writer being thus destroyed. Fortunately, the birds again nested, and all, according to the warden, succeeded in raising broods of young. By next season, a fine colony should be established.

American Egret.—At the time of our visit there were 12 occupied nests of this species on Bird Island, containing eggs. More birds than the 12 nests would account for were seen, but, owing to the dense brush in which they were nesting, it was very difficult to find all the nests. After we left, a large number

of Egrets came into the island, which the warden thinks were from a colony which had been broken up in another part of the state. These birds brought the total of pairs up to 66 on Bird Island, and 16 on Saw Grass Island, forming the nucleus of a fine colony which should be larger another year.

Snowy Egret.—The Snowy Egrets were well advanced in their nesting, most of the nests found having young birds just hatched. On Bird Island we found 18 nests, which number was increased to 57 by the warden in his later trips around the island. Four nests were found on Saw Grass Island, and 30 on Red Bird, making a total of at least 91 pairs of Snowy Egrets on the three islands, most of which successfully raised young.



GLOSSY IBIS, MALE, FEMALE AND FOUR YOUNG, ORANGE LAKE, FLORIDA, ROOKERY
Photographed by O. E. Baynard

Reddish Egret.—One pair of this now too uncommon Egret was found on Bird Island, and the nest, containing four eggs, was located. The birds were nesting in the colony of Egrets in the central part of the island, and both birds were seen at the nest while photographing an Egret.

Little Blue Heron.—Next to the White Ibis, the Little Blue Heron is the most numerous of the species nesting on the island, their number being estimated at 2,500 pairs. The nesting was well advanced, most of the birds having young in various stages of growth, though a few nests with eggs were found. About 1,000 more pairs were nesting on Saw Grass Island.

Louisiana Heron.—This Heron in numbers comes next to the Little Blue. About 1,000 pairs was the estimate of the number nesting in the lower bushes

around the edge of the island. On Saw Grass, 50 more pairs were nesting, and on the "tussocks" between Bird Island and Red Bird Island, a hundred odd further pairs were observed, all nesting. The Louisianas had young birds in various stages of growth.

Water-Turkey.—160 pairs were breeding on Bird Island, and about 200 pairs on Saw Grass Island. The nests were completed and laying had begun.

Other species nesting on or close to the island were: Little Green Heron, 60 pairs on Bird Island and 30 pairs on Saw Grass Island; Black Crowned



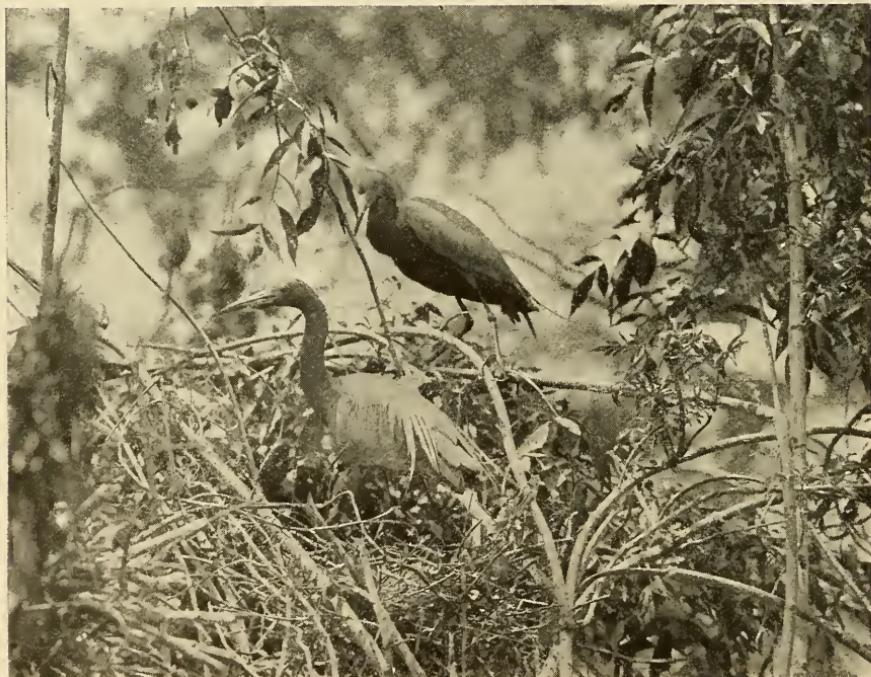
FEMALE WATER-TURKEY, ORANGE LAKE, FLORIDA, ROOKERY
Photographed by P. B. Philipp

Night Heron, 25 pairs; Yellow Crowned Night Heron, 25 pairs; Least Bittern, 6 or 8 pairs nesting in the marsh about the island; Wood Duck, 1 pair; Purple Gallinule, abundant; Florida Gallinule, common; Florida Red-winged Blackbird, abundant; Boat-tailed Grackle, abundant; King Rail, 2 pairs; Prairie Warbler, 5 pairs.

Altogether, on the three islands, we estimated a bird population of approximately 10,000 pairs. This estimate is an exceedingly conservative one, the actual number of birds probably being much in excess of the figures given.

The colony is, therefore, one of the largest in the state, and numbers among its inhabitants some of the birds whose names are rapidly becoming

memories. Every effort should be made suitably to protect it. Its situation, and the sympathy of the people in the neighborhood, should make it a very easy matter to afford such protection, and I cannot advise too strongly that the Audubon Society concentrate its efforts on this spot. The colonies, or what are left of the colonies, in the southern part of the state—in the Big Cypress, the Everglades, and the Keys,—are so situated that it is almost impossible to give them any protection. Here, at Orange Lake, there is room for the colony to grow. Birds from other colonies which have been broken up drift in here, and there is every reason to believe that, with a little attention, a colony can be established which would be a monument to the National Association and one of the sights of Florida. Certainly no better chance will ever be offered.



LITTLE BLUE HERONS AND NEST, ORANGE LAKE, FLORIDA, ROOKERY

Photographed by P. B. Philipp

STATE AUDUBON REPORTS

California.—The past year has been a busy one for our Society, with most satisfactory results.

Early in October, Miss Gretchen L. Libby, our School Secretary, again took up the work so successfully carried on by her the year before. This educational work was given financial assistance by a gift of \$250 by Mrs. Russell Sage. The past year being a legislative one, it became necessary for Miss Libby to leave the school work and go to Sacramento, to look after our interests there. She spent the greater part of February and March in legislative work. Early in the session, a bill was introduced in the Assembly to remove protection from the Meadowlark. Later, it was amended by its author, and made to apply only to certain of the valley counties. In the end, it was defeated in the Assembly by a vote of 49 to 23, thanks to the untiring efforts of Miss Libby and the many friends of this Society. Another adverse bill, introduced in the Senate, aimed to take protection from the Kingfisher, Grebe, Tern, Night Heron, Pelican, Bittern, and Cormorant. This was an especially dangerous measure, as it would have made possible the wholesale slaughter of Grebes and Terns for millinery purposes. This bill was amended in Committee and never came up for final passage.

A law was enacted, dividing the state into six game districts. This makes it possible to arrange the open seasons in different districts in such a way as to avoid much killing of game birds during the nesting season. While, heretofore, in Southern California, the Dove season opened July 15, while the birds were still nesting, it does not now open until September 1. The season for the Valley Quail is limited to one month in the Sixth District, which will give these splendid birds a chance to increase in certain sections where they are now scarce.

At the close of the legislative session, Miss Libby severed her official connection with this Society and accepted the position of Educational Assistant with the State Fish and Game Commission, and has continued the work on practically the same lines as heretofore. During the year, she visited 15 counties, 40 towns, 114 schools; gave 242 talks to 17,450 people.

Though a few milliners in the state have been offering for sale plumes of the Snowy Egret and Grebes' breasts, it has, on the whole, been ignorance as to the law, rather than a desire on their part to evade it. I believe, as a rule, the milliners of California are not averse to the present law.

This year, a very good "Bird and Arbor Day" booklet was issued by State Superintendent Hyatt, much of the material being supplied by the Audubon Society.

During the year, a most important undertaking has been successfully launched by W. Leon Dawson, author of "Birds of Washington" and "Birds

of Ohio," assisted by the Cooper Ornithological Club of California. It is Mr. Dawson's intention to spend five years in studying the birds of the state, and in writing "The Birds of California," in three superb volumes. The work will be illustrated by colored paintings of birds by Allen Brooks, by photographs and photogravures.

Our work was given an impetus by the presence, in May, of Dr. Henry Oldys, who gave his splendid lecture on "Bird Notes" before enthusiastic audiences.—MRS. HARRIET W. MYERS, *Secretary*.

Connecticut.—The report of the Connecticut Society, during the past year, is one of generalities rather than of detail. The membership has steadily increased, but that alone does not indicate the widespread influence that has been extended, resulting as it has in many bands of bird protectionists, who have organized for similar work without technically joining the Society.

This widespread sentiment has so permeated the state that at last it has been possible to pass a legislative bill curbing and regulating the taking of birds and eggs by collectors,—a much-needed measure; as, in many cases in this state, as elsewhere, the term "scientific collector" can be interpreted to read "commercial trader," and, even in the best sense, there is no reason for allowing the most ardent non-commercial scientific collector to become an exterminator.

Certain methods of interesting school children have undergone a change. Ten years ago, the traveling-lecture outfits, with colored slides and easily manipulated oil-lanterns, were one of our most potent teachers; but, with the great improvement in method—the introduction of moving-picture shows—even in very small towns, the pictures thrown by the oil-lantern have lost their hold in a great measure. In lieu of adding to these outfits, we find it better to build up the traveling libraries, increase the circulation of the colored bird charts that were originated by the Massachusetts Society, and start a widespread campaign for the distribution of the leaflets issued by the National Association.

To touch and possess are very strong instincts, and a leaflet in the hand often proves of tenfold greater influence than the picture on the screen, that must vanish before it can be completely possessed, even by memory. It is not too much to hope that in time we may thus reach every free school in the state, and we expect, during the coming year, not only to add a bound volume of the leaflets to each of our circulating libraries, but to send with each a set of the separate leaflets, to be given to pupils who show special interest.

A large measure of the success of the Connecticut Society is owed to the intelligent coöperation of the State Board of Education, and to the officials of the Fish and Game Commission, as well. There are ultra-sentimentalists who think that the Audubon Societies should begin and end their efforts

with the protection of song birds. Connecticut has always stood for the conservative middle course of fair play and fair game-bird laws for the sportsmen, and we do not forget that it is the result of the gun-license law that makes it possible to put wardens in the field, who also extend their protection to the non-game birds.—*MRS. MABEL OSGOOD WRIGHT, President.*

District of Columbia.—Since our last report, we have had several outings, or field meetings—one to observe the fall migrations under the leadership of Professor Bartsch, another to the Zoölogical Park with Dr. Theodore Palmer as our leader, and five or six walks this spring with several leaders for each outing. One of our spring walks was arranged especially for our Juniors, —that is, members of our Society under eighteen years of age.

This spring, the outings were, of course, free to members of the Society, but, owing to their growing popularity and tendency to deteriorate into mere picnics, we charged non-members fifty cents for the five walks. We found that this plan worked well. On each walk we had three or more competent leaders, members of the Biological Survey, and others, so that those attending were divided into small groups; in that way, we felt that the walks this spring were much more instructive and satisfactory than in the past. Our walks were attended by a total of 97 persons, and 103 varieties of birds were seen; the most unusual, perhaps, being six individuals of the Cape May Warblers, seen May 13.

Our spring outings were preceded by our annual bird-study classes. As a number of the public school teachers usually attend these classes, we were allowed the free use of several rooms in one of the large school buildings. Our enrollment was seventy-one (71), of whom thirty-four (34) were members of our Society.

We also had a number of extremely interesting lectures during the winter. Our membership continues about the same, a few dropping out and others taking their places.

We have continued the issuing of "Current Items of Interest," under the able editorship of Mr. Henry Oldys. Copies of these leaflets have been sent to the secretaries of all the state societies, and will be sent to any others who will notify the Secretary of their desire to see them; or they will be forwarded to other societies, at the rate of five hundred copies for four dollars (\$4.00), if sent to one address.—*MISS HELEN P. CHILDS, Secretary.*

Florida.—The Florida Audubon Society held its tenth annual meeting on March 28, 1911. If each year, as we present our report to the Association, we feel a certain amount of discouragement in not showing greater results, we would ask the members of the Association to review these ten years and observe, throughout the state, the change of attitude among Floridians regarding bird protection. We meet in this bird-land of Florida obstacles that require

Herculean strength to overthrow, yet the state which should listen to our suggestions for its benefit turns to us a deaf ear.

All laws regarding licenses should be revised, especially that for "scientific purpose;" no birds, or skins of birds, taken under any form of license should be used for trade; no association, society or person, outside the state of Florida, should have the right to issue any form of license or permit for shooting or collecting birds, their skins, plumage or eggs, in Florida. The object of our Society is thus defeated, as numbers of birds are taken every year under various pretexts, to enrich public or private collections, as well as for commercial purposes.

Recently, a bill presented by Senator Williams, of Tallahassee, was lost in the Legislature. This bill was "to provide for re-adjustment of all licenses, to regulate closed seasons for game birds, and to provide means for deriving a revenue therefrom; to provide for the appointment of a game, fish and forest commissioner, also deputy commissioner, game wardens and game reserves." The importance of this bill from an economic standpoint, if for no other reason, should have claimed the attention of the Legislature.

The work of the Society has been carried on successfully by Mrs. L. P. Bronson, Treasurer, and Mrs. I. Vanderpool, Secretary. We here publicly acknowledge our indebtedness to these officers for their efficient and faithful service since the foundation of the Society. Our membership list numbers 1,500. Charts, leaflets, summaries of laws, bulletins and drawing materials have been distributed with good results. We could accomplish much more definite work with a larger income. Mr. and Mrs. Kirk Munroe made an occasion of interest when three book-prizes were presented from the Florida Audubon Society to the children at Cocoanut Grove. A Band of Mercy under Mrs. Crosby, at San Mateo, has been founded. Meetings have been held at Mantec, Ocala, and by the auxiliary at St. Petersburg under its efficient President, Mrs. Tippetts. Mrs. Roe successfully carries on the auxiliary at Port Orange. The Bird Preservation Committee of the Federation of Florida Women's Clubs have greatly extended their work. "Bird Day" has been observed very generally by the clubs, and many schools have given us reports of "Bird Day" exercises. Three prizes of two dollars each were given for compositions about birds, and four more were given for bird study to pupils of the Robert Hungerford School (colored) at Eatonville. At the Orange County State Fair, held in February at Orlando, space was given for an exhibit from the Florida Audubon Society. Mrs. Haden, of the Executive Committee, and Mrs. I. Vanderpool, Secretary, were in attendance to explain the work of the Society and many leaflets were distributed. The thanks of the Society should be extended to the "Times Union" and the press of the state, and to the Southern Express Company.

Through the interest of Mr. Oscar Baynard, an island in Orange Lake, where there were rookeries, was purchased by the National Association as

a reserve, and Mr. Baynard was made warden. A bill prohibiting "the shooting of live birds as targets" was passed by the Legislature. Florida may congratulate itself on this humane advance. In May, reports were received that "500 birds, with their backs torn off for aigrette plumes," had been found at a rookery. A recent London "Times" says: "the game protectors of the City of New York report that they are unable as yet (since June 30) to find any aigrettes for sale in that city." It may be pertinent to ask, how is one to account for the increasing amount of aigrette plumes now ornamenting women's hats all over the United States?

Mr. James Buckland of London, in his pamphlet "Pros and Cons of the Plumage Bill," says, when deplored the extermination of plumage birds: "Thirty years ago, there were millions of White Herons breeding in the United States; today, nothing remains of those vast hosts but a few colonies rigidly guarded by armed wardens. Their practical extermination was due to their slaughter in the millinery interest, and to no other cause whatever. The same may be said of the white wings of the Egrets of China." To Venezuela, Mr. Buckland says, the eye of the plume hunter was next turned, and in 1908 2,839 kilos, which represent 1,500,000 plumes of the aigrette (such as women wear on hats), were exported. To produce a kilo (1 kilo is approximately two pounds) of small plumes, 870 birds have to be killed, an appalling fact, when one realizes that, besides the mutilated and dying 870 large birds, countless numbers of small birds are left starving in the nests. And all this cruelty is for what? Simply to satisfy woman's heedless vanity, and love of feathered adornment. Our Society would suggest that this subject be made of the first importance at the next International Congress for bird preservation.—*MRS. KINGSMILL MARRS, Chairman of Executive Committee of the Florida Audubon Society.*

Illinois.—The continued illness of Mr. Dutcher, President of the National Association of Audubon Societies, makes bird-lovers work with sad hearts; though it brings the desire to make even greater efforts to carry on the work that owes so much to him.

The membership of our State Society has been increased by 31 adults and 1,877 junior members. In addition to this increase and in response to an appeal, about 40 of our former members have joined the ranks of those who pay the annual dues of one dollar.

Three illustrated lectures were kept on the road during part of the year. Our sets of pictures and libraries, however, are not so popular. We have sent out 919 leaflets. These, and the lectures, have to do the missionary work throughout the state. They are good workers, but we greatly need a "real, live missionary," to travel through the state and talk to schools, clubs, Farmers' Institutes, etc. Out of our 102 counties, there are 12, largely in the southern and southwestern portion of the state, which make no response to

our efforts. Probably our Humane Education Law will help the birds, where an appeal makes no visible impression.

We have again prepared and sent out, in connection with the Woman's Outdoor League, a programme for Arbor and Bird Day, of which 5,000 copies were printed, 3,000 being sent to the State Superintendent of Public Instruction. Part of our last year's work was the placing of portfolios of leaflets, loosely fastened together, in libraries and other public places. We have now twelve more such portfolios to be placed. We hope gradually to extend this work throughout the state.

One of our directors has been constituted a committee of one to bring us into closer touch with Farmers' Institute work, and we are considering the placing of the County Secretaries on our regular mailing list, as well as all clubs who wish to be in touch with our work and are willing to pay an annual membership fee.

The new state law of New York in relation to plumage, which took effect July 1, has been watched with some interest in Chicago. The question of the possibility of a similar law for Illinois has been much discussed. Unfortunately, the work of our Game Commissioner has been hampered by lack of funds, owing to some question connected with state appropriations. Our present law needs little change to be sufficient.

Our annual meeting, April 29, was a successful one as to attendance, and we had the pleasure of listening to Mr. Henry Oldys' excellent lecture and charming bird songs. Our former directors were re-elected, with the exception of Mrs. John V. Farwell, Jr., and Rev. George B. Pratt, who were among the charter directors of the Society. Mrs. Farwell, who had much to do with the organization of the Society, was made Vice-President.

Our financial showing was excellent, our receipts for the year being \$687.67 and our expenses \$425.75. Our active membership list, members now paying one dollar a year, now includes 295 names. This list changes every year, but gradually grows longer, in spite of many losses each year.

Slowly, but surely, the work grows, our mission being largely to induce people to stop and see the birds and listen to their songs. When we can do that, the birds can be trusted to "convert many from the error of their ways."

—MARY DRUMMOND, *Secretary*.

Indiana.—In carrying on the work of the Society for the year 1911, the policy decided upon at the organization has been closely followed.

The educational work has been conducted through lectures and talks in the schools, through articles in the newspapers, by lending the Audubon slides which are the property of the Society to various clubs for special talks in different parts of the state.

The Society has encouraged and kept in touch with the bird-study clubs in various parts of the state. While most of these clubs are organized primarily

for the study of nature, they are strong factors in maintaining, after it is aroused as well as in arousing, a public sentiment not only in nature study but in bird protection.

Before it was realized by the watchers of legislation last winter, the Legislature passed a law offering a bounty on Crows' heads and various Hawks, and also on the eggs. It was too late to prevent the passage of the law, but it was not too late to show the legislators that the law was a vicious one. Hence, these gentlemen did not provide any way of paying the bounty and, as none had been provided in the law itself, no serious harm has been done. In a few cases, men have presented themselves at the county court houses with a supply of Crows' heads, to be told that no bounty could be paid, as no means had been provided for the payment.

The annual meeting of the Society at Crawfordsville, this spring, was a specially helpful one. Besides four sessions held in the High School Auditorium, and fully attended, bird talks were given in all the schools of Crawfordsville. A new and attractive feature of the annual meeting was the session on Saturday morning at six-thirty o'clock, when a number of groups of people interested in field study went, with a competent leader, to the fields and woods, and found the birds "at home."—FLORENCE A. HOWE, *Secretary*.

Iowa.—The work of the Iowa Audubon Society, which is, in many respects, a repetition of former years, was carried on largely by correspondence, with headquarters in Waterloo.

Many earnest workers are located throughout the state, and the officers are greatly indebted to teachers and directors in public schools and colleges, where the economic value of birds is being taught.

We have been ably represented at the board meetings of the Iowa Federation of Women's Clubs by several enthusiastic workers, among whom are Dr. Margaret Clark, Waterloo, member of the Public Health Committee of the State and General Federation; Miss Maime Weller, Nashua, Chairman of the Conservation Committee; Mrs. W. B. Small, Waterloo, member of the Conservation Committee; Mrs. James B. Diver, Keokuk, prominent worker in club-life.

A report of the work was given by our President, Mrs. Small, at the last biennial meeting of federated clubs. During the year, she has accomplished much good by circulating the slides and lectures presented to the Audubon Society by Mrs. Hamand, of Schaler. These slides are in almost constant demand.

The history and records of the Iowa Audubon Society have been compiled by the Secretary, so that all who are interested may see at a glance how the work is conducted. This pamphlet contains a brief history of past work, articles of incorporation, constitution and by-laws, a list of the common birds of Iowa, by Prof. Charles R. Keyes, Mount Vernon, Iowa, and the laws for

the protection of non-game birds. This, with other literature, is sent to all new members and others upon receipt of twenty-five cents.

The Secretary once more had the pleasure of attending the National Conservation Congress as a delegate from the federated clubs. The time allotted to the report of the Audubon Society was limited, and the message given necessarily brief.

Because of the yearly loss to our agricultural products, through the deprivations of insects, it is essential that the study of bird protection be taken up in earnest.

Valuable service has been rendered to our Society by John R. Spurrell, President of the local Society at Wall Lake, who is keeping in touch with legislation at Des Moines, so that existing laws for the protection of bird life may not be repealed or adversely amended.

We are endeavoring to interest the State Game Warden, George W. Lincoln, of Cedar Rapids, in the enforcement of laws to protect non-game birds of Iowa. These laws are still openly violated by women of fashion, who wear bird plumage, and by milliners, who persist in selling this ornamentation; both classes are equally guilty. It should be generally understood that, with few exceptions, all non-game birds are protected by law.

The Iowa Audubon Society was organized at Keokuk in 1898, and federated with Iowa Women's Clubs in May, 1909.—*JANE PARROTT, Secretary.*

Kansas.—Drastic changes in the game laws of Kansas were made by the Legislature of 1911. The protection of non-game birds has been achieved, in effect, without the adoption of the model Audubon Society law, modified to meet local conditions, which was fathered by this Society through two Legislatures. This was brought about largely by a better understanding of the subject, as a result of much educational work during the previous two years, superbly reinforced by the immense prestige of L. L. Dyche, Professor of Natural History in Kansas University and acting Game Warden. We find that 299 species of birds perform a beneficent economic service to the people of Kansas; a very large proportion of this number are non-game birds that were without protection under the old laws, and the efforts of this Society were centered in legislative protection to them, rather than in changes in the game-bird phases. Of the total number of 355 species that visit this state, there are really but three species that are more destructive than useful; hence, the importance of protection to outlawed birds, about which the old game laws were absolutely silent. At Professor Dyche's suggestion, the wording was changed to include the useful species. While there is a disposition on the part of some hunters to question the wisdom of the amended laws as regards game birds, and to criticise the Game Warden's opinions of good and bad birds, and fish, it is the general opinion of those familiar with the subject of conservation of the natural resources of Kansas that Governor Stubbs' judgment was

wise when he influenced action looking to the services of a man of such wide experience as the present Game Warden, to administer that important office. The elimination of the Mourning Dove as a game bird, and the reduction in the size of bag of game birds in open season, have resulted in dissatisfaction in some portions of the state, which may be brought before some later Legislature, but it is believed that the large number of seed-eating and insectivorous birds that were formerly outlawed will never again be cut off the protected list, whatever the action in regard to game birds. And, in this one respect, the work of this Society has been eminently successful.

Through the efforts of Professor Thomas J. Headlee, Entomologist of the State Agricultural College, Manhattan, Kansas, and a Director in this Society, the article mentioned in our last report was published in the interest of agricultural education by the College Extension Department, under Mr. J. H. Miller. The edition comprised 25,000 copies, which were sent to all the School Districts and Farmers' Institutes of the state. Copies were also mailed by this Society to persons throughout the United States, Canada and some European countries. This document, being the first of the kind in Kansas to cover such a comprehensive field, is regarded as a very important publication of the Society, and furnishes facts and figures that will materially aid our advance work. Six copies were mailed to the parent Society, and we still have a goodly number on hand for distribution.—RICHARD H. SULLIVAN,
Secretary.

Kentucky.—The Kentucky Audubon Society was organized January 28, 1911, with eighteen charter members (this number was later increased to eighty-four), with officers as follows: Prof. James H. Gardner, President; Miss Mary L. Didlake, Vice-President, and Mr. V. K. Dodge, Secretary-Treasurer.

Meetings are held regularly on the first Saturday afternoon in each month. Systematical study of birds was inaugurated and pursued diligently during the spring migratory season. A vigorous campaign of education has been carried on principally among the school children of nearby counties. The work of the committee in this regard is shown in the remarkable list of Junior Audubon Classes. These classes, at the end of the Junior fiscal year, June 1, totaled one hundred and eight, with a membership of 1,475, placing Kentucky third in the list of southern states.

Work has been started on a campaign to organize auxiliary societies in every county of the state. A letter is being prepared to each of the county school superintendents of the 119 counties in Kentucky. This will set forth the objects of the National Society, and the plan or organization of the State Society, the County Auxiliary and the Junior Classes. Along with the letter will be sent a copy of our Constitution and By-Laws, copies of the National Association Leaflets, including Special No. 22, a copy of bird studies pursued

by our local members, with program of bird walks, a return stamped envelope, blank reply letter, copy of State Law relating to song and insectivorous birds, and a revised check-list of the birds of Kentucky.

In other words, the work of the Kentucky Society, the coming year, will be almost exclusively to educate people of this state to love and protect birds.—*V. K. Dodge, Secretary.*

Maine.—The work of the year has been educational and legislative. Lectures were given by Mrs. P. Abbott, a local Secretary, before schools, literary clubs and charitable institutions, and much interest was awakened.

Public hearings before the Legislative Committee and Inland Fisheries and Game Committees were attended by the State Secretary. In the contests for the passage of beneficial measures, we won eight important victories. A list of these new laws is given on page 175 of *BIRD-LORE* for May-June, 1911.

In July, the writer accompanied Secretary Pearson, of the National Association, on a trip of inspection to the Audubon Wardens on the Maine Coast, and the bird colonies which they guard.—*ARTHUR H. NORTON, Secretary.*

Maryland.—In every effort to secure the growth of an Audubon Society, two barriers block the way. These barriers are furnished by two large classes of society.

The first class comprises those earnest, willing souls who, because of constant demands made upon their hours and purses to relieve human needs, feel that they have but little to devote to birds.

The other consists of those who have an inflated capital, both of time and money, but who are victims of a paralyzed will.

The first barrier is more easily removed; for giving, whether of time, strength or money, increases the capacity for giving, and the majority of Audubon Society members are carrying other burdens of responsibility. However, if there are barriers, there is always a door of hope somewhere. At this door stand the children, the future citizens and lawmakers, never apathetic when appealed to, and so easily molded.

Nature-study in the public schools is proving the most effective factor in accomplishing the goal toward which every Audubon Society is striving.—*MINNA D. STARR, Secretary.*

Massachusetts.—Our work during the past year has gone forward along the usual lines, and has brought a gain in our membership, which is now 8,481. Of these 3,156 are Juniors. There have been a number of changes in our local secretaries, but we now have ninety, in addition to four local committees.

During the fall and winter, the Society sent out a field secretary, the work being done by Mrs. Harriet T. Boyd, who was able to

arrange for a number of talks on birds and Audubon work before clubs and schools. There would doubtless have been more opportunities for these meetings if we had started earlier, as many Societies had arranged their programmes for the winter before they knew about it.

A good many leaflets and warning posters in English and Italian, and copies of the laws, have been distributed, and there has been a fairly good sale for our bird charts and plates. The Educational Leaflets have been as popular as ever, and our three traveling lectures and four traveling libraries have been in demand.

The plates for our calendar failed to come from Japan in March, as promised, and we were much disappointed. They are promised definitely by December 10, however, and we hope to be able to fill our orders this year.

The state officers, the Fish and Game Commission, have shown the same spirit of coöperation, and have given prompt and efficient help whenever complaints of violations of law have been received.

Early in the year, a new Gunners' Association made an attempt to have the spring-shooting law, that has cost us so much work, either repealed, or modified, and the situation was saved only by hard work on the part of every one interested. The State Grange was interested and gave good help. A contribution of \$150 was given from our treasury to the National Association for legislative expenses in Massachusetts, this year.

An attempt to interest people in our work, and to urge them not to wear aigrettes, is being made by means of cards in our street-cars.

An article urging every one to care for and restrain their pet cats, especially during the nesting season, was sent to many newspapers throughout the state asking them to publish it.

In addition to the usual monthly meetings of the directors, we held a course of four lectures on Birds and Bird Music, in February and March, which was successful in every way. The lecturers were Mr. Louis Agassiz Fuertes, Mr. Henry Oldys, Mr. Edward Avis and Mr. F. Schuyler Mathews.

In May, we gave a lecture, free to the public, with Mr. F. Schuyler Mathews and Mr. Edward Howe Forbush as speakers. Mr. Francis H. Allen, one of our directors, presided and gave a brief report of our work. Following this meeting, the directors gave an afternoon tea, at Hotel Brunswick, to our local secretaries.—JESSIE E. KIMBALL, *Secretary*.

Michigan.—Through the efforts of a few energetic workers, a splendid work has been accomplished in Michigan for the promoting of interest in the protection of bird-life. During the year, the President, Mr. Jefferson Butler, delivered twenty-seven lectures before church congregations, in museums, schools and clubs. He was instrumental in getting a "Bird Day" law passed, and in influencing Governor Osborn to issue a proclamation on the value of birds and the advisability of observing "Bird Day" in the schools.

The Society also worked with the Michigan Association and Camp-Fire Club in securing the passage of an improved game law.

More than three hundred schools in the state have been supplied with literature. Much of the work has been made possible through the generosity of Mr. Henry Ford, of Detroit. Mr. Ford has coöperated with President Butler in having nesting-boxes put up to the number of five hundred, and also in placing out winter-feeding stations and supplying food.

Miss Clara Bates, of Traverse City; Mrs. Edith Munger, of Hart; John Watkins, of Calumet; Mrs. Belle M. Perry, of Charlotte, and Grace Greenwood Browne, of Harbor Beach, have prepared numerous articles for the press on birds and their protection, and called the attention of the public to the Audubon Society and its mission. The Secretary has given bird lectures before Women's Clubs, Schools, Farmers' Institutes and Summer Assemblies. She was instrumental in interesting the Michigan State Federation of Women's Clubs in the study of birds. At the present time, she is Chairman of the Civic Department in the Michigan State Federation of Women's Clubs, and of the different committees comprising her department are the Audubon Committee and the Humane Committee, these coöperating with the State Audubon and State Humane Associations. The Secretary has addressed more than one hundred and fifty schools, thereby reaching hundreds of children, and placing literature in the hands of more than six hundred teachers. She has also given prizes for the best-built and most practical bird-houses at three county fairs, and has written many articles for the press, as well as distributing one thousand badges among school children.

The club women throughout Michigan are doing a good work for the Audubon Society, by placing a Bird Day program in their club calendar, and studying birds from an educational, aesthetic and economical standpoint. As there are eighteen thousand club women in Michigan, their influence is sweeping with great force over the state. Very few, if any, club women wear bird feathers for hat adornment; occasionally one who has not heard of the Audubon movement comes out so adorned, but is promptly furnished with a supply of literature for her enlightenment.

Mr. Charles Daniel, of Detroit, offered prizes for essays written by a school-boy or girl under eighteen years of age: the first prize of \$20 for the best essay written on song and insectivorous birds; the second prize of \$15 for the best essay written on bird-protection; and a third prize of \$10 for the best essay written on how to attract and feed the birds in winter. This attracted much attention, not only on the part of children, but also of teachers and parents. Mr. Henry Ford is contributing sufficient to employ Mr. Butler as legal adviser and financial agent, to raise funds to place the Society on a sustaining basis.

Headquarters for the Society have been opened in Mr. Butler's office, in Detroit. It is planned to take a census of the wild life of the state, and to

learn more of the nesting habits of the water-birds along the Great Lakes. A vigorous campaign will be carried on in the schools, and a traveling library will be purchased and sent to various parts of the state. Mr. Butler will give time to securing the coöperation of the prosecuting attorneys and sheriffs for the enforcement of the game laws. He will also aid in prosecutions.—
MRS. ANNA WALTER, Secretary.

Minnesota.—The Minnesota Audubon Society has done considerable work through the Boy Scout Association which has been extensively organized in St. Paul and Minneapolis. We have interested the boys in the Audubon Society through the study of birds, and we expect to do more of this in the coming year. We have also had an exhibit again at the State Fair, which was put up by Mr. Rodgers and Mr. Pranzen, of Minneapolis.

We are now looking up some important points of legislation. We think that, if possible, the vicinity of such lakes as White Bear and Minnetonka, where a great many people have summer homes, should be made a kind of bird-reserve, and hunting should be prohibited the year round.

In coöperation with the St. Paul Humane Society, we published a special suggestive program for Bird Day, in the daily papers, and a special Bird Day story.

I feel that a reconnaissance of the northern part of the state should be made, with a view to locating the breeding-places of certain birds and creating a bird-reserve. Some work of this kind should be undertaken along the Lake of the Woods and the international boundary.—*D. LANGE, President.*

New Jersey.—The New Jersey Audubon Society was incorporated December 15, 1910, and the initial meeting of the Board of Trustees was held at Newark, December 29, 1910. The Audubon Society of the State of New Jersey, which had previously occupied the field, dissolved December 27, 1910, and the Secretary-Treasurer of that organization turned over to the new one the funds and property of her organization at the Trustees' meeting.

The New Jersey Audubon Society immediately inaugurated a campaign for increased membership, and soon after introduced in the Legislature an amendment to the plumage clause of the non-game-bird law of New Jersey. Much misunderstanding of, and opposition to, this measure had to be overcome; but it was passed in the Assembly, March 15, 1911, and by a unanimous vote in the Senate, April 10, notwithstanding the fact that a similar bill could get but four votes a year before. The bill was signed by Governor Wilson, April 17, and became effective August 1. To secure this victory, the members of the Society and the friends of bird protection were circularized several times, as were also the members of the Legislature. Hundreds of letters were written by members and friends to their constituents, the coöperation of women's clubs was enlisted, and the Secretary made two trips to

the state capitol, and spent several days there working for the passage of the bill. As a result of this legislation, New Jersey now ranks with New York in having one of the strongest laws for the protection of non-game birds ever enacted.

When this law went into effect, the press of the state and country was immediately flooded with misstatements regarding its effect. Corrections of these reports were at once sent out by the Secretary.

The campaign for membership has been pushed as actively as possible. A number of members have been very active in this work. At the initial meeting of the Board of Trustees, two patrons and two life members were secured. The membership now stands as follows: patrons, 2; life members, 4; sustaining members, 35; members, 164; associate members, 91; junior members, 773; total, 1,076. While there is reason to feel some pride and satisfaction in this number of members secured in less than a year, yet the coming year should see a much greater gain.

Following the recent killing of birds in Montclair, the Society, through the Secretary, investigated the matter and gave out a statement to the press, setting forth the facts and correcting the absurd exaggerations that had gone abroad. It is also coöperating with the Fish and Game Commission to secure the punishment of the man or men who violated the laws.

Three meetings of the Executive Committee have been held since the Trustees' meeting of December 29. At these meetings, the "Guide to New Jersey Birds" was authorized, and an edition of 10,000 copies, free to patrons, life members, sustaining members and members, 40 cents to associate and junior members and the trade, and 60 cents to others, will be ready for distribution October 10. An arrangement was made to send *BIRD-LORE* free to patrons, life members and sustaining members, and for 60 cents a year to other classes of membership. An exhibition at the Interstate Fair at Trenton, September 25-29, was arranged for and very successfully conducted. On September 28 alone, more than 50,000 people viewed an educational exhibit consisting of bird-books, pictures and charts, bird-boxes, camera, opera-glasses and notebooks, with other features, including a specially valuable demonstration of the economic value of birds, nine species being shown feeding in characteristic manner on insects, weed-seeds and mice, the group being set off by an artistic and natural painted background. Leaflet Number 1 on the Chickadee, and soliciting the support of the public, of the work of the Society, was distributed during the Fair to some seven thousand people.

The Treasurer's report shows the receipts for the year to have been \$912.23, and an expenditure of \$718.14, leaving a balance of \$194.20.

A course of lectures on the economic value of birds, by the Secretary, before Farmers' Institutes, during November and December, has been arranged for. The Secretary also spoke on the work of the Audubon Society at the Montclair and South Orange Schools, in June.

The immediate, urgent work before the Society for the coming year is the perfecting of a program of bird-study for the Associate and Junior Members, and the building up of membership.—BEECHER S. BOWDISH, *Secretary*.

New York—It is with much regret that the report of the New York Society is presented necessarily incomplete, this year. Owing to my recent return, after four months' absence, the reports of the work accomplished during the summer by the Local Secretaries have not been received. As at present registered, however, the membership is 12,940.

The vagaries of the New York Legislature took a much worse form than usual, this past year, when the Levy bill and the bill to repeal the Anti-spring-Duck-shooting Law threatened to undo the work for bird protection which Mr. Dutcher's noble efforts, during many years, had laboriously built up. Happily, both these bills were defeated, and Senator Bayne's Bill, prohibiting the sale within the state of all game, except that imported from foreign countries or raised on domestic game farms (which must be properly labeled), was successful. Thus the year's record in regard to legislation is one of decided gain. The campaign was conducted by the National Association of Audubon Societies, but the issue was so vital a one that it called forth the most earnest efforts on the part of all members of the Audubon Society, and of all associations interested in game or animal protection throughout the state.

Since July 1, 1911, the Shea-White Audubon Plumage Law has been in effect, and the traffic in aigrettes is, at last, illegal in the state of New York.

Financially this has been an unusual year for the Society. A much-interested member, who is also an enterprising Local Secretary, made a donation of five hundred dollars to the Society, and from one of the patrons one hundred dollars has been received.

The local conditions vary greatly in so large a state as New York, but the good work of many faithful secretaries has been continued, from the quiet efforts among personal friends to the wider field of lecturing before clubs, meetings of Grangers and teachers' institutes.

The Society has been particularly fortunate this year in the appointment of a number of new Local Secretaries; one is connected with a Normal School, from which one hundred and twenty-five teachers graduate annually; another, with a car at her command, visits systematically all the schools within a wide radius.

The necessity of maintaining the interest among the Junior members has always been emphasized. The methods employed by different teachers are interesting. In addition to the use of the leaflets, lectures, lantern-slides, coloring of the outlines and recording observations of the birds, the winter-feeding-places are put in charge of the children. The boys are made special wardens, to guard the nests and the law posters; they are taught to make bird-houses, to be put up near the school in the spring; and one city school reports

that the girls have bound the various leaflets into little books, making pretty and serviceable covers, thus giving the school library many volumes upon bird protection. Work of this description is of great value in keeping enthusiasm alive among the Junior members, and should be encouraged everywhere.

EMMA H. LOCKWOOD, *Secretary*.

North Carolina.—During the year, the North Carolina Audubon Society has employed about thirty-five game wardens, and between sixty and seventy convictions in the courts have been brought about.

Our representatives did much work in behalf of a number of bills introduced during the session of the State Legislature which convened early in January. A bill which we had drawn and presented for the establishment of a State Game Department, and which would relieve the Audubon Society of the duties of enforcing the bird and game laws, failed to pass. About 80 per cent of the population of North Carolina live in the country, and the bulk of the Representatives and Senators seem to feel that the farming classes would not approve of a resident hunter's license tax, which is so important for the maintenance of an efficient warden force.

The sea-bird colonies on the coast again thrived this year under protection, and the warden in charge reports the following as the number of young birds raised: Royal Tern, 992; Common Tern, 4,465; Cabot's Tern, 7; Least Tern, 1,592; Black Skimmer, 2,651; Laughing Gull, 1,134.

During the year, Mr. Pearson resigned as Secretary, to become executive officer of the National Association, and the writer assumed the duties of that office.—P. D. GOLD, JR., *Secretary*.

Ohio.—The Audubon Society of Ohio has little of novelty to report in its work of the past year, for the features that have become a part of its life are for the most part, we hope, permanent. The series of lectures in the libraries and schools by our more active members has grown to be a part of the educational work of our city, and we hope will continue so for many years to come. The regular monthly meetings are growing more and more popular, and may necessitate our finding larger quarters for these gatherings.

Interest in bird-study and protection is steadily, if slowly, increasing; and, as everything which makes for better morality and better citizenship has its reason for existence, we feel convinced that the work of our Society, in trying to implant a higher ideal in the minds of the people, is well worth while.

The game wardens in Ohio have been very active, the past year, and have practically cleaned out every store's supply of aigrettes,—which action is greatly to be commended.

The field meetings, under our capable and willing guide, are always delightful, and are an inspiration for individual study and observation of bird life.

On the whole, our plans for the coming year are along the same lines tried and found satisfactory in the past several years, and we all look forward to a year full of effort and accomplishment.—KATHERINE RATTERMANN, *Secretary.*

Oklahoma.—Many of the prominent workers in the Audubon Society have been out of the state much of the time during the past year, consequently less systematic work of the organization has been accomplished. However, the sentiment in favor of birds and bird-protection has not waned, but has grown much stronger. More schools are celebrating Audubon Day, and more girls and boys are observing birds and arguing for their protection; also, more farmers and agriculturists are forbidding, even in the open season, the killing of those game birds, such as the Quail, the Meadowlark, the Dove, and others, which prove so great a blessing in the way of destroying insects and weed-seeds. This is, to a great extent, the result of the reading of literature and letters sent out from the office of the State Audubon Society, at Guthrie.—
ALMA CARSON, Secretary.

Oregon.—We think we have some progress to report in our year's work, and reason to suppose that the year to come will show even better results.

The educational work has been confined to the distribution of leaflets and lectures to teachers and schools. In the lectures, no small part has been taken by the beautiful photographs generously loaned by Mr. H. T. Bohlman. Any bird talk illustrated by such photographs goes far to win boys and others from hunting with a gun, and starting them to hunting with a camera.

The Corresponding Secretary has given many bird talks. Our President, Mr. Finley, delivered thirty-six talks among the public schools. These bore fruit in the manual-training department of the public schools of Portland by setting many children vigorously to work building bird-houses. Several hundred were constructed. An exhibition of these was held in the Assembly Hall of one of our largest department stores, and most of the houses were sold, the money being returned to the builder, in each case. The exhibition called forth much favorable comment.

We have as a member of our Board of Directors the State Superintendent of Public Schools, who is making bird-study a special feature in the work of the schools.

We are also fortunate in the Governor of our state. Governor West is a man ardently anxious to serve our interests when it is in his power to do so.

The Society was recently the recipient of a bequest from Mrs. Walter Dyer, known as the "Byron Z. Holmes Bequest," of \$2,500 preferred stock in the International Telephone Company, bearing interest at 7 per cent. We recognize this as a long step forward in the recognition of the Audubon Society.

At the Legislature, this year, an important bill passed which provided for

the establishment of wild-bird and game refuges in different parts of the state. The Governor was authorized to set aside any lands owned by the state, and surrounding state institutions, as wild-bird and game refuges; also, lands owned by private individuals were, under certain conditions, allowed to be set aside for the same purpose. Upon the passage of this bill, three thousand acres about the State Institutions at Salem were at once declared refuges by the Governor, also a large tract near Pendleton.

Mr. William L. Finley, our State Game Warden, understands his duty and knows how to enforce the laws. There have been some complaints of the Robin, and especially of the Lewis' Woodpecker, destroying cherries and apples. This Woodpecker has found a friend in Mr. M. A. Kelso, of Sherwood, who reports having observed it eating caterpillars in his orchard—an economic asset, which if generally understood by the orchardist, would save many a handsome fellow from the shot-gun. Throughout the state, people are coming to be more intelligently interested regarding wild-bird value, and many are more anxious to study than to kill on sight.—EMMA J. WELTY, *Secretary*.

Pennsylvania.—During the past year, the work of the Pennsylvania Audubon Society has been chiefly the distribution of leaflets and other bird-protection literature, and also the starting of Junior Audubon Clubs.

To try and encourage greater permanence in these clubs, and a more thorough bird study by means of indoor classes during the winter, is part of the work planned for the coming season.

This work will, doubtless, be greatly aided by the suggestions and ideas to be gathered from the annual meeting of the National Association of Audubon Societies, on October 31, in New York, and the Pennsylvania Society will also, this year, have the further stimulus to bird-study given it by the meeting of the American Ornithologist's Union in November, at the Academy of Natural Sciences, in Philadelphia.

Among the items of local interest to the Society, during the year, have been the publishing of a new leaflet, the adoption of a society button for the children's clubs, and the printing of a new form of the society's pledge, so as to include both young and adult members.—E. W. FISHER, *Secretary*.

Rhode Island.—The Audubon Society of Rhode Island has, for the past three years, given its main interest to educational work. This can best be done in connection with the schools. One of our directors, Mrs. Thomas V. Pontiac, has worked out a most satisfactory method of reaching young children, and getting them actively interested to observe and know the birds. She has devoted one afternoon a week, and has visited in turn the six higher grades of the grammar school, lecturing half an hour in each room on the birds of the season. During the fall and winter, she described the permanent residents and winter visitants. She had a bird lunch-counter, which attracted

wide interest in the food habits of the birds. In the spring, she lectured on migration. At the end of the year, she offered an examination on the work, and also a competitive prize for the best essay on a bird subject. The results were unusually gratifying.

The interest in bird-study reacts most helpfully on all the other work of the school. Teachers are as enthusiastic as students to have the bird talks given each year.

The special advantage of this work is that it helps each student, by giving them a method of study, a good knowledge of the common birds about our homes and parks, and also the deep interest to know and protect the birds. We are looking for more such devoted bird teachers, to go to different parts of our state.

Another valued director of our Society, Mrs. Walters, has the privilege of being editor of the School Department of *BIRD-LORE*. The wealth of suggestions and material she gives must be a real aid to teachers.

Another director reports thirty field trips for bird-study with his classes. More and more, our traveling library work is coördinated with the work of the public schools. During the past year, one hundred and ninety volumes have been received by gift or purchase, bringing our total library up to four hundred and fifty volumes. One generous donor sent us the complete Doubleday Nature Library, and another gave a collection of twenty-five books for a special memorial library.

The Audubon Society is in close touch with the Park Museum. Mr. Madison, the Curator, gives lectures on bird protection at the Museum and in the schools, and supplies loan material for bird- and nature-study to the teachers.

The directors have held their regular bi-monthly meetings, and one social meeting with luncheon for the benefit of out-of-town Secretaries.

A new economic bird lecture on Bob-white and other game birds, with sixty-four colored lantern slides for illustration, is completed and ready for circulation among the rural schools and granges.—*ALICE W. WILCOX, Secretary.*

South Carolina.—The Audubon Society of South Carolina has had all it could do to hold its own and to prevent serious loss of ground. No increase in membership can be recorded, but the year shows net loss, many members having failed to renew their membership, but it is quite reasonable to suppose that most of these will renew hereafter.

The present status is that the Chief Game Warden of the state is serving as Secretary of the Audubon Society, without pay (and is doing it gladly), but one person cannot properly attend to both positions. The Society badly needs a live secretary who will push the work.

Just a little explanation may clear up matters. The General Assembly,

which met in January last, failed to make provision for enforcing the laws. The resident hunters' license bill failed of passage by nine votes, and no substitute was offered.

The Audubon Society was divorced from connection with enforcing the laws by the act creating a Chief Game Warden, passed at the session of 1910. The Chief Game Warden was given control of the Game Protection Fund, consisting principally of the non-resident license. This has amounted to only about \$600 during the present year. This officer was also given entire charge of the warden force; but he was especially barred by statute from creating any debt, and hence could promise to pay only when funds were in the treasury. The effect of all this was to disorganize the warden force effectually, for the time at least, and it will have to be reorganized *ab initio*.

South Carolina has again fallen into the throes of a political upheaval, to which it is periodically subject, and the cause of bird-protection has suffered.

The campaign of education has gone on without abatement, and the cause is stronger in the minds of the people than a year ago. There have not been wanting object lessons in insect outbreaks, and the minds of the farmers have been impressed as never before with the value of birds in checking such scourge.

The pine bark beetle (*Dendroctonus frontalis*) has riddled the pine trees in the western counties of the state, and is moving rapidly eastward. The United States Bureau of Entomology has established a station for combating this pest, and several of their best men are in the field. The pea curculio caused extensive damage to cotton by cutting off blooms in the early summer. At the present time, there is a general invasion of the cotton leaf caterpillar (*Argillacea Alabama*), and the late crop of cotton is being ruined.

These things, with the advance of the cotton-boll weevil eastward at an accelerated rate, have caused acute anxiety, and the rural districts are stirred over the need of bird-protection to an extent hitherto unknown.

Entirely through the help of the National Association, a campaign was carried on for the protection of American Egrets and Snowy Egrets along the coast, and there were but four birds known to have been killed during the season. It is gratifying to relate that the miscreants who killed them are in jail, and have been there for nearly two months, being unable to give bail. The trial was postponed on account of the illness of their lawyer, and will not come off until next spring. All the Egret colonies did well, and there will be a noticeable increase next season of our slender stock of these fine birds.—
JAMES HENRY RICE, JR., *Secretary*.

East Tennessee.—On September 2, 1910, a few bird-lovers met in serious consultation, hoping thereby to lend a helping hand toward the preservation of our wild birds. The result was the organization of the East Tennessee Audubon Society. There were present nine adults and three children, the latter being received as junior members.

Of the adults present, two-thirds were obliged to accept office, to keep the ball rolling. For a while the rolling stone may gather no moss; it is equally certain that a snowball kept in motion increases in volume. The following officers were elected: President, H. Tullsen; First Vice-President, Judge H. Y. Hughes; Second Vice-President, Mrs. J. E. Hood; Secretary of Literature, Mrs. Charlotte O. Lutz; Recording Secretary, Miss M. M. Woodward; Treasurer, Miss Sophie M. Ducloux. The remaining grown persons might be termed high privates, for all the members worked with such enthusiasm that our membership has increased from nine to over ninety.

One of the first things we tried to do was to stop the violation of the game law as respects the shooting of game birds out of season, as well as the killing of non-game birds, such as the Nighthawk, etc.

Mrs. Lutz was appointed to organize junior societies in the schools of Knoxville and vicinity. Her happy talks and the distribution of our literature exercised a widespread influence for good.

Some time in February, 1911, there was an influx of Robins and Cedar birds. Their wanton destruction by idle men and boys was stemmed by my junior class of girls, who indignantly laid the law down to them. And later on, through information given by children of another school, President Tullsen was enabled to have several large boys arrested and fined for killing birds and robbing nests.

About this time, our President conceived the idea of issuing circulars recommending the establishment of bird stations,—small areas of land ranging from a town lot up to five acres, and game refuges from five acres up,—our largest being one thousand acres.

The exhibit of the East Tennessee Audubon Society at the "Appalachian Exposition" was the crowning feature of the year. Free space was granted us in the main building for our booth. Mrs. Thomas O'Conner loaned to the Society a handsome and expensive collection of mounted birds. Mr. Arthur Ogden contributed a mounted Peacock, and Mr. Ambrose Gaines a mounted albino Bob-white. Among the exhibits were catchy photographs, birds' nests galore, bright bird pictures, and a good quantity of literature, much of this latter being contributed by Mr. Eugene Swope, the editor and publisher of "Nature and Culture," Cincinnati. The members took turns staying at the booth, which was thronged with eager men, women and children, many of whom registered as possible members, while not a few became members on the spot. Assuredly, great interest was aroused, and we have yet to see the entire results of our labors.—MISS M. M. WOODWARD, *Secretary*.

West Tennessee Audubon Society.—The organization of the West Tennessee Audubon Society, for the year 1910, is as follows: R. B. Maury, M.D., President; Prof. E. S. Werts, First Vice President; Mrs. J. H. McCormick, Second Vice-President; Mrs. Pevey Finley, Recording Secretary; Miss Willie

Morgan, Corresponding Secretary; Miss Freeman, Goodwyn Institute, Treasurer. Up to the present time, the work done for bird protection has been chiefly in the public schools among the teachers, and in the formation of Junior Audubon Societies. Very nearly 1,800 pupils have been enrolled in these classes. Great enthusiasm has been manifested by both teachers and pupils.

The Park Commission of all Memphis has shown great interest in the subject of bird conservation. It has not only put a stop to the killing of birds in the parks, but has erected bird-boxes after the pattern of the Berlepsch models, and has established in Overton Park a Bird Refuge City, in which bird tables for winter-feeding are placed, and attractive shubbery and trees are found for nesting.

Through the efforts of the Audubon Society, the Bolton College Agricultural School has taken an interest in this subject. Junior Audubon classes have been organized in the school; measures have been adopted for bird protection on the land belonging to the college, and its grounds have been made a game refuge. Mrs. Fayser Edmondson, near Whitehaven, has posted her grounds, and has made her farm a game refuge. In the heart of Memphis, Mrs. P. C. Van Vleet has made of her beautiful grounds, covering several acres, a Bird Refuge City.

In November, 1911, the Goodwyn Institute, under the auspices and with the assistance of the National Association of Audubon Societies, will give lectures, with stereopticon illustrations, on the subject of Bird Preservation, for the purpose of instruction of the children of the schools, and the public generally.

In March next, the Goodwyn Institute will have several lectures by Professor Schmucker, of Philadelphia, along the same lines. In November, a movement will be made after the lectures, to enlist public support in the cause of bird conservation, outside the schools.—R. B. MAURY, M.D., *President.*

Virginia.—The Audubon Society of Virginia began its campaign last fall by an effort to reach the farmers and, from the utilitarian standpoint, interest them in bird protection.

Mr. Coiner, our Commissioner of Agriculture, kindly consented to give us several pages in his Annual Agricultural and Industrial Report of the state. This report reaches many thousands of the substantial rural population, a class which reads cheerfully every publication in such a report.

Our article entitled "Does It Pay to Protect the Birds" we feel was well placed, and we trust we gained some friends for the birds.

In February, we wrote to the supervisors of each county in the state asking what laws they had relative to the killing of Robins. One state law permits an open season of six weeks in the spring, but our counties may close the season if they so elect.

We had many encouraging letters in return, and five counties passed laws closing the season altogether, and one or two counties all but one day.

We have also sent out from this office all the school literature for the Audubon classes formed in the state, and in this way were in touch with school work.

To stimulate intelligent interest and observation among the children, we have offered a gold medal for the best essay by a child under sixteen, entitled "What I Saw in My Bird-box" (or "Nest").

Our state also set apart May 4 to be observed as "Bird Day," and our State School Journal also published a suggested program (furnished by us) to be used on that day.

We have had one free public lecture during the year by our gifted National Secretary, Mr. T. Gilbert Pearson, and we feel that our people are becoming better acquainted with, and consequently are more interested in, this splendid work of bird protection.—*MRS. W. E. HARRIS, President.*

West Virginia.—On October 10, 1911, the State Audubon Society of West Virginia was organized at Parkersburg, with the following officers: Miss Ida M. Peters, President; Mrs. W. W. George, Vice President; Miss Hattie M. Alleman, Secretary; Mr. Beauchamp Smith, Treasurer.

The membership started with an enrollment of twenty-five, and since then a number of persons have signified their wish to join. We are delighted with the outlook for an earnest, enthusiastic Audubon Society.

Among our members we have several teachers, and it is our hope to arouse interest in the schoolrooms and get some Junior Societies formed.

A committee has been appointed to draft our constitution, and we meet in business session on the twenty-fourth to adopt the same. We propose, this winter, to meet once a month, and at each of these meetings to take up the study of one certain bird, gleaned from reading and observation all the information possible concerning the subject. A number of our members are desirous of doing field work, and we hope that many more will come to know the pleasure and profit of actual observation. We also want to emphasize bird protection.

Any suggestions that you or the officers of any of the state societies can give us will be very much appreciated.—*HATTIE M. ALLEMAN, Secretary.*

Wisconsin.—The Wisconsin Audubon Society has experienced a fairly successful year. It published, throughout the school year, September to June inclusive, its little monthly magazine "By the Wayside," which is devoted to the protection of birds, and to arousing children's interest in birds and in nature generally.

During the winter and spring, the state legislature was in session. Among the mass of bills introduced were a goodly number relating to bird protection.

The bills to permit hunting in spring were defeated. A bill to prohibit the use of the automatic shot-gun was defeated, although it attracted support from a variety of sources. Some good may have been accomplished by the passage of a bill which still further limits the hunter's daily bag. An attempt on the part of the Audubon Society to establish a reserve by legislative enactment met defeat in the Senate. The Society, through its representatives, took part in all the hearings on the more important bills relating to birds, but just what its single influence was is hard to determine.

With this record back of it, the Society is looking forward to another year of active endeavor in advancing the cause for which it stands.—ROLAND E. KREMERS, *Secretary*.

**LIST OF MEMBERS OF THE NATIONAL ASSOCIATION
OF AUDUBON SOCIETIES**

BENEFACTOR

*Albert Wilcox 1906

FOUNDER

Mrs. Russell Sage 1910

PATRON

William P. Wharton 1909

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Carr, Gen'l Julian S.	1907	Moore, Clarence B.	1909
Chapin, Chester W.	1910	Morton, Miss Mary.	1906
Chapman, Clarence E.	1908	Murphy, Franklin.	1909
Childs, John Lewis.	1905	North Carolina Audubon Soc.	1905
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Coolidge, T. Jefferson.	1907	*Palmer, William J.	1906
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Crozer, Mrs. J. Lewis.	1908	Parker, Edward L.	1909
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*Deceased.

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Thayer, Mrs. Ezra R.	1909	Williams, John D.	1909
Thayer, John E.	1909	Woodward, Mrs. George	1908
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Carried forw'd, \$16,370 20	Carried forw'd. \$16,927 20	Total..... \$17,117 20

**The Report of the Treasurer of the National Association
of Audubon Societies**

BALANCE SHEET

Exhibit "A"

October 20, 1911

ASSETS

Cash in Bank and Office.....	\$14,963 61
Furniture and Fixtures.....	\$552 12
Less Depreciation.....	138 03
	<hr/>
Furniture and Fixtures—Sage Fund.....	414 09
Inventory—Leaflets, Plates, etc., (nominal value).....	121 00
Bird Island Purchase, Orange Lake, Fla.....	500 00
Audubon Boats (three).....	250 20
less depreciation,.....	732 20
	<hr/>
<i>Investments, Endowment Fund—</i>	2,196 61
U. S. Mortgage & Trust Co. Bonds, guaranteed.....	\$3,000 00
Bonds and Mortgages on Manhattan Real Estate.....	323,900 00
Manhattan Beach Security Co. Bonds, guaranteed.....	2,000 00
	<hr/>
<i>Investment, Mary Dutcher Memorial Fund—</i>	328,900 00
Bonds and Mortgages on Manhattan Real Estate.....	7,100 00
Total.....	\$354,445 51

LIABILITIES

Endowment Fund—

Balance at October 20, 1910.....	\$343,745 91
Received from Life Members.....	1,400 00
	<hr/>

Mary Dutcher Memorial Fund—

Balance at October 20, 1910.....	\$7,100 00
Contributed this year.....	632 70
	<hr/>

Bradley Fund—

Total contributed.....	\$1,900 40
Less amount invested, taxes, repairs, etc.....	1,728 57
	<hr/>

Mrs. Russell Sage Fund—

Balance last year.....	\$3,342 85
Contributed this year.....	5,975 57
	<hr/>

Expenditures this year.....	\$9,318 42
	<hr/>

Surplus—Balance from Income Account.....	\$7,812 95
Less—Deficit from last year.....	7,780 55
	<hr/>

Total.....	\$354,445 51
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INCOME AND EXPENSE ACCOUNT FOR YEAR ENDING OCTOBER 20, 1911

Exhibit "B"

INCOME—

Members' dues	\$6,900 00
Contributions.....	10,217 20
Interest from Investments.....	17,098 02
Educational Leaflets—Sales.....	1,628 95
Von Berlepsch, Book—Sales.....	115 90
Sales of Slides.....	258 78
Bird-Lore Sales.....	362 90
Sundry.....	17 97
Total.....	\$36,599 72

EXPENSES—

Warden Service and Reservations—

Salaries.....	\$2,368 64
Launch Expenses.....	210 40
Reservation Expenses.....	101 13

Legislation—

Massachusetts Legislation.....	\$651 39
Expenses.....	285 46
New York Legislation.....	698 63

Educational Effort—

T. G. Pearson salary and expenses.....	\$4,428	53
E. H. Forbush salary and expenses.....	1,834	44
M. B. Davis salary and expenses.....	300	00
W. L. Finley salary and expenses.....	1,222	40
Curran & Mead, Press Information.....	1,800	00
Slides and Drawings.....	484	35
Electros and half-tones.....	163	66
Bird-Lore to members.....	1,532	00
Extra pages Bird-Lore.....	586	92
Printing Reports, Circulars, Notices, etc...	206	00
Newspaper Clippings.....	60	00
Educational Leaflets.....	2,572	59
Von Berlepsch Books.....	208	45
Grant and Trafton Books.....	12	83
Lecture and Stereopticon Work.....	19	00
Traveling.....	31	95

State Audubon Societies—

Minnesota.....	\$50 00
Rhode Island.....	22 97
Connecticut.....	125 39
California.....	96 35
Michigan.....	50 00
New Hampshire.....	46 17
Vermont.....	45 76
	<hr/>
Expenses carried forward.....	436 64
	<hr/>
	\$19,778 77
	<hr/>
	\$36,599 72

INCOME AND EXPENSE ACCOUNT FOR YEAR ENDING OCTOBER 20, 1911, continued

INCOME, brought forward.....	\$36,509 72
EXPENSES, brought forward.....	\$19,778 77
<i>General Expenses—</i>	
Salary Chief Clerk.....	\$1,325 00
Salary Cashier and Bookkeeper.....	836 00
Salary Stenograpers.....	993 75
Salary, Junior Clerk.....	299 97
Postage.....	835 63
Moving Expenses.....	188 56
Telegraph and Telephone.....	168 92
Office and Storeroom rent.....	900 00
Stenographic Work.....	85 87
Legal services.....	625 50
Envelopes and Supplies.....	445 63
Express and cartage.....	35 61
Holmes League Loan.....	55 00
New Members Expense.....	707 36
Miscellaneous.....	466 68
Depreciation on Boats.....	963 85
Depreciation on office furniture.....	138 03
	—
	9,071 36
Total expenses.....	\$29,286 77
<i>Less</i> —Inventory of Leaflets, Plates, Outlines, etc. (nominal value).....	500 00
	—
	28,786 77
<i>Balance</i> —Surplus for the year.....	\$7,812 95

**LAWRENCE K. GIMSON, CERTIFIED PUBLIC ACCOUNTANT,
82 Wall Street**

DOCTORS F. A. LUCAS AND G. B. GRINNELL,
Audit Committee,

National Association of Audubon Societies,
1974 Broadway, New York City.

NEW YORK, October 24, 1911

Dear Sirs:—In accordance with your instructions, I have made an examination of the books and accounts of the National Association of Audubon Societies, for the year ending October 20th, 1911, and present herewith the following Exhibits:

EXHIBIT "A"—BALANCE SHEET, October 20, 1911.

EXHIBIT "B"—INCOME AND EXPENSE ACCOUNT FOR YEAR ENDED
OCTOBER 20, 1911.

All disbursements have been verified with properly approved receipted vouchers and paid checks; all investment securities with Safe Deposit Company, have also been examined and found in order.

Yours very truly,

(Signed) **LAWRENCE K. GIMSON,**
Certified Public Accountant.

DR. J. A. ALLEN,
Acting President.

NEW YORK CITY, October 25, 1911.

Dear Sir:—We have examined the report submitted by Lawrence K. Gimson, Certified Public Accountant, of the accounts of the National Association of Audubon Societies, for the year ending October 20, 1911, which account shows balance sheet of October 20, 1911, and income and expense account for the year ending the same day.

Vouchers and paid checks have been examined in connection with disbursements, and also securities in the Safe Deposit Company.

We find the account correct. Very truly yours,

(Signed) **F. A. LUCAS,**

(Signed) **GEO. BIRD GRINNELL,**

Auditing Committee.

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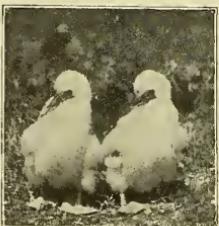
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