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Bird-Lore

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

EDITED BY

FRANK M. CHAPMAN

Official Organ of the Audubon Societies

AUDUBON DEPARTMENT EDITED BY

MABEL OSGOOD WRIGHT

AND

WILLIAM DUTCHER

VOLUME VII — 1905 —

THE MACMILLAN COMPANY
HARRISBURG, PA., AND NEW YORK CITY

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BY FRANK M. CHAPMAN

193701

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Bird-Lore



EDITED BY
FRANK M. CHAPMAN

PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

HARRISBURG, PA.

NEW YORK

LONDON



Bird = Lore

January - February, 1905

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



To subscribers whose subscription expired with the last (December, 1904) issue of BIRD-LORE, the present number is sent with the hope that the matter of renewal has been overlooked.

On receipt of your renewal we will send you the Seton Shrike picture, which should be considered due notification of the entry of your subscription.

Reduced line cut of Ernest Thompson Seton's drawing of a Northern Shrike. Presented to every subscriber to Volume VII, 1905, of BIRD-LORE. The original is nearly life-size.



1. YELLOW WARBLER, MALE.
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 3. MANGROVE WARBLER, MALE.

4. MANGROVE WARBLER, FEMALE.
 5. PRAIRIE WARBLER, MALE.
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(ONE-HALF NATURAL SIZE.)

Bird = Lore

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

Vol. VII

JANUARY — FEBRUARY, 1905

No. 1

Advertisement

By C. C. DAWSON

I have houses newly builded,
Bright with paint and newly gilded.
They will be for rent in Spring—
Who will come a-tenanting?

They are in a choice location,
Beautiful for situation.
Sheltering branches round them play,
Turning breath of March to May.

Houses mine, just made for pleasure
Unalloyed, and without measure.
Who the homes I offer take,
Shall be blessed for Love's sweet sake.

These alone are my conditions:
All my tenants are musicians,
And the songs they sweetly sing
Are the only pay they bring.

A New Year Suggestion

By MABEL OSGOOD WRIGHT

WE are supposed to encircle each new year with a frame of good resolutions all pointing progressively in the direction of new aims and hopes.

The pessimist says: "There is no new year; tomorrow is as today and all arbitrary divisions of time are purely commercial arrangements." I do not agree with this person; the so-called last day of the old year and the first of the new have a strong moral effect upon us. We clear our desks of unanswered letters, pay our bills, and begin life anew.

If our interest in birds and their protection has waned in late autumn and early winter, we feel a new impetus. The shortest day has passed, spring is ahead of us. What shall we do to earn the joy of it when it comes? There is legislation to be watched, there are laws to be enforced, people to be persuaded, children to be taught; but in spite of these various duties, two practical needs equal them all. As it is inevitable and desirable that the land should be peopled and tilled, the birds' leaseholds of their hereditary haunts run out slowly but surely, and we must supply them with food and shelter, even as we do the red men on the reservations that have been allotted them.

It is not enough to say, "We will see that you are not destroyed, we will tell the world of your good deeds, that it may pause and admire"—we must, at least, place homes and a livelihood within their reach.

Our editor has wisely made this issue a Bird-house number, and if any one expects to have bird-dwellings ready for occupancy in April, they should be made and placed in the month of February, that they may become a bit weathered and a part of their surroundings before the return of the first migrants.

As to these houses themselves, they may be of many shapes and patterns, but a few simple rules apply to them all.

In making a bird-house, try to study both box and location from the point of view of the species of bird you hope may occupy it, not from your own standpoint of a pretty bit of color in a picturesque location. You will notice that bird-hotels, full of impossible and draughty rooms with openings at both ends, are very seldom tenanted, save by squirrels and English Sparrows, and as we have no conspicuous or gaily colored nests, we should take this hint of color protection in the making of bird-houses. For this work there are no materials so suitable as weathered boards and sections of logs and tree trunks with the natural bark securely fastened in place.

In the process of rebuilding a shed or two and replacing some old dead hedges with new growth, I found that the haunts of my Robins had been

much disturbed and, instead of four score or so nests, each season the number was dwindling. Three years ago, therefore, I tried the experiment of having some flat, shallow trays about six inches square, bracketed in suitable locations so as to form attractive nesting-places for nest-building Robins, who, as we all know, are fond of straddling a tree-crotch with their compound of clay and grass or utilizing any flat beam or odd nook that will give them a resting-place.

These boxes had a few holes in the bottom, so that they should not



TRAYS FOR ROBINS' NESTS IN AN ARBOR

hold water, and were placed so that a branch or other projection afforded at least partial top shelter.

The first season the Robins examined but distrusted the contrivance; the second, two were used, while last year five were occupied by Robins and the sixth was appropriated by a Phœbe, who has thus kindly given me a hint for more trays to be placed in locations likely to suit this lovable worker for garden good. Until two years ago, by dint of gun and vigilance I kept that cheerful nuisance, the English Sparrow, at bay; but somehow or other he has arrived, probably because I was alert only eight hours out of the twenty-four while he was scheming for at least sixteen.



A NATURAL NESTING - BOX

European Starling, photographed by A. L. Princehorn at Glen Island, N. Y. These are the first American photographs of these lately introduced and rapidly increasing species which we have seen

Nesting - Boxes

By EDWARD HOWE FORBUSH

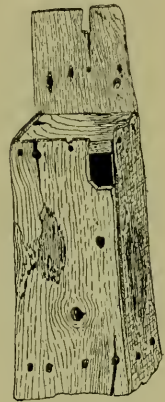
Illustrated by the author

THERE is no better way to attract and protect several species of useful birds than to put up nesting-boxes. Every family, rich or poor, that lives in the country, can provide them. Old worn or waste materials may be used if others cannot be procured: for the birds seem rather to prefer weather-beaten lumber or rusty metal to that which is new, bright or painted.

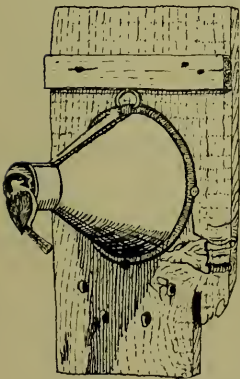
Among my early recollections there comes to mind an old, unpainted, weather-beaten New England farm-house, the home of a poor farmer with many children. It stood in the shade of a giant elm by the roadside, and high up the rugged trunk of the old tree another home, a box made of ancient shingles weather-stained and moss-grown, was occupied by a family of Bluebirds. I noted every detail of their airy castle, and on returning home secured four old shingles and a piece of board from amongst the kindling wood, and with a hatchet and saw a rough box, like the accompanying cut, was made and put up in one of our cherry trees.

Soon a pair of Bluebirds came, and after that many pairs nested in such boxes. The shingle box answers its purpose fairly well if put up against the side of a building, or on a tall pole or tree trunk, where the cat is not likely to climb. Any small box will do, if it is nearly the right size and shape, but it will be better to have a piece of thin board or shingle nailed flat on the top and projecting a little on all sides to make the roof tight and shed the rain. If the board projects well out over the entrance hole, it will keep the rain from driving in. In Massachusetts, where my experiments have been made, it is best to have the entrance to the box face the west. Those who cannot conveniently make or purchase boxes may use tomato cans, old tinware, such as milk-cans, funnels, pails, coffee-pots or tea-pots. The worn-out funnel nailed to a piece of old board serves to show one way in which such contrivances may be put up. The board may be nailed or screwed to a tree or the side of a barn.

I have seen a Barn Swallow's nest built in a lard pail which was used to stop a stove-pipe hole in the chimney of a deserted house. If old tinware is used, it is best to have it in trees where, being shaded by the leaves, it



THE SHINGLE BOX



A NEW USE FOR AN OLD FUNNEL

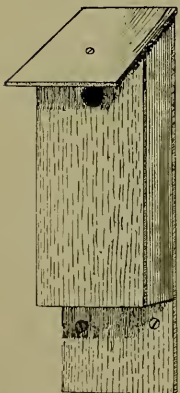
will not be heated by the sun's rays. There should be a few small holes in the bottom of each pot or can, so that, should the rain happen to drive in, it may run out. There never should be an uncovered hole in the top. If a lard pail is used, it must have a cover to keep out the rain and a hole must be cut in one side for an entrance. Tree pruning is a chief cause of the scarcity of certain birds in some localities. When hollow limbs are cut off they may be cut up into sections and each section roofed, bored and mounted in such a way as to make two or more nesting-places out of one.



HOLLOW LIMB BOX

A handsome and durable box may be made of bark. This style of box is one of Mr. William Brewster's ingenious inventions, and is yet untried; but I have made a considerable number of them and see no reason why they will not be serviceable. Old tin utensils may be useful to the farmer to put up in his orchard, but they are not ornamental and so should be placed in trees where they will be hidden by the foliage; but the bark box is novel, useful, neat, and also decorative in a rustic way.

The birch boxes must be made late in June, when the bark will peel readily. A small tree can be cut down and cut into sections long enough for boxes. Each box is made by peeling off both outer and inner bark, then sawing a slice off each end of the stick for the bottom and top, tacking the bark on the ends, nailing on the supporting stick, and then covering the top with the green bark from a young pine, to make it water-tight.

THE BIRCH
BARK BOXBOX FOR BLUEBIRDS
OR CHICKADEES

These small boxes are suitable for the Chickadee. The bark of the chestnut makes strong and durable boxes, which may be covered or roofed with zinc, for the larger birds.

The cat and the English Sparrow are the chief enemies of the native birds about our villages and cities. An objection to many bird-houses is that they are not cat-proof. When my first shingle box had been up three or four weeks the family cat was found, one day, hanging on it and clawing out the young birds. Later a box which seemed to be cat-proof was devised for Bluebirds. It was very deep with an overhanging cover or roof, no perch, and the entrance hole well up under the eaves. This makes it difficult, if not impossible,

for the cat to hang on and reach the nest. The young birds find it rather hard to get out of such a box at first. They have to make many attempts, and when they finally escape they are quite strong and less likely to be caught by cats than they would be if reared in a box from which they could get out before they were fully fledged.

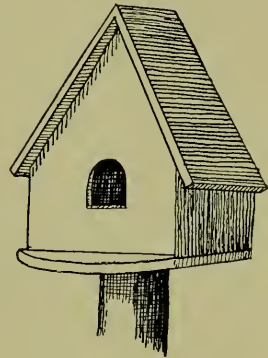
The ordinary small bird-house that is put up for Martins or Tree Swallows must be set on a tall, slim pole, to give the birds a degree of immunity from the cat. These birds usually seem to prefer a house elevated from fifteen to thirty feet from the ground on such a pole. Ordinarily, the entrance holes are made too near the bottom or floor, and the young birds, being nearly on a level with the doorway, are sometimes pushed out or fall out in their eagerness for food, and so become the prey of the prowling cat.

In building Martin boxes this danger may be partially guarded against by having a little platform around each story, and a railing not less than three or four inches in height around the platform.

The shape and size of the bird-boxes must be regulated by the size and habits of the birds for which they are intended. It is better to have them comfortably large than too small, for this gives the birds more room and air. In my experience, when birds have their choice, the long, deep boxes placed rather low are more likely to be occupied by Bluebirds, Chickadees and Wrens, than are the square boxes or bird-houses, especially if they are raised high in the air on poles.

While the exact size of the box is rather immaterial, the size of the entrance hole is most important. This should be just large enough to admit the desired tenant, and small enough to keep out all larger birds. A diameter of one and seven-eighths of an inch will do for Wrens, one and one-fourth inches for Chickadees, one and one-half inches for Bluebirds or Swallows, two and one-half inches for Martins, and three and one-half inches for Flickers and Screech Owls. By observing this simple rule about the size of the doorway, it sometimes is possible to have several species nesting amicably within a small area.

Martins, breeding as they do in large communities, are particularly subject to parasites and other adverse influences. Nearly all the Martins in Massachusetts seem to have succumbed to the cold rain-storms of June, 1903. They were then decimated throughout most of southern New England. It seems probable that the only hope of their soon recovering their foothold there lies in putting up more Martin boxes and thoroughly cleaning out those now filled with dead Martins or with English Sparrows' nests. In a



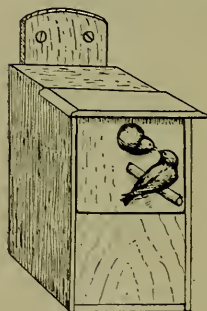
TREE SWALLOWS BOX

few cases in southern Maine where this was done Martins bred during the past season. Elsewhere in the same towns there were no Martins.

One of the most important questions asked by those who are putting up bird-houses is, "How shall we get rid of the English Sparrow?" The Sparrows are kept away from my bird-boxes by the use of a gun loaded with small charges of powder and dust shot. They have so well learned their lesson that there has been no necessity for shooting any for two years. Where these birds are plenty, however, continuous shooting may be necessary. I have never had any success in putting up boxes hung so as to swing by a wire. The Sparrows do not nest in them, but neither do other birds; nevertheless, some of my correspondents have known both Bluebirds and Tree Swallows to nest in these boxes. This is only one of the numerous instances that teach one that his own experience alone is never an infallible guide.

Those who are much troubled by the Sparrow may find the swinging boxes worth trying.

Little reliance can be placed on boxes without a perch, for a Sparrow is likely to get into any hole that any other bird of its size can enter. Mrs. Mary R. Stanley suggests the use of Martin boxes without a perch and with the entrance underneath. I have had no experience with such houses.



BOX WITH SLIDING
COVER

Every small nesting-box should be provided with a cover or door, by which it can be opened and the contents removed. This is always practicable, except perhaps with large Martin boxes, which should have entrance

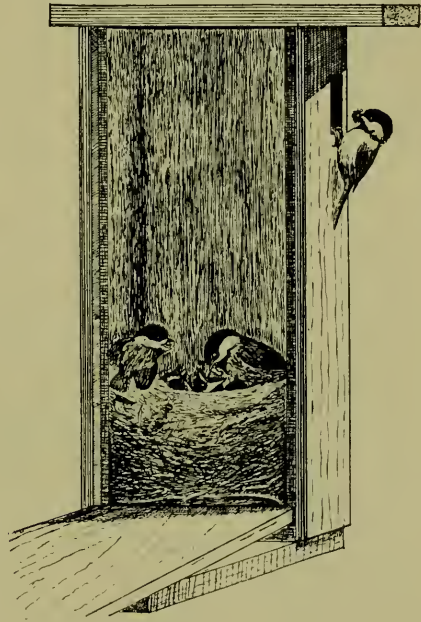
holes large enough so that the rooms can be cleaned out through them. A box which can be opened provides a way to get rid of the Sparrows. Their eggs can be removed every week until they tire of laying and leave the locality, or their nests can be destroyed with little trouble. There need be no sentiment about destroying these unfortunate little pests. Squirrels and mice often occupy these boxes, and their nests must be removed unless we prefer them to the birds. All the boxes mentioned above provide for this, except the shingle and bark boxes, which, however, can easily be made to open. The box shown in the cut above is the most convenient of all, where English Sparrows are plenty. The door extends half-way down the front and is attached to a narrow cover which overlaps a part of the top of the box. This arrangement needs no locking so long as it is not meddled with by children, and can be taken out in an instant without disturbing the nest, leaving an opening large enough to put in the hand and remove the contents of the box at once.

For those who wish to study the habits of such birds as can be induced to nest in boxes, the observation box shown in the cut is very nearly perfect. More than thirty years ago I made the first one for the purpose of studying

the domestic economy of a pair of Bluebirds. It is a simple affair with one side rabbeted for a pane of glass, and a door which shuts over the glass. The door is kept closed most of the time until the young are hatched. It can then be kept open as much as seems desirable, to observe the habits of the birds through the glass; but it must be arranged so that the sun will not shine in it, as that might be fatal to the young birds. The box shown in the cut is mounted on a short board projecting from my window-sill. The door is hinged at the bottom by a piece of leather, and opens toward the window. It has been occupied for three seasons by Chickadees, and any one

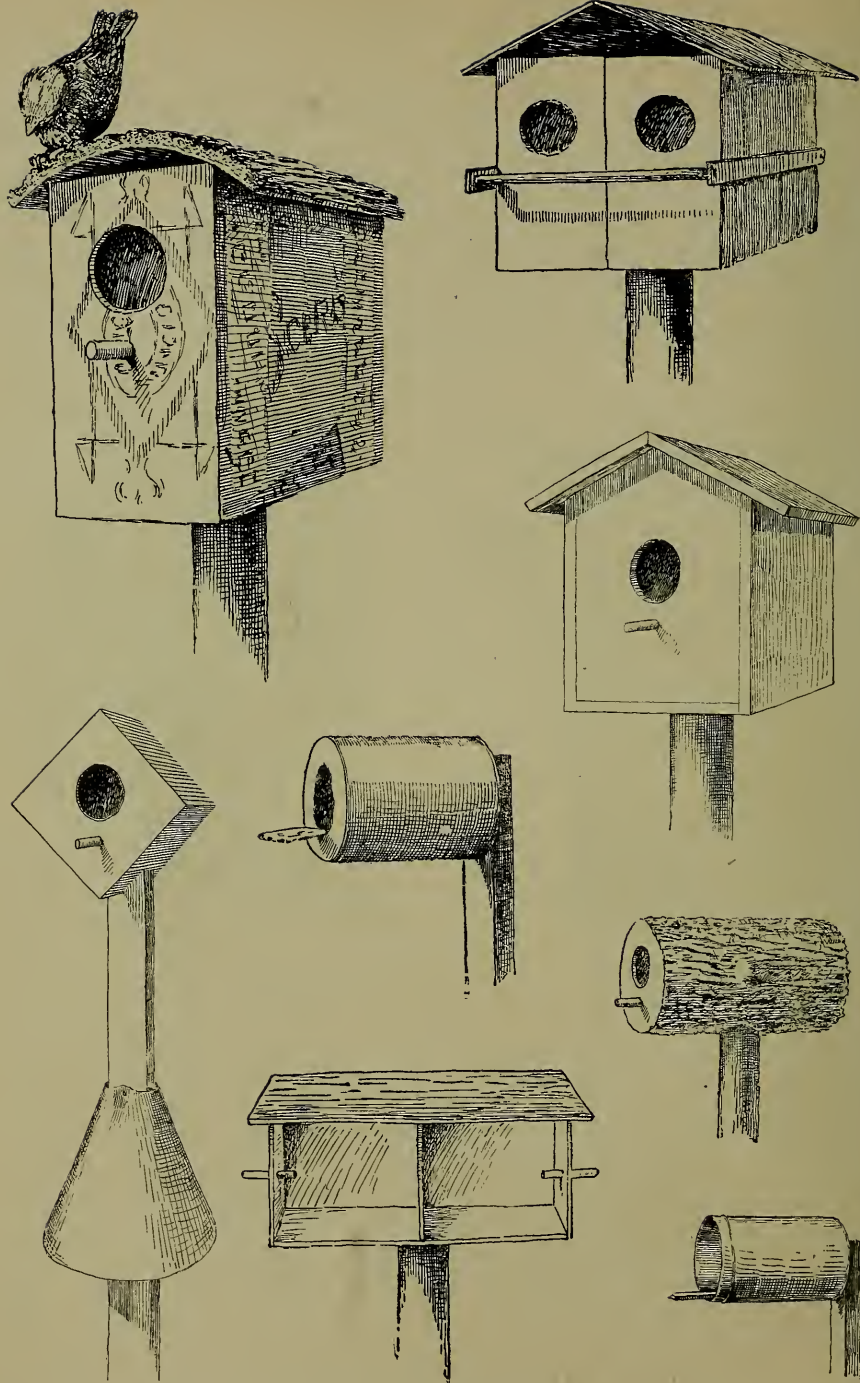


OBSERVATION BOX, CLOSED



OBSERVATION BOX, OPEN

sitting at the open window can watch the young birds as they are fed, note their growth and development, the character and amount of their food, the nest-cleaning and all their household affairs. The old birds were first attracted to the windows by feeding them there. Then they found the box a good place for shelter, and finally nested in it. They are good neighbors, attending to their own business and, as unpaid laborers in our fruit trees and woodland, their work of clearing insects from the premises is of the utmost value.



A PAGE OF NEST-BOX SUGGESTIONS

From the Cornell Nature Study Bureau. Courtesy of Mrs. Anna Botsford Comstock

On the Construction of Houses for the Purple Martin

By J. WARREN JACOBS

Illustrated by the author

IT is a task for me to give plans and describe the manner of constructing houses for Purple Martins. This is not because I have lacked experience in building these houses, but because in making a score or more of Martin homes, I have followed no set plan or rule, except to have the rooms a certain size, the entrances to the same of proper dimensions, and the whole, when finished, to have the appearance of a miniature residence or other building.

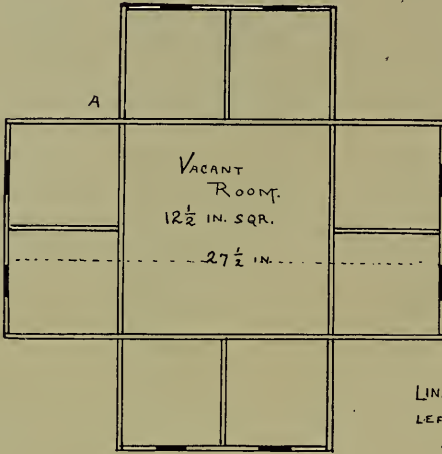
Before commencing on a bird-house, I had firmly fixed in my mind about what I wanted to do, and could fairly well picture how the house would look when completed. With my head for a guide, and a well-equipped kit of wood-working tools, I went to work on a house, which, when completed, was a well-proportioned, miniature building, bearing close inspection by architectural critics.

The first Martin house I ever built contained rooms 6 inches square and 7 inches high, with entrances $2\frac{1}{4}$ inches square, 1 inch above the floor. The birds were so well pleased with this box that I have followed this rule in making all others. Of course, the model of some of the houses I have made compelled me to vary in the dimensions of some of the rooms, but in nearly all cases the capacity was about the same:—if the width of a room was an inch less than the regular size, the depth was greater.

If you wish to build a Martin house and are fearful that you cannot devise and carry out a plan for a neat, well proportioned, miniature residence, make a plain box of twelve rooms, paint it well and erect it 12 to 15 feet above the ground, on a stout pole or iron pipe, in a position twenty or more feet from your buildings and where the tree branches do not reach. To make such a box, take a board 13 inches wide and 20 inches long; this is for the bottom or first floor, and should be at least $\frac{7}{8}$ inch thick. For sides and ends get a poplar board 16 inches wide and $\frac{3}{4}$ inch thick. Cut off two 13-inch sections for the ends, and two pieces $21\frac{1}{2}$ inches long for the sides. With a rule and pencil, divide these two side pieces off in three equal sections each; then draw a line full length the board, through the middle; make an opening $2\frac{1}{4}$ inches square, centrally in each of the six sections, 2 inches from the bottom edge, for the first story, and $1\frac{1}{2}$ inches above the middle line for the second story. This gives openings for six nesting rooms in each of the two sides. Now nail the end pieces to the bottom board, and then add the side pieces, and the house is ready to receive the partitions, second floor and top ceiling—all of which can be made of pine box-stuff $\frac{1}{2}$ inch thick. This completes the inside up to the 'square.' Now cut four triangular pieces for gables and roof supports, nailing two of

them on top of the end pieces and two directly over the partitions. This leaves a space in each gable end which can be utilized by the birds if a round hole $2\frac{1}{2}$ inches in diameter is cut for an entrance. Nail on the roof

Fig. 1



-A-
1ST. & 2ND. FLOOR
PLAN.

8 ROOMS
ON EACH FLOOR.

SIZE OF ROOMS,
6 IN. SQR. 7 IN. HIGH.
ENTRANCES $2\frac{1}{4}$ IN. SQR.
1 IN. ABOVE FLOOR. REPRESENTED
ON DIAGRAM BY
BLACK DASH.

LINES REPRESENTING BOARDS ARE
LEFT OPEN TO SHOW WHERE
JOINTS ARE TO BE MADE.

-B-

ROOF PLAN

STRAIGHT DOTTED LINES SHOW
FULL LENGTH BOARDS.

DOTTED OCTAGON SHOWS
WHERE CUPOLA IS TO BE
PLACED.

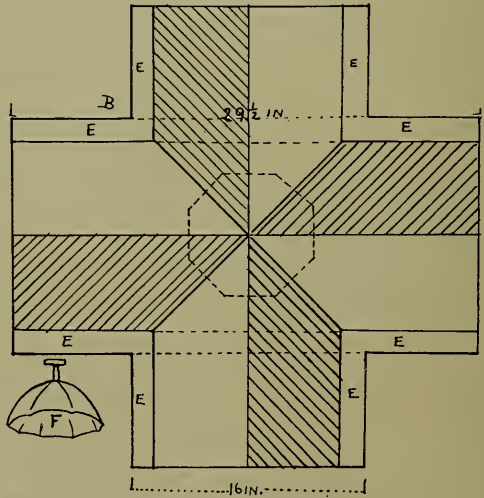
E.- CORNICE.

C. & D.- PARTS OF CUPOLA.

C.- 2 PIECES.

D.- 8 PIECES.

F.- TOP FOR CUPOLA
MADE BY TINSMITH.



GROUND PLAN AND DETAILS OF MARTIN HOUSE NO. 1

boards, leaving the eaves and ends to project about an inch, put a perch beneath each opening, or a strip $1\frac{1}{2}$ inches wide full length of the box beneath each row of doors. Add ornaments on each end of roof, and a little piece of wood representing a chimney in the middle. Paint the body of the box white and the roof a slate color. Four short angle-irons, with holes for

screws or nails, and made of old buggy tire at the blacksmith shop, will serve as the safest means of fastening the box to the top of the pole. Wooden braces or supports of any kind reaching from the pole to the edge of the box should be avoided, if you wish to deprive your neighbors' cats of an occasional feast on Martin flesh. The tools necessary for constructing this box are ordinary carpenters' saw and hammer, a brace and $\frac{3}{4}$ -inch bit for starting the openings to the rooms, and a compass-saw for enlarging and squaring the same. For constructing more elaborate bird-houses, other wood-working tools will be needed and a work-bench with a strong vise is desirable.



MARTIN HOUSE NO. 1

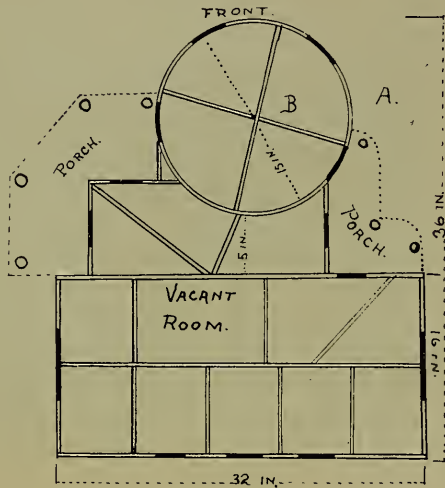
Two designs are selected from photographs of bird-houses I have built, and the floor and roof plans are given to aid those who wish to build elaborate houses. To go into detail and describe these plans would take up much valuable space, and be so tedious to follow that many persons would become confused and discouraged at the beginning; therefore, I give a brief description here, and add figures, measurements and explanations to the plans as a further help.



MARTIN HOUSE NO. 2

The principal points are to get the rooms a suitable size, and the openings rightly placed and of the proper dimensions.

Fig. 1 is a four-gabled structure of twenty rooms: the height from bottom board to cornice is 16 inches, and the width of each front is 14 inches; the little gable pieces, in which the round openings are cut, are 8



A.
 1ST. ¹/₂ 2ND. FLOOR PLAN.
 B 1ST. TO 3RD FLOOR PLAN
 1ST. ¹/₂ 2ND. FLOORS, 15 ROOM
 EACH. - 3RD. FLOOR 4 ROOMS
 IN FRONT PART, 2 ATTIC ROOMS
 IN MAIN PART
 SIZE OF ROOMS VARY -
 SQR. ONES 5 ¹/₂ X 7 IN.
 ENTRANCES 2 ¹/₄ IN. SQR. -
 IN ENDS OF MAIN PART REP-
 RESENT DOUBLE WINDOWS,
 DIVIDED BY END OF PARTITION
 WALL.

C.
 PLAN OF ROOF.
 STRAIGHT DOTTED LINES SHOW
 FULL LENGTH BOARDS.
 D. - CORNICE.
 E. - CHIMNEY POSITION.
 F. - ROOF OF ROUND
 SECTION. - MADE
 BY TINSMITH.
 G. - GABLE
 PIECE.

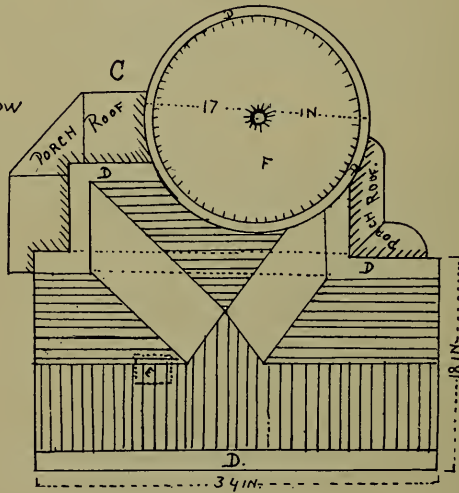
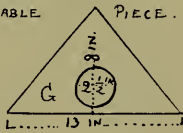


Fig 2

GROUND PLAN AND DETAILS OF MARTIN HOUSE NO. 2

inches high. The cupola is 6 inches high, exclusive of the two octagon pieces, which are of ¹/₈-inch stuff and 6 inches in diameter; on top of this is the little dome-shaped roof made by a tinsmith. The size of all the rooms on the first and second floors is 6 inches square and 7 inches high—four rooms on each side of a hollow space 12 ¹/₂ inches square. Little roof

ornaments for the birds to perch on are whittled out of white pine blocks, and the corner strips and window-frames and caps are made of thin pine strips. The window-sills are $\frac{1}{2}$ to $\frac{3}{4}$ inch thick, which gives the birds a foothold in going in and out of their nesting-rooms.

The same materials used in No. 1 will answer in building No. 2, with the addition of round wooden cylinders (I use "E Twist" tobacco crates, which are very convenient and cost but a trifle ; they are about the size of a half-bushel measure, and parts of three are required in making this house). The rooms in the third story of this round part are only 5 inches high. Porch columns can be turned out of poplar pieces at the planing-mill, or square ones, made by hand, with beveled corners, look well and cost less.

The outside of all joints, gutters and valleys in the roof should have a strip of tin securely nailed on to exclude water and preserve the house.

The first floor of all bird-houses weighing fifty pounds or over should be double, one extending above (inside), and one below the weather-boarding. Use $\frac{7}{8}$ -inch oak boards for the first floor ; clean poplar, $\frac{3}{4}$ inch thick for the sides and roof, and white pine, $\frac{1}{2}$ inch thick, for partitions and inside floors (shoe boxes are the best for this).

I paint the body of all my bird-houses white, and the corner strips, window-frames and other trimmings in light or dark green, red or slate ; gable pieces in terra-cotta ; roof dark slate, and chimney and roof ornaments white. Upper half of windows are painted green, to represent shades. Bottom of box and the pole are painted black.

The angle-irons, four in number, for fastening the box to the top end of the pole, are made of old buggy or wagon tire, according to the weight they have to support, and are screwed to the bottom of the box and to the pole ; or, if an iron pipe is used, to a piece of wood which will slip down



HOUSE NO. 2 IN POSITION

into the end of the pipe. All expensive Martin houses should be erected on a pole provided with a pair of barn-door hinges and a clasp for locking securely in position, and for lowering the same and placing in the dry during the winter. This is done by casing 2 feet of the lower end of the pipe in a box made of 2-inch joists, and hinging it to the top end of a solid piece of oak or locust, 8 or 10 inches square and 3 feet long, placed in the ground to a depth of $2\frac{1}{2}$ feet.



Photographed by M. S. Crosby, at Rhinebeck, N. Y.



Photographed by R. W. Hegner, at Decorah, Ia.



Photographed by F. M. Chapman, at Englewood, N. J.

THREE WREN HOMES

Nest-Box Notes

From St. Louis, Mo.

Since BIRD-LORE is to have a Bird-House number, I think, as an old hand in the use of bird-boxes, I should contribute a few hints in regard to them.

1. A simple and effective way of keeping the English Sparrow out of a Bluebird's box is to put it up not higher than eight to ten feet from the ground. Bluebirds like this situation, prefer it even to a higher one, but no English Sparrow cares for such a box,—it is not nearly safe enough for him, and though one may, exceptionally, try to take possession of it, he is easily discouraged when he sees that anybody can reach it from a chair.

2. The Martins like their houses higher up, at least sixteen to eighteen feet from the ground. My advice is to put each box on a separate 2 x 4 pine wood scantling, this to be fastened near the ground by two bolts to a 3 x 4 cedar post,—this cedar post to be six feet long, half in the ground, half out of it. Two wires reaching from near the box down to some fixed objects keep the box from swinging too much in a strong wind. The great advantage of this arrangement is that anybody can, by simply taking out one of the two bolts, easily lower the box to the ground in order to remove the Sparrow's nests which otherwise could only be reached by the risky and troublesome use of a long ladder. The reason why one box is better than two or more on the same pole, is because it is very probable that after one pair of Martins has begun building, Sparrows will take possession of the other boxes, and by our interference we should seriously disturb the Martins, already building or laying.

Martins' boxes should be at least 8 x 8 inches inside and six inches high, with a double roof, one parallel with the floor to keep the box closed and dark, the other slanting and projecting several inches over the three - inch-wide porch in front of the

entrance. This second roof is important, as without it the heat in the box becomes so intense that the young ones suffer greatly and are likely to leave the box, fall to the ground and are lost, since no Martin feeds its young on the ground. The entrance should not be larger than 2 x 2 inches, flush with the floor and porch. The roof should be on hinges, to allow easy removal of the contents of the box, if necessary.

3. I would also say to those who put up bird-houses of any kind to keep a watchful



ARTIFICIAL HOLLOW LIMB FOR A WOOD-DUCK'S NEST

Made by Ernest Thompson Seton, on his place at Cos Cobs, Conn., of wire-netting covered with cement modeled to resemble bark.

eye on the House Wren. He is as great a nuisance as the English Sparrow. He enters bird homes in the absence of the owner, ruins their nests, pierces and throws out eggs and can do enough mischief in one season to threaten the existence of a whole colony of Martins. Nor are his

attentions confined to bird-houses either; open nests also suffer from his sneaking visits, and much of the damage laid at the English Sparrow's door may be traced to the innocent-looking Jenny Wren.—O. WIDMANN, *St. Louis*.

From Washington, D. C.

As to the matter of bird-boxes, there is really very little I could say, and probably nothing that would be new. The boxes on my place are all of the ordinary type, the only special point (and that, of course,



AN UNWELCOME TENANT

Photographed with the aid of a mirror to reflect light,
by E. Van Altena

not original with me) being that the holes are made too small for the English Sparrow, My boxes are placed anywhere, almost. One is on my veranda; one on top of a fifteen-foot post to which a climbing rose is trained; one is in a tree, and in other trees are hung long-necked gourds with a small hole in one side. These nesting-places are occupied solely by House Wrens, for they will not allow any other bird to use them. Each spring a pair of Carolina Chickadees build their nest in one of them and have begun incubation by the time the House Wrens arrive, but that is as far as the poor Chickadees ever get, for the Wrens immediately oust them and destroy their

eggs. If it were not for the English Sparrows I could easily have Bluebirds, Tufted Titmice, Carolina Wrens and Crested Flycatchers, for all these are numerous in the vicinity of my place and frequently come inside the grounds; but it is simply of no use whatever to put up boxes with holes large enough to admit the Sparrow, for he alone benefits thereby. I tried putting up boxes without perches, as some one advised, but (as I really thought would prove to be the case) it made no difference whatever to the Sparrows, which I have seen fly directly into a box without stopping first to cling to the edge of the entrance.—ROBERT RIDGWAY, *Brookland, D. C.*

From Durham, N. C.

Birds have simple tastes in the selection of nesting-sites. I have found by experience that the nesting-box on which most time and trouble have been expended is usually the one that goes without a tenant (English Sparrows not counted as tenants). After several unsuccessful attempts to induce wild birds to nest in the orchard, I abandoned the fancy-box idea and began to pattern after nature's bird-houses—and with success. A hollow log, about a foot in length and with three inches inside diameter, was secured to the branch of one of the orchard trees by dull-colored twine. Both ends were plugged with old bark and a chink in the side with gray moss. A round hole, one and one-half inches in diameter, had previously been bored in the side of the log, near the top. A pair of Chickadees were the first occupants, and a brood of four was reared that spring. The next year no suitable box was provided, but in the spring of 1904 a pair of Chickadees again built in a new log at the same place.

A hollow section of dogwood, over a yard in length, and with an inside diameter of five inches, was strapped to the trunk of another orchard tree as the small log had been placed for the Chickadees. The lower end was simply plugged with a few old chips and sticks, while a small board tacked over the top served to keep out the rain and

sun. An irregular opening was cut in the side of the log. It was, of course, larger than the one in the small log, measuring about $4 \times 2\frac{1}{2}$ inches. A pair of Tufted Titmice were the first occupants. They reared a brood of five.

This was an interesting family of birds. By gradual advances I succeeded in taming the parents so that they would fly in at the entrance as I sat on a near-by branch of the tree,—so near, in fact, that my knee was less than a foot below the log entrance and the parents were obliged to fly directly over it. I often remained motionless at a yard's distance from the nest entrance and thus secured considerable data on feeding habits. A few days before the Titmouse family left the log a pair of Crested Flycatchers began to investigate about the log and remained in its vicinity much of the day. It seemed as if they had made an agreement with the Titmice about the length of their occupancy and had now come to see that they moved out. Be that as it may, the Titmice left on the afternoon of May 27, and on the morning of June 1, the Flycatchers began to move their furniture in the log. This consisted of chicken feathers, green weeds and snake-skins. An interesting brood was reared that spring, and the next spring (1904), a pair of Crested Flycatchers (presumably the same ones) again reared their young in the log.

For Bluebirds I have tried another device. I cut circular holes in the sides of two tin coffee cans and mounted them on a pole, only about two inches apart. That was a mistake, for a rough-and-tumble fight ensued when two pairs of Bluebirds tried to build in such close proximity. One pair was driven away by the other. This last pair reared two broods. It is evident that such birds as have built in my bird-houses are of great value in the orchard. Nearly all feeding was done in the orchard, and the food consisted, as far as I know, of insect diet. I observed the Titmice several days, and during that time saw nothing but insect food given the nestlings. I was watching at very close range, too. Grasshoppers, lunar moths, green beetles, green bugs, and dragonflies were part of the

Flycatcher's diet.—ERNEST SEEMAN, *Durham, N. C.*



A Wren House Which Should not Lack a Tenant

It is made of strips of bark and surrounded by twining branches of old grapevine, and it contains two compartments, each with one opening. By another summer the clematis vine, which has been planted about it, will partially conceal it, thus affording a most natural setting.—J. FLETCHER STREET, *Beverly, N. J.*

A Tree Swallow Home

The notice in December BIRD-LORE that the next issue would be largely devoted to bird-houses tempted me to send you the enclosed photograph of a Tree Swallow's nest on a rose trellis in front of my barn. The handsome little pair moved in May 14,



A TREE SWALLOW HOME

1904, raised a brood, and left July 6. They were very tame and decidedly attentive to each other during their stay. The male spent a large part of his spare time perched on a telephone wire a short distance from the nest, within sight and easy call of his mate. They had a few tilts with a pair of

Bluebirds, who occupied another similar tenement a short distance away, and who, for a time, seemed not to desire the Swallows for neighbors but finally decided to bury the hatchet and let them remain.

We took great pleasure in watching them soar gracefully about, catching food and feeding their young. The little house stands ready for them next season, and we shall be on the lookout, hoping they will return.—W. H. PHILLIPS, *Brattleboro, Vt.*

From the Catskills

As BIRD-LORE invites us to send notes about bird-houses, I venture to suggest that one side of each house be made so that it can slide out. We have found that very important, as they need to be emptied and cleaned in the autumn, after the birds have left them—so that they will be ready for spring use. Especially is this true when Wrens occupy them, as their building material is so profuse; if the sticks, etc., are left to accumulate, the young birds may be suffocated.

Another suggestion would be, to place the bird-house on a post in an open space; out of the way of cats, and also of chipmunks—who have been known to raise their families in bird-houses that were placed in trees. The posts to be painted green, and the part that is sunk in the ground to be tarred, for preservation.

We had discs of tin placed around some of our bird-houses that were not near our home; but perhaps the mountain red squirrels are greater athletes than squirrels generally, for they overcame all difficulties and perseveringly lived there.—HENRIETTA HAINES DOREMUS KING.

Unique Martin Boxes

I might mention a unique Bird-House used by a store-keeper at a little town in the southern part of Greene County, Pennsylvania. He has two or three candy-buckets made into Bird-Houses, and hung on a wire stretched from his store to his warehouse. He has quite a colony of Martins nesting in these swaying 'castles,' and states that the Sparrows do not disturb them.—J. WARREN JACOBS, *Waynesburg, Pa.*

An English Sparrow as a House-breaker and Other Notes

Some years ago, at my home in Plainfield, New Jersey, I erected a small Wren house, placing it on top of a small telegraph-pole in the garden. I made the entrance hole to the box so small that an English Sparrow could not enter, and here, for several years, a pair of Wrens made their home and raised their families. Last winter, an English Sparrow determined to take possession, and I found it repeatedly clinging to the side wall of the house, and pecking at the wood and enlarging the hole. This it kept up most determinedly for a number of weeks, until it was large enough for its entrance, when it at once took possession and went to house-keeping. I then took the house down and destroyed it. I found the wood-work of soft pine badly eaten around the entrance, showing that the Sparrow can dig into wood as well as into grains and seeds.

One of the sights of this city is a large Purple Martin colony on the main business street, consisting of three bird-houses, containing probably ten pairs in each. Here they come every April and raise their families without apparently being in the least disturbed by the noisy traffic going on around them. Here they have come for so many years that the oldest inhabitant cannot remember to the contrary. They were certainly here in 1828, and, how long before, we have no record.

Other noteworthy bird appearances here were a Tufted Titmouse who spent the winter of 1902-3 with us, whose clear whistle was frequently heard as he fed with the Nuthatches and Downies, on the suet, placed on a tree in front of the house; also, a flock of Cardinals who spent the winter in a near-by swamp, and the visit of a flock of Starlings, that came in one of the heavy snows of last winter. The Wood Thrush is plentiful here in summer, with numerous Rose-breasted Grosbeaks, and I have one large Snowy Owl to my credit.—WM. M. STILLMAN, *Plainfield, N. J.*



A MEMBER OF A FAMILY THAT MAKE THEIR
OWN NEST BOXES. FLICKER

Photographed by R. H. Beebe at Arcade, N. Y.

Bird-Lore's Fifth Christmas Bird Census

THE results of BIRD-LORE's fifth Christmas Bird Census are a tribute to the enthusiasm of the true bird lover. In what other branch of nature study would we find so large a number of students who, under similar conditions, would consider it not only a pleasure but a privilege to tramp miles through the snow under threatening skies, with the mercury below freezing?

Reports have been received from the Atlantic to the Pacific, one observer, indeed, venturing well out on the troubled waters of the Atlantic itself; and they represent from a part of an hour to as many as ten and a half hours' observation.

Reaboro, Ontario.—December 23, 1904; time, 10.05 A. M. to 12.15 P. M.; 1.40 P. M. to 3.30 P. M. Sky dull, heavy thaw; snow in patches; wind southwest; temp., from 37° to 38°. Ruffed Grouse, 10; Pine Siskin, 58; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 9. Total, 5 species, 79 individuals.—E. WELLINGTON CALVERT.

Queenston, Ontario.—December 23; time, 8 A. M. to 11 A. M.; 12 M. to 4 P. M. Cloudy; ground partly covered with snow; wind southwest, high; temp. 40°. Herring Gull, about 300; Bonaparte's Gull, 1; Golden-eye Duck, 5; Blue Jay, 4; American Crow, about 300; Goldfinch, 4; Junco, 4; Brown Creeper, 3; White-breasted Nuthatch, 4; Chickadee, about 70; Golden-crowned Kinglet, 11. Total, 11 species, 706 individuals.—HARRY H. LARKIN.

Cape Elizabeth, Maine.—Time, 9.30 A. M. to 12.45 P. M. Clear; three inches of snow; wind northwest, light; temp., zero. Herring Gull, 38; Chickadee, 25; American Goldfinch, 20; Myrtle Warbler, 5; Snowflake, 5; Tree Sparrow, 2; Crow, 2; Hermit Thrush, 1. Total, 8 species, 98 individuals.—W. H. BROWNSON, J. F. FANNING and LOUIS E. LEGGE.

St. Albans, Vt.—Time, 12 M. to 2 P. M. Clear; about eight inches of snow; no wind; temp., 8° below zero. Ruffed Grouse, 1; White-breasted Nuthatch, 4; Black-capped Chickadee, approximately, 30. Total, 3 species, 35 individuals.—LELIA E. HONSINGER and MRS. C. E. HEPBURN.

St. Johnsbury, Vt.—December 20; time, 10.30 A. M. to 2.30 P. M. Clear; no wind; ground covered with snow; temp., 28°. Chickadee, 14; White-breasted Nuthatch, 3; Tree Sparrow, 2. Total, 3 species, 19 individuals.—DELIA I. GRIFFIN and ISABEL M. PADDOCK.

St. Johnsbury, Vt.—December 21; 8 A. M. to 10 A. M.; after a light snow. Birds that visited a lunch counter; Chickadee, 52; Red-breasted Nuthatch, 17; White-breasted Nuthatch, 9. Total, 3 species, 78 individuals.—MRS. EDWARD T. FAIRBANKS.

West Barnet, Vt.—December, 26; time, 8 to 10 A. M. Clear; ground mostly covered with snow; wind northwest, light; temp., 5° at 8 A. M. From windows overlooking bird table and orchard. Hairy Woodpecker, 1; Downy Woodpecker, 1; Redpoll, 15; Goldfinch, 6; Pine Siskin, 3; White-breasted Nuthatch, 1; Chickadee, 9. Total, 7 species, 36 individuals. I have recently seen large flocks of Goldfinches and Pine Siskins; also a few American Crossbills.—MARION BOLE.

Bethel, Vt.—Time, 2 P. M. to 3.20 P. M. Sky overcast; ground mostly snow-covered, as for six weeks past; wind northeast, light; temp., 20° to 14°. Ruffed Grouse, 1; Downy Woodpecker, 1; Pileated Woodpecker, 1; Blue Jay, 8; Redpoll, 5; Goldfinch, 23; Tree Sparrow, 3; White-breasted Nuthatch, 3; Chickadees, 7. Total, 9 species, 52 individuals.—ELTA M. LEWIS.

Burlington, Vt.—Time, 2 P. M. to 3.15 P. M. Cloudy; ground covered with snow,

south wind, light; temp., 10°. Downy Woodpecker, 3; Crow, 3; Cooper's Hawk, 1; White-breasted Nuthatch, 6; Red-breasted Nuthatch, 1; Chickadee, 17. Total, 6 species, 30 individuals.—EMMA E. DREW.

Tilton, N. H.—December 26; time, 10 A. M. to 4 P. M. Cloudy; a little snow on ground; wind northeast to north, light; temp., 26°. American Merganser, about 21; Black Duck, 1; American Golden-eye, about 14; Canadian Ruffed Grouse, 1; Downy Woodpecker, 1; Blue Jay, 3; American Crow, 1; White-breasted Nuthatch, 2; Chickadee, 18. Total, 9 species, 62 individuals.—EDWARD H. PERKINS and GEORGE L. PLIMPTON.

Wilton, N. H.—Time, 8.30 to 10.30 A. M., 1.45 to 3.30 P. M. Clear in forenoon, cloudy in afternoon; ground lightly covered with snow in patches; wind west, light; temp., 4° to 25°. Ruffed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; Blue Jay, 7; American Crow, 18; Redpoll, 5; American Goldfinch, 60; White-breasted Nuthatch, 1; Chickadee, 16; Golden-crowned Kinglet, 1. Total, 10 species, 116 individuals.—GEORGE G. BLANCHARD.

Hanover, N. H.—December 21; 8.15 A. M. to 10 A. M. Clear, about five inches of snow covering the ground; wind northwest, fresh; temp., 18°. Canadian Ruffed Grouse, 1; Northern Downy Woodpecker, 1; Blue Jay, 1; American Crossbill, 2; Goldfinch, 1; Pine Siskin, 15; Brown Creeper, 3; Red-breasted Nuthatch, 1; Chickadee, 21. Total, 9 species, 46 individuals.—FRANCIS G. BLAKE, Brookline, Mass.

Meriden, N. H.—Time, 10 A. M. to 1 P. M. Distance covered, nine miles, over rolling and hilly country half open, half mixed-growth woodland; temp., 4° below zero; no wind, hazy sunlight, ground about two-thirds covered with snow. Ruffed Grouse, 2; Red-tailed Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Pileated Woodpecker, 1; Blue Jay, 8; Redpoll, about 100; Goldfinch, 40; White-breasted Nuthatch, 2; Chickadee, 25. Total, 10 species, 181 individuals.—ERNEST HAROLD BAYNES.

Boston, Mass.—(From Harvard Bridge, through the Back Bay Fens and Riverway, Olmsted and Jamaica Parks and the Arnold Arboretum; six miles of the city park system.) December 23; 8.15 A. M. to 4.15 P. M. Cloudy, with occasional light rain and sunshine; eight inches of snow on the ground; wind southwest, light; temp., 38° to 48°. Great Black-backed Gull, 7; Herring Gull, 55; Black Duck, 3; Red-legged Black Duck, 115; American Golden-eye, 21; Bob-white, 16; Sparrow Hawk, 1; Downy Woodpecker, 1; Flicker, 36; Blue Jay, 17; American Crow, 32; Purple Finch, 21; Goldfinch, 3; Snowflake, 2; White-throated Sparrow, 4; Tree Sparrow, 34; Junco, 20; Song Sparrow, 19; Fox Sparrow, 3; Cedar Waxwing, 87; Mockingbird, 2; Brown Creeper, 6; White-breasted Nuthatch, 2; Chickadee, 27; Golden-crowned Kinglet, 12; Robin, 3. Total, 26 species, 549 individuals.—HORACE W. WRIGHT, FRANCIS G. and MAURICE C. BLAKE.

Boston, Mass. (Franklin Park, Arnold Arboretum and Fenway) December 26; time, 11 A. M. to 3 P. M. Ground well covered with snow; sky overcast; temp., about 23°. Downy Woodpecker, 1; Flicker, 2; Crows 15; Junco, 4; Chickadee, 4; Golden-crowned Kinglet, 2. Total, 6 species, 28 individuals. I have also to report the appearance of a Catbird in the Boston Public Garden December 21 and 23, 1904. This bird seemed to be in good condition.—J. S. CODMAN.

Medford (through Middlesex Fells, to Pine Banks Park, Malden, Mass.).—Time, 8.40 A. M. to 3.30 P. M. Clear, followed by snow-flurries; ground covered with snow; wind west, brisk; temp., 25°. Ruffed Grouse, 3; Northern Downy Woodpecker, 1; Arctic Three-toed Woodpecker, 1 male; Blue Jay, 3; American Crow, 19; American Crossbill, 11; American Goldfinch, 41; White-throated Sparrow, 1; Tree Sparrow, 4; Junco, 48; Song Sparrow, 1; Fox Sparrow, 1; Brown Creeper, 9; White-breasted Nuthatch, 1; Red-breasted Nuthatch, 4; Chickadee, 105; Golden-crowned Kinglet, 2. Total, 17 species, 255 individuals.—GORDON BOIT WELLMAN, HORACE W. WRIGHT, MAURICE C. BLAKE, and HERVEY W. KING.

Brookline, Mass.—Snowing, ground snow-covered; temp., 10°. Black Duck, 9; Mallard, 5; Red-shouldered Hawk, 1; Flicker, 14; Crow, 8; Blue Jay, 9; Tree Sparrow, 5; Junco, 4; White-throated Sparrow, 6; Catbird, 1; White-breasted Nuthatch, 2; Chickadee, 9; Golden-crowned Kinglet, 3. Total, 13 species, 76 individuals. I got to within ten feet of the Catbird, which seemed very tame and hungry.—CHARLES B. FLOYD.

Cambridge (Fresh Pond Marshes), Arlington Heights, Belmont and Waverly, Mass.—December 30; time, 9.15 A. M. to 5.10 P. M. Cloudy A. M., clear P. M.; ground mostly snow and ice-covered; wind southwest, light; temp., 30°. Great Blue Heron, 1 (in flight southward); Ring-necked Pheasant, 2; Marsh Hawk, 1; Screech Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 1; Flicker, 3; Blue Jay, 1; American Crow, 21; Red-winged Blackbird, 3; Meadow-lark, 1; Purple Finch, 1; American Goldfinch, 79; White-throated Sparrow, 1; Tree Sparrow, 52; Song Sparrow, 13; Swamp Sparrow, 5; Chickadee, 37; Golden-crowned Kinglet, 44; Robin, 4. Total, 20 species, 273 individuals.—HORACE W. WRIGHT and MAURICE C. BLAKE.

Near Boston, Mass., Lynn Beach and Nahant.—December 26; time, 11 A. M. to 4.15 P. M. Cloudy; light snow on ground, light snow-flurries; strong east wind; temp., 20°. Horned Grebe, 1; Brünnich's Murre, 2; Herring Gull, 8; American Scaup Duck, 17; American Golden-eye, 13; Old Squaw, 11; Surf Scoter, 2; Sparrow Hawk, 1; Horned Lark, 3; American Crow, 4; Goldfinch, 1; Snowflake, 1; Song Sparrow, 1; Brown Creeper, 2; Chickadee, 2. Total, 15 species, 72 individuals.—FRANCIS BYERLY.

West Roxbury, Mass.—December 22; time, 9 A. M. to 2 P. M. Partly cloudy; ground snow-covered; wind west to southwest, brisk; temp., 19°. Downy Woodpecker, 2; Flicker, 4; Blue Jay, 6; Crow, 20; Tree Sparrow, 3; Junco, 3; Song Sparrow, 1; Fox Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 12; Golden-crowned Kinglet, 2. Total, 12 species, 57 individuals.—CHARLES E. HEIL.

Nahant, Mass.—December 24; time, 9.20 A. M. to 2.10 P. M. Cloudy, remaining snowdrifts, some bare ground; wind northeast, brisk; temp., 30° to 24°. Holboell's Grebe, 2; Loon, 1; Brünnich's Murre, or Razor-billed Auk, 4; Great Black-backed Gull, 6; Herring Gull, 165; Red-breasted Merganser, 7; American Golden-eye, 36; Old Squaw, 25; White-winged Scoter, 13; Horned Lark, 35; American Crow, 105; Snowflake, 2; Song Sparrow, 2; Chickadee, 1. Revere Beach.—Time, 3 15 P. M. to 4.15 P. M. Great Black-backed Gull, 49; Herring Gull, 750; American Crow, 12. Total, 14 species, 1,215 individuals.—MAURICE C. BLAKE and HORACE W. WRIGHT.

Atlantic, Squantum and Moon Island, Mass.—December 28; time, 9 A. M. to 4.15 P. M. Cloudy; wind northeast, very light; very dense fog, lifting from 12 M. to 12.30 P. M.; wind shifting to southwest and increasing to very strong; at 2 P. M. sky nearly clear, ground mostly snow-covered; temp., 36° to 38°. Loon, 1; Great Black-backed Gull, 12; Herring Gull, 350; Red-breasted Merganser, 5; Red-legged Black Duck, 51; American Scaup Duck, 562; American Golden-eye, 136; Bufflehead, 14; Old Squaw, 2; American Scoter, 5; Sparrow Hawk, 1; Northern Downy Woodpecker, 2; Flicker, 7; Horned Lark, 14; American Crow, 197; Meadow-lark, 1; Snowflake, 100; Song Sparrow, 4; Cedar Waxwing, 26; Chickadee, 7; Golden-crowned Kinglet, 1. Total, 21 species, 1,498 individuals.—FRANCIS G. and MAURICE C. BLAKE.

Woonsocket, R. I.—December 24; time, 8 to 10.30 A. M. Cloudy; snow 8 inches deep; wind north, strong; growing cold after a two days' thaw; temp., 42° down to 28°. Blue Jay, 3; Crow, 2; Song Sparrow, 1; Chickadee, 3. Total, 4 species, 9 individuals.—CLARENCE M. ARNOLD.

Glocester, R. I.—Time, at intervals all day; partly to wholly cloudy, snow-squalls in forenoon; ground covered with snow; wind northeast, light; temp., morning 5°. Ruffed Grouse, 2, their tracks plentiful; Blue Jay, 4; Crow, 2; Junco, 1; Chickadee, 2. Total, 5 species, 11 individuals. December 21, Northern Shrike 1; December 22, flock of 12 to 15 Goldfinches, and 6 Tree Sparrows.—J. IRVING HILL.

Providence, R. I.—December 28; time, 9 A. M. to 12 M. Cloudy; ground covered with snow; wind northwest, strong; temp., 22°. Downy Woodpecker, 3; Flicker, 7; Blue Jay, 9; American Crow, 1; Goldfinch, 4; Tree Sparrow, 19; Field Sparrow, 7; Junco, 7; Song Sparrow, 11; Brown Creeper, 6; Chickadee, 20; White-breasted Nuthatch, 1. Total, 12 species, 90 individuals. Also December 17, Robin 1, White-throated Sparrow, 1.—E. H. MASON, Jr.

Drownville, R. I.—Time, 9 A. M. to 12 M. Occasional snow-flurries; ground covered with ten inches of snow; wind northeast, light; temp., 34°. Herring Gull, 1; Red-shouldered Hawk, 1; Crow, 1; Tree Sparrow, 15; Slate-colored Junco, 10; Song Sparrow, 1; Myrtle Warbler, 1. Total, 7 species, 30 individuals.—F. M. JENCKS.

Bristol, Conn.—Time, 7 to 10 A. M. Cloudy; ten inches crusty snow, wind northeast, fresh; temp., 6°. Ruffed Grouse, 3; Downy Woodpecker, 2; Blue Jay, 6; American Crow, 11; Goldfinch, 3; Tree Sparrow, 39; White-breasted Nuthatch, 2; Chickadee, 15; Golden-crowned Kinglet, 6. Total, 9 species, 87 individuals.—R. W. FORD, NEWTON MANROSS, E. E. SMITH and FRANK BRUEN.

Bristol, Conn.—December 26; time, 7.15 A. M. to 2.30 P. M. Ground snow-covered; wind northeast, light; temp., 16°. Bob-white, 16; Ruffed Grouse, 2; Hairy Woodpecker, 2; Downy Woodpecker, 6; Blue Jay, 28; American Crow, 52; Goldfinch, 6; White-throated Sparrow, 1; Junco, 8; Song Sparrow, 2; Tree Sparrow, 69; Winter Wren, 1; White-breasted Nuthatch, 5; Chickadee, 11; Golden-crowned Kinglet, 2. Total, 15 species, 211 individuals.—E. E. SMITH and FRANK BRUEN.

Washington, Conn.—Time, 3 P. M. to 4.30 P. M. Cloudy; ground covered with snow; wind northeast, light; temp., 20°. Downy Woodpecker, 2; White-breasted Nuthatch, 2; Chickadee, 4. December 24.—Hairy Woodpecker, 2; Jay, 2; and flock of Tree Sparrows were in the neighborhood. December 27, heard Goldfinch and Flicker.—WILHELMINA C. KNOWLES.

South Norwalk, Conn.—Ther. 13° at 9 A. M.; raw north wind; 10 inches of snow in evening; snowing parts of all day. Herring Gull, 1; Marsh Hawk, 1; Snowy Owl, 1; Downy Woodpecker, 9; Blue Jay, 10; Crow, 10; European Starling, 5; Purple Finch, 1; Goldfinch, 6; Snowflake, 6; Tree Sparrow, 40; Junco, 6; Song Sparrow, 6; Fox Sparrow, 1; Carolina Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 25; Robin, 1. Total, 20 species, 106 individuals. Five members of Norwalk Bird Club, each covering a different territory.—WILBUR F. SMITH, Pres.

Trudeau, N. Y. (In the Adirondacks).—December 26; time, 5 P. M. to 5.30 P. M. Cloudy; snow on the ground; no wind; temp., 20°. Chickadee, 3; American Goldfinch, 4; White-breasted Nuthatch, 1. Total, 3 species, 8 individuals.—L. R. PERKINS.

Canandaigua, N. Y.—December 24; time, 8 A. M. to 12.30 P. M.; 1.15 P. M. to 3 P. M. Cloudy; wind northeast, with driving snow; temp., 14°. Herring Gull, 2; American Scaup Duck, 3; Screech Owl, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 1; American Crow, about 350; Red-winged Blackbird, 1; Meadow-lark, 1; Tree Sparrow, 38; Song Sparrow, 5; White-breasted Nuthatch, 7; Chickadee, 16; Golden-crowned Kinglet, 1; Mongolian Pheasant, 2. Total, 14 species, 430 individuals.—FRANK T. ANTES.

Auburn, N. Y.—Time, 8.30 A. M. to 4 P. M. Cloudy; ground covered with snow, except in exposed portions; wind southeast, very strong, with snow after 12 noon; temp., 18°. Herring Gull, 25; American Merganser, 3; Red-breasted Merganser, 6; Hooded Merganser, 6; American Golden-eye, 13; Red-tailed Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Crow, 27; Goldfinch, 3; Brown Creeper, 1; White-breasted Nuthatch, 1. Total, 13 species, 90 individuals.—FREDERICK J. STUPP.

Ithaca, N. Y.—December 24; time, 7.05 A. M. to 8.10 A. M.; 8.30 A. M. to 4.40 P. M. Cloudy; light snow for a time; ground snow-covered; wind north, brisk; temp., 16°. Herring Gull, 4; Bald Eagle, 1; Hairy Woodpecker, 5; Downy Woodpecker, 9; Crow,

250; Goldfinch, 4; Tree Sparrow, 100; Junco, 5; Song Sparrow, 2; Brown Creeper, 3; White-breasted Nuthatch, 12; Chickadee, 25; Golden-crowned Kinglet, 1 (heard); Robin, 2. Total, 14 species, 423 individuals.—FRANCIS HARPER.

Hilton, N. Y.—December 23; time, 9.30 A. M. to 2.30 P. M. Wind southwest, strong; ground thinly snow-covered. Marsh Hawk, 2; Downy Woodpecker, 14; Hairy Woodpecker, 6; Red-headed Woodpecker, 5; Crow, 12; Redpoll, 3; Goldfinch, 8; Purple Finch, 1; Song Sparrow, 1; Tree Sparrow, 15; Chickadee, 30; White-breasted Nuthatch, 20; Red-breasted Nuthatch, 2; Brown Creeper, 6. Total, 14 species, 129 individuals.—JOHN ARCHER and ALBERT H. WRIGHT.

New York City, Central Park.—(110th Street Woods and Upper Reservoir). Time, 3 to 4 P. M. Snowing; wind north; temp., 28°. Herring Gull, nearly a thousand; Downy Woodpecker, 1; White-throated Sparrow, 8; Junco, 2; Song Sparrow, 1; Towhee, 1; Cardinal, 4; Brown Creeper, 4; Chickadee, 6. Total, 9 species, 27 individuals (excluding Gulls).—MAUNSELL S. CROSBY.

New York City, Central Park.—December 26; time, 8.30 A. M. to 10.40 A. M. Brisk, northeast wind; temp., 24°. Herring Gull, 23; Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 1; White-throated Sparrow, 15; Cardinal, 4; Junco, 1; Chickadee, 6; Golden-crowned Kinglet, 1; Robin, 1. Total, 10 species, 54 individuals.—CARLETON SCHALLER.

New York City, Central Park.—Time, 9 to 10.25 A. M. Cloudy; four inches of snow; wind strong; temp., 21°. Herring Gull, 70; Hairy Woodpecker, 1; Downy Woodpecker, 1; Starling, 2; White-throated Sparrow, 13; Junco, 1; Song Sparrow, 1; Cardinal, 2; Black-capped Chickadee, 1; Robin, 1. Total, 10 species, 93 individuals.—E. H. and H. E. PORTER.

New York City, Central Park.—December 26; time, 8.30 to 9.40 A. M. Cloudy; 4 inches of snow; no wind; temp., 27°. Herring Gull, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; White-throated Sparrow, 20; Junco, 1; Song Sparrow, 1; Cardinal, 2; Brown Creeper, 1; Black-capped Chickadee, 2; Hermit Thrush, 1; Robin, 1. Total, 11 species, 32 individuals.—H. E. PORTER.

New York City, Central Park.—Time, 8.45 to 10.30 A. M. North of 90th Street. 12.50 to 1.30 P. M. 'Ramble.' Cloudy; snow at close; ground snow-covered; wind strong northeast; temp., 22°. Herring Gull, 70; Red-shouldered Hawk, 1; Downy Woodpecker, 1; White-throated Sparrow, 27; Song Sparrow, 1; Fox Sparrow, 1; Cardinal, 6; Brown Creeper, 1; Chickadee, 11. Total, 9 species, about 118 individuals.—GEORGE E. HIX.

New York City, Central Park.—Time, 8.15 to 9.45 A. M. Cloudy; ground covered with snow; wind north; temp., 23°. Herring Gull, 39; Hairy Woodpecker, 1; Downy Woodpecker, 1; American Crow, 1; European Starling, 2; White-throated Sparrow, 19; Junco, 1; Song Sparrow, 2; Cardinal, 1; Brown Creeper, 2; Chickadee, 4; Hermit Thrush, 1; Robin, 2. Total, 13 species, 76 individuals.—ISAAC BILDERSEE.

Manhattan Beach, L. I.—Time, 3.30 to 4.30 P. M. Heavy snow-storm; wind violent, northeast; ground covered with snow; temp., 25°. Black-backed Gull, 7; Herring Gull, innumerable (an immense flock of Herring Gulls, resting on the ocean, extended as far to the east and south as I could see); American Scoter, 5; American Crow (est.), 800; White-throated Sparrow, 8. Total, 5 species, 820 individuals (excluding the Herring Gulls).—ISAAC BILDERSEE.

Setauket, Long Island, N. Y.—Time, 8 A. M. to 4 P. M. Cloudy; ground covered with snow; began to snow at 3.15 P. M.; wind east, fresh; temp., 17° to 25°. Herring Gull, 29; Black Duck, 200; Whistler, 21; Shell-drake, 33; Great Northern Diver, 1; Crow, 5; Junco, 15; Cedarbird, 1; Chickadee, 54. Total, 9 species, 359 individuals.—SELAH B. STRONG and WALTER WHITE.

Orient Point, Long Island. Time, 10 A. M. to 2 P. M. Cloudy; ground covered

with deep snow; wind northeast, strong; temp., 16°. Horned Grebe, 4; Loon, 2; Great Black-backed Gull, 4; Herring Gull, 200; Red-breasted Merganser, 13; Black Duck, 40; American Golden-eye, 2; Buffle-head, 20; Old Squaw, 46; White-winged Scoter, 2; Short-eared Owl, 1; Horned Lark, 160; Crow, 80; Snowflake, 8; Tree Sparrow, 23; Junco, 6; Song Sparrow, 14; Myrtle Warbler, 5; Meadow-lark, 33; Chickadee, 13; Golden-crowned Kinglet, 4. Total, 21 species, 680 individuals. Two Carolina Wrens and a large flock of Snowflakes, which have been here since November 1, were not seen.—ROY LATHAM.

Atlantic Ocean (from 10 to 25 miles east of Long Branch, N. J.)—December 31; time, 8.20 A. M. to 3.45 P. M.; wind light southeast to brisk northwest; temp., 35°. Dovekie, 1; Bonaparte's Gull, 67; Ring-billed Gull, 12; Herring Gull (estimated), 5,000; Great Black-backed Gull, 29; Glaucous Gull, 2; Kittiwake, 74 ad., 57 im. (found only after having almost lost sight of land); Gannet, 54 ad., 20 im.; Double-crested Cormorant, 1; White-winged Scoter, 491; American Scoter, 33; Old Squaw, 34. Total, 12 species; about 5,800 individuals.—ROB E. STACKPOLE and WILLIAM H. WIEGMANN.

Edgewater, Palisades Park, Leonia and Nordhoff, N. J.—December 26; time, 8.20 A. M. to 2.55 P. M. Cloudy; about six inches of snow on the ground; wind light, north; temp., 25°. Herring Gull, 100; Marsh Hawk, 1; Red-tailed Hawk, 1; Blue Jay, 2; American Crow, 15; American Goldfinch, 7; Tree Sparrow, 34; Song Sparrow, 7; White-breasted Nuthatch, 1; Chickadee, 3. Total, 10 species, about 171 individuals.—GEORGE E. HIX.

Montclair, N. J.—December 26; time, 8.30 A. M. to 12.45 P. M. Cloudy; snow on ground; wind northeast, light; temp., 23°. Red-shouldered Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 9; Flicker, 1; Blue Jay, 19; Crow, 68; European Starling, 3; Goldfinch, 73; White-throated Sparrow, 2; Tree Sparrow, 163; Junco, 282; Song Sparrow, 1; Northern Shrike, 1; Brown Creeper, 5; White-breasted Nuthatch, 4; Red-breasted Nuthatch, 1; Chickadee, about 150; Golden-crowned Kinglet, 3; Robin, 1; Bluebird, 2. Total, 20 species, about 792 individuals.—RANDOLPH H. HOWLAND.

Montclair and Pine Brook, N. J.—Time, 9 A. M. to 3 P. M. Cloudy; ground snowy; occasional showers, turning to sleet; wind west, light, to northeast, strong; temp., 42°, falling to 28°. Marsh Hawk, 1; Downy Woodpecker, 4; Blue Jay, 79; Crow, 47; Tree Sparrow, 44; Junco (est.), 100; Song Sparrow, 7; Cedar Waxwing, 10; White-breasted Nuthatch, 3; Chickadee, 58; Golden-crowned Kinglet, 2. Total, 11 species, 355 individuals.—VINCENT E. GORMAN.

Morristown, N. J.—Time, 10 to 10.30 A. M., temp., 22°; cloudy. 2.15 to 5 P. M.; temp., 20°, snowing hard; ground snow-covered; wind strong, northeast. Crow, 2; Jay, 1; Tree Sparrow, 22; Song Sparrow, 2; Carolina Wren, 1; Winter Wren, 1; Golden-crowned Kinglet, 6. Total, 7 species, 33 individuals. This is the first time I have seen a Carolina Wren in mid-winter, and I know of no other record for this locality.—R. C. CASKEY.

Beverly, N. J.—December 26; time, 6.45 to 7.30 A. M. and 8 A. M. to 5.15 P. M. Sky clouded; ground covered with snow to depth of six to eight inches; wind northwest, moderate; average temp., 26°. Bob-white, 7; Red-tailed Hawk, 2; Downy Woodpecker, 4; Flicker, 1; Blue Jay, 1; Crow, 450; Meadow-lark, 6; Goldfinch, 58; White-throated Sparrow, 16; Tree Sparrow, 105; Junco, 175; Song Sparrow, 36; Cardinal, 23; Brown Creeper, 1; Chickadee, 3; Golden-crowned Kinglet, 2. Total, 16 species, 890 individuals.—J. FLETCHER STREET.

Newfield, N. J.—Time 12.20 to 4 P. M.; light, misty snow at first, becoming heavy later; ground covered with crusted snow; grass and trees covered with ice; temp., 29°. Bob-white, 1; Flicker, 1; Crow, 4; Blue Jay, 6; Mourning Dove, 1; Song Sparrow, 2; Tree Sparrow, 1; Junco, about 75; Chickadee, 2. Total, 9 species, 93 individuals.—WILLIAM W. FAIR.

Moorestown, N. J.—December 26; time, 6.30 to 7.30 A. M. and 8 A. M. to 5.30 P. M. Cloudy; wind north to northeast, light, 5 inches of snow; fine precipitation from 9.30 to 11 A. M., freezing to a glassy coat on the bare twigs and on the drooping evergreens; temp., 24°. Mallard, 1; Red-tailed Hawk, 3; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 9; Flicker, 1; Horned Lark, 4; Blue Jay, 3; Crow, 87; Rusty Blackbird, 1; Meadow-lark, 4; Purple Finch, 1; Goldfinch, 11; White-throated Sparrow, 7; Tree Sparrow, 44; Junco, 81; Song Sparrow (sings), 17; Cardinal, 7; Northern Shrike, 1; Winter Wren, 3; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 9. Total, 23 species, 298 individuals.—WILLIAM B. EVANS.

Fairmount Park, Philadelphia, Pa.—Time, 11 A. M. to 4.30 P. M. Cloudy; a steady snow falling; ground covered with snow; wind northeast, moderate; temp., 22°. American Herring Gull, 6; American Merganser, 25; Downy Woodpecker, 5; Crow, 34; Goldfinch, 13; White-throated Sparrow, 12; Tree Sparrow, 10; Junco, 23; Song Sparrow, 45; Fox Sparrow, 1; Cardinal, 13; Carolina Wren, 2; Winter Wren, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 5; Chickadee, 4; Brown Creeper, 1; Robin, 1. Total, 18 species, 204 individuals.—CHRISWELL J. HUNT.

Germantown, Pa.—Time, 8 A. M. to 11 A. M. Clear; snow on ground; wind west, light; temp., 20°. Hairy Woodpecker, 1; Downy Woodpecker, 2; American Crow, 9; White-throated Sparrow, 4; Slate-colored Junco, 12; Cardinal, 2; Carolina Wren, 8; Winter Wren, 2; Brown Creeper, 2; Chickadee, 6; Golden-crowned Kinglet, 3. Total, 11 species, 51 individuals.—ARTHUR F. HAGAR.

West Chester, Pa.—Time, 2.30 to 5.00 P. M. Snowing hard, several inches on the ground; moderate northwest wind; temp., 19°. Turkey Buzzard, 9; Downy Woodpecker, 5; Crow, 152; Song Sparrow, 7; Tree Sparrow, 5; Junco, 7; White-breasted Nuthatch, 3; Carolina Wren, 1. Total, 8 species, 189 individuals.—C. E. EHINGER.

Glenside, Pa.—Time, 9.45 A. M. to 1 P. M. Overcast; eight inches snow; wind east, moderate; temp., 26°. Red-tailed Hawk, 1; Crow, fully 1,000; Meadow-lark, 8; Song Sparrow, 10; Junco, 17; Tree Sparrow, 2; Goldfinch, 1; Brown Creeper, 1; Chickadee, 3. Total, 9 species, 1,043 individuals.—SAMUEL H. BARKER.

Radnor Township, Delaware County, Pa.—Time, 9.10 A. M. to 3.25 P. M. Snowing almost throughout; ground well covered; wind northeast, moderate; temp., 20° at start, 23° at return. Red-tailed Hawk, 1; Red-shouldered Hawk, 1; Downy Woodpecker, 4; Crow, 25; Purple Finch, 1; Goldfinch, 2; Tree Sparrow, 35; Junco, 30; Song Sparrow, 11; Cardinal, 2; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 4; Chickadee, 5. Total, 14 species, about 123 individuals.—CHARLES H. ROGERS.

Bristol, Pa.—December 26; time, 9.45 A. M. to 1 P. M. Cloudy; about 4 inches of snow on the level; wind east, light; temp., 24°; finish, 28°. Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 2; Blue Jay, 1; Crow (common); Fish Crow (common); Goldfinch, 7; Song Sparrow, 7; Tree Sparrow, 56; Junco, 40; Cardinal, 2; Myrtle Warbler, 1; Brown Creeper, 1; Tufted Titmouse, 1. Total, 14 species, 122 individuals (excluding Crows).—THOS. D. KEIM.

Concordville, Pa.—December 21; time, 10.30 A. M. to 1 P. M. Cloudy, and commencing to snow, ground well covered with snow; wind southeast, sharp and steady; temp., near 20°. Bob-white, 3; Turkey Vulture, 2; Red-shouldered Hawk; Sparrow Hawk; Downy Woodpecker, 2; Meadow-lark, 3; Crows; Purple Finch, 3; Goldfinch, 2; Tree Sparrow, flock of 50; Junco, 50 (together); Song Sparrow, 3; Cardinal, 1; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 3; Golden-crowned Kinglet, 2. Total, 18 species.—K. R. STYER.

Accotink, Va.—Time, 12.30 P. M. to 12.45 P. M. Hailing; ground nearly bare; wind northeast, rather brisk; temp., 29°. From front and side windows of house. Bob-white, 9; Crow, 2; Cardinal, 2; Bluebird, 2. From 3 P. M. to 3.30 P. M., in short

walk around the place, wind and temperature the same: Junco, 3; Song Sparrow, 4; Cardinal, 2; Bluebird, 7. Total, 6 species, 31 individuals.—WM. P. CATON, M.D.

Waverly, W. Va.—December 26; time, 9 A. M. to 2 P. M.; 4 P. M. to 5.30 P. M. Cloudy, rain falling heavily after 3 P. M.; wind east, light; ground bare; temp., 45°. Red-tailed Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Horned Lark, 6; American Crow, 4; Goldfinch, 4; Tree Sparrow, 14; Field Sparrow, 11; Slate-colored Junco, 15; Song Sparrow, 7; Cardinal, 7; Carolina Wren, 7; Brown Creeper, 3; White-breasted Nuthatch, 6; Tufted Titmouse, 14; Carolina Chickadee, 23; Golden-crowned Kinglet, 2; Bluebird, 3. Total, 18 species, 133 individuals.—EARLE A. BROOKS.

Durham, N. C.—December 27; time, 8.30 A. M. to 10.30 A. M. A dense fog, the ground muddy after heavy rains; temp., 52°. Bob-white, 12; Downy Woodpecker, 1; Turkey Vulture, 2; Flicker, 3; Crow, 5; Goldfinch, 2; White-throated Sparrow, 5; Field Sparrow, 40; Junco, 50; Song Sparrow, 15; Swamp Sparrow, 10; Cardinal, 8; Myrtle Warbler, 1; Carolina Wren, 6; Tufted Titmouse, 10; Carolina Chickadee, 5; Golden-crowned Kinglet, 3; Bluebird, 3. Total, 18 species, 181 individuals.—ERNEST SEEMAN.

Lexington, Ky.—Time, 7.30 A. M. to 4.30 P. M., less one hour at noon; distance traversed, about nine miles; temperature at starting, 55°; at return, 50°; maximum, 60°, being abnormally high; cloudy till 8 to 9 o'clock, clear balance of the day; wind fresh, shifting from south through west and north to east. Bufflehead, 1; Mallard, 18; Killdeer, 2; Red-shouldered Hawk, 1; Broad-winged Hawk, 2; Sparrow Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 4; Red-bellied Woodpecker, 6; Flicker, 12; Horned Lark, 25; American Crow (est.), 831; Meadow-lark, 23; Bronzed Grackle, 70; American Goldfinch, 1; Vesper Sparrow, 2; White-crowned Sparrow, 8; Tree Sparrow, 10; Slate-colored Junco, 55; Song Sparrow, 30; Fox Sparrow, 2; Cardinal, 6; Mockingbird, 1; Carolina Wren, 9; Bewick's Wren, 1, reported by Mrs. W. B. Hawkins; Brown Creeper, 8; White-breasted Nuthatch, 2; Carolina Chickadee, 10; Golden-crowned Kinglet, 3; Bluebird, 1. Total, 31 species, 1,151 individuals.—R. H. DEAN and V. K. DODGE.

Campbellsville, Ky.—Time, 2.40 P. M. to 3.50 P. M. Clear; ground bare; wind south, light; temp., 59°. Hairy Woodpecker, 2; Red-bellied Woodpecker, 3; Flicker, 15; Crow, 1; Meadow-lark, 60; Junco, 23; Cardinal, 2; Wren, 1; White-breasted Nuthatch, 4; Carolina Chickadee, 6; Tufted Titmouse, 5. Total, 12 species, 127 individuals.—W. M. JACKSON.

Youngstown, Ohio.—December 26; time, 7 A. M. to 12 M.; 1.30 P. M. to 5 P. M. temp., 34° to 40°. Cloudy; trees and shrubbery covered with ice in the morning; about one inch of snow, melted by noon; wind south, turning to east; drizzling rain in the afternoon; distance walked (as registered by pedometer), 16 miles. Tree Sparrow, 110; Song Sparrow, 2; Blue Jay, 8; Chickadee, 24; Golden-crowned Kinglet, 7; Tufted Titmouse, 6; White-breasted Nuthatch, 10; Junco, 10; Sparrow Hawk, 1; Towhee, 1, male; Ruffed Grouse, 1; Hairy Woodpecker, 5; Downy Woodpecker, 4; Red-bellied Woodpecker, 2; Flicker, 1. Total, 15 species, 192 individuals. While Crows usually remain with us all winter, I have not seen one since early in November, although I have been out frequently.—GEORGE L. FORDYCE.

Cadiz, Ohio.—Time, 12.35 to 3.10 P. M. Ground and trees coated with ice, following heavy rain; foggy, and light northeast wind; temp., 36°. Bob-white, 7; Red-tailed Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 6; Red-bellied Woodpecker, 2; Tree Sparrow, 8; Song Sparrow, 7; Junco, 1; Cardinal, 5; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 1; Tufted Titmouse, 14; Chickadee, 9. I also saw an immature or female White-throated Sparrow, and on December 23d, two Robins. Total, 14 species, 72 individuals.—HARRY B. MCCONNELL.

McZena, Ohio.—December 24; time, 8.50 A. M. to 3.10 P. M. Cloudy; ground

covered with thin coating of ice and a few remaining snow-drifts; wind north, light; temp., 24°. Ruffed Grouse, 3; Mourning Dove, 1; Red-tailed Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 11; Red-bellied Woodpecker, 2; Flicker, 3; Blue Jay, 7; American Goldfinch, 3; Tree Sparrow, 100; Junco, 35; Song Sparrow, 12; Swamp Sparrow, 1; Cardinal, 9, Carolina Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 20; Tufted Titmouse, 15; Chickadee, 12; Golden-crowned Kinglet, 5. Total, 21 species, 246 individuals.—ZENO METCALF, CLELL METCALF and C. E. HEFFELFINGER.

Richmond, Ind.—Time, 2 P. M. to 4 P. M. Wind strong, northwest, heavy, cold rain; temp., 35°. Downy Woodpecker, 1; Crow, 6; Cardinal, 2; Junco, in flocks; Tree Sparrow, 12; Chickadee, 2.—M. BAXTER, P. B. COFFIN, MRS. COFFIN and MISS CARPENTER.

Mt. Carmel, Ill.—December 22; time, 7.30 A. M. to 11.30 A. M.; 2 to 4 P. M. Partly cloudy; ground partly covered with snow; light south wind; temp., 32°. Gull (sp. ?), 7; Duck sp. ?), 8; Bob-white, about 20; Mourning Dove, 4; Bald Eagle, 1; Sparrow Hawk, 5; Kingfisher, 2; Hairy Woodpecker, 1; Downy Woodpecker, 9; Red-headed Woodpecker, about 25; Red-bellied Woodpecker, 7; Flicker, about 20; Prairie Horned Lark, 6; Blue Jay, about 50; Crow, about 35; Meadow-lark, 22; Goldfinch, 2; White-crowned Sparrow, 14; Tree Sparrow, about 25; Slate-colored Junco, about 200; Song Sparrow, 17; Towhee, 2; Cardinal, about 20; Loggerhead Shrike, 2; Mockingbird, 3; Carolina Wren, 3; Winter Wren, 2; Brown Creeper, 8; White-breasted Nuthatch, 6; Tufted Titmouse, about 35; Chickadee, 31; Golden-crowned Kinglet, 8; Robin, 1; Bluebird, 8. Total, 34 species, about 609 individuals.—CHAS. F. BRENNAN.

Urbana, Ill.—Time, 9.30 A. M. to 1 P. M. Cloudy, foggy, ground bare; wind northwest, moderate; temp., 35°. Downy Woodpecker, 5; Flicker, 1; Blue Jay, 50; Crows, 500; Tree Sparrow, 25; Junco, 30; Song Sparrow, 2; Loggerhead Shrike, 1; Chickadee, 5. Total, 9 species, 619 individuals.—ALFRED O. GROSS.

Rock Island, Ill.—Time, 10.30 to 11.30 A. M., 1.45 to 3.30 P. M. Cloudy, with cold, damp, east wind, a little snow on the ground; both Mississippi and Rock Rivers free from ice; temp., 33°. Lesser Scaup Duck, 2; Hairy Woodpecker, 5; Blue Jay, 1; Crow, 2; Redpoll (Lesser), 6; Tree Sparrow, 3; Snowbird, 15; White-bellied Nuthatch, 1; Chickadee, 12. Total, 9 species, 47 individuals.—BURTIS H. WILSON.

Chicago, Ill.—Lincoln Park, 9.20 to 11 A. M., Graceland Cemetery, 11.15 to 12.30 A. M. Cloudy, flurries of misty rain and fine snow; ground glazed and sprinkled with snow; wind east, light; temp., 32°. Herring Gull, 6; Red-breasted Merganser, 3; Loggerhead Shrike, 1. Three small flocks of Ducks seen flying over the lake at a considerable distance from shore.—JULIET T. GOODRICH.

La Crosse, Wis.—Time, 12.15 to 12.30 P. M., 2.45 to 4.15 P. M. Cloudy, dull, ground partly covered with snow; wind variable, northeast to southwest; temp., 32-30°. Cedar Waxwing, 14; Robin, 4; Chickadee, 2. Total, 3 species, 20 individuals. Robin seen every day up to December 28; White-breasted Nuthatch and Brown Creeper frequently seen.—WILLIAM SCHNEIDER.

Appleton, Wis.—Time, 9.30 A. M. to 12 M., 1.30 to 4.30 P. M. Cloudy, ground covered with light fall of snow; no wind; temp., 30°. Red-headed Woodpecker, 3; Downy Woodpecker, 1; Blue Jay, 6; Snowflake, 70; White-breasted Nuthatch, 2; Crow, 1. Total, 6 species, 83 individuals.—HENRY W. ABRAHAM.

Abilene, Kans.—Time, 8.45 A. M. to 1.30 P. M. Cloudy; ground bare; wind east; temp., 30°. Marsh Hawk, 1; Red-tailed Hawk, 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Red-bellied Woodpecker, 2; Crow, 22; Prairie Horned Lark, 62; Meadow-lark, 23; Goldfinch, 1; Harris' Sparrow, 84; Tree Sparrow, 34; Slate-colored Junco, 30; Towhee, 1; Cardinal, 26; Bewick's Wren, 1; Brown Creeper, 1; Chickadee, 9. Total, 17 species, 305 individuals.—EDWARD W. GRAVES.

Independence, Kans.—Time, 8.40 A. M. to 12.30 P. M. Foggy in the morning, with light, but steady northeast wind, changing to clear at noon, with wind south to southeast; ground bare; temp., 45° to 60°. Red-shouldered Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 6; Downy Woodpecker, 10; Red-bellied Woodpecker, 3; Flicker, 20; Prairie Horned Lark, 58; Blue Jay, 40; American Crow, 50; Meadow-lark, 100; Western Meadow-lark, 2; Rusty Blackbird, 6; Purple Finch, 17; American Goldfinch, 10; Lapland Longspur, 84; Harris Sparrow, 51; White-crowned Sparrow, 18; Gambel Sparrow, 1; Field Sparrow, 1; Slate-colored Junco, 250; Song Sparrow, 15; Fox Sparrow, 1; Cardinal, 26; Cedar Waxwing, 58; Myrtle Warbler, 1; Carolina Wren, 16; Winter Wren, 1; Brown Creeper, 11; White-breasted Nuthatch, 2; Tufted Titmouse, 7; Chickadee, 16; Golden-crowned Kinglet, 1; American Robin, 60; Bluebird, 12. Total, 34 species, 956 individuals.—ALICK WETMORE.

LaGrange, Mo.—December 23; time, 9 A. M. to 12.30 P. M. Ground dry; heavy clouds; several little dashes of rain; wind soft, south, changing to cutting north; temp., 45° to 35°. Bob-white, 1; Cooper's Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 12; Red-bellied Woodpecker, 4; Flicker, 1; Blue Jay, 5; Crow, 2; Red-winged Blackbird, 60; Purple Finch, 1; Goldfinch, 25; Tree Sparrow, 200; Junco, 100; Cardinal, 8; White-breasted Nuthatch, 1; Tufted Titmouse, 3; Chickadee, 28; Bluebird, 1. Total, 19 species, 457 individuals.—SUSAN M. JOHNSON.

Blaine, Wash. (Lat. 49°).—December 26; time, 7.45 A. M. to 12.30 P. M.; 1.30 P. M. to 5.30 P. M. Slightly overcast to clear; two inches of snow on ground; no wind; temp., 31° at 8 A. M., 40° at noon. Western Grebe, 4; Holboell Grebe, 100; Horned Grebe, 23; Loon, 3; Pacific Loon, 4; Marbled Murrelet, 22; Pigeon Guillemot, 11; California Murre, 1; California Gull, 10; Ring-billed Gull, 3; Short-billed Gull, 15; Bonaparte Gull, 2; Mallard, 2; Pintail, 6; Scaup Duck, 1,000; Lesser Scaup, 250; American Golden-eye, 14; Barrow's Golden-eye, 2; Bufflehead, 500; Old Squaw, 22; Harlequin Duck, 2; White-winged Scoter, 300; Surf Scoter, 200; Black Brant, 20; Fannin's Heron, 1; Harris' Woodpecker, 1; Gairdner's Woodpecker, 2; Northern Pileated Woodpecker, 1; Northwestern Flicker, 2; Northwest Crow, 120; Brewer's Blackbird, 2; California (?) Purple Finch, 1; English Sparrow, 2; Oregon Junco, 200; Rusty Song Sparrow, 33; Sooty Song Sparrow, 2; Oregon Towhee, 5; Northwest Bewick Wren, 8; Western Winter Wren, 12; Oregon Chickadee, 31; Western Golden-crowned Kinglet, 38; Ruby-crowned Kinglet, 3; Western Robin, 128; Varied Thrush, 10. Total, 44 species, about 3,000 individuals.—W. LEON DAWSON.

Napa, Cal.—December 25; time, 12 noon to 12.45 P. M.; 2 P. M. to 2.30 P. M. Clear, strong north wind; temp., 46°. December 26; time, 11 A. M. to 4 P. M. Clear; wind; north, medium; temp., 49°. [The results of the two days' observations are combined, but owing to impossibility of securing separate lists in time for publication the MS. is printed as received.—ED.] Great Blue Heron, 1; Killdeer, 8; White-tailed Kite, 1; Western Red-tailed Hawk, 1; Desert Sparrow Hawk, 2; Harris Woodpecker, 3; California Woodpecker, 6; Red-shafted Flicker, 29; Anna's Hummingbird, 3; Say's Phoebe, 1; Black Phoebe, 2; Steller's Jay, 1; California Jay, 19; American Crow, 3; Western Meadow-lark, numerous, 66 counted; Brewer's Blackbird, very numerous, 600 estimated; Willow Goldfinch, 39; Green-backed Goldfinch, 21; Western Savanna Sparrow, 7; Gambel's (White-crowned) Sparrow, 41; Golden-crowned Sparrow, 19; Thurber's Junco, 12; Samuel's Song Sparrow, 4; Spurred Towhee, 2; California Towhee, 8; California Shrike, 5; Audubon's Warbler, 18; American Pipit, 11; Plain Titmouse, 3; California Bush-tit, 1 (flock heard); Western Golden-crowned Kinglet, 9; Ruby-crowned Kinglet, 1. (Crimson Crown-patch undoubtedly seen); Dwarf Hermit Thrush, 2; Western Bluebird, 5; Ducks (flying too high to distinguish species) 26. Total, 35 species, 980 individuals.—E. L. BICKFORD.

For Teachers and Students

The Migration of Warblers

EIGHTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

YELLOW WARBLER

More notes have been contributed by the observers on the Yellow Warbler than on any other species of Warbler, and the following records are an epitome of about two thousand observations during a period of more than twenty years. The winter range of the Yellow Warbler and its subspecies extends from Western Mexico to Dutch Guiana, a longitudinal winter range equaled by few species. But, though occurring throughout Central America, it is absent from the West India Islands, and reaches the eastern United States in the spring by a roundabout course across the Gulf of Mexico, and is one of the later Warblers to arrive in the Gulf States.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
Greensboro, Ala.			April 14, 1888
Savannah, Ga.			April 16, 1894
Atlanta, Ga. (near)	3	April 17	April 10, 1900
Frogmore, S. C.			April 17, 1885
Raleigh, N. C.	14	April 13	April 5, 1888
Asheville, N. C.	4	April 15	April 12, 1893
New Market, Va.	14	April 22	April 17, 1896
White Sulphur Springs, W. Va.	7	April 23	April 16, 1896
Washington, D. C.	7	April 20	April 15, 1888
Waynesburg, Pa.	5	April 24	April 17, 1896
Beaver, Pa.	8	April 23	April 18, 1891
Renovo, Pa.	10	April 30	April 24, 1896
Englewood, N. J.	8	May 1	April 26, 1902
Croton-on-Hudson, N. Y.	7	May 1	April 28, 1891
Shelter Island, N. Y.	11	May 4	April 18, 1891
Ballston Spa, N. Y.	12	May 5	April 29, 1897
Branchport, N. Y.	10	April 29	April 23, 1896
Alfred, N. Y.	17	May 2	April 26, 1897
Center Lisle, N. Y.	13	May 3	April 30, 1897
Buffalo, N. Y.	5	May 1	April 26, 1889
Jewett City, Conn.	16	May 4	May 1, 1891
Hadlyme, Conn.	8	May 3	April 30, 1902
Hartford, Conn.	10	May 5	May 3, 1903
Providence, R. I.	6	May 4	April 29, 1899
Framingham, Mass.	10	May 2	April 25, 1897
Randolph, Vt.	11	May 9	May 4, 1887
Southern New Hampshire	11	May 10	May 4, 1887
Orono, Me.	4	May 11	May 9, 1896
Plymouth, Me.	12	May 14	May 10, 1894
Montreal, Can.	11	May 10	May 7, 1887
Quebec, Can.	9	May 15	May 10, 1902

SPRING MIGRATION, continued

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
St. John, N. B.	6	May 24	May 21, 1893
Scotch Lake, N. B.			May 13, 1901
Pictou, N. S.	6	May 14	May 10, 1895
Halifax, N. S.	3	May 14	May 12, 1896
North River, Prince Edward Island	5	May 25	May 20, 1890
Hamilton River, Que.			May 31
<i>Mississippi Valley—</i>			
New Orleans, La.	12	April 6	April 1, 1892
Helena, Ark.	5	April 18	April 14, 1901
Eubank, Ky.	6	April 16	April 12, 1889
St. Louis, Mo.	7	April 19	April 15, 1888
Brookville, Ind.	8	April 15	April 11, 1897
Waterloo, Ind.	11	April 25	April 18, 1891
Columbus, Ohio	6	April 22	April 18, 1889
Wauseon, Ohio	10	April 26	April 20, 1889
Cleveland, Ohio	8	April 28	April 25, 1886
Morgan Park, Ill.	6	May 1	April 28, 1900
Rockford, Ill.	8	May 8	May 1, 1887
Southern Wisconsin	10	May 6	May 2, 1890
Petersburg, Mich.	13	April 26	April 19, 1894
Strathroy, Ont.	10	May 1	April 25, 1897
Listowel, Ont.	14	May 2	April 24, 1885
Ottawa, Ont.	17	May 7	May 3, 1895
Keokuk, Ia.	13	April 30	April 25, 1897
Davenport, Ia.	10	May 1	
Lanesboro, Minn.	9	May 7	April 28, 1888
Elk River, Minn.	7	May 12	May 9, 1888
Aweme, Manitoba	5	May 14	May 9, 1902
Corpus Christi, Tex.			April 22, 1891
San Antonio, Tex.			April 15, 1890
Bonham, Tex.	6	April 11	April 8, 1889
Onaga, Kans.	9	April 25	April 22, 1900
Lincoln, Neb.	6	April 28	April 25, 1891
<i>Western United States—</i>			
Pueblo, Colo.			May 6, 1894
Loveland, Colo.			May 7, 1890
Cheyenne, Wyo.	3	May 11	May 9, 1889
Great Falls, Mont.	5	May 16	May 11, 1891
Rathdrum, Idaho			May 15, 1903
Osler, Saskatchewan			May 17, 1893
Red Deer, Alberta			May 16, 1893
Fort Chippewyan, Athabasca			May 24, 1893
Fort Resolution, Mackenzie			May 25, 1860
Fort Simpson, Mackenzie			May 26, 1861
Fort Simpson, Mackenzie			May 21, 1904
Southern California	5	April 7	April 5, 1889
Chilliwack, B. C.			April 27, 1889
Kowak, Alaska			June 9, 1899

FALL MIGRATION

The Yellow Warbler begins its southward migration among the very earliest of the family, and fall migrants have been noted in central Florida July 20 and at Key West July 26. So rapid is the southward journey that

the arrival of the first in the fall has been noted in southeastern Nicaragua August 9, 1892; San José, Costa Rica, Aug. 25, 1889, and Aug. 24, 1890; Bonda, Colombia, August 27, 1898.

PLACE	No of years' record	Average date of last one seen	Latest date of last one seen
Newport, Ore.			September 18, 1900
Berkeley, Cal.	2	October 5	October 9, 1888
Great Falls, Mont.			September 13, 1889
Latitude 64° Mackenzie			August 10, 1903
Aweme, Manitoba	3	September 3	
Lanesboro, Minn.	4	August 14	September 10, 1889
Ottawa, Ontario	5	August 20	September 7, 1901
Southern Ontario	9	August 23	September 5, 1902
Glen Ellyn, Ill.	2	September 5	September 6, 1899
Wauseon, Ohio	9	September 15	September 26, 1891
North River, Prince Edward Island	2	August 21	
St. John, New Brunswick			September 2, 1890
Montreal, Can.	6	August 26	September 3, 1890
Lewiston, Me.	4	September 1	September 5, 1898
Renovo, Pa.	5	September 6	September 17, 1894
Beaver, Pa.	3	August 27	September 30, 1888
Washington, D. C.			September 28, 1890
Raleigh, N. C.			August 28, 1888
St. Louis, Mo.			September 3, 1896
Onaga, Kans.			August 24, 1894
Bonham, Tex.			September 12, 1889
New Orleans, La.			October 27, 1893

MANGROVE WARBLER

The Mangrove Warbler is a non-migratory species occurring in western Mexico and Lower California.

PRAIRIE WARBLER

From its winter home in the West Indies and Florida, the Prairie Warbler begins to move northward early in March, though the full tide of migration does not start until the last of the month.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
Raleigh, N. C.	16	April 15	April 6, 1892
Washington, D. C.	5	April 22	April 19, 1891
Southeastern New York	14	May 4	May 1, 1891
Portland, Conn.	4	May 6	April 27, 1888
Jewett City, Conn.	10	May 7	May 1, 1896
Boston, Mass.	8	May 8	May 4, 1891
Eubank, Ky.	7	April 20	April 13, 1893
Toronto, Ont.			May 11, 1900

The latest records of striking the southern lighthouses are in the first half of May, and the earliest spring date is March 7. Thus the period of spring migration in the southern United States extends over more than nine weeks.

FALL MIGRATION

The southward migration occupies more time than the northward, and lasts from the middle of August to the first week in November. Some dates of the last ones noted are at Taunton, Mass., Sept. 15, 1887; Shelter Island Heights, N. Y., Sept. 19, 1901; Washington, D. C., September 4, 1887; Raleigh, N. C., September 9; Frogmore, S. C., September 30, 1886; Fowey Rocks Lighthouse, Florida, November 6, 1891.

The records indicate that the southern breeding birds spend about five months in the summer home, at least as long in the winter home and the remainder of the year in migration. Even the northern nesting birds remain for four months at the breeding grounds.

Which Shall Be the National Association Bird?

The Committee appointed to adopt a seal for the National Association of Audubon Societies are at a loss which bird to select; therefore, it is thought best to defer the selection until the Audubon members have had an opportunity to vote on the subject.

The members of the Audubon Societies can vote as societies or individually for any North American Bird, and the Committee will be largely guided in their selection by the result of the ballots.

It is suggested that a thoroughly representative bird should be the one selected: that is, one that is found throughout North America from the Arctic to Panama.

All votes must be sent to the undersigned prior to the first day of May.

WILLIAM DUTCHER,

Chairman National Committee of Audubon Societies
525 Manhattan Avenue, New York City

A Portrait of Audubon

At the suggestion of the Massachusetts Audubon Society, A. W. Elson & Company, of Boston, have reproduced, in photogravure, the well-known Inman portrait of Audubon. This reproduction is artistically attractive, and has been pronounced, by those qualified to judge, to do full justice to the original.

Congratulations are due the Massachusetts Society on the successful outcome of their efforts to fill the demand for a standard portrait of Audubon.

Book News and Reviews

CATALOGUE OF CANADIAN BIRDS. Part III. Including the Order Passeres after the Icteridæ. By JOHN MACCOUN. Geological Survey of Canada, Ottawa, 1904. Pages i-iv; 415-733; i-xxiii.

The present volume completes this important work, though the author remarks that "much additional information regarding the birds included in the first two parts has come to my hands; and this will, in the near future, be published in the form of an addendum to the complete catalogue."

Reference to our notices of the preceding parts of this memoir will indicate its nature and scope. More space is allotted each species in the present part, with a corresponding increase in the amount of information given. This is especially true, we are glad to say, of that portion of the annotations relating to nesting habits.

The data given are carefully accredited to their respective sources, but the place at which certain observations were made is not always stated. For example, Mr. J. Hughes-Samuel's record of the occurrence of Kirtland's Warbler leaves one in doubt as to the locality where the bird was found. Again MS. notes here published for the first time are not distinguished from those which have already appeared. Both these defects could be remedied in a bibliography, which we trust will be included in the proposed addendum.—F. M. C.

DISTRIBUTION AND MIGRATION OF NORTH AMERICAN WARBLERS. By W. W. COOKE. U. S. Dept. of Agriculture, Division of Biological Survey, Bull. No. 18. Washington, 1904. 8vo; pages 142.

This work is based primarily on the MS. reports of the numerous observers, who for years have been contributing migration records to the Biological Survey; but Professor Cooke has also had access to all other available sources of information, including the leading collections of this country. His publication, therefore, adequately represents the existing knowledge of the subject to which it relates.

It treats of 'Routes of Migration,' 'Southernmost Extension of Winter Ranges of Warblers of Eastern North America,' and, in a 'Systematic Report,' of the general distribution and migration. Particular attention has been paid to routes of migration after the species leaves the United States, and here Professor Cooke works in a practically untouched field and brings together much information which tends to show that many of our current beliefs in regard to routes of migration have no foundation in fact.

In determining the winter homes of our Warblers, Professor Cooke again sheds light where before there was comparative darkness, and his tabulation of Warblers according to their winter distribution furnishes an interesting summary of the results obtained.

The Systematic Report gives the breeding range and winter range, together with spring and fall migration records, for the fifty-nine species and nineteen subspecies of North American Warblers. Professor Cooke is to be congratulated on the thorough manner in which he has completed a work which, for an indefinite period, will remain the standard authority on the journeys of the Mniotiltidæ.—F. M. C.

THE BIRDS OF MIDDLE AND NORTH AMERICA. Part III. By ROBERT RIDGWAY. Bull. U. S. Nat. Mus. No. 50; 8vo. Pages xx + 801; plates xix. Washington, 1904.

The families treated in the third part of this great work, with the number of species and subspecies contained in each, are as follows: Wagtails and Pipits, 8; Swallows, 32; Waxwings, 2; Silky Flycatchers, 5; Palm Chats, 2; Vireos, 75; Shrikes, 8; Crows and Jays, 81; Titmice, 36; Nuthatches, 10; Creepers, 6; Wrens, 135; Dippers, 3; Wren-tits, 4; Warblers (Sylviidæ), 22.

Mr. Ridgway remarks that the three volumes which have now been published describe about 1,250 species and subspecies,

or about two-fifths of the total number of North and Middle American birds.

Part IV, which will contain the Thrushes, Mockingbirds, Larks, Starlings, Weaver Birds, Sharp-bills, Tyrant Flycatchers, Manakins and Chatterers, is said to have been about half completed in September last. Doubtless its appearance will be delayed by Mr. Ridgway's absence in Costa Rica, but even those students to whom this treatise proves most useful and who, consequently, are most eager to see it advanced, cannot but rejoice that its industrious author has been induced to take a much-needed rest.—F. M. C.

THE ADVENTURES OF COCK ROBIN AND HIS MATE. By R. KEARTON, with upwards of 120 illustrations from photographs taken direct from nature by CHERRY and RICHARD KEARTON. Cassell & Company, Ltd. 1904. 12mo. Pages xvi + 240.

In this book Cock Robin tells not only the history of his own life but adds much information concerning the ways of other feathered folk. Designed primarily for younger readers, no one can fail to be interested in the striking photographs from nature with which the book is illustrated. The Kearton brothers have the knack of making not only good, but artistic bird pictures, and the generous supply they have given this, their latest work, places it far above the usual run of children's nature books.—F. M. C.

BIRDS BY LAND AND SEA: The Record of a Year's Work with Field-glass and Camera. By JOHN MACLAIR BORASTON. Illustrated by photographs taken direct from nature by the author. John Lane, London and New York. 8vo. Pages xiv + 282; half-tone ills., 72.

The author gives in this book the gist of almost daily observation of birds in Stretford, England, and the surrounding districts from September, 1902, to September, 1903. The area of observation has been extended by occasional excursions over the Cheshire border, while the account also includes the narrative of the author's experience during a summer holiday spent in the Island of Anglesey. He has set down his experiences in chapters devoted to the

successive months of the year. Not the least attractive and valuable feature of this book is the series of photographs which the author has succeeded in taking.

The Ornithological Magazines

JOURNAL OF THE MAINE ORNITHOLOGICAL SOCIETY.—Besides the numerous notes on the occurrence and breeding of various birds in Maine, the July number contains the conclusion of A. H. Norton's careful paper on the 'Finches of Maine,' the second of the Warbler series, by J. M. Swain, treating of Wilson's Warbler, and an article by F. J. Noble on the 'Feeding Habits of the Turnstone.'—W. S.

BULLETIN OF THE MICHIGAN ORNITHOLOGICAL CLUB.—The leading articles of the September issue are the first instalment of Prof. W. Barrows, paper on 'Birds of the Beaver Islands' and one on 'Nesting of Kirtland's Warbler in 1904.' An editorial announces the steps taken by the state game-warden to protect this bird, including the revoking of all collecting permits so far as this species is concerned. A page is devoted to the Michigan Audubon Society, and a frontispiece represents Cory's and the Least Bittern, from wash drawings by Taverner.—W. S.

Book News

The success accorded Mr. W. Leon Dawson's 'Birds of Ohio' has induced him to project a similar work on the birds of Washington. Details of the proposed publication may be obtained from Mr. Dawson, at Blaine, Wash.

William Watson Woollen, of Indianapolis, has almost ready for publication a bird book, to be entitled 'Buzzard's Roost: A Bird Study.' Mr. Woollen has made a special study of our common birds.

Among the official state bird lists, now in course of preparation, are those on the birds of Connecticut, by J. H. Sage and L. B. Bishop; the birds of New York, by E. H. Eaton, and the birds of Minnesota, by T. S. Roberts.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Published by THE MACMILLAN COMPANY

Vol. VII Published February 1, 1905 No. 1

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico twenty cents a number, one dollar a year, postage paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

THE publisher of a popular magazine, noted for its large circulation rather than for its literary excellence, sometimes adorns the cover of his production with the statement that he thinks the present number quite the best which he has ever issued; an outspoken blowing of trumpets which, at least, has the merit of frankness even if it grates on one's sense of the fitness of things.

While we would not, therefore, so openly express our satisfaction with the present number of BIRD-LORE, we cannot wholly conceal our pleasure in being permitted to place in our readers' hands a magazine containing so many eminently practical, useful and permanently valuable features as this issue of BIRD-LORE. We have so frequently been asked for information in regard to bird-houses, we are assured that the fully illustrated, authoritative article on this subject which we present will be welcomed by bird-lovers throughout the land. Surely there is no more delightful way in which to establish intimate relations with birds than to have your own particular bird tenants, with every detail of whose home-life you may become familiar, and who, possibly, may accept of your bounty year after year. The readiness with which suitable nesting houses are occupied not only ensures a successful outcome of a speculation in ornithological real estate, but is an indication of what an agent would call "the demand for desirable homes," and the extent to which we supply

this demand is a measure of our aid to the cause of practical bird protection. Let us then prepare or erect our bird-houses for the season now almost here, and in due time send a brief report on our bird tenants for publication in a later issue of BIRD-LORE.

OUR chief cause for congratulation on the present number of BIRD-LORE, however, is not alone due to the generosity of those who contributed articles on bird-boxes, or to the success of the Christmas Bird Census, or Professor Cooke's migration records, or the character of our Advisory Council, but also to the inclusion in BIRD-LORE, for the first time, of the annual report of the National Association of Audubon Societies. Annual reports are apt to be perfunctory affairs, at the best, and their enforced perusal is an almost certain means of dispelling the interest they were designed to arouse. We venture to assert, however, that no one having the slightest sympathy with bird protection can begin Mr. Dutcher's report without finishing it, nor can he finish it without being surprised and impressed by the development of the Audubon movement, and the splendid foundation which has been laid for the erection of an enduring structure.

The instincts which prompt us to condemn and prevent cruelty and inhumanity, to appreciate and delight in the beautiful, to preserve man's heritage in nature so that those who come after us may find the world as beautiful as we have found it, should inspire our enthusiastic support of the cause which Mr. Dutcher and his associates throughout the country are so ably advancing.

When a subscription list is headed with a donation of \$100,000, no further guarantee of the importance of the object for which it appeals should be necessary; and we trust that the close of the present year will see the National Association of Audubon Societies with an endowment of \$1,000,000. Then the one weak side—the financial—of its work will have been so strengthened that under the efficient management of the interest of this sum the friends of the birds need have no fear.

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

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The National Association — its Needs and Aims

The National Association of Audubon Societies for the Protection of Wild Birds and Animals completed its incorporation January 5, 1905.

The particular objects for which said corporation is formed are as follows :

a. To hold meetings, lectures and exhibitions in the interest of the protection of wild birds and animals and to use all lawful means for their protection.

b. To publish and distribute documents and other printed matter on these or other subjects, and to acquire and maintain a library.

c. To coöperate with the National and State Governments and regularly organized natural history societies in disseminating knowledge relative to wild birds and animals.

In carrying out the purposes of the Corporation, it needs a permanent endowment of not less than one million dollars.

The aims of the Corporation are :

1. To organize, foster and strengthen State and Local Audubon Societies.

2. To permanently maintain and greatly enlarge the number of wardens now guarding colonies of breeding birds.

3. To increase, in the rural districts, circulating nature-book libraries.

Since the organization of the National Association in 1901, the several branches of its work have been carried on in a very economical manner, with the contributions of a few deeply interested patrons who have annually given the sum of three to four thousand dollars. The lack of a fund commensurate with the needs of the Association has, in the past, very greatly hampered the growth of the work

Over \$62,000,000 was given by wealthy philanthropists during 1904, for the maintenance of educational institutions, hospitals, homes, churches, missions, libraries and miscellaneous charities. Of these the most notable and by far the largest gift was the munificent sum donated by Mr. Carnegie for the establishment of libraries which are almost entirely located in cities or the larger towns. The people who most need good books are the dwellers in the rural districts, and unfortunately, the Carnegie libraries do not benefit them in the slightest degree. The Audubon Societies, since their organization, have, in a small way, done all they could to give to the farmers and their families good nature literature through the medium of small circulating libraries. The extent of this work has been limited only by the very small means at the disposal of the societies.

When the National Association succeeds in securing the desired endowment, a very large portion of the annual income will be devoted to the expansion of the Audubon library system. It is also purposed to employ trained lecturers to instruct the rural public by means of illustrated talks about birds, animals, flowers, trees, and, in fact, every branch of nature, especially along economic lines. The income of one million dollars would not be too large for these purposes when the magnitude of our agricultural interests is considered. The Secretary of Agriculture, Hon. James Wilson, in his New Year's greeting to the people of the

United States, makes this statement: "All the gold mines of the entire world have not produced, since Columbus discovered America, a greater value of gold than the farmers of this country have produced in wealth in two years; the products of the farms for this year alone (1904) amount to more than six times the capital stock of all the National Banks."

It is a well-established fact that insects destroy annually agricultural products to the value of \$300,000,000, this sum including the terrible loss to the cotton industry from the boll-weevil, and, in addition to this sum, the Bureau of Forestry reports: "At current stumpage values and wholesale prices of commercial products the annual loss from forest insect depredations is estimated to be about \$100,000,000."

Birds are the principal check on the increase of insect pests; therefore, every possible means should be employed to increase bird life. It is believed that the most effectual and rapid method of reaching this end is by educating the agricultural masses about the economic value of birds through the use of thousands of nature libraries and millions of educational leaflets. To carry out this purpose the National Association pleads for a liberal endowment.

The National Association, during the past four years, has employed a small number of active and earnest men as bird wardens to protect during the breeding season colonies of birds that were threatened with extermination by plume-hunters. There are many other colonies that need such special protection, but it can only be given provided a sufficient endowment fund is secured. A few thousand dollars spent this way annually, will preserve for the benefit and enjoyment of future generations the beautiful and interesting birds that dwell along the coast.

The National Association is fully organized, is incorporated, and has a great and important economic work to carry on; but it is powerless to accomplish any of the great good that it aims to do unless a generous and appreciative public recognizes its needs and furnishes the desired endowment fund.

For Young Observers

Edited by T. GILBERT PEARSON

Address all communications for this Department to the Editor, at Greensboro, N. C.

Bird Tenants

OUR young observers will find in this number of BIRD-LORE descriptions and pictures of a great many different kinds of bird-houses.

We hope that they will make a practical use of the suggestions given and, when possible, try to secure some bird tenants this coming spring by offering them suitable homes.

It is already time to begin to prepare these dwellings, and, as Mrs. Wright tells us, the sooner we place them out of doors the sooner will they begin to look as though they belonged there. In the next issue of BIRD-LORE we will give a plan for the study of Bird Tenants, and at the same time make some suggestions which we are sure will interest our young observers.

The first prize for the letters on 'Feeding Birds in Winter' was won by Miss Emily N. Hoxie, whose article is published below.

Feeding Birds in Winter

By EMILY N. HOXIE, Peace Dale, R. I.

Last winter we put out suet in the trees for the first time, and soon the Downy Woodpeckers, Nuthatches, Chickadees and Blue Jays came and ate. The Chickadees would take a few little pecks, then fly away. The Blue Jays and Nuthatches would break off a big piece and carry it away, but Downy would stay for a long time and make a good meal. Only two Downies came, and they both had the red spots on their heads. One we called the big Downy and one the little Downy,



GETTING READY FOR THE BLUEBIRDS

because there was so much difference in their size. They became very tame and I could roll my hoop under the tree and they would not fly away. We kept a pan of crumbs out in the yard for the Sparrows and Juncos. Many English and Tree Sparrows came, and nearly all winter we had one little Song Sparrow for a daily visitor. He would fly at the English Sparrows and drive them all away if they ate too near him. We heard him sing in January. We had Kinglets in the fall, but they did not stay here in the winter. On sunny days we saw little birds (sometimes five at once) flying round the windows and roofs and porches. We saw they were after flies, so we caught a great many flies in our attic and put them in a box on the window-sill outside. The birds were very tame, and came and ate while we stood at the window. We found by 'Bird-Life' that they were Myrtle Warblers. There were flocks of Bluebirds around all winter, and some of them came and ate flies with the Warblers.

In May the winter birds stopped coming and the Robins and Cat-birds began to eat the suet. It was much easier than digging worms. It was very funny to see the birds. The Robin who had a nest in one of our trees would bring her little ones under the tree where the suet was and fly up and bring pieces down to them. While she was on the ground feeding them, the Cat-bird would go to the suet. As soon as the Robin saw the Cat-bird on the suet she would go and drive him off, when he would fly down under the tree to pick up the pieces which dropped. They would keep this up for some time. Papa nailed a piece of suet on the table in the yard where my sister and I mix mud-pies, and the Cat-birds would come there and eat and carry some away while we were there playing. The Red-winged Black-birds came to the back part of our garden, where we kept a pile of food for the birds, and carried off great pieces for their young ones. They made many trips a day for some time. This winter the Downy and the Nuthatch came the first day of December, though the Chickadees were here weeks before that. We read in 'Bird-Life' that bayberries were the Warbler's favorite food, so mamma and I picked some and put them out in a dish on the window-sill for him. We put out some flies, too, and he ate those and did not seem to care for the bayberries. We saw him eat three berries, and he could hardly swallow them; they seemed so large for his little bill and throat. We have had thirteen different kinds of birds in the yard this winter, and enjoy watching them very much.



Report of the National Association of Audubon Societies

ALSO ON THE

Results of Special Protection to Water Birds

OBTAINED THROUGH THE THAYER FUND
FOR THE YEAR 1904

TOGETHER WITH A

History of the Audubon Movement

By WILLIAM DUTCHER, CHAIRMAN

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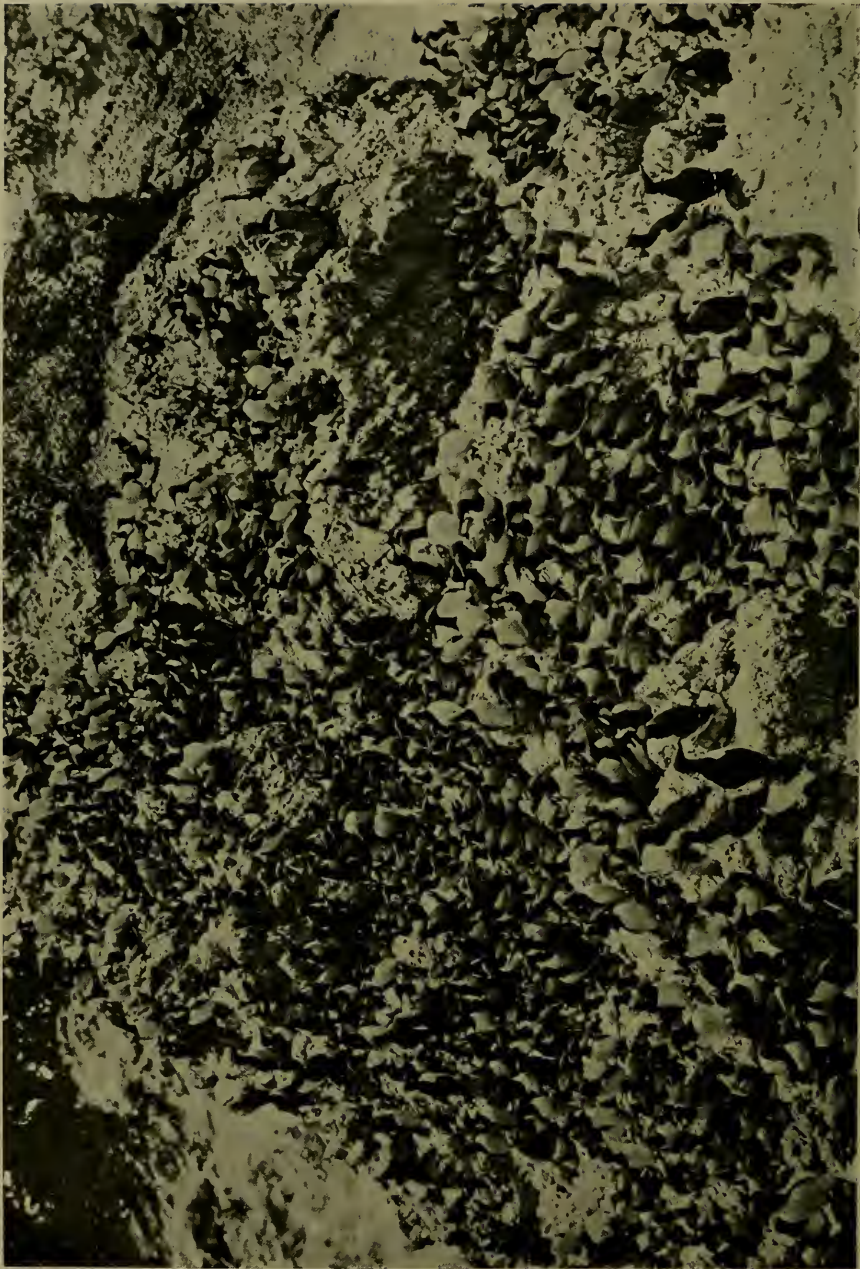
- Work of the American Ornithologists' Union.
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- Live Bird Traffic.

STATE REPORTS.

REPORTS OF RECEIPTS AND EXPENDITURES.



CALIFORNIA MURRES ON ARCH ROCKS, COAST OF OREGON
Photographed by Finley and Bohlman

INTRODUCTORY

Admit into thy silent breast
The notes of but one bird,
And instantly thy soul will join
In jubilant accord.

—*Johanna Ambrosius.*

PROGRESS is defined as advancement of any kind; growth, development, improvement; and is a high word for the promotion of human knowledge, character and general welfare. In all these things we feel that the great economic movement in which we are engaged has made positive gains, not only on the material, but also on the spiritual side. The material gains can always be seen, recognized and enumerated, because they are tangible; for instance, there is the model law adopted in two important states, an active Audubon Society organized in another important state, and additional colonies of water-birds discovered and effectively cared for by paid wardens, while many of the colonies that have had protection for several years show a marked increase in size.

The spiritual gains are intangible, but are nevertheless positive and recognizable in increased interest, willingness to work, inquiry about methods, and, above all, a growing and generous response to financial calls for support.

HISTORY OF THE AUDUBON MOVEMENT

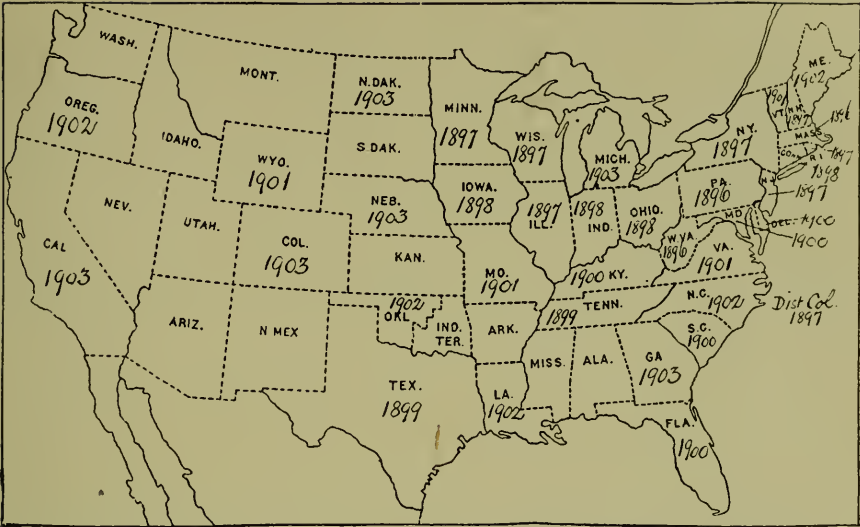
In order that the great gains that have been made may be more easily recognized, let us take a retrospective view.

As early as 1883 there was an evident awakening to the fact that too many birds were being killed, for 'Forest and Stream,' in commenting on a communication from a correspondent, remarks: "The subject of protecting our small birds is, we are glad to see, occupying each year a larger share of public attention." Later in the same year, in an editorial on 'Spare the Swallows,' it says: "The milliners now demand the breasts and wings of Swallows for decorating ladies' hats. To supply the call, thousands of these birds are killed by agents of the millinery taxidermists." During the following year, 1884, this awakening was more evident, from the greater number of newspaper articles that appeared under such titles as the following: 'Protect the Small Birds,' the writer of which says: "For several years I have watched the decrease in numbers of our small birds"; 'Protecting Song Birds,' 'Preservation of Song Birds,' in which the writer says: "Let us have a law to prevent the shooting, by men

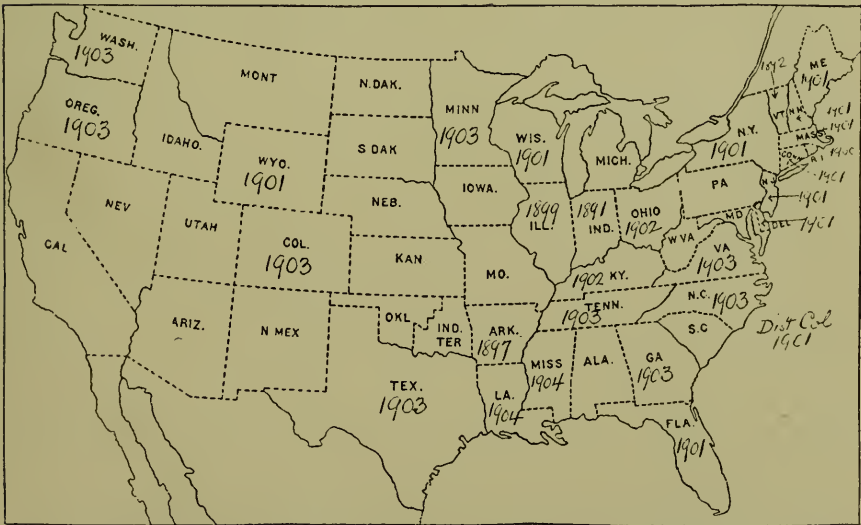
as well as boys, of the insect-eating and song-birds of our land"; 'Decrease of Song Birds,' in which the writer directs attention to the advertisement of a Boston taxidermist who calls for 'all kinds of native birds' and states, "I saw in the window of a large millinery store here over one hundred and fifty stuffed skins of the Baltimore Oriole, labeled 75 cents each." In an editorial in 'Forest and Stream,' entitled, 'The Sacrifice of Song Birds,' it is stated: "The destruction of American wild birds for millinery purposes has assumed stupendous proportions. The unholy work gives employment to a vast army of men and women, and this army wages its campaign of destruction with a diabolical perfection of system." The editorial refers to details of the work published in other columns of the paper which furnish evidence of the ghastly character of the business. It was during this year that the work of exterminating the Terns commenced and the gruesome business was carried on from Florida to Massachusetts and hundreds of thousands of these beautiful and graceful creatures were sacrificed on the altar of fashion. Today the small remnant of the once countless throngs of Terns, or Sea Swallows, are being carefully guarded by wardens in the employ of our Society who are paid from the Thayer Fund. They now live in peace and happiness, are permitted to breed in security, and, thanks to a growing sentiment of kindness to all wild life, are rapidly increasing in numbers.

Work of the American Ornithologists' Union.—In the minutes of the second annual meeting of the American Ornithologists' Union, held at the American Museum of Natural History in New York, September 30, 1884, may be found the following entry: "Mr. Brewster called attention to the wholesale slaughter of birds, particularly Terns, along our coast for millinery purposes, giving some startling statistics of this destruction, and moved the appointment of a committee for the Protection of North American birds and their eggs against wanton and indiscriminate destruction, the committee to consist of six, with power to increase its number, and to coöperate with other existing protective associations having similar objects in view. After earnest support of the motion by Messrs. Brewster, Chamberlain, Coues, Goss, Merriam and Sennett, it was unanimously adopted, and the following gentlemen were named as constituting the committee: William Brewster, H. A. Purdie, George B. Grinnell, Eugene P. Bicknell, William Dutcher and Frederic A. Ober."

Establishment of the Biological Survey.—At this same meeting action was taken which proved far more reaching in its results than was probably ever dreamed of or hoped for by its originators. The Union instructed the Council to prepare and present a proper memorial to Congress and also to the Canadian Government, in behalf of the Committee on Bird Migration, and to consider what other means could be



MAP OF STATES HAVING AN AUDUBON SOCIETY WITH THE YEAR IN WHICH IT WAS ESTABLISHED



MAP OF STATES WHICH HAVE PASSED THE A. O. U. MODEL LAW WITH THE YEAR OF ITS ADOPTION

devised to promote the work. As the result of the appeal to Congress, an appropriation of \$5,000 in aid of the work was secured through the United States Department of Agriculture. In recognition of the action taken by the American Ornithologists' Union in securing the appropriation, the Department of Agriculture invited the Council of the A. O. U. to select a superintendent to carry on the work. The Council at a meeting held April 21, 1885, in Washington, unanimously appointed Dr. C. Hart Merriam, who secured as his assistant Dr. A. K. Fisher, both among the founders of the American Ornithologists' Union. From this humble beginning has grown the present Biological Survey, a Division of the United States Department of Agriculture, which still has at its head Dr. Merriam, the original superintendent, who has gathered about him a staff of well-known ornithologists.

The great value of the work of this important division of the Government is becoming more and more apparent every year, especially in the great mass of educational material that is being published, and in the active part it is taking in the work of protecting both game and non-game birds. The Audubon Societies work in close touch with the Biological Survey, in fact being practically auxiliary to it. All important movements and plans of the National Association are adopted after consultation with the Biological Survey, which furnishes a large part of the food data which is embraced in the Educational Leaflets published by this Society.

Early Legislation.—To continue our review, early in 1885 the Legislature of New Jersey passed a bill, introduced by Senator Griggs, forbidding the killing of any Nighthawk, Whippoorwill, Tern, Gull, or any insectivorous or song bird not generally known as a game bird. This was probably the first comprehensive bird law passed, in that it protected all the birds that could not strictly be considered game birds.

Song Birds as Food.—During the same year Mr. Sennett, of the first A. O. U. Protection Committee, published in 'Forest and Stream' an article entitled 'The Lesson of a Market,' in which he gave a list of the non-game birds that he found exposed for sale in the Norfolk, Virginia, market. It consisted of twenty-six species, among them the Robin, Catbird, Brown Thrasher, Bluebird, Yellow-rumped Warbler, Waxwing, Red-eyed Vireo, eight species of Sparrows, Dove, and included even the Crow and Screech Owl. Twelve or fifteen stands had the birds for sale, some having as many as three or four hundred. Contrast that condition with the conditions today. The markets at the present time are bare of song birds and in some states even game birds are not sold. During the present year even the New Orleans markets were closed for song birds, where they had been sold in large quantities ever since the days of the French occupancy. This last gain was the direct result of the effective work of the Louisiana Audubon Society.

A. O. U. Committee on Bird Protection.—At the meeting of the American Ornithologists' Union held at the American Museum of Natural History, New York, November 17-18, 1885, a report of the Committee on the Protection of Native Birds was made by Mr. Brewster, chairman, who stated that owing to ill health he was obliged to resign the chairmanship, and for this and other adverse circumstances the Committee had been unable to develop a systematic plan of work. The discussion following the report showed that there was no lack of interest in the subject, and that active measures would be taken to enlighten the public and to create a proper sentiment in relation to the wholesale slaughter of birds going on for millinery purposes. "Dr. Merriam regarded the work of this Committee as the most urgent now before the Union." A new Committee was appointed which met at 51 Liberty Street, New York, December 12, 1885, for organization. Mr. George B. Sennett was elected permanent Chairman and Mr. Eugene P. Bicknell, Secretary, the other members of the Committee being Dr. J. A. Allen, Dr. J. B. Holder, Dr. George B. Grinnell, William Dutcher and L. S. Foster, all of New York City; Mr. Wm. Brewster, of Cambridge, Mass.; Mr. Montague Chamberlain, St. John, N. B., and Col. N. S. Goss, Topeka, Kansas. Weekly meetings were held thereafter at the American Museum of Natural History, when a large amount of preliminary work was done. A sub-committee was appointed to collect statistics respecting the extent of the trade in bird skins for millinery purposes; to another sub-committee was entrusted the duty of procuring a full series of the legislative enactments of the different states in behalf of bird protection, as a basis for intelligent action in respect to this phase of the subject.

The Committee deemed it advisable that its first work should be educational in its character, in order to create sentiment against the use of birds for decorative purposes and in general for the protection of all native birds.

The year 1886 seemed to mark the high tide of bird protection work during its first cycle of development, and great activity was displayed. The A. O. U. Committee, through the coöperation of the editor and publisher of 'Science' and of Mr. G. E. Gordon, President of the American Humane Association, were able to effectively reach the public. A sixteen-page supplement to No. 160 of 'Science,' February 26, 1886, was issued; and it was subsequently republished as 'Bulletin No. 1 of the A. O. U. Committee on Bird Protection' in an edition of over 100,000 copies. It contained the following articles: 'The Present Wholesale Destruction of Bird-Life in the United States,' by J. A. Allen; 'Destruction of Bird-Life in the Vicinity of New York,' by William Dutcher; 'Destruction of the Eggs of Birds for Food,' by George B. Sennett; 'Birds and Bonnets,' by Frank M. Chapman; and as editorials, 'The Relation of Birds to Agriculture,'

'Bird-Laws,' and 'An Appeal to the Women of the Country in Behalf of the Birds.'

In this Bulletin was presented the first completed draft of what has since been known as the A. O. U. Model Law, 'An Act for the Protection of Birds and their Nests and Eggs.' While the Model Law has been improved and strengthened as the result of experience, yet it substantially remains the same as when first drawn in January, 1886. One of the tangible gains in bird protection work is the fact that in January, 1886, the Model Law was not in force in a single state; today it is in full force in twenty-eight states, the territory of Alaska and the Northwest Territories, across the border.

Organization of the First Audubon Society.—An editorial entitled 'The Audubon Society' appeared February 11, 1886, in 'Forest and Stream,' from which is quoted some facts relating to the organization of the first Audubon Society, the successor of which we now are: "Very slowly the public are awakening to see that the fashion of wearing feathers and skins of birds is abominable. Legislation of itself can do little against this barbarous practice, but if public sentiment can be aroused against it, it will die a speedy death. While individual effort may accomplish much, it will work but slowly, and the spread of the movement will be but gradual. Something more than this is needed.

"In the first half of this century there lived a man who did more to teach Americans about birds of their own land than any other who ever lived. His beautiful and spirited paintings and his charming and tender accounts of the habits of his favorites have made him immortal, and have inspired his countrymen with an ardent love for the birds. The land which produced the painter-naturalist, John James Audubon, will not willingly see the beautiful forms he loved so well exterminated.

"We propose the formation of an Association for the protection of wild birds and their eggs, which shall be called the Audubon Society. Its membership is to be free to every one who is willing to lend a helping hand in forwarding the objects for which it is formed. These objects shall be to prevent, so far as possible, (1) the killing of any wild birds not used for food; (2) the destruction of nests or eggs of any wild bird, and (3) the wearing of feathers as ornaments or trimming for dress.

"To bring this matter properly before the public at large, we shall employ every means in our power to diffuse information on the subject over the whole country. Those who are willing to aid us in our labors are urged to establish local societies for work in their own neighborhood. To such branch societies we will send, without charge, circulars and printed information for distribution among their neighbors. A little effort in this direction will do much good. As soon as the association shall have a membership and shall be in a position to organize, and shall have attained

an existence, we will hand the books and any funds which it may have, over to its members, who will, thereafter, take charge of it. The work to be done by the Audubon Society is auxiliary to that undertaken by the Committee of the American Ornithologists' Union; and will further the efforts of the A. O. U. Committee, doing detail duties to which they cannot attend."

That the Audubon Society attracted the attention of the best minds of the country is indicated by the following letters, selected from many others, received by 'Forest and Stream':

"Brooklyn, N. Y., Feb. 20, 1886.

I am heartily in sympathy with your purposes for the protection of birds, and should be glad to contribute any influence that I can to that end. If there were no purchasers there would be no demand, and no reason for slaughtering these winged gems. But as only women create a demand, it rests upon them to stay this wanton destruction. I am sure it is only necessary to bring before American women the cruelty of this 'slaughter of the innocents' that fashion is carrying on to secure a renunciation of this ornament and the salvation of birds. On this subject the kind feelings, the taste, and æsthetic sympathy of the whole community are on your side, and if you persevere you will assuredly win. Yours,

Henry Ward Beecher."

"Oak Knoll, Danvers, Mass., 2d mo., 20, 1886.

I heartily approve of the proposed Audubon Society. We are in a way to destroy both our forests and our birds. A Society for the preservation of the latter has long been needed, and I hope it is not too late for the accomplishment of its objects. I could almost wish that the shooters of the birds, the taxidermists who prepare their skins, and the fashionable wearers of their feathers might share the penalty which was visited upon the Ancient Mariner who shot the Albatross. Thy Friend, John G. Whittier."

Bishop Henry C. Potter wrote: "There is an element of savagery in the use of birds for personal decoration, which is in grotesque contrast with our boasts of civilization: but even the savage stops short, as a rule, with the feathers. It is only Christian people who think it worth while to butcher a whole bird to adorn their headgear. I am sure, however, that it is largely from that unreflecting habit which is a leading vice in people who follow the fashions. But it is a vice, as Hood sang, when he wrote,

'For evil is wrought
By want of thought,
As well as by want of heart.'

Oliver Wendell Holmes wrote: "I assure you of my hearty sympathy with the members of the Audubon Society in their efforts to prevent the

waste of these beautiful, happy, innocent and useful lives on which we depend for a large share of our natural enjoyment."

Charles Dudley Warner sent the following message: "A dead bird does not help the appearance of an ugly woman, and a pretty woman needs no such adornment."

In June, 1886, the Audubon Society reported that it had passed the 10,000 mark in membership and that additional names were being added at the rate of one thousand per week. On May 20, 1886, the Legislature of New York State substantially passed the A. O. U. Model Law, thus being the first commonwealth to adopt this measure.

At the end of the first six months of its existence the Audubon Society had enrolled over 11,000 members, and it was deemed necessary to incorporate. Steps were taken to that end, and on August 6, 1886, the incorporation was completed in the city of New York, with the corporate title of 'The Audubon Society for the Protection of Birds.' The incorporators were George Bird Grinnell, Edward R. Wilbur, Charles B. Reynolds, Joel A. Allen and William D. Page.

In November following, the A. O. U. Protection Committee published its second Bulletin in 'Forest and Stream.' This was subsequently republished in pamphlet form as 'Protection of Birds by Legislation.' This Bulletin contained the New York Law of 1886, with detailed comments, also a revised and simplified draft of a model law with full explanation thereof, and suggestions how the law might be enforced, the effect of the law on bird protection, the work of the Audubon Society and other pertinent matter. The report of the A. O. U. Protection Committee presented by Mr. Sennett, chairman, at the fourth annual meeting of the Society, held November 16-18, 1886, at Washington, D. C., proved of special interest and showed activity on the part of the members. During the year twenty meetings were held at which a quorum was present. After detailing the work and successes of the year, it concluded by stating that the public press had warmly seconded its efforts, and it felt justified in claiming that its labors had yielded most encouraging results, and that the future was full of promise of further successes. The public was thoroughly aroused to the importance of enforcing strenuous measures for the better protection of our birds, and the sympathy and assistance received by the Committee in its work was full of encouragement to further effort.

At the close of the year 1886 the Audubon Society had 16,000 members, with over three hundred local secretaries, scattered throughout the United States and in various foreign countries.

The Audubon Magazine.—In January, 1887, 'The Audubon Magazine' appeared as the organ of the bird protection movement. 'Forest and Stream' in an editorial, January 13, 1887, states: "The methods of personal letter writing and circular distribution, heretofore adopted by the

Audubon Society, have proven inadequate to keep pace with the growth of the movement, and now the Society is to have its own special medium in the world of journalism. 'The Audubon Magazine,' devoted to extending and building up song-bird protection, will be published in the interest of the Society by the Forest and Stream Publishing Company.

"The special purpose of the new monthly will be to advance the work already so well under way, give stability and permanence to that work, and broaden the sphere of effort in such directions as may with reason suggest themselves. Ornithology, discussed in a popular way, will, as a matter of course, take precedence over other subjects of natural history, to which the pages of the new magazine will be largely devoted, but it will treat of outdoor life and animated nature in many forms. The price has been made merely nominal, fifty cents per year. The Audubon Society will hereafter grant admission to associate membership. This step is taken out of deference to the expressed desires of a large number of persons who are in hearty sympathy with the Society in its aims and in all of its methods, except the pledging of members. For one reason or another such persons do not care to sign the Audubon pledges. They will, however, be glad to lend to the work their influence and active aid, and it is therefore desirable that they should in some way be recognized."

In May the Audubon Society reported a membership of about 30,000, and 'Forest and Stream' in an editorial said: "The expenses of this movement, which have been very heavy, have been borne by Forest and Stream Publishing Company without any assistance from outside persons. Four numbers of the Audubon Magazine have appeared and we are able to form an intelligent judgment of the character of the periodical. It is full of matter which is both instructive and entertaining. Each number contains a full-page illustration of some well-known bird, carefully reproduced from Audubon's plate, together with a description and life history of the species figured. Besides this the story of the life of the great artist-naturalist is appearing as a serial. Economic questions are treated in an intelligent and novel way, and there are lighter articles and stories for the younger folks." June 30, 1887, the Secretary of the Audubon Society reported a membership of 36,000, and, in August, 38,400.

At the fifth meeting of the A. O. U. held at the Museum of the Boston Society of Natural History, October 11-13, 1887, Mr. Sennett, chairman of Committee on Bird Protection, reported as follows: "The Committee was doing all in its power to disseminate information in relation to the subject, the chief obstacle to its work being the ignorance of the public on all matters relating to the utility of birds and the measures necessary for their protection. This ignorance was especially dense among

farmers, who were intensely prejudiced against Hawks and Owls, and indifferent to the services rendered by these and many other useful species which they were accustomed to regard as enemies and pests. The information the Committee had gathered respecting the food of birds of prey showed conclusively that, with two or three exceptions, these species were far more beneficial than harmful, many of them subsisting chiefly on field mice and other farm pests. In this connection quite an extended account was given of the very excellent work of the Audubon Society."

Decline of the First Audubon Movement.—During 1888 the tide of bird protection was rapidly ebbing, for the subject seemed to be given little attention in the public press. 'Forest and Stream' pointed to the fact that large numbers of song birds were shot during the spring migration in the vicinity of New York, notwithstanding the law forbidding shooting of such birds and, in an editorial in November, said as follows: "Essays have been written to demonstrate the foolishness of small bird destruction, laws have been passed to protect the useful species, societies have been organized and tens of thousands of members enrolled pledged against the fatuous fashion of wearing bird skins as dress; arguments, pleas, appeals to reason and appeals to sentiment have been urged; and what is the outcome of it all? Fashion decrees feathers; and feathers it is. The headgear of women is made up in as large a degree as ever before of the various parts of small birds. Thousands and millions of birds are displayed in every conceivable shape on the hats and bonnets. This condition of affairs must be something of a shock to the leaders of the Audubon Society, who were sanguine enough to believe that the moral idea represented by their movement would be efficacious to influence society at large. Meantime the reintroduction of feather millinery in no way derogates from the value of the work done by the Audubon Society. It has called attention to the ethical and economic aspects of the question and has educated a very respectable minority to organized action. In the face of this minority thoroughly convinced that indulgence in feather millinery is wrong in itself, or conducive to consequences inimical to human well-being, the arbiters of fashion cannot achieve that complete success they have been accustomed to look for." With the end of the second volume, December, 1888, the Audubon Magazine ceased to exist and, with it, organized effort for bird protection.

At the sixth annual meeting of the American Ornithologists' Union a very brief statement of the work of the Protection Committee was made by Dr. J. A. Allen, in the absence of the chairman, Mr. Sennett. "Efforts were being made to influence legislation and the Committee was trying to enlighten the public."

During 1889 the subject received no attention from the press, and at the Seventh Congress of the A. O. U., held November 12-15, Mr.

Sennett, chairman of the Protection Committee, made a very brief verbal report of progress, the most important statement being that the law recently enacted by the State of Pennsylvania, in a measure through the influence of the Committee, was commended as the best thus far adopted.

The report of the A. O. U. Protection Committee, made by Mr. Sennett, chairman, at the Eighth Congress, November 18-20, 1890, merely referred to the fact that no additional legislation had been obtained, but there was a general feeling manifested to protect song birds.

At the Ninth Congress of the A. O. U., November 17-19, 1891, the chairman, Mr. Sennett, merely reported progress, and Mr. Brewster stated what had been done to protect the Terns on Muskeget Island (Mass.) during the past four years.

The Protection Committee did not make any report to the American Ornithologists' Union during the years 1892 and 1893. At the Eleventh Congress, 1894, Mr. F. M. Chapman was appointed chairman of the Committee.

At the Twelfth Congress the chairman, Mr. Chapman, in his report, detailed the special protection given to the Terns on Great Gull Island, N. Y., to prevent their extermination, and also the successful efforts of Messrs. Brewster and Mackay to prevent the repeal of the Massachusetts law protecting the Terns of Muskeget Island. The Committee was continued and, Mr. Chapman declining the chairmanship, Mr. Gurdon Trumbull was made chairman.

At the Thirteenth Congress, Nov. 12-14, 1895, Mr. Brewster stated, in behalf of the Protection Committee, that the Terns on Muskeget Island showed great increase, as did the colony of Laughing Gulls; and that great credit was due Mr. George H. Mackay for his continuous efforts to save these birds from destruction. Messrs. Stone and Dutcher reported on the protection given to the coast birds in New Jersey and New York. A new committee was appointed, consisting of William Dutcher, chairman, Ruthven Deane, Witmer Stone, Leverett M. Loomis and George H. Mackay.

At the close of the year 1895 the low tide of bird protection had come and the end of the first cycle was at hand. The A. O. U. Protection Committee was discouraged and hopeless, feather-wearing was as rampant as ever, the legislatures of the states of New York and Pennsylvania, where the model law had been enacted, had amended or repealed the same, and bird legislation was as defective as it was before the protection movement began; the Audubon Society had practically ceased to exist, and the 'Audubon Magazine' was no longer published. Truly it might be said that the cause of bird protection seemed hopeless, for the movement that had started so brilliantly in 1883 was seemingly dead after a short career of twelve years. An analysis of the cause of the decline points to the following reason: the movement was started and carried on as a single society,

the expenses of the same being borne by a liberal and public-spirited corporation that was organized for another purpose. The magnitude of the undertaking was too great for any person or corporation to carry on unaided, the actual physical labor and the great expense were beyond the strength or purse of anything but a coöperative movement among the several states and the contributions of hundreds of individuals. There was also a total lack of supporting laws, nor was the warden system adopted during the first movement.

Origin of the Second, or Present Audubon Movement.—The second cycle of bird protection practically commenced in January, 1896, when the system of State Audubon Societies was started by the organization of a Society in Massachusetts; this was followed by one in Pennsylvania, and thereafter state organizations followed in rapid succession, until now there are societies in thirty-five states, one territory and the District of Columbia. Many of these societies are large and flourishing ones, some of them being incorporated. The Society in North Carolina is unique in that it acts in that state as a Game Commission with power of appointing bird- and game-wardens who can arrest violators of the game-laws.

Uniform bird legislation was found to be absolutely necessary and has rapidly been secured, so that at this date the model law is in force in twenty-eight states, one territory and the Northwest Territories in the British Provinces. In addition, the Audubon Societies, individually and through the National Association, have exerted a vast and valuable influence in game-bird protection, having found it impossible not to become interested and involved in this important branch of economics. All of the societies stand emphatically for short open seasons, no spring shooting, non-export, no sale of game, and every known method of preserving the rapidly diminishing game-birds of the country.

Another of the gains is the powerful auxiliary to Audubon work, the very excellent illustrated magazine BIRD-LORE, now in its seventh volume, which is the organ of the societies, and is a medium of exchange of thought, methods and news between the several state Societies, and serves to keep them in touch with one another; further, it is a means of communication between the officers and committees of the individual societies and their members. This magazine is of the highest character, being scientifically correct and correctly popular; the editor having kept up to the high standard promised in his editorial in the first number, February, 1899. The several societies and bird lovers at large can in no surer way advance the cause of bird protection than by extending very widely the circulation of our official organ, BIRD-LORE.

The Thayer Fund.—Early in 1900 Fashion had again attacked the Gulls and Terns, and dealers said that the demand for these skins far exceeded the supply. An appeal to bird lovers was made by Mr. Abbott H. Thayer, and

through his efforts a generous fund was raised which was used for special protection to sea-birds during the breeding season, wardens being employed for this purpose. Mr. Thayer has diligently and patiently worked to continue the fund from year to year, with annually increasing results, so that during the past year thirty-four wardens have been employed, as follows: Maine, 10; Massachusetts, 1; New York, 2; New Jersey, 2; Virginia, 8; North Carolina, 4; Florida, 4; Texas, 1; Michigan, 1; Oregon, 1; and a contract has just been made with a warden in Louisiana.

Formation of the National Committee.—In November, 1900, an important meeting took place in Cambridge, having as its object the discussion of the Federation of the State Audubon Societies in order to strengthen the bird-protection movement and more effectually place it upon a lasting basis. A committee was appointed, which reported at a meeting held in New York in November, 1901, as follows:

1. That the several societies retain their individuality, that is, that they be not merged into a National Organization.

2. But in view of the increased efficiency that would always result from some form of union, which would admit of concerted action, it is recommended that,

3. The several societies shall each appoint one member of a Committee to be known as the National Committee of the Audubon Societies of America.

4. That the members of the Committee may be empowered to represent the societies whenever concerted action on the part of the societies be deemed by the Committee expedient.

5. That an annual Conference be held.

Since 1901, the National Committee has had charge of the formation of new Audubon Societies, the fostering and encouragement of the new and weaker organizations, the warden system, legislation, and general educational work, and it is also an additional medium of exchange between the several state societies. In 1903 the National Committee began to issue a series of illustrated leaflets for educational purposes.

The above résumé of the bird-protection movement, from its inception to the end of 1903, is presented in order that the public may have in concise form a history of the movement.

If desired, fuller details may be obtained in the published reports from 1896 to 1903 of the work done in those years.

REPORT OF THE NATIONAL COMMITTEE FOR 1904

Suggestions.—This brings us to the present year's activities, but, before detailing them, it is deemed advisable to present certain important suggestions for the consideration of the several state societies; the most vital of these is legislation.

In the states of Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Oregon, Rhode Island, Tennessee, Texas, Virginia, Washington, Wisconsin and Wyoming, there will be legislative sessions commencing early in 1905. In each of these states the Model Law is now in force, and it is, therefore, extremely important that measures shall be adopted to prevent any adverse bird legislation. The Audubon Societies of the several states in question should at once have their Law Committees arrange to watch closely for any such legislation. If this is not done, it will be a very easy matter for selfish people to have amendments passed that will very seriously weaken the present excellent laws. In Ohio, in 1903, an amendment was passed removing the Dove from the protected birds. This was a very serious loss to the state itself, besides having a bad influence in other sections of the country. The best method of watching legislation is to arrange with some reliable person at the Capitol, preferably a bright newspaper reporter, to furnish a copy of every bird bill that is introduced; the Law Committee will then determine whether the bill is adverse or beneficial; if the latter, it should be supported by the Society, but, if adverse, every means should be taken to defeat the passage of the bill. This is one of the most important activities for Audubon Societies to engage in, and under no circumstances should it be overlooked or passed by as a matter of no importance.

The National Committee, having large experience in such matters, holds itself in readiness to advise and aid the Audubon Society of any state where adverse legislation may be introduced.

A second suggestion, equally important, is the incorporation, not only of each State Society, but of the National Committee also, for the same reasons apply to all.

We have seen that the original Audubon movement was not permanent chiefly because of lack of pecuniary support. Permanency for all the societies can be obtained only by incorporation, in order that each may be in a legal position to receive bequests from persons to whom our great economic movement appeals. The financial support of such an undertaking as ours is always largely in the nature of voluntary subscriptions, and to a smaller extent from dues of members. That these latter are in no

way adequate, every executive officer of an Audubon Society knows only too well. Early in the year a large number of letters regarding the incorporation of the National Committee were sent to contributors, and the officers of the several societies. It was the consensus of opinion that incorporation was desirable and important.

There are large numbers of Societies for the Prevention of Cruelty to Children and Animals in the country, which in almost every instance are incorporated, and some of them are endowed with large sums, and are the owners of a considerable amount of income-producing property. None of these societies has objects of greater economic importance than the one we represent, for the preservation of the birds of the country has a direct bearing on the greatest of all the industries of the United States—its agriculture. As the Committee is now constituted, it is without legal form and cannot accept bequests, should any be offered. The popular character of bird protection, which appeals, as it does, to all persons who, in the slightest degree, love nature and her beautiful creatures, is sure to attract the notice of persons who are looking for desirable channels in which to dispose of surplus wealth. During the past year the New York Audubon Society found it necessary to incorporate in haste. A letter was received by the secretary in which the writer said that she was about to have a will made and, if the Society were in a legal position to accept a bequest, that one-half of her estate would be devised to it.

Again, the chairman of the National Committee was visited recently by a friend of the movement, who, after listening to a detailed statement of the plans and scope of work carried on and also seeing the evidences of actual results obtained from the small fund annually received, stated that just as soon as the National Committee was legally constituted he would add a codicil to his will devising to the National Committee the sum of one hundred thousand dollars (\$100,000), which, on its receipt, was to be securely invested, the interest of the same only to be used. The only condition he made was that the scope of the work of the National Committee was to be broadened enough to embrace wild animals as well as birds. He added, on the occasion of a second visit, "if, after seeing the names on your board of trustees, I find that they are of a class that will faithfully carry out the present purposes and plans of your society, I may not limit the sum to \$100,000."

The above is only one of the many cogent reasons why the National Committee should be incorporated at once, and the same reasons apply equally to all of the State Societies that are not already incorporated. We are warranted in looking forward to the time when the central body shall have the means at its disposal from interest and rents alone, to send out trained lecturers and organizers to all parts of the country, to publish for gratuitous distribution necessary educational matter and to conduct earnestly

and freely one of the greatest economic and æsthetic movements of the day.

The third suggestion is regarding the Junior members, the boys and girls. It is believed that not enough stress is laid upon enlisting the youth of our country in this work. It has been truly said by an educator in Kentucky, "It is surely with the school children, the men and women to be, rather than the adults, we must grow." This idea is the keynote, and suggests the future strength of the Audubon movement. What are we doing for the youth at the present time? Surely not enough when we ask them only to sign a pledge, and in return give a button or a leaflet of some kind. Let us look back to our own youth and think how such action would have affected us,—should we have had more than a passing interest which would have been about as lasting as the morning dew? Children are superlatively creatures of action, full of life and vigor and anxious to do something; they are not satisfied to sit idly by and not be a part of any activity that is going on. Can we not apply this very force to our own benefit? I think we may. How?

It is well known that the individual is the unit, but stronger than the unit is the family, stronger than the family is the hamlet, stronger than the hamlet is the township, then the state, and finally the country. Let us apply the institutional method to the children of villages and towns and form them into branches or clubs, with officers and committees. Are we not always complaining of the boy with the beanshooter or the first gun, who we claim is killing birds or collecting eggs. This is merely misdirected force, and at heart the boy is not bad. If the supposedly worst boy in a hamlet were to be made the chairman of a committee of boys and girls whose duty it was to protect birds, one could not find in all the Audubon ranks a more earnest, consistent worker than he would be. What children need is to have a sense of responsibility for the care or safety of some object. They can always be trusted under such circumstances. It is a vitally different proposition if you say to that same lad, "You must not hurt or frighten the birds, because it is not only wrong but against the law." That is a proposition in which he takes little interest; but let him be personally responsible for the care of the birds, and, believe me, he will not fail you. The stimulus of interest makes all the difference in the world in that boy; in other words, let us judiciously steer the force and activity of the child in the proper channel. Will it not interest the average boy or girl to be on a Committee on nesting boxes, on feeding birds in winter, on a nature library for the town, or school, on bringing the Audubon traveling lecture to the town, on ushering and seating the audience; these things will all serve to help our work and incidentally make good citizens. Let us give this suggestion a fair trial during the coming year.

The fourth suggestion is that most of the Societies are not growing fast

enough in membership, and consequently are hampered for workers and financial support. How can this be remedied?

1. By preparing a concise and effective appeal, stating the objects of the Society and asking all persons who are interested in birds or nature to join.
2. Asking for persons who will act as local secretaries.
3. Getting every paper in your state to publish your appeal once or twice. The Audubon Societies do not avail themselves enough of the support, aid and influence of the public press. The columns of the newspapers are always open to any great popular movement.
4. Getting the boys and girls to act on committees for addressing envelopes and folding circulars, and thus distributing them by the thousands, when a single overworked secretary could prepare only a few hundreds.
5. By making special efforts to secure bird and nature libraries and illustrated bird lectures to be loaned free to all applicants.
6. By trying to secure the influence and coöperation of women's clubs and especially trying to get them to refrain from using aigrettes.

The fifth suggestion is for every Society to have a law committee who should prepare a circular giving the names of the state officials charged with the duty of bird and game protection, with the names and addresses of the special or local officers. The information should also embrace the law and how it is enforced. This circular should be distributed broadcast throughout the state, and the press should be asked to publish the same. Warning notices should be prepared for tacking on trees and public places, and if there is a large foreign element in the population some warning notices should be printed in the foreign language most used. The principal foreign offenders are Italians, Poles and Germans, who congregate in or about the large centers of population.

Further suggestions will be made by the National Committee from time to time through our organ, BIRD-LORE.

Thayer Fund.—It is gratifying to be able to report that contributions to the Thayer Fund, the financial support of the National Committee, are growing more liberal each year. In 1900 this fund was \$1,400; 1901, \$1,680; 1902, \$1,945; 1903, \$3,054; and during the present year, \$3,731.

The following table shows where the citizens are most interested in the preservation of birds, as indicated by the amount of funds contributed: Massachusetts, \$2,027; New York, \$1,212; Michigan, \$130; Connecticut, \$93; Rhode Island, \$65; Pennsylvania, \$63; Switzerland, \$25; New Jersey, \$23; Illinois, \$16; Vermont, \$15; Canada, \$14; District of Columbia, \$11; Maine, \$10; Ohio, \$11; Wisconsin, \$5.

Bird Protection Abroad.—The Sub-Committee on Foreign Relations has not been idle during the past year, and it is pleased to be able to report the following: The very pleasant relations existing between the English and American Societies for the Protection of Birds is every day becoming more

close and intimate. A large number of educational leaflet No. 7 on the Snowy Heron were distributed by the English Society. Mrs. Edward Phillips, one of the vice-presidents, writes: "I was intending to write to you to tell how immediate the appreciation of your admirable article on the 'Snowy Heron' has been, and to add an assurance of my earnest desire that it may please the Creator of every living thing to direct and strengthen your efforts and those of your co-workers and sympathizers, among whom please count me." Mrs. Praeger, of Holywood, Ireland, says, "Your Society makes a very touching and powerful plea for the Herons; it is quite the best leaflet I have seen on the subject, and I was glad to have it to distribute at our last meeting."

Early during the present year large numbers of Swallow skins were offered in the millinery shops in New York. On examination they were found to be *Hirundo rustica*, a common European bird. Some were purchased and sent to the British Society in order to keep them informed of the situation in the United States. The Secretary replied, "Your enclosure is of melancholy interest—the poor little bodies of these young Swallows, killed when just out of babyhood and making, probably, their first flight to a new and unknown home—Swallows that ought to have come and twittered about our English homes, but instead are ghastly little corpses for the 'decoration' of American women's hats.

"I think I may say that in England the Swallows are everywhere protected and valued. I doubt whether one is ever intentionally killed. On the contrary, the decrease in their numbers has of recent years been a subject of serious concern. It is on the Mediterranean, in France and Italy, that the slaughter of these birds takes place, during the migration season; and this I fear we shall have no power to stop until some international law of bird protection is agreed upon.

"May I again express our indebtedness to you for the 'Snowy Heron' leaflets, which are, I believe, doing good work."

An inquiry was received early in the year from Dr. Heuss, of Berlin, asking for information regarding the plan and scope of the Audubon work. This was furnished, and the National Committee stated that it would be very glad to coöperate with the German Society in any international movement to protect the birds of the whole world. Attention was also called to large numbers of wild birds that annually were shipped alive from Europe to America for sale by the cage-bird dealers. A letter from Louisa, Countess V. I. Gröben, will be of interest to the members of the American Societies. "Having read your letter to Dr. Heuss, I must say how happy I am that we have come into connection. When I founded our Frauen-bund, only last March, I had no idea that a society with nearly the same aims and plans was existing in America! I admire all I read in the Audubon papers immensely, and only hope that in years to come our society

will reach up to your standing. As we are going to have a new law about bird protection brought before the Reichstag next winter, it was of great value for us to read what you mentioned about the export of our birds via Bremen."

From Switzerland comes the following good news from Mr. Herbert Edward Gans, of Geneva: "I am actively occupied with the vital question of the protection of useful birds, especially migratory birds, and as I have heard through the British Society that the laws in the United States have become very stringent, and that the efforts of your Union are being rewarded, I should feel very much obliged if you could send to me the best of the United States laws, or decrees, on the protection of birds, and especially of insectivorous and migratory birds, and of those unfortunate creatures which are exterminated for ornaments for ladies' hats.

"I should feel obliged if you could also add a short summary or notice on the question, in general, and the way in which your Union has gone to work to accomplish its purpose. If you could answer me as soon as possible, it might be of use to me, in the course of December next.

"In Germany they are introducing, in many cities, a progressive law on cats (in proportion to the number owned by each person), and this measure renders valuable services; for cats are one of the great causes of destruction of useful birds, especially those, like the Nightingale and Black-cap, which nest near the ground." A detailed reply was sent, together with the fullest sympathy of the Audubon Societies in the movement to tax cats. A complete set of reports and other Audubon publications was forwarded.

Bird Protection for Canada.—Strange to say, it has been impossible to establish any close relations with our neighbors on the north, nor is it evident that Audubon work has taken much hold there. The Toronto 'Sun' seems to be most alive to the situation, for from time to time it publishes excellent editorials, one—"Don't Shoot Hawks,"—being especially commendable. It closes as follows: "The newspapers throughout Ontario should keep this subject constantly before their readers, until some day the foolish prejudice against the Hawk and Owl families will have been dispelled." As the British Provinces are the summer homes of many of our birds, it is extremely desirable that the bird-protection movement should be extended to cover the whole of North America, both by the passage of the Model Law and the formation of Audubon Societies for educational work. The warden system is very much needed in the Marine Provinces, as is indicated by the accompanying statement of Mr. Herbert K. Job, the well-known ornithologist and explorer:

"The last half of June and the early part of July I spent at the Magdalen Islands and off the southern coast of Nova Scotia, at Seal Island. Bird life on the Magdalens is holding its own very well. The

Common Terns are robbed in certain localities by the fishermen, but the region is so wild that it would be hard to stop it. I examined a fine breeding colony of Ring-necked Plovers. Various ducks are breeding numerous, notably the Red-breasted Merganser and the Black Duck.

"At Bird Rock the colony has decidedly increased. The keeper thinks there are ten thousand birds there. Certainly there are more than when I was there in 1900. The greatest increase is with the Kittiwakes, and the Gannets are also doing finely. The usual ledges are crowded with the latter, and North Bird Rock is white with them. Only the Puffins have not quite held their own, though they have not been disturbed. Not a soul had molested the birds this season at the time of our visit,— June 23 to 25. The keeper has been ordered by the British Government to let no one trouble the birds, yet he hesitates to enforce this absolutely, as he is left largely dependent upon the courtesy of the crews of vessels who land. Previous to our arrival he had seen no one—with one exception, in May—since the previous November, when the government supply steamer had called.

"It is remarkable that the birds have so increased, since during the summer of 1903 a gang of workmen were engaged in blasting out a cut into the west side of the Rock, where is being built a stairway, a landing-jetty and a track up which boats are to be drawn by a steam winch to the top. These improvements were to have been completed this season. Henceforth it will be easier to ascend the Rock, yet, until the Gulf of St. Lawrence meets with 'a change of heart,' reaching the Rock and landing will still be uncertain and dangerous. The vessel we engaged failed to appear, and our party, rather than give up, after having come so far, made the trip from Grosse Isle in an open boat, at the risk of our lives.

"On Seal Island, Nova Scotia, the once fine colony of the Herring Gulls is in a very bad way. Keeper Crowell and his talented daughter, Bernice, do all they can to protect the birds, but the island is too large for them to watch, being some three miles in length. Fishermen land and rob them, and as late as early July, when I was there, very few nests had eggs, and only one young Gull had been seen. The old Gulls are as wild as hawks. The colony has decreased 75 per cent, I think, since my visit there eight years ago. The Common or Arctic Tern colonies are also suffering, but the Black Guillemots are still numerous because, being mostly near the light-house, they are guarded by the Crowells. It is too bad to leave this good family unaided to carry on this unequal struggle to save these beautiful birds from ignorant, senseless vandalism. The Nova Scotians are fine people, and they ought not to allow themselves to lag behind New Brunswick in the matter of bird protection."



KITTIWAKES ON BIRD ROCK, GULF OF ST. LAWRENCE

Photographed by H. K. Job



NEW LADDER AND CUT, BIRD ROCK, GULF OF ST. LAWRENCE

Vertical height of cliff, 105 feet; distance by ladder, about 150 feet

Photographed by H. K. Job



RING-NECK PLOVER BROODING YOUNG, MAGDALEN ISLANDS

Photographed by H. K. Job



WILSON'S SNIPE ON NEST, MAGDALEN ISLANDS

Photographed by H. K. Job

Bird Protection in Mexico.—On the other hand, the work of bird protection is being carried on admirably in Mexico, through the "Comision de Parasitologia Agricola." Prof. A. Meraz, of this Committee, furnishes the following outline of the work :

"1. As the protection of birds is a matter which relates directly to the subjects of the Department of Agricultural Parasitology, Prof. Alfonso L. Herrera, Chief of that Department, submitted to the Second National Mexican Scientific Congress a proposed law for the protection of birds useful to agriculture.

"2. Diverse studies relative to the *useful birds* have appeared in the Publications of the Commission.

"3. Circulars have been distributed among the farmers with the object of forming Ornithology Leagues.

"4. They are being established in Zacatlan, State of Puebla, Orizaba, State of Vera Cruz, and Celaya, State of Guanajuato.

"5. The Governors of some states have promulgated special laws regulating hunting, and especially prohibiting the hunting of useful birds.

"6. The undersigned, under the direction of Prof. A. L. Herrera, and with the approval of the Secretary of the Interior, gave a hearing on 'The Protection of Birds Useful to Agriculture.' (On the 5th of May, last.)

"7. The Commission of Parasitology will regularly issue engravings of each one of the useful birds. Said engravings will be distributed preferably among the farmers, colleges and societies for the protection of animals. The press will be asked to reproduce these engravings.

"8. It is proposed that in the National Primary Schools, and if possible in their private capacity, the directors and professors will treat of the birds useful to agriculture in their lectures on zoölogy, and will teach this subject to the boys and girls.

"9. It is proposed to construct large aviaries in the parks and public gardens of the Federal District for the purpose of procreating the useful species, and then setting them free.

"10. In every way possible it will be arranged to diffuse knowledge relative to the useful birds.

"11. In due time the National Government will be asked to elevate the present laws to the category of laws for the entire Republic.

To conclude, it remains for me to express to the National Committee of Audubon Societies for the Protection of Birds, my fullest thanks in the name of this Commission for the interesting publications which the Committee has sent me on such an interesting subject.

"Separately, I am sending today to that honorable group, the publications of this Department. I hope that from this date our interchange of pamphlets will be regularly established.

The report of the Conference of the 5th of May is now in the press, and I will send it at first opportunity.

"I would be much obliged to you, Mr. Dutcher, if you would kindly send me the electrotypes which illustrate the pages of the 'Educational Leaflets,' so that we may reproduce them in the publications of this office."

Later an appeal was made to Professor Meraz that some steps be taken to prevent the slaughter of White Herons in Mexico, to which he replied as follows :

"This society has given an account to the secretary of same that some Mexican hunters do business in your market with the Snowy Heron's feathers. The hunting in Mexico of aforesaid birds is very limited at present, and Prof. A. L. Herrera, Chief of this Department, together with a Mr. Manuel Ortega y Espinose, who is the Assessor of the Improvement Secretaryship, are now making a very minute study so as to reform the laws relative to the hunting of the benefited species. As soon as these studies are published I will send you some without delay.

"I have also the pleasure to announce the receipt of your last leaflets, Nos. 9 and 10. My intention is to translate all of the series, and will take notice particularly of the Mexican species.

"I have associated myself with an inspector of the official primary schools so as to see if it is possible for us to organize a society for the protection of birds, the results of which I will advise you of later.

"Finally, several editors of the pedagogic agricultural publications have solicited your electros which you have so kindly loaned to this commission, and I would be very much obliged if you will allow me to loan them to them."

The National Committee furnished to the Mexican Commission electros of all of the illustrations of its educational leaflets.

Bird Protection in Pacific Islands.—Dr. Richmond, of this Committee, writing in behalf of the Smithsonian Institution, says, "We have recently received from the Treasury Department several specimens of birds from the island of Lisiansky, one of the outlying Hawaiian islets, with the following history: Capt. O. C. Hamlet, of the Revenue Cutter Service, commanding the U. S. S. 'Thetis' was sent to this island for the purpose of taking away certain Japanese who were unlawfully engaged in the killing of birds. No doubt these fellows were collecting plume-birds. The skins were made by the Japanese and have no data or labels attached. The species represented one Albatross, one Tropic Bird and three Terns."

The newspaper account of this slaughter is correct and is given herewith :

"Special Correspondence of the 'Chronicle.'

HONOLULU, June 23.—Captain Hamlet, of the Thetis, states that the destruction wrought by the party of Japanese poachers on Lisiansky island

to bird life was something appalling. He estimates that they killed at least 300,000 birds, to judge from the number of cases of plumage and the amount of meat they secured. All of their spoil had to be abandoned, but it is properly preserved and will keep for a long time. There are 335 of these cases, the plumage in them being of the highest quality.

"The Japanese who were brought here by the *Thetis* are the remains of a party of bird poachers whose presence on an American island was reported by Captain Niblack, of the United States steamer *Iroquois*, some weeks ago, and the *Thetis* was sent to stop their operations, but she arrived to find them only too anxious to leave their hunting-ground and to abandon spoil which is worth at least \$20,000.

"The Japanese were employed by a Tokio firm, and they fitted out in the schooner *Yeiju Maru* in Yohohama last December. Their destination was Lisiansky Island, a wonderful center of ocean-bird life in mid-Pacific not far from Midway Island. The island is the property of the United States.

"According to their story, they arrived at Lisiansky Island on January 8, and commenced at once to kill birds. They had a staff not only of hunters, but also of skilled taxidermists and skinners, for the birds' plumage was intended for the millinery markets of Paris. The men collected skins and wings by the thousand, the birds being very tame.

"On January 18 a fierce gale struck the island and the *Yeiju Maru*, dragging her anchor, struck a coral reef and was totally lost, ten of the men who happened to be aboard being drowned. Seventy-seven men were left helpless on the island."

Our member, Mr. W. A. Bryan, of Honolulu, while in the States during the past summer, was asked to prepare a statement and appeal to present to the General Government, asking that some steps be taken at once to prevent the destruction of the wonderful and highly interesting bird colonies in the Pacific Ocean. The following letter was sent to the Chief Executive:

BISHOP MUSEUM, HONOLULU, H. I., October 31, 1904.

To the HONORABLE THEODORE ROOSEVELT,
President of the United States,
Washington, D. C.

Sir:—While in New York and Washington during the latter part of July, Mr. Wm. Dutcher, President of the National Committee of the Audubon Societies for the Protection of Birds, made an attempt to arrange a meeting with you at which I might have the honor to bring before you in person the urgent need of our Government taking active steps to prevent the extermination of the bird-colonies on the outlying islands of the North Pacific Ocean, knowing it to be a matter in which you take an active interest.

It was impossible to arrange an audience at that time, and, in accordance with

the suggestion of your secretary, I submit herewith a sketch of the wanton destruction of bird life on these islands, in the belief that it can and will be stopped in the near future.

During the past few years I have visited practically all of the low coral islands in the North Pacific, and have been appalled at the destruction of the birds on these islands by Japanese 'plume-hunters' who make a business of visiting not only the bird islands of their own possessions, but those of the United States as well, and killing birds by the hundreds of thousands.

On Marcus Island, a colony had been at work for six years. In that short time they had wiped out of existence one of the largest Albatross colonies in these waters. So complete was their work of destruction that during the year of my visit (1902) they had only secured thirteen specimens of the Albatross! While there I estimated that they had 40,000 Tern skins ready for shipment, which was the second boat-load to be shipped that year.

Most of the sea-birds rear but a single young, a fact which makes their extermination certain if this slaughter is allowed to continue.

Midway Island at the time of my visit in 1902 was covered with great heaps of Albatross carcasses, which a crew of poachers had left to rot on the ground after the quill feathers had been pulled out of each bird. This mischief was done notwithstanding the fact that the previous year a similar party had been warned off by the United States Steamer 'Iroquois' which visited the island by chance.

Laysan Island, which fortunately is at present worked for guano, is inhabited by a company of laborers. So far this large and interesting colony has not been molested, although 'bird-skin pirates' have more than once called there in the hope of finding the island uninhabited.

The enclosed clipping gives a reliable account of recent depredations on the neighboring island of Lisiansky, which is not fifty miles from Laysan.

I am informed that the other low islands in the chain are similarly scourged.

The necessity of visiting these islands from time to time has been brought to the attention of various departments of the Government by Mr. E. R. Stackable, Collector of Customs for the Port, in the hope that a much-needed revenue cutter might be permanently stationed in these waters. I would not presume here to go over the ground which he has so ably covered in his reports, further than to summarize and say, that such a vessel is needed here—

1st. To enforce the immigration laws—to prevent aliens from visiting these uninhabited and unvisited islands as temporary landing places, on the way to the larger islands.

2d. To enforce the customs laws—prevent smuggling, etc.

3d. To assist distressed vessels. As life-saving stations, the value of this chain of islands—stretching, as they do, for hundreds of miles along the track of trans-Pacific travel,—cannot be over-estimated when it is known that they will be regularly visited by a relief vessel.

4th. For the protection of property. Such a vessel would effectually break up the wholesale slaughter of sea-birds which inhabit these islands; a step which must be taken *now* if it is to be at all effective.

In conclusion, I would therefore again respectfully urge upon your attention the importance of the Federal Government maintaining in these waters a revenue cutter which would be regularly stationed at Honolulu under the direction of the Treasury Department and the local Collector of Customs in the usual manner, with its duties so arranged that the vessel would make at least two trips a year to the outlying islands of the region, to enforce the immigration and customs laws; to relieve shipwrecked and marooned seamen,

and prevent the destruction of bird life on the several islands, and in various other ways make it possible to protect and utilize our possessions in these waters.

Trusting the subject may receive your favorable consideration, I remain, Sir,
Your obedient servant,

WILLIAM ALANSON BRYAN,
United States Special Inspector Birds and Animals,
Curator Ornithology.

The Committee regrets that it is unable to make any report regarding the passage of bird-laws in the Philippine Islands. (See Report 1903, p. 106).

Government Aid.—It is with the greatest pleasure that the National Committee acknowledges the cordial and hearty coöperation of all departments of the General Government in its efforts to preserve the birds of the country.

The Post-office Department, as shown by the following letter, willingly accorded the very great privilege of displaying our warning notices, giving the Federal and State Laws relating to birds, in any post-office in the United States.

OFFICE OF THE POSTMASTER GENERAL,
WASHINGTON, D. C., July 28, 1904.

NATIONAL COMMITTEE OF AUDUBON SOCIETIES,
525 Manhattan Avenue, New York, N. Y.

Gentlemen:—In reply to your letter of July 26, I have to state that the Department has no objection to postmasters' posting a warning against the killing of birds and game in violation of the State laws and in violation of the Federal laws governing such matters.

You are at liberty to forward a copy of this communication to any Postmaster to whom you send the warning notice for posting in his office.

Very respectfully,

R. J. WYNNE,
Acting Postmaster General.
J. R. A.

A photographic reproduction of this letter has been prepared for distribution, with a warning notice to postmasters, the following note being appended:

POSTMASTER.—Please post the attached Warning Notice in a conspicuous place in your office, in accordance with permission of Post Office Department.

NATIONAL COMMITTEE OF AUDUBON SOCIETIES.

A report,* after a personal visit of investigation regarding certain islands in the Gulf of Mexico off the east coast of Louisiana, was made to the National Committee by Mr. F. M. Miller, President of the Louisiana Audubon Society. This showed the conditions relative to the bird life there to be so deplorable that it was formulated and was sent to Mr. Frank Bond,

* For details of this bird destruction see beyond, under 'Louisiana.'

of the Department of the Interior, with the request that Government action be taken at once in order to prevent the total extermination of certain sea-birds in that district. The matter was presented to President Roosevelt through the Departments of Interior and of Agriculture, October 3, and the next day the President, with his usual admirable promptness and intelligent appreciation of the needs of bird protection, set aside a number of large islands belonging to the General Government as a reservation by the following order:

EXECUTIVE ORDER

It is hereby ordered that Breton Island, as shown by the General Land Office map of the State of Louisiana, of date 1896, in Township 13 South, Range 20 East St. Helena Meridian, when same shall be surveyed; and Old Harbor and Freemason Islands, in Townships 14 and 15 South, Ranges 21 and 22 East, same Meridian, when surveyed, be, and they are hereby reserved and set apart for the use of the Department of Agriculture, as a preserve and breeding-ground for native birds. This reservation to be known as 'Breton Island Reservation.'

(Signed) THEODORE ROOSEVELT.

White House, October 4, 1904.

Adjacent to and just east of the Breton Island Reservation is a large group of islands known as the Chandeleur and Errol Islands Light-House Reservation. In order to carry out effectually the plan of bird protection in that portion of the Gulf of Mexico, Mr. Bond was requested by the National Committee to present the subject to the proper authorities in Washington, which he did, with most happy results as indicated by the following correspondence:

DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFICE,
WASHINGTON, D. C., October 7, 1904.

REAR-ADMIRAL JOHN J. REED, Chairman of the Light-House Board,
Department of Commerce and Labor, Washington, D. C.

Dear Sir:—The Audubon Societies of the United States, through their National Executive Committee, are now arranging to employ a warden to patrol the islands within the 'Breton Island Reservation,' created by Executive Order of October 4, 1904, for the preservation of native birds. In connection with this patrol and protective work, such coöperation by the employees of the adjacent islands contained within the Chandeleur and Errol Islands Light-house Reservations, as may be proper, is greatly desired, and will materially aid us in the work of protecting the birds. The Chairman of the National Committee of Audubon Societies has authorized me to bring the matter formally before you, in the hope that we may secure the issuance of an order forbidding eggging and shooting of all kinds within these reservations, such order to be accompanied by instructions to the employees to warn off hunters and otherwise prevent trespass, whenever possible.

In view of the fact that the pot-hunting season will open with the arrival of the migrating water-fowl, early action will be necessary to save the birds this year. The

Audubon Societies of the United States will be greatly obliged for your advice and assistance in accomplishing the end sought. Very respectfully,

(Signed) FRANK BOND,

Member of the National Committee of Audubon Societies.

DEPARTMENT OF COMMERCE AND LABOR, LIGHT-HOUSE BOARD,

WASHINGTON, D. C., October 14, 1904.

COMMANDER WILLIAM W. KIMBALL, U. S. N.,

Inspector Eighth L. H. District, New Orleans, La.

Sir:—The Board incloses herewith a copy of a letter dated October 7, 1904, from Mr. Frank Bond, member of the National Committee of Audubon Societies, recommending that action be taken to suppress the destruction of native birds within the Chandeleur and Errol Islands Light-house Reservations.

The Board authorizes you, in accordance with this request, to post notices on these two light-house reservations, forbidding the shooting of birds thereon, and also to issue instructions to proper light-house employees to prevent trespassing on these reservations.

Respectfully,

(Signed) C. T. HUTCHINS,

Captain, U. S. N., Naval Secretary.

OFFICE OF INSPECTOR, 8TH DISTRICT,

NEW ORLEANS, LA., October 21, 1904.

MR. THORWALD HANSEN,

Keeper Chandeleur Light-House, Biloxi, Miss.

Sir:—A copy of a letter of the Light-House Board, with its enclosure, is hereby forwarded for your information and compliance.

The Magnolia will post the reservations with sign-boards early in November; meantime put up such notices as you can arrange.

Once a week, weather permitting, you or the Assistant Keeper will proceed by boat to the southward as far as Freemason Island, and will take the names of all persons found trespassing afloat or ashore, and the names of all vessels trespassing. You will warn off trespassers and inform them that they and their vessels, sail-boats, schooners, power boats or other craft will be reported to the U. S. District Attorney for prosecution or libel, or both, as the case may be.

You will report to this office all cases of trespassing observed, with such details as to date, time and character of offense, as will give sufficient data for basing actions of prosecution or of libel, or of both.

It may be difficult to obtain a knowledge of the names and places of abode of trespassers, but the name of the vessel used by the trespassers can be readily obtained.

You will note as far as possible the names of all light-draft vessels passing into Chandeleur Sound, and will make it your duty to acquaint yourself with the trade and character of such vessels, so as to know which are and which are not to be suspected of intention to trespass.

You will understand that shooting ashore or from vessels along the beaches of the reservation, eggng, landing on the islands without permission, and the taking of shells, are all trespasses that render the doers liable to prosecution, and their vessels to libel in the United States Courts.

You will render to Captain Sprinkle, the Warden of the Breton Island Bird Preserve, such aid in his duties as does not interfere with your own as Keeper of the Light, and the Chandeleur and Errol Islands Reservation. Respectfully,

(Signed) W. W. KIMBALL,

Commander, U. S. Navy, Inspector 8th L. H. District.

Live Bird Traffic.—There are still a few bird trappers and netters in the vicinity of the large cities, notably New York, who ply their trade with the greatest caution. The National Committee during the past autumn has exercised special vigilance in order to stop this trade. As none of the captured birds could be sold in this country, they were trapped for shipment abroad. With the aid of a detective, some of the trappers were located in the vicinity of New York City, and the channel through which they shipped the birds was discovered. The men have been warned in such a pointed way that it is hoped that this practice has been broken up.

STATE REPORTS

The following details of Audubon work in the several states and territories give the activities in the respective commonwealths during the past year.

As legislation has been considered in detail, no further mention of it will be made. Warden work will be mentioned only in the states where the system was employed.

Alabama.—This is the only Gulf Coast State that has not adopted the Model Law. Considerable work has been done in this Commonwealth during the past year by the National Committee, but seemingly without any visible result. There are a few people who seem to take a slight interest, but it has been impossible to find any citizens who will start an Audubon organization or lead in the movement for a comprehensive bird law. With over 20,000,000 acres of farm lands in the State, valued at \$100,000,000, it seems strange that the agricultural public are so dead to their own interests. It would seem as though the boll-weevil scourge, which is an imminent danger to the cotton-growing interests of the state, would arouse the planters and lead them to demand the protection of birds. Alabama stands almost alone in this indifference to a great danger.

An excellent paper, 'The Civic Value of Birds,' was written and circulated freely by Hon. John H. Wallace, of Huntsville, but even this voice from one of her own citizens has not seemed to arouse the people.

Arkansas.—Arkansas has no Audubon Society yet, but Mrs. Stephenson, a member of the National Committee, still keeps the subject of bird protection and the enforcement of the game laws before the people. It will be strange if her great civic work does not soon attract the notice of her fellow citizens, and cause many of them to flock to her aid in this important matter. Mrs. Stephenson says in a letter:

"The work in Arkansas for the past year has been effective, though, being confined to the distribution of protective literature and appeals through letters, it has not attracted the attention of the public. Numerous requests for information regarding Audubon work have been referred to the National Committee. Some copies of Educational Leaflet No. 7 have been sent to newspapers of the state with a request that they be published; and the interest of Senator Clark, member of the Committee on Territories, has been assured to the side of those who oppose the repeal of the Alaska Game Law.

"While friends for the birds have been won among men and boys, the magic words that shall win pity and forbearance from the *gentler sex* are still to be spoken."

California.—Sooner or later, it is always the case that the proper persons are found to head a great philanthropic movement; it is only a matter of seeking until they are found. The State of California certainly has reason to be proud of some of her public-spirited citizens. While the Audubon movement only crystallized into the first local organization in May of the present year, yet before the close of the first six months it has gained such momentum that nothing can now stop its onward progress. The report of Secretary W. Scott Way is given in full:

"The California Audubon Society had its beginning at Pasadena, on March 25, 1904. Local societies were soon afterwards formed at Garvanza and El Monte, each with senior and junior sections, and under the direction of the senior societies a number of junior sections were formed in city and country schools.

"The Ladies' Song-bird Protective Association, of Santa Cruz county, voted to affiliate with the Audubon societies, and has already given active and efficient assistance. A fourth local society, under the leadership of Miss Anna Head, is just organized at Berkeley with a large membership, and gives promise of entering upon the work with much activity and enthusiasm.

"At the end of six months from the organization of the first society, the combined membership, senior and junior, exceeds one thousand, which we shall more than double before the day of our annual meeting in May.

"A great deal of effective work has already been done, including the securing of local protection in Los Angeles county for thirty species of birds, ordinances prohibiting shooting on the public roads, in both Los Angeles and Santa Cruz counties, and, in the last-named county, the closing of the open season for Doves for a period of five years.

"The society has also entered actively into the work of game protection during the closed seasons, and by the aid of deputy wardens, who are serving without pay on account of their interest in game preservation, violations in places where the society has a footing have almost ceased.

"Since its organization the society at Pasadena has held eight public meetings, all of which have been well attended and productive of much good. Each meeting has resulted in a considerable increase in membership.

"A great amount of literature has been distributed, including the Educational Leaflets of the National Committee, and special leaflets on the Mourning Dove and in the interest of the Audubon movement. Cards calling attention to the closed seasons for game and giving lists of protected birds have been posted throughout Los Angeles county, and educational leaflets are now being put into the hands of teachers throughout the state.

"At this writing our chief efforts are being directed toward securing the enactment of the Model Law at the approaching session of the Legislature, and in persuading the sportsmen to lend their coöperation in gaining better protection for the Mourning Dove. Under the existing state law, this bird is exposed to the hunters during more than half its nesting season, a condition which has caused the Audubon Society to place the cruel results before farmers and land-owners throughout the state and thus, by arousing public sentiment against the inhumanity of summer Dove shooting, has caused the posting of 'No Shooting' signs on more than 100,000 acres of land in Los Angeles county alone. About half this acreage was posted by one man, E. J. Baldwin, a sportsman himself, but one whose humane instincts are deeper than his love of sport.

"Included in our plans for the near future are federation of the local organizations into a state society, and active Audubon work in the public schools.

"The society is receiving much assistance and encouragement from various organizations of farmers, and also of women's clubs. For example, the California Club, of San Francisco, numbering nearly 500 members, has entered actively into the spirit of the Audubon movement, and has placed Mrs. Alice L. Park, an enthusiastic friend of the birds, in charge of this work.

"The present outlook for the Audubon movement, and the gaining of state protection for non-game birds, and better laws relating to nearly all species of game, is at this writing certainly very encouraging."

Colorado.—The active spirit and leader in the Audubon work in this state has been so much occupied with her duties as Secretary of the State Board of Horticulture and the added duties of World's Fair work that she has not been able to give much time to Audubon work. Mrs. Shute writes: "It is very hard to get people interested who are capable of realizing the need for a strong society in our state. At the annual Horticultural Convention in January next, Prof. George L. Cannon will give an illustrated talk on the plumage of birds, which it is hoped will create some additional interest."

Connecticut.—The Connecticut Audubon Society is without a doubt one of the best organized societies in the National Association, and has carried its educational work far beyond the point reached by any other society. Mrs. Glover, the secretary, reports: "We have not increased largely in membership this year, but we feel that the school children are being well taught about birds and are encouraged to notice and study them. We will shortly have a small text-book of Connecticut birds gotten up by Mrs. Wright ready for distribution among the teachers of the state. The State Board of Education prints and distributes it. We published our usual Bird Day program. We have purchased 14 new libraries of ten books each for circulation in the schools. We sent a library of 22 books to the St. Louis Exhibition in a case provided by the Board of Education, and these books will make two libraries for use in schools on their return to Connecticut."

The above report is terse, but it gives to other societies a text of the greatest value in "we feel that the school children are being well taught about birds." A single generation has not yet passed since the Audubon movement started (1883), and we are now reaping the benefit of the early work; how much easier will be the work in two or three decades hence when the school children of today are the men and women who will be conducting Audubon affairs!

The National Committee earnestly hopes that many more secretaries will be able to report before the end of 1905 that "the school children are being well taught about birds."

Delaware.—This is a small state, but there is a great deal of good Audubon work done within its borders. Prof. A. R. Spaid, Superintendent of Free Schools in New Castle County, gave a series of fifty-six illustrated nature lectures to over 5,000 people, free to all school children; twenty-one of these talks were on bird subjects.

Prof. Spaid thinks that, in time, illustrated lectures will become a part of a school course, and he suggests to persons of wealth that the public schools should no longer remain below their dignity. These generous people have showered upon our colleges and universities millions of gold, and have to a very large extent ignored the public schools. While we do not want these schools made charity institutions, we do need gifts of money for special purposes for which Legislatures do not usually appropriate. The interest created by the bird lectures was so great that about 600 new members were added to the Audubon Society.

The State Ornithologist, Mr. Pennock, has been giving bird lectures to agriculturists, and also preparing and sending out Bulletins under the auspices of the State Board of Agriculture, in the general line of bird protection, by showing the value of some species frequently destroyed wantonly or through ignorance of their value.

Mrs. Hilles, secretary of the Audubon Society, reports: "We are hampered for want of money, but have gone on extending our membership, and have made arrests for the killing of Robins, etc. We are now contemplating a system of small dues, in order to keep up our treasury, which has only voluntary support. We have succeeded in awakening a public sentiment, which I hope will stimulate the good work and win us many workers."

The foreign bird-shooting element is being looked after sharply; an Italian was arrested for killing nineteen birds—Robins, Flickers, Thrushes, etc.,—was held by magistrate for Court of General Sessions, was found guilty and fined ninety-five dollars, the full statutory limit. Not being able to pay, he was sent to the work-house for ten days. Such prompt and vigorous enforcement of the law has a very decided and wholesome influence.

District of Columbia.—The report of the secretary, Mrs. Patten, is given in full. The only suggestion that the National Committee has to offer is that some of the enthusiastic workers in the District of Columbia Society be sent across the borders into Maryland and Virginia in order to increase enthusiasm in those rather dormant state societies. "Work has been carried on through indoor meetings; lectures each month, classes for the instruction of teachers, popular classes to promote the interests of bird students and bird lovers of all ages and both sexes, a successful reception of a social nature to increase membership, primarily in order that those already enrolled might have opportunity to become further acquainted. Field meetings in April and May were productive of a large attendance and great enthusiasm. Laws have been well observed. Millinery stores, markets and bird stores have been visited. The work in the schools now holds equal place with other branches in the 'Nature work.'

"About 800 leaflets have been distributed, consisting mostly of the publications of the National Committee. Circulars to increase subscriptions to BIRD-LORE have been sent out upon every opportunity. The Society has increased largely in membership. Its annual meeting was crowded to the doors. Practically the same program will be repeated this year. New bird-skins will be purchased for the use of lecturers and schools. We now have an illustrated lecture of our own also available in this way. The Society increases annually along the lines most desirable—increased membership, broadening fields of work and widely reaching interests of many kinds suggested by its enthusiastic and hard-working Board of Directors, who are ably equipped for the work."

Florida.—Warden work has been very successful during the past year; a short résumé of the results, extracted from a great mass of letters and

formal reports from the men employed, will be of interest and will give some idea of the extent and value of the system. Warden Paul Kroegel, who has charge of the Pelican Island Reservation, reports: During the breeding season of 1903-4 the Pelicans deserted the large island of the reservation where they had bred for many years past, and occupied some small adjoining islands during the nesting season. Why they deserted their ancestral home the warden could not determine. Mr. Chapman, who has had a long acquaintance with this colony of Pelicans, having visited and studied it several seasons, was of the opinion that the gradual killing of the trees had caused the birds to abandon the island. The Pelicans usually commence to gather about the Reservation early in November, and this year the date was anxiously awaited in order to determine whether the abandonment of the large island was permanent or not. A most interesting fact in natural history developed as follows: The National Committee, in its anxiety to prevent trespass on the reservation, had a very large sign painted and set up on the big island. This was evidently the reason why the Pelicans went to the adjoining islands. When the birds returned in November, 1904, some four to five thousand in number, Warden Kroegel watched their actions carefully, to learn, if possible, why the large island was not occupied. He reported that the birds seemed restless and disturbed about something on the island which prevented their occupancy. Thinking that possibly the large sign was the trouble, it was taken down, and two days after all of the birds were back on the island. On November 15, about one hundred nests had been started, and the indications were that laying will commence about the usual date, December first.

Warden Guy M. Bradley is employed by the year and is continually cruising in the launch 'Audubon' among the keys and islands at the extreme southerly point of the state, or else is patrolling on foot the swamps and everglades in that wild section. He covers some hundreds of square miles. Frequent reports are made of his travels, with notes about bird conditions. It is impossible to give the details in a published report, but the Committee are satisfied that the results achieved are most excellent. The warden writes that there are no less than nine nesting-places,—rookeries,—within ten miles of his home. With the exception of the Cuthbert rookery, these have not been disturbed. Formerly they were 'shot out' and robbed of eggs quite often by pleasure parties, pot-hunters and plume-hunters. This section is a most interesting one and will well repay a visit by any bird student or nature photographer.

Warden Charles G. Johnson, of the Sand Key Light-House Station, reports a very favorable year for the Gulls and Terns that breed near his station. He and his assistant keeper prevent any landing on the breeding-grounds during the nesting season, nor will they permit shooting thereafter. Mr. Johnson reports also that the Key West markets do not now offer sea-

birds' eggs for sale, as was the custom formerly. On August 3, all the birds, young and old, from the other keys and sand spits in the immediate neighborhood were gathered on Sand Key and were estimated to number about four thousand. They remained until the 7th, when they left about 4 o'clock in the afternoon.

A new warden, Benjamin Peacon, who was recommended to the Committee by Capt. Geo. A. Bicknell, U. S. Navy, Commandant Key West Naval Station, was employed during the breeding season on the Dry Tortugas. The warden resided on Bird Key from May 10 to July 23, and reports that the Terns had an undisturbed season and made a normal increase. It is his opinion, however, that, unless a warden is stationed on Bird Key every year, the colony will be systematically robbed of their eggs, as the sentiment in that locality is decidedly against prevention of eggng.

The following interesting and important report by Mrs. Marrs, Chairman of the Executive Committee of the Florida Audubon Society, gives a very clear idea of the excellent work that is being done in Florida, and it also contains a most pertinent suggestion regarding the prohibition of Pigeon shooting at traps. This is a cruel and debasing practice, and the Florida Audubon Society will only be doing its duty when it takes up the matter with the legislature and press of the state. "An increasing membership shows a more general interest in the state for bird protection. Membership, including all grades, 750. Leaflets and pamphlets distributed, 10,000. Warning notices sent out for posting, 2,000. Some 800 letters have been written. Original leaflets published during year, 6, making the total number of Florida leaflets 14. A large card has been printed giving a summary of the 'Bird Laws of the State' (arranged by Mr. R. W. Williams, Jr.); 600 have been sent for posting in merchandise stores, express offices, stations, hotels, etc. Sixty-seven teachers are enrolled as members. There are 8 local secretaries, who have in charge for use of schools 30 Massachusetts Audubon charts. Prizes were offered at close of the school year for Bird Chart compositions. Ten prizes and several rewards of merit were given. Of these prizes 4 were books, 5 were subscriptions to BIRD-LORE, 1 to 'American Birds.' The average age of children 11 years. BIRD-LORE is also offered gratuitously, on application, to the principal of any Florida college, institute or school. Ten prizes of \$2 each were given for articles written on Florida birds at the 'Student Help Fair' held in Jacksonville in May. 'The Palmetto Club' at Daytona, and 'The Rosalind Club' of Orlando, have each paid a 'Sustaining Membership.' The Florida State Federation of Women's Clubs have a sub-committee on the 'Preservation of Birds.' The Sunshine Society of Florida lends us a helping hand. All such organizations are urged to become members, to more widely establish an interest.

"Again we have paid for six months the salary of Warden Guy M. Bradley at Cape Sable, in response to a call from the National Committee; realizing, if our means are limited, the importance of guarding the rookeries, but while doing this we look forward with the hope that the time may come when our Florida legislators will realize that money spent to establish our own bird wardens would be money well invested for the benefit of our state. For the hazardous work our wardens carry on so well, our public thanks are due them.

"In February, 1904, Mr. Geo. N. Chamberlin (a vice-president) made a two-hundred-and-fifty-mile trip, down Indian River, from Daytona to Lake Worth; a letter to the Society gives an account 'of the feeding or breeding-grounds of Cranes, Herons, Ducks, White and Brown Pelicans.' With Warden Kroegel he visited the Pelican Island Reservation and its vicinity, where he saw thousands of Brown Pelicans nesting; they were found to be quite tame on approaching them to view the nests, which were built of sticks and grass and contained eggs or young. Mr. Chamberlin urges that a small steam motor-boat be provided the warden, as Pelican Island is three miles from Sebastian, where Kroegel lives.

"As the attention of all humane persons has been directed to the inhuman practice of the slaughter of live Pigeons by 'trap shooting,' which is permitted in certain localities in Florida for the entertainment and amusement of both women and men 'pleasure-seekers,' we would here make our protest against this brutal so-called 'sport,' with the hope that public-spirited Floridians will cause it to be forbidden in the near future, by seconding the efforts of this Society."

Georgia.—Unfortunately Audubon matters are not in a very encouraging condition in this great agricultural state. Prof. Starnes, the secretary, reports as follows: "I have hoped I would be able to make a report of something definite accomplished by the Georgia Audubon Society, but I am forced to admit that it is impossible. I have not been able to induce any one to take hold and push things, and I have personally, at this season of the year, an overwhelming amount of routine work which consumes all of my time. I yet hope to enlist the active sympathies of one or two parties. It is difficult to arouse effort in this matter, since our state law covers all points except extending protection to the Dove and the Lark. Yet it is sadly defective in the provision made for wardens. This is of really more moment than the omission of protection to the Dove and the Lark.

"I am sorry that so disappointing a report must be made of our organization in this state; success cannot be achieved until some one is found with sufficient time to devote to the cause."

The National Committee will make earnest efforts during the coming year to find such a person.

Hawaii.—The following is the report of Mr. Bryan, a member of our Committee:

"As yet no effort has been made to organize an Audubon Society in the Hawaiian Islands, although the matter is under consideration and we hope to be able to effect an organization within the coming year.

"The annexation of Hawaii by the United States has necessitated the recasting of many of the fundamental laws of the country, and, in consequence of the unusual amount of urgent legislation before the local assembly, the modification of the game laws has been deferred; although the subject has been thoroughly discussed and a model bill is at hand which will be presented as soon as it is possible to secure its consideration by the legislature.

"When compared with any other state in the Union, it will be observed that an unusually large proportion of the native land-birds of Hawaii are now considered as being extinct. Fortunately their extermination has been brought about by causes which it would have been impossible to cover by legislation.

"The subject of the introduction of desirable birds has received attention in years past. As a result, all of the larger islands have more or less thriving colonies of introduced game-birds of several species. The people are aroused to the importance of the introduction of beneficial insectivorous and song-birds, and indications point to the subject receiving substantial encouragement at no distant date.

"The leaflets and circulars distributed by the Audubon Society have little bearing on our local conditions, as none of the birds treated are found here. However, the matter contained in them is of general interest and stimulates observation and inquiry."

Illinois.—Audubon work in this state is progressing steadily and surely, especially among the juniors. Miss Drummond, the secretary, makes the following encouraging report: "The work of the year has been carried on along the usual lines. The number of persons joining since our organization, April 1, 1897, now totals 16,094,—1,035 adults and 15,059 juniors. Of these 60 adults and 1,573 juniors were added during the past year.

"The first Arbor and Bird Day, under the law passed in 1903, was kept in April, 1904 (Arbor Day alone having been kept before). We have distributed during the year 7,060 leaflets, the greater portion being the publications of the National Committee. Since our annual meeting in April, a leaflet by Mrs. H. E. Walter, one of our Directors, 'Helps for Bird Study,' has been published for the use of teachers and others. It is also being issued in monthly instalments in 'By-the-Wayside.' A letter from the secretary to the teachers of the state was published in the Arbor and Bird Day Annual, issued by the State Superintendent of Public Instruction.

"At the annual meeting in April a new committee was suggested, which has since come into being with some fifty members, a committee on membership, whose duty it is to bring as many new members as possible into our flock.

"Our illustrated lecture has done good work; the two libraries have been little used. The junior work, under Mrs. Wm. M. Scudder, has been encouraging and the teachers are proving themselves good helpers.

"We have spent during the year \$225.61 and have received \$232.76, but, thanks to a balance on hand from last year, we closed our year with a balance of \$64.31.

"Out of 102 counties in the state the secretary had letters from 47, but we have very few local branches.

"We hold two general meetings in Chicago, and a goodly number of other meetings have been held in the state."

Indiana.—The Audubon movement in this state is on a solid and progressive basis and is doing a great work in the schools. The report of Miss Howe, the secretary, gives some of the interesting details.

"The Indiana Audubon Society has continued its activities, especially emphasizing the work among the children and through the press.

"During the spring months bird-talks were widely given in the schools of the cities.

"The Indianapolis News Audubon Society, an auxiliary of the State Society, furnished somewhere about seventeen thousand bird buttons to the school children of the city and state; the 'News' bought the buttons and distributed them through the sub-stations or by mail. The payment for a button consisted of a signed pledge to protect the birds.

"The State Superintendent of Public Instruction, in the last Arbor and Bird Day Annual, devoted over forty pages to the Audubon work in one way or another, and to the birds. These annuals are now being sent to the 16,000 teachers in the state, and will be used by nearly 500,000 pupils, at the annual Bird Day of the schools of this state. The members of the Audubon Society very gladly helped in getting the matter for the annual which serves as the bird text-book for many teachers. Again and again has the state society had reason for congratulation in the fact that the State Superintendent is a man alive to the great value of bird study by the pupils.

"Audubon societies, as a rule, are not overburdened with money, and the Indiana Society is no exception to the rule. Hence, when we have found friends of the birds who were in a position to do for them what we could not, we have helped these friends in their larger work, — for instance, few societies could have afforded the large outlay for bird buttons or could have put into general circulation the bird pledge which was published in every issue of the 'News' for the latter part of the spring. All

this the 'News' did, and then distributed the buttons, reaching much further than could an individual or a society. Yet, who can estimate the value, from an educational point of view, of the daily publishing of the Bird pledge, for weeks at a time, in the leading daily paper of the state?

"Again, in no other way could the society do so much for the birds and the children, both, as to help the Superintendent of Public Instruction (himself a member of our executive board) to fill the pages of the Bird Day Annual.

"The annual meeting of the society was one that received the enthusiastic recognition of the city in which it was held. The schools furnished the music, and they were closed for the afternoon session.

"Always, one of the papers of the session is furnished by a pupil of the High School in which the meeting is held; at this meeting the paper was illustrated by tabulations on the blackboard showing the economic value of the bird studied, at different seasons of the year. The work was representative of what is done in the schools of that city along these lines, and shows what an exceptionally practical as well as pleasurable subject bird study is.

"As far as the plans for the coming year are made, we shall continue work already begun, and develop and extend it as we have means and opportunity. Our only new work for next year will be to establish local secretaries, according to suggestions from the National Committee."

Iowa.—The effort of the National Committee to secure the adoption of the Model Law by the legislature of 1904 met with failure, although a large amount of work was done. Miss Hamand, the secretary of the Schaller Society, spent some weeks at the Capitol at the request, and partially at the expense, of the National Committee, in the interest of proper bird legislation, and also to help the passage of a bill to abolish live-bird trap-shooting. The latter bill was successful, and the cruel practice of trap-shooting at animate targets is now illegal. Mrs. Parrott, corresponding secretary, furnishes the following summary of work done in 1904:

"In Iowa there are many societies and organizations for the protection of birds. Very few of these have united with the state organization, however; better results could be obtained in the way of enforcing the laws and educating the public if all would unite with one central organization.

"The State Audubon Society was founded and incorporated at Keokuk in 1898, although the Schaller Society is the oldest in the state. Both societies have done considerable work distributing National Committee leaflets and along other educational lines.

"Much has been done to improve legislation in our state. It was largely through the efforts of Miss Jane Hamand, of Schaller, that our Iowa legislature passed a law prohibiting the use of live Pigeons and Turkeys in trap-shooting.

"The various bird and outdoor clubs in our cities and towns are doing excellent work in an educational way, actual observation in field and woods taking the place of the printed page.

"Rev. Rett E. Olmstead, of Decorah, has delivered many entertaining lectures and awakened great interest in the study and protection of birds.

"Howard Burrell, of Washington, Iowa, has written numerous good articles for the Iowa press, and is now and then prevailed upon to deliver a lecture, which is always enthusiastically received.

"One of the good results of the work this year is the organization of a strong and enthusiastic society at Humboldt, among whose members are some of the best-read and posted bird and nature students in the state. A committee of three has been appointed to outline work for the public schools in that place. Good results are expected. Since the issuing of the circular by the United States Department of Agriculture, suggesting that a Bird Day be added to the school calendar, the study of birds in Iowa has been given quite a little attention.

"In some schools we have Bird Day in connection with Arbor Day, which is usually devoted to the study of trees and birds. There are others, however, which devote some time each week of the year to the study of birds.

"Charts are made out showing which species are with us in the different months, and the birds are studied in their proper season. In this way the children learn to love them, know their value and are more thoughtful for their safety.

"In Waterloo the teachers have taken up the work. Some field work has been done, one teacher identifying about a hundred different species of birds.

"For the coming year the local societies and state organizations are preparing an outline of work to be presented at the Biennial of the Federation of Women's Clubs, which will meet in Waterloo next May, and by which it is hoped to bring about some uniform and concerted action in the various clubs throughout the state.

"We are deeply interested and anxious to assist in the passing of the Model Law at the next session of the legislature."

Kentucky.—There is a small amount of Audubon work being done in the state in some five or six stations. This takes the form of bird talks on the lecture platform, and work in grade and kindergarten schools. Mr. C. W. Wilson, of Mayfield, writes: "The Model Law is still in force, and is highly commended by all who are familiar with its provisions, also that the new series of readers for public schools devote more space than heretofore to birds and their beauty and value. I think this tends to educate children in the right direction." Mr. R. H. Dean, of Lexington, mentions that the principles of bird protection are inculcated in the kindergarten work in the

local public schools, as well as at the summer playground work. Prof. W. M. Jackson, of Campbellsville, writes: "I know the National Committee has other matters than state affairs to see to, and that this work ought to be done by the state; but, if the state won't do it, and the National organization can take the lead and start the work, then probably the state will take up the responsibility. Of course the trouble with the National, as with the state organizations, is that it takes money to do these things. For a National Emblem, our society suggests a Cardinal,—or, as we in Kentucky say, a Kentucky Cardinal."

Louisiana.—The results of the Audubon work in this state are simply marvelous, and show forcibly what the efforts of a few active spirits can accomplish, led by a man who, besides being a splendid organizer, is a pleasing and persuasive speaker and an untiring worker. With such a combination an Audubon Society cannot help succeed. Two years since (see report for 1902) Audubon work was unknown in Louisiana, the bird laws were worse than none, for they permitted trapping and shipping live birds from the state. A little less than two years' arduous labor directed toward the education of the public to the needs of bird protection, aided by the boll-weevil scare, has completely changed the condition of bird and game affairs, and now the citizens of Louisiana can congratulate themselves on having the most perfect non-game bird law in the country. It became effective August 9, 1904, and at the same time a new and very excellent game law became operative. These laws prevent the trapping, caging and exporting of all birds; consequently the traffic in Cardinals, Mockingbirds, Nonpareils and Indigo Birds is prevented, not only in Louisiana, but also in all parts of the country, since, as soon as the citizens of Louisiana made the trade illegal in their own state, the Federal Law, known as the Lacey Act, made it illegal to trade in Louisiana birds in other portions of the country. As Louisiana heretofore supplied all of the above trade, the influence of her new law reaches far beyond the borders of her own state. In August last the president of the society, Mr. Frank M. Miller, made a cruise among the islands in the Gulf of Mexico to the eastward of the state coast line; he found the eggs of the Royal and Least Terns, Laughing Gulls and Black Skimmers being used by glue manufacturers,—assuredly one of the most flagrant and vicious forms of bird destruction. It was impossible to determine exactly the extent that this nefarious traffic was carried on; but, making due allowance for the exaggerations of fishermen and others who gave the evidence, it is possible that a conservative estimate would be 50,000 eggs destroyed, and probably the number was far greater. One well-authenticated case was that 600 dozen eggs of the Royal Tern were taken in one day by a single vessel from Old Harbor Island. It was ascertained that there were about thirty-five islands which were occupied as breeding-grounds. Some

of these islands were small sand-bars or shell heaps, others were of considerable size, with areas of marsh grass. Among other distressing conditions discovered on the trip, was the fact that the market hunters of wild-fowl, principally in the employment of cold storage houses, contemplated visiting the outlying islands, beyond the jurisdiction of the Louisiana laws, in order to kill Ducks. This meant the destruction of some two or three hundred thousand birds, which were to be shipped via Mobile, as the new non-export law of Louisiana prevented the shipment of these game birds out of the state, as had heretofore been done.

The conditions were so appalling that President Miller visited New York in order to lay the matter in detail before the National Committee, hoping that some means could be devised to stop both the eggng in summer and shooting water-fowl in winter. The larger of the islands visited is the most outlying, and is a natural refuge for wild-fowl in the cold season prior to the spring migration. The island referred to is some twelve miles long, and contains many thousand acres, with ponds and natural feeding-grounds. An examination of the records in the Land Office in Washington by Mr. Bond, of the National Committee, revealed the fact that several of the islands, including Breton Island referred to above, were still the property of the General Government. The details furnished by President Miller were then presented by Mr. Bond to the Departments of the Interior and Agriculture, which referred the matter to the Chief Executive, with the result that seven of the islands were set aside by President Roosevelt as a Public Reservation (see page 72).

The balance of the bird islands on examination were found to have been ceded to the State of Louisiana, or were within the jurisdiction of the state, so that the bird laws can be enforced. A large number of these islands belong to the Lake Borgne Levee Association, and can be purchased for a nominal sum per acre, as they are entirely valueless for any purpose except breeding-places for birds. The several islands in question, some thirty in number, aggregate some thousands of acres, and should be the property of the Louisiana Audubon Society.

It is hoped that some rich and public-spirited citizen of Louisiana will furnish the Audubon Society with the means to buy these islands, that they may be dedicated forever as breeding-places and winter homes for water birds. Louisiana was the birthplace of John James Audubon, the great artist-naturalist, and within her borders he passed a considerable portion of his life. The citizens of Louisiana can in no more fitting way show honor to one of the greatest of her sons, one whose name will always shed luster on the state, than to make these bird islands a refuge and name them the Audubon Reservation. It is what the great Audubon would have chosen, and will be a far more fitting and enduring monument than a shaft of marble or granite.

To complete the chain of protection in this part of the Gulf, the Light House Department was appealed to for aid, which was promptly given (see details, page 73). On the recommendation of President Miller, a warden has been employed by the National Association to patrol among the islands, to post warning notices on them, and to warn masters of vessels that for any violation of the bird or game laws by themselves or their crews, they will be held to the strictest accountability, even to the libeling of the vessel. Capt. Wm. M. Sprinkle, the warden, furnishes his own schooner and a helper, and as he is thoroughly acquainted with all of the breeding-grounds and the islands resorted to by the birds, it is believed that in the future they will be safe and will be permitted to breed undisturbed. President Miller, in a recent letter to the National Committee, gives this guarantee of future effort: "This state has made a splendid beginning, and, with the Audubon Society still engaged in educating the people to the value of bird life as a great public asset, we hope to carry on the work until our state laws and a wise sentiment make us abreast of the most advanced commonwealth."

Massachusetts.—The only paid warden employed has charge of the Weepecket Islands. His report is very satisfactory, as it shows that the Terns breeding on that island were unmolested during the entire season and that they made a normal increase. Mr. George H. Mackay, who has for so long a period given such watchful care to the birds breeding on Muskeget, writes, "I have nothing new regarding this island; conditions there were long ago settled satisfactorily to me, and it runs itself without care nowadays. So far as I know, there is nothing to complain of in that quarter." Mr. Mackay adds, regarding game legislation, that he has watched and guarded the interests of the public most earnestly and closely. "No obnoxious bills were passed, but a most important and valuable bill was championed and was successfully passed. This was the prohibition of sale of spring shore, marsh and beach birds. I regard it as a most important factor in bird protection." The National Committee agree most heartily with Mr. Mackay in his opinion, and consider that the citizens of Massachusetts owe a great deal to his persistent and indefatigable work. The influence of this excellent legislation reaches far beyond the limits of the commonwealth where it was enacted.

Mr. Mackay intends to make an effort to secure similar legislation for Ducks, and he should be supported most earnestly by every sportsman in the state, as the killing of any species of game birds during the northward migration is wrong both in principle and practice, and is indefensible from any standpoint. Mr. Frederick A. Homer gives the following interesting account of the Terns breeding on that historical island, Penikese: "The Terns are increasing very rapidly from year to year, and the past year seems to have been an exceptional one. In all my experience I have never seen

so many here. The Roseate Terns are also increasing wonderfully, and while a few years ago they seemed quite rare, this year I saw great bodies of them, with not a Common Tern among them, and I judge the colony is divided about equally between the Common and the Roseate. This fact is very pleasing to me, as it evidences the care we have taken to see that protection is afforded them. There have also been but few fishermen in our harbor of late, and it has thus been easy to control the taking of eggs, and having but few sheep on the island very few of the young Terns have been crippled. My notes give but twelve as having been found in a crippled state, and I can say with confidence that this has been an exceptional year for the constantly increasing Tern colony at the island of Penikese. Gradually they are nesting nearer the outbuildings than ever before, and all my fear is that they will finally overrun the island; but this matter will regulate itself, I suppose.

"Below are some extracts from my note-book: May 5, 1904. The Terns arrived early this A.M. in small detached squads, the weather being fine and the wind strong from the S.W.

"May 6. The Terns are arriving in greatly increased numbers and by evening had all arrived. Weather fine, wind N.E.

"May 26. Saw the first egg.

"June 21. Saw the first young Tern, just hatched.

"July 17. The young are beginning to fly.

"August 3. Terns commenced to leave with some young.

"Sept. 15. Terns have all left."

Unfortunately, the Common and Least Terns breeding on Katoma Beach, Martha's Vineyard, did not fare so well, for some lawless party robbed the birds of all their first laying of eggs. As the Least Terns are less prone to breed in colonies than the other members of the family, it may be possible that they did not suffer so much from the raid as did the Common Terns. A reward of twenty-five dollars was offered by the National Committee for evidence that would convict the eggers, but it was without result and the person who committed the crime is still unpunished. Mr. John E. Howland, of Vineyard Haven, who has aided the National Committee in many ways, writes that he is of the opinion that the Least Terns breed sparingly all along the south shore of Martha's Vineyard. He adds, "The severe winter, even on this favorably located island, was more than our game birds could stand and the Quail were nearly exterminated; it is to be regretted that our Legislature did not make a close season on these beautiful little game birds. In May I saw quite a number of Heath Hens, but at this writing I cannot give you any information as to how they nested. Local shooters are respecting the laws protecting Gulls, Terns and Night Herons in a way they have never done before."

Miss Kimball, secretary of the Audubon Society, sends the following report of growth and good results:

"Since the last report sent you (Nov., 1903), our society has gained 431 new members, giving a total membership of 6,016 persons, of which 1,505 are Juniors. We have 118 local secretaries working in 117 districts through the state.

"A good number of Educational Leaflets, and other circulars, have been distributed. New warning posters, or copies of the law, printed on cloth, have been sent out freely. There has been a good demand for the two bird charts published by the Society. The calendar for the last year has been republished for 1905, and plates taken from it without dates, to sell in sets. A number of 1904 calendars were given to teachers of vacation schools, to help them in their nature-work.

"A new traveling lecture, written for children, illustrated by colored plates, was added to our two lectures, with lantern and slides, and all three were used a good deal, especially during the spring.

"Our four traveling libraries have been loaned continuously, and new books are now being added.

"The very few complaints of violations of the law which have been made, have been reported to the Fish and Game Commission.

"An appropriation for this year was made to help the Biological Farm which Dr. Field has started at Sharon.

"The following meetings have been held, in addition to the regular monthly meetings of the Board of Directors: A course of three lectures by Rev. Herbert K. Job; a free lecture or public meeting, addressed by Mr. Ralph Hoffmann, and Mr. William Dutcher, and a field-meeting or bird-walk, open only to Associate members."

Maine.—A session of the legislature will be held early in 1905, and the Committee hopes to be able to carry out some of the recommendations suggested in the last report, for the improvement of the game and bird statutes. Whether public opinion is strong enough at the present time to secure the passage of a law preventing spring shooting of Ducks, Geese and shore birds, is not definitely known; however, such a law is much needed, especially in the case of the American Eider. Fishermen still take the eggs of this fast-disappearing bird, notwithstanding all the efforts to prevent this wasteful practice. Each year lessens the number of these Ducks breeding on the Maine coast, and, unless some radical measure can be devised to protect the Eiders, they will shortly have to be classed among the birds that formerly bred in the state. A close season for ten years would not be too radical a law to meet the exigencies of the case.

Eleven wardens were employed during the breeding season of 1904, and it gives the Committee great pleasure to state that all of these men gave faithful, interested and excellent service. All of the bird colonies on

the Maine coast are in particularly favorable localities for effective protection. That most of the colonies are in fine condition, and are increasing rapidly in size, is very clearly stated in an interesting report made by Mr. A. H. Norton, after a personal inspection, his trip lasting from July 12 to August 16. A summary of Mr. Norton's report is appended.

The Puffins at Matinicus Rock numbered six, a gain of two since last year.

Black Guillemots still maintain the full extent of their range in Maine.

Herring Gulls show a general increase in number. While the birds are found in considerable numbers as far west as Scarborough, No Mans Land marks their western breeding limit on this coast. At no point are the birds as abundant in the same area as at No Mans Land, which contains but twelve acres.

At the Duck Islands the conditions still continue to be excellent. In fact, nowhere is protection extended and conducted with more zeal and better results than at Great Duck Island and No Mans Land. At Little Duck the birds are rather less accustomed to the presence of man than at Great Duck, and are a little wilder than the birds at the latter place. The colony has increased extensively since protection became established. No evidences of molestation were visible.

Laughing Gulls have left Metinic Green Island this year and returned to Western Egg Rock in Muscaugus Bay. This is a less desirable place from our point of view, and it is to be hoped that they may return to the island first named. The reason for this change is not entirely clear, as they returned to Metinic Green Island in the spring. It is possible that the erection of a small shed for the shelter of the three sheep pastured here, near the resort of the Gulls, may have had the effect of changing their place.

Common and Arctic Terns of Maine sometimes breed separately but more often together, so that they may be conveniently treated under the general term, Terns. On the whole, there has been a decided increase in the numbers of these birds.

No mortality was noted among them at any point, and it is said that food seems to have been more abundant than it was last year. Mr. Ruthven Deane, one of the directors of the National Association, while on the Maine coast the past summer, visited the Tern colony in Saco Bay and confirms Mr. Norton's favorable report. He says, "During July and August large numbers of Terns were seen daily fishing in Saco Bay and off Scarborough Beach."

Leach's Petrels, so far as observed, have not suffered molestation. The introduction of dogs and cats on the islands where they breed, by fishermen who camp or live there, is a practice that may be serious and should be prohibited, as both of these animals are very destructive to Petrels.

It is doubtful if any Cormorants now breed in Maine; yet they continue to remain throughout the summer in some numbers.

I succeeded in getting ashore on Old Man Island, after making three attempts; this was on August 1, a rough, foggy day. I saw only one Eider Duck, a female which started from the shore or close to it at the northeast part of the island, and flew entirely away, not returning while I was there. Though I searched, I could find no nest or young. While the number there last year was considerably more, observations at other points makes it seem to me probable that only a small number were actually breeding, perhaps only the four which Captain Small, the warden, has observed to remain this year.

The shooting about Old Man Island, last spring, no doubt had the result of driving away all but the birds most strongly attached to the place. With law and enforcement there seems a fair chance to save this colony.

A single Female Eider was seen at Pulpit Rock, August 3, and on July 30, about Jordan's Delight Ledges, off Naraguagus Bay, sixteen or more of both sexes were started from the water, all being strong of wing. They were not seen here on our return.

At Jericho Bay I failed to see any of the birds about their resorts, though it may be hoped that some had bred and departed from Spirit Ledge. With the extended extirpation of the little Terns at the old resorts of this Duck further up the bay, it seems nearly certain that none could have escaped nest-robbing there.

An Eider Duck was seen for some time around Matinicus by Mr. Merton Tolman this spring. While the outlook is not bright, another effort should be made to protect these grounds, with the hope of saving this noble bird to the breeding fauna of the United States. A law for the protection of this Duck must be required of the legislature at the coming session.

While a few of the birds spend the summer on this coast, thousands, and perhaps tens of thousands, winter or migrate along the outer islands, reefs, and ledges of Maine. They form an item of some importance in the economy of a class who depend to a great extent upon the 'abundance of the sea' for a livelihood. A pair of dressed Eiders, or Ducks and Drakes, command about 50 cents, while five yield a pound of feathers.

The migrants begin to arrive late in October, and depart the last of April. As the birds inhabit the most exposed places at the most inhospitable seasons, they are taken only by the hardier gunners, and, as they are held in much esteem, all of these taken are put to use.

With these conditions, it would be nearly impossible to prevent the taking of all of the birds for even a short term of years, should such a law be passed.

A law prohibiting the taking of Eiders between March first and

November first would probably meet with little opposition, and would be observed. Its enforcement would give security to the birds which return in April or May to breed. Means must be taken to enforce the protection of the breeding-grounds, or the species must cease to breed on our shores.

Great Blue Herons are protected at Bradbury's Island and Great Wass Island. At both of these places the young were on the wing late in July; they were abundant at Deer Isle, where they feed about the long, shallow coves at low tide. They were considered more numerous this year than at any previous year. About Great Wass Island many were also seen, indicating successful breeding.

Black-crowned Night Herons have been protected at Falmouth and at Little Duck Island; both of these colonies are quite large, and have passed a successful breeding season. Three pairs of these birds bred this year on No Mans Land, this being the first instance known. The young which were successfully reared were leaving their nests July 21.

Spotted Sandpipers breed, to some extent, on nearly every protected island, and receive the attention of the wardens. They have bred well, and have not been molested so far as known.

The Secretary of the State Audubon Society reports "progress in the work of bird protection in Maine. The objects of the Audubon Society are becoming better known, and meet the approval of the thoughtful everywhere. The reports from the local secretaries are encouraging." One writes: "The interest in bird-study is gratifying. The school children take an active interest in birds, and are learning the lessons taught by the society for their protection." Another writes: "The teachers are delightfully enthusiastic over the Audubon work."

One teacher who presides over a large school composed of younger pupils has accomplished a great work among the children under her care. Every morning she gives them a bird-talk of a few minutes, and she has inspired them with a wonderful degree of enthusiasm. They surprise even herself, by the closeness and accuracy of their personal observation of bird-ways, and also by the amount of information which they have acquired through such observation. They have taken under their especial protection all the birds in their respective neighborhoods, and woe is sure to betide any would-be plunderer who dares to disturb the nests. One small pupil discovered some New Hampshire boys climbing to one of the Robins' nests near his home (South Berwick is a border town), and endeavored to drive them away. Not succeeding in this, the plucky little one went promptly for a policeman, who gave the intruders convincing proof that it is not safe to violate our Maine laws for the protection of birds. I am sure that those boys will raid no more nests on this side of the state line.

It is a matter of common remark that the birds in this vicinity are remarkably tame this season. They have been so faithfully defended against their enemies, and so liberally supplied with food and with nesting materials by their little friends who wear the Audubon button, that it is not strange that the timid creatures should respond to these friendly advances.

Reports from other branches are equally interesting. We have continued to distribute literature, pledge cards, buttons and certificates as formerly. We have two bird-charts with descriptive matter to be loaned to local secretaries, teachers or other bird-lovers upon application.

Our society now numbers 1,261, of which 315 are members and juniors, and 946 are associates. However, it is not a show of numbers that we seek, but the education of the masses to the economic value of birds.

Michigan.—This is one of the few states that has not as yet adopted the Model Law. One of the chief activities of the Audubon Society and other public-spirited citizens should be to try to secure its passage at the session of the legislature commencing in January, 1905. The large colony of Herring Gulls breeding near the Passage Island Lighthouse, Lake Superior, were protected by a paid warden, and they made a normal increase. Professor Barrows, of the Agricultural College, reports that some small colonies of Herring Gulls, Common Terns and Caspian Terns which occupy several small islands and rocky ledges in the northern part of Lake Michigan were very much disturbed and were robbed of their eggs. This was not discovered until too late to take action this season, but attention will be given to them during the coming breeding season. It is especially important that the colony of Caspian Terns should be rigidly protected, as comparatively few of them breed in the United States.

Secretary Butler, of the Audubon Society, reports as follows: "Our work has consisted mainly in distributing literature and in endeavoring to organize branch societies. Some success was achieved in protection at various points and the state was aroused for a time over the report of the Fruit-Growers' Association recommending the next legislature to provide an open season for Robins. A colony of Great Blue Herons was being rapidly destroyed at Clarkson during the nesting season. The women of the community said the wings made good dusters, and thus encouraged the killing. The killing of Gulls and Terns for the milliners has been common in Michigan, but this has been somewhat checked.

"At Chesaning a man was killing Hummingbirds for the millinery trade. On promising to give up the unlawful work, no further action was taken. Complaints have come from several parts of the state, but no action could be taken because the deputy game wardens refuse to act on information

supplied by the Audubon Society. The State Game Warden requires that all complaints shall be made to him.

"The best results obtained were from the posting of printed notices giving a résumé of the law relating to the destruction of birds. Many of these signs were destroyed by vicious persons, but threats of prosecution are doing some good.

"Plans for the coming year will be an effort to pass the Model Law; a series of lectures for the public; talks by the secretary to boys' clubs and church societies, especially those meeting during the summer season; plans to get bird study before the educational bodies of the state, and especially those that hold meetings during the summer months; funds to be secured to carry on successfully all of the above work."

Minnesota.—This was one of the first states to organize an Audubon Society (1897); the Model Law has been adopted, but the bird protection movement is not yet under full headway. This commonwealth has an area of over 83,000 square miles in which the birds must be protected, and a population of over one and one-half millions of people who should be willing to do some bird study and bird protection work. There should be at least one or more local secretaries in every county in the state; Massachusetts, with only one-tenth of the area to cover, already has one hundred and sixteen secretaries at work. President Taylor makes a specially interesting report of educational work done: "The work of the year has been more than satisfactory. We have, in connection with the bird branch of the State Horticultural Society, issued and largely distributed a circular on bird protection which has done much good. We have secured one hundred lantern-slides, through different sources, and these have been used by Prof. D. Lange in his lectures to the High School and to school teachers and scholars. Four more lectures are still to be delivered before the children in this city. He has published under the auspices of this Society a book, 'How to Know One Hundred Birds of Minnesota and the Northwest,' which is the best primary lesson book I have seen, and it has been very successful. A number of convictions have been secured and a general tone of better security for our birds has been established. The public is talking about us, which is always a favorable sign that we are doing something.

"While we get somewhat discouraged for need of money, we peg along and slowly win our way, I am sure. We, however, need help from the richer sections of the country."

Mississippi.—During the present year the Model Law was adopted which is a decided gain, as it helps to close up the gap in the coastwise states and permits the use of the warden system. As there is no Audubon

organization in this commonwealth, the necessary work of securing the passage of new legislation was entrusted to Mr. Miller, president of the Louisiana Audubon Society. His success in a state where no previous educational work along Audubon lines had been done is another evidence of what a great personal interest, added to force and determination, can achieve. The National Committee have distributed some educational matter and warning notices, but there is great need for a State Audubon organization.

Missouri.— In a few words Secretary August Reese tells the conditions in this great commonwealth: "The Missouri Audubon Society, since its incorporation June, 1901, has been highly successful in creating a healthy sentiment for the better protection of birds, both from a utilitarian and from a humanitarian point of view. In its effort to obtain practical legislation, it has fought a gallant but unsuccessful battle. Supported by the press and thousands of prominent citizens, the questionable influence of those who traffic in birds and game triumphed over the wishes of the masses. Not discouraged by defeat, we will renew our labors to obtain our cherished object, the enactment and enforcement of effective bird laws."

With the election of a man of the character of Joseph W. Folk as the Governor of the State, boodle will hereafter have no power to defeat good bird and game legislation. The cold storage magnates will soon discover that it is impossible to find any state to which they may send their paid emissaries to slaughter game birds, both in and out of season. Gradually the lines are closing about them, as one state after another enacts laws which limits the bag, and especially prohibits sale and export. The legislature of 1905 should wipe out the disgrace of the past and place the state in the front rank of bird and game protection.

Nebraska.— There are two organizations in the state working for bird protection, both of them sending messages of good accomplished. Miss Higgins, secretary of the Audubon Society, says: "This society has kept alive during the past year the bird interest among the 15,000 or more junior members. The vigilant protection of birds and their nests last spring by thousands of little bird-lovers was gratifying indeed, and productive of wonderful results. In all the parks and wooded spots in the city and the country round about were posted warnings. Omaha has forty special police officers, all members of the Humane Society and nearly all members of the Audubon Society; these officers have been of inestimable value to the society. We have circulated what literature it was possible for us to procure.

"I send this superficial account of our year's work, and hope that next year, when we have become a state organization, we may not only have a

report to send to the convention, but a delegate as well. We are to have a meeting soon for the purpose of incorporating into a State Association."

Dr. Wolcott of the Nebraska Ornithologists' Union, writes: "The Union has reprinted a leaflet of Professor Bruner's 'A Plea for the Protection of our Birds.' Of these about four thousand have been circulated. Many newspapers, and some prominent ones, in the state, have reprinted the leaflet; probably a total circulation of 50,000 has been reached in this way.

"Representatives of the society have spoken in favor of bird protection at farmers' institutes, at teachers' institutes, at meetings of patrons of schools, to school children, etc. Probably fifty audiences have been addressed during the year. The officers of the society have coöperated with and advised the State Game Warden, especially in reference to warning of individuals and prosecution of a few, for destruction of game and song birds.

"Much work has been done by members privately in securing the posting of land, in warning and watching boys and men known to be violating game laws, and in other ways keeping the cause of bird protection before the people."

New Hampshire.—Work in this state is carried on effectively along most of the best lines of real progress; an outline of the same is furnished by Mrs. Batchelder, the secretary: "The work of the society for the past year has been a continuation and enlargement of that of previous years. The circulation of the National Association's educational leaflets has been increased by the addition of those recently published.

"The colored bird-charts and BIRD-LORE'S uncolored chart have been introduced in many more schools, and donated to such schools as could not purchase them. A circulating library of bird literature has been made available for use in rural schools. The traveling lecture and stereopticon continue to be in demand, and are reported to be very useful.

"At the suggestion of the National Association, feeding grounds for the birds were established during the latter part of the severe winter. It is the intention to repeat the experiment, and to make systematic observations thereon.

"At the request of the State Federation of Women's Clubs, literature, charts and other materials were furnished to the Arts and Crafts Department for circulation among women's clubs in rural districts.

"Contributions in money have been made to the society for the protection of New Hampshire forests, and to the National Association of Audubon Societies.

"The junior societies thus far organized have been very successful in arousing an interest in bird life among the young people.

"The work of the coming year will be practically a continuation of that

of the past. Steps have been taken toward encouraging the improvement of school-house grounds in rural districts. This is undertaken with a view of bringing children and youth into closer sympathy with nature, of attracting bird life to the immediate vicinity of the schools, and thus indirectly but surely to accomplish the more effectual protection of the birds themselves."

New Jersey.—Two wardens were employed to watch and guard the few remaining Laughing Gulls and Terns on this coast. Both of them report an exceptionally favorable season, and an unusually large increase. Even nature was kind in that she sent no heavy storm-tides to sweep away the eggs and young during the breeding season. The summer boarder with a gun, who must kill something, still gives some trouble; but the resident public are beginning to acknowledge that a strict enforcement of the bird and game laws is a benefit to all. Miss Scribner, the secretary of the Audubon Society, narrates in a few clear words the important and rather strenuous activities of the present year. Very few of the Audubon Societies have ever been called upon to pass through such an ordeal as was presented to New Jersey during the last session of the legislature. That the Society was not caught napping, is a cause for congratulation and an example to other societies who may at any moment have to face the same situation. "The most important result reached during the past year on the part of the New Jersey Audubon Society was that relating to the 'Robin Bill.' It was rumored in the preceding summer that the fruit-growers and others had planned to enter a bill in the legislature authorizing the shooting of Robins, Catbirds, Flickers and Doves, thus removing protection from some of our most valuable insectivorous birds. An educational crusade among the children was deemed advisable, and, accordingly, several thousand leaflets on the Robin were sent to the superintendents and principals of public schools, who had kindly agreed to distribute them.

"In consequence of active work on the part of the friends of the society, and as a result of thousands of petitions sent all over the state, the members of the legislature and the Governor were deluged with thousands of names, and public opinion was sufficiently aroused to prevent the passage of bills in the Senate and House which proposed to make an open season on Robins and other important birds.

"The next work in which the Society took a hand was that of helping to pass a law forbidding the shooting of Pigeons at traps. In conjunction with the Hudson County Society for Prevention of Cruelty to Animals, petitions and letters were sent all over the state and public opinion, which had been kept agitated for the previous two years, was thoroughly aroused. The sporting element made a desperate fight, and succeeded in keeping the bill in Committee till the close of the session, but public indignation was

so strong that Governor Murphy called an extra session to reconsider the 'Pigeon Bill.' At this session the bill was passed in a few minutes.

"About a hundred new members have been received in the New Jersey Society during the past year, but this inadequately represents the interest aroused by the work of the society. This interest is contagious, and many are devoting time and thought to the study and protection of birds, and in the schools especially much attention is given to this work."

New York.—A determined effort was made by the baymen and hotel keepers of Long Island to have the law prohibiting spring shooting of Ducks and Geese repealed, but, owing to the strong fight made by the sportsmen of the other parts of the state, aided by the entire Audubon influence, the attempt was unsuccessful. The stopping of spring shooting for two years has increased the numbers of the above-named game birds very materially, and it is reported by reliable observers that more Wood Ducks and Black Ducks were hatched and successfully reared in New York State than for many years past. Two wardens were employed to care for the Terns breeding at the north and south end of Gardiner's Island, and each of them report a very large increase in the numbers of these Sea Swallows. The two colonies now number some thousands of birds which are not molested, as the people residing in the vicinity of the breeding grounds are fully acquainted with the law and generally observe it.

Miss Lockwood, secretary of the Audubon Society, makes an extremely encouraging report, which is added: "The same methods have been followed during the past year by the New York Audubon Society as heretofore. The wall charts, the traveling lantern and slide outfit, the educational and other leaflets, have done effective work.

"Over 17,000 leaflets have been distributed; of these, 2,700 were sent to the State Fair at Syracuse. The law posters have been circulated in both English and Italian.

"The lecture 'Travels of a Bird Student,' given by Mr. Chapman for the benefit of the society at Sherry's, added over \$400 to the funds. \$125 was contributed toward the expenses of the National Committee.

"In October, Mr. Dutcher spoke in behalf of the society at the Convention of Societies for Prevention of Cruelty to Children and Animals, at Syracuse.

"From all parts of the state reports are received showing increased popular interest. One local secretary writes: 'I am delighted with the progress being made with the work of the Audubon Society: in the general information and awakened intelligence of the people whom I meet, greatly in contrast with that of a few years ago.' Another secretary was told by a leading clergyman of her town, after reading 'An Open Letter to Clergymen' by Mr. Dutcher: 'I will aid you all I can, and will take the cause

right into the pulpit, and later on will distribute the leaflets in my congregation.'

"Never before has the New York Society begun the winter with better prospects. There are now enthusiastic workers all over the state and many new fields to be conquered. As unstinted a distribution as possible must therefore be made of the many excellent leaflets now available.

"Steps have been taken for the incorporation of the society.

"The pressing need of the society, to meet which all energies must be bent, is to gain two or three hundred sustaining members. Each town and city in the state should contribute its quota according to its wealth and size, and with persistent effort this ought to be possible. Such an income as this would mean would do much to insure the permanency of the society, whatever (inevitable) changes in the Executive Board the future may bring.

"The present membership is 5,217."

North Carolina.—The report of the year's work detailed by Secretary Pearson shows so clearly how much a well-managed and aggressive society can accomplish that it becomes an excellent object-lesson for the Executive Officers of all other societies.

"The Audubon Society of North Carolina is an unique organization, in that it is not only a society for the study of bird life and the promulgation of the ideas of bird protection, but it has, in addition, the power of appointing bird and game wardens, and in other ways represents the state as a Game Commission might do. The measure of success with which its affairs have been attended demonstrates clearly the advisability of a non-political organization, conducting the affairs of the bird and game protection work of a commonwealth.

"This Society has been adding to its warden force until, at the present time, forty men are employed, six of these giving their entire time to the work. The enforcement of the bird and game laws in the state is a new experience to most of the population, and when such conditions exist it is reasonable that the people should be made acquainted with the law, and substantial reasons given them why the insect-eating birds should be protected and the game preserved. To accomplish this end the wardens travel through the country visiting the towns, country stores and farmhouses, handing out literature and talking with the people. In this way there has been distributed during the past year in round numbers the following literature:

Cloth warning notices	17,000
Leaflets of National Committee	21,000
Government publications	32,000
Publications of the State Society	110,000

"Making a total of 180,000 different articles of printed information regarding bird protection, which has been given the people of the state. These do not take into consideration 600 books purchased for the use of the local secretaries, rural school teachers and game wardens. Each warden is supplied not only with copies of the State and Federal laws, but with certain literature which he is obliged to read and become familiar with. For example, every warden has a copy of Neltje Blanchan's 'Bird Neighbors,' Pearson's 'Stories of Bird Life,' Hornaday's splendid new 'Natural History of North America,' and the magazine, 'BIRD-LORE.'

"After the warden has thoroughly acquainted the people of his territory with the bird and game laws, he proceeds to prosecute any violations of the law which may be reported to him. Fifty-five prosecutions have been successfully conducted by the Audubon Society for the past year.

"Aided by support from the Thayer Fund, the society has been able to extend absolute protection to the breeding sea birds along the coast. About 2,700 young are known to have been raised the past summer. The secretary has delivered a number of talks and public lectures in various parts of the state, with the view of arousing further interest in the subject of bird study and bird protection. The work of the society is well received in the state, and the officers feel that they have grounds for much encouragement."

North Dakota.—During the present year the local society has developed into a state organization which bids fair to become one of the important factors in bird preservation. Its field of usefulness is large, for within the borders of the commonwealth many large colonies of water birds find their breeding homes.

The first report of the society is presented by Miss Abbott, the secretary: "As our State Society was not organized until May of this year, we have accomplished nothing other than the outdoor Saturday morning Bird classes, which were carried on during the spring and early summer. These classes were largely attended both by adults and children. Also, through the summer a number of bibliographies on nature and birds were distributed, as well as Audubon literature.

"We are planning to have stereopticon lectures given in this city and throughout the state by members of the society who will volunteer to do this work. The society owns fifty bird slides. We shall issue a printed bulletin in which we will include Audubon news and literature and bibliographies on nature.

"We are making great efforts toward the establishing of branch societies. We are also sending out the Audubon pledge, to which we hope to get the signatures of all the teachers and pupils throughout the state; to those signing this pledge we shall send a bird button.

"Perhaps the work that will be the most important will be that of lending libraries, containing books and mounted pictures on nature and birds; these libraries are to have between ten and fifteen books in them, and, together with the case, will cost \$20. If our funds hold out we shall send a copy or copies of BIRD-LORE with each library. Of course these libraries are to be loaned through the branch societies. At present the society is preparing a list of the 'Flowers and Plants of North Dakota, and Where Found.' This will be published and distributed by the society in the spring."

Ohio.—The progress made by the Ohio Audubon Society is best shown by the report of the corresponding secretary, Mrs. Charlotte Miller Temple:

"We report a considerable increase in enrolment of members, and a continued interest and effort in bird protection.

"Monthly meetings are held, the time being divided between reports of officers, committees, etc., and a program which usually includes an address on some subject bearing upon the work of the society, with brief field discussions. During the year numerous talks have been given in the schools by members of the society. School children are welcomed at the meetings. A corps of speakers assisted at the school celebrations of Arbor and Bird Day.

"Every possible effort was made by our committee to prevent the removal of the Carolina Dove from the protected list, but these efforts were futile, and Doves are being slaughtered this fall.

"The treasurer, assisted by other members, sold Audubon calendars during the holiday season, netting a substantial amount for the treasury. No admission fee was charged at the annual public lecture; Mr. William Hubbell Fisher, the speaker, gave a bird talk, illustrated by lantern-slides. Other talks were given at various meetings by Mr. Chas. Dury (The Humming-bird), Mr. Benn Pitman (Birds in Art), Mr. Osburn (Bird Calls), Mrs. Hermine Hansen (The Scarlet Tanager), Miss Gertrude Harvey (The Tern Islands of Lake Erie). Dr. T. S. Palmer, of Washington, D. C., and State Game Warden Mr. J. T. Porterfield, of Columbus, gave inspiring talks at one meeting. A new feature, which may become a part of our program, was 'Field Day' in June.

"Branch secretaries are being appointed throughout the state, and from this we hope to gain much. The corresponding secretary's work has kept the society in touch with other state societies, the A. O. U., the Biological Survey at Washington, and with the Society for Protection of Birds in England.

"Inquiries in regard to Audubon work are frequently coming in from new quarters, evidencing the growth of interest in bird protection."

Oklahoma.—While the Audubon Society of this territory is in a dormant condition, yet the subject of bird protection and the allied subject of

humane education are attracting considerable attention. Mrs. Henrietta E. Foster, of Tecumseh, who has been urging the passage of a humane education law, quotes a letter from the State Superintendent of Public Education in South Dakota, where humane education is taught in the schools: "It has a tendency to create a desire for nature study, not only with the small children, but with those of the higher grades. It has also tended to increase the birds. The boys who were in the habit of climbing trees and destroying nests now see a study in this subject. I believe that great good will come from it in many ways. It will make more careful boys and girls, as well as better educated men and women." Mrs. Foster adds: "You will notice that the effects on increase of birds and protection of them accords with my claim that such would be the result of a humane education law. I am glad to know that it has been proven to be a fact. I believe in a stringent law to protect the birds, but that alone is not sufficient; the humane education of the children should go with it. The little it has been taught in the public schools in this territory has entirely changed the nature of the boys who have been given the instruction, as to their manner of treatment of birds; like the boys of Dakota, they have changed the killing of birds and robbing of nests to the protection and study of them."

The press are not silent on the subject of bird protection, as is shown by the following excellent editorial from the New Kirk 'Democrat Herald': "It is likely at the sessions of the territorial legislature an effort will be made to have more stringent game laws passed. A small per cent of the larger kinds of game is left in Oklahoma, but what there is, the sportsmen would like to protect as much as possible. The chief aim now, however, will be to afford better protection for birds such as Quail and Prairie Chickens, both of which are still quite abundant in several sections. The Quails are said to be especially beneficial on farms, as they are one of the best pest-killers known, and on that account the farmers will be glad of the passage of a law which will insure their feathered friends more protection."

Oregon.—At the request of this Committee, State Game Warden Baker sent two deputy wardens to the southeastern portion of the state to give special protection to the birds breeding in the extensive and numerous shallow lakes in that region. The sum of one hundred and fifty dollars was paid from the Thayer Fund on account of the salary of the wardens, the balance being paid by the state.

Very few attempts at violation of the law were reported, the worst offenders being hunters from California who cross the line, hunt and return before they can be captured. Chief Warden Baker states: "The wardens arrived at the breeding grounds at least two months too early, as owing to late snows and high water the breeding season was late."

Early in the year the Committee requested Messrs. Finley and Bohlman, the well-known bird photographers and nature writers, to furnish a report of the conditions of the bird colonies on the Oregon coast. The report is so interesting that it is given in full:

"We have visited the majority of rocks which are scattered along the coast from the mouth of the Columbia south to the California line, and we find that by far the most important rookeries are to be found on the 'Three Arch Rocks,' which are situated near the entrance of Netarts Bay, practically two miles north of the same, and probably ten or fifteen miles south of the entrance of Tillamock Bay. The rocks consist of a group of three



BRANDT'S CORMORANTS ON THE ARCH ROCKS, COAST OF OREGON

Photographed by Finley and Bohlman

large rocks, and a few unimportant smaller ones, and are a mile off shore. The one to the right is three hundred and four feet high and about eight hundred feet long, while the one to the left is of about the same area, the center one being somewhat smaller and more precipitous. These rocks are densely populated, principally by California Murres, of which there are ten or twelve large rookeries and a large number of smaller ones; the large rookeries, it is estimated, contain between five and ten thousand individuals each, which gives a Murre population, at a conservative estimate, of seventy-five thousand individuals.

"There are three large rookeries of Cormorants, probably four or five hundred birds in each; the rock to the left is inhabited almost entirely by Brandt's Cormorants, while on the middle rock are found the Farallone

Cormorants. Baird's Cormorant is found on all three rocks in isolated and more inaccessible spots, and is the least common; there is a fourth species of Cormorant found here, but it was not positively identified. There are two Tufted Puffin rookeries on the rock to the right and the north slope of the middle one, and also a few on the northern slope of the third rock. There are two species of Petrels found, the Forked-tail and Leach's, but it was impossible to estimate their numbers or that of the Puffins; however, the guano was honey-combed with their burrows. The Western Gull is quite numerous, between three and five thousand individuals; they breed on all of the rocks. Pigeon Guillemots, not over fifteen or twenty pairs, and a few Black Oyster-catchers, were found.

"These rocks were visited in 1901 and 1903, and both times considerable difficulty was experienced in getting out to them, as it was necessary to launch a boat through the surf. We waited two weeks each time before a sufficiently calm day arrived to attempt the breakers, although a little later in the year, the storekeeper at Netarts P.O. assured us that the breakers often subsided entirely, and people camping along the beach (summer resort people from Tillamook and neighboring small cities) went out in small boats to see the birds and sea-lions, a large rookery of the latter inhabiting the smaller rocks. These people no doubt do some damage to the birds, as firearms are common, and they make a practice of shooting at the sea-lions from the bluffs on the shore; yet at this season, which is in the latter part of July and August, the birds have finished their breeding, and the young are fully grown. In the earlier part of the season, from June 1 to July 10, there are but few outside people on the beach, and the breakers are too heavy to allow any but the most determined and well-equipped to reach the rocks from the shore, so not a great deal of danger is to be apprehended from this source.

"There is, however, one great menace to the bird life present, which ought to be checked. The seagoing tug 'Vosberg,' of Tillamook, has been in the habit, in the past two years, of running Sunday excursion parties out to the rocks. These parties comprise most of the able-bodied male citizens of the town, and they go armed to the teeth, the ostensible and advertised object of the excursion being a sea-lion hunt, or to capture one alive. We witnessed the arrival of such an excursion, while waiting on the shore for an opportunity to get out; the tug steamed very slowly in and out among the rocks, while the passengers practiced marksmanship on the birds sitting on the cliffs. That they did great damage was attested the following day when, along the beach, the surf line was strewn with the dead bodies of Cormorants and Murres, mainly the former. This is a practice that it will probably be difficult to check, as the town is isolated, being reached only by weekly steamboat and stage lines, and this is doubtless one of their most popular and exciting diversions in the summer.

"At the south end of the Oregon coast, there are a number of bird rocks, but not very large in size. Several years ago we were told that parties were gathering eggs from these rocks and were sending them to the San Francisco markets. Subsequent investigations proved this to be a fact.

"The summers of 1892 and 1894 were spent about twenty miles north of Cape Blanco, at the mouth of the Coquille River, where there are a number of bird rocks. They are not very large, but they are well populated with Cormorants, principally Brandt's, Tufted Puffins, Western Gulls and Murres. At present these rocks do not need protection, as they are not likely to be reached by anybody except the life-saving crew at Bandon, a small town at the mouth of the Coquille, only a short distance from the rocks.

"From the Coquille up past Coos Bay, and clear up to Yaquina Bay, the rocks are small and scattering and do not need any protection. The same condition obtains near Cape Foulweather, north of Yaquina.

"The balance of the rocks along the coast to the Columbia River are a couple opposite Cape Mears Light-house, another near the mouth of the Nehalem River, a few more further north opposite Cannon Beach; but these have comparatively small colonies of birds and need no protection at present."

The flagrant violation of Section 1 of the Act of 1903 (Model Law) by the owners of the tug Vosberg was brought to the attention of State Game Warden Baker, who notified the captain of the tug that any future violations of the statute would be prosecuted. It is proposed by the committee to give special attention to the Oregon coast during the coming breeding season, in order that eggging and shooting shall be prevented.

The acting secretary of the Audubon Society, Miss Metcalfe, presents the following report: "During the past year our work has been divided between education and bird protection, or enforcement of the new bird law that went into effect at the close of the last session of the state legislature. The educative work has included free stereopticon lectures, informal bird talks, Saturday afternoon outings during the nesting season, and sunrise meets, the latter arousing the greatest enthusiasm, bringing us a number of new club members that we would not have obtained otherwise; many of those attending walked miles in the early dawn, carrying lunch baskets, note-book and opera glasses, to a commanding height overlooking the city of Portland, where we viewed the glorious panorama of snow-clad mountains and winding river under the reddening sky, while enjoying hot coffee and sandwiches as we listened to the sunrise chorus of the birds.

"The usual annual award of cash prizes was made by the John Burroughs Club of Portland to the school children of Oregon for the greatest knowledge of our native birds, as shown both by field tests and compositions. A visit from our valued friend, Rev. W. R. Lord, author of 'The

First Book of the Birds of Oregon and Washington,' to whose enthusiasm and unselfish devotion to the cause the bird-lovers of this region owe so much, was a noteworthy event in the early part of the year; his interest in the work led him to make the long journey across the continent from his home in Rockland, Mass., in compliance with the wishes of the bird-clubs of the Pacific northwest. His stereopticon lecture, illustrated by the marvelous and beautiful colored studies of birds by Louis Agassiz Fuertes, was a source of intense enjoyment to all who had the privilege of listening to it.

"Bird protection has not been neglected, although there is urgent need of greater facilities for guarding that vast uninhabited territory in southern



ARCH ROCKS, COAST OF OREGON

Photographed by Finley and Bohlman

Oregon, the lake-lands, where thousands of beautiful Grebes and other water birds breed. Through the efforts of our local bird men the interest of the state was aroused, to the extent of contributing the services of a game warden, making two altogether, for the enforcement of our new law in southern Oregon. The National Association furnished printed notices warning the public of the penalties attached to infringement of our law. These have been distributed throughout the state.

"Our State Audubon Society has met with a sad loss in the sudden death, by drowning, of our corresponding secretary, Mr. Brugger. Our president, A. W. Anthony, has been in Alaska for several months past, and will probably remain there this winter. For this reason the report now

offered is not as complete as it should be in its showing of the work that is being done in the state outside of Portland."

Pennsylvania.—The very brief report of the secretary, Mrs. Robins, tells of progress in that most important line of work, new local branches with consequent increased membership and support.

"Work has been carried on as usual. There has been a steady increase in membership and a most gratifying increase in local societies and clubs for the purpose of bird study and bird protection. As our state is such a large one, it is almost impossible for us to keep in touch with the members excepting where these branches exist and our energies for the coming year are to be largely devoted to encouraging the forming of these clubs and branches, under the care of our local secretaries or some other competent person.

"The traveling libraries continue to do good work.

"A new bird and game bill is to be introduced in the state legislature at its next session, and the society will take steps to ensure such improvements as are needed for the preservation of wild birds, and use its best efforts to aid the passage of the bill."

Rhode Island.—Notwithstanding the protest of the Audubon Society, the National Committee, and the intelligence of the commonwealth, the legislature passed a law providing for the payment of a bounty of twenty-five cents each for the scalps of Hawks, Owls and Crows. This statute is such a monument to ignorance and prejudice and is so far behind the times that it is published in full, in order that the public may have an opportunity of reading the very worst bird statute in force in any part of the United States. It is unfortunate when a commonwealth lacks laws for the protection of its birds, but it is much worse to have a bounty law for birds that scientific investigation has proved to be beneficial as a class. Bounty laws for birds or animals are wrong, both in principle and in practice.

CHAPTER 1160.

AN ACT Entitled an Act for the Protection of Song Birds and Game.
(Passed April 13, 1904.)

It is enacted by the General Assembly as follows:

Section 1. Every person who shall kill any wild hawk, except fish hawks, wild crow, or wild owl within the limits of this state shall, upon presentation of the proof hereinafter designated, receive for every such animal so killed the sum of twenty-five cents, to be paid by the general treasurer.

Sec. 2. Before such person shall be entitled to receive the aforesaid reward he shall exhibit to any town clerk or state senator of any town, the

head of any animal killed, mentioned in Section one, and shall make affidavit of the time and place of such killing. Such town clerk or senator shall thereupon destroy the head of such animal, and shall, in addition to his official attestation of said affidavit, certify that the person making the same exhibited to him the head of the animal alleged to have been killed; and the state auditor shall, upon presentation of such affidavit and certificate, draw his order upon the general treasurer in favor of the person signing such affidavit.

Sec. 3. The sum of five hundred dollars or so much thereof as may be necessary is hereby appropriated, out of any money in the treasury not otherwise appropriated, for the purposes of this act.

Sec. 4. This act shall take effect from and after its passage.

Mrs. Grant, secretary of the Audubon Society, furnishes the following interesting report: "Our work has been prosecuted with some vigor during the past year, chiefly in establishing new branches in the rural districts and in schools. Ten new branches have been founded, and fifty of the Massachusetts Audubon bird-charts have been placed in schoolrooms. Our two traveling libraries have been in constant demand, and the stereopticon and accompanying lecture have been used many times. We have also assisted in the printing and distributing of a valuable poster, 'Feed the Birds.'

"We have increased our membership substantially, and, on the whole, feel that we have accomplished some good. In the future we mean to prosecute even a more vigorous and aggressive work."

South Carolina.—This is the only state on the Atlantic coast that has not as yet adopted the Model Law for the protection of its non-game birds. Why the citizens of this commonwealth have not yet awakened to the importance of bird protection is difficult to understand, in view of all of the agitation on the subject during the past few years. Early in the spring of 1904 Mr. Herbert K. Job made an extended bird photographing trip through the south, and among the other localities visited was South Carolina. The following brief, but interesting report shows the importance of improved legal bird protection: "During the second and third weeks of May I explored the Sea Islands of South Carolina. The coastwise trip was notably interesting from opportunities to study the shore birds, breeding and migrating. Oyster-catchers, Wilson's Plovers and Willets were scattered about in fair numbers and were breeding, apparently unmolested. In one place I was shown a fine nesting colony of Willets, and saw in one day as many as fifty nests with eggs.

"Migratory shore birds were very abundant, the various small sandpipers, — notably the Red-backed, — Turnstones, Ring-necked and Black-bellied Plovers and Hudsonian Curlews. The latter were seen by thousands, feed-

ing in scattered flocks in the great marshes by day, and at sundown resorting to small, low islands to roost. I saw as many, I should judge, as ten thousand in one great flock. I did not observe much shooting, but there is some, and the southern coastwise states certainly should have laws prohibiting spring shooting of shore birds, thus preventing disturbing them while breeding or migrating northward.

"It was too early to witness the breeding of the Black Skimmers and Terns. At several points there were large flocks of Skimmers and fair numbers of Royal Terns, apparently about to breed. The Royal Tern was the only species at all common; no Least Terns were seen.

"Several low sandy islands were visited where Brown Pelicans are accustomed to breed. High tides and gales seemed to have drowned them all out this year. On only one island were there eggs, and these were washed from the nests and scattered about the sand or in windrows. Nature is more unkind even than man to the Pelicans, neither shielding them nor endowing them with brains."

Mr. Job adds regarding another part of the south: "I was fortunate enough to ferret out a rookery of the American Egret which is probably the largest in North America, the existence of which does not seem to be known away from its immediate locality. Several hundred pairs of Egrets were breeding undisturbed, most of them with young, besides large numbers



WILLET ON NEST, SEA ISLANDS, SOUTH CAROLINA

Photographed by H. K. Job

of Little Blue and Louisiana Herons, many Great Blue, and numbers of Yellow-crowned and Black-crowned Night Herons. Probably this rookery is quite safe, for the owners of the land watch it and will kill any man at



OYSTER CATCHER ON NEST, COAST, SOUTH CAROLINA

Photographed by H. K. Job

sight found there with a gun. Still, I think it is best that I should not publicly divulge the locality, nor even the state."

Audubon work in South Carolina is not in a satisfactory condition, but it is hoped that, during the year 1905, the National Association will be in a position materially to aid the nucleus of a society that now exists.

Texas.—Late in the year Audubon interests developed in such a satisfactory manner that there is no doubt that in a very short time a large and flourishing society will be organized, with earnest and active workers in charge of its affairs. The National Association, aided by its resident member, Mr. Attwater, have been for a long time working to accomplish the above happy result. The following résumé of conditions in Texas is furnished by Mr. Attwater, who has exceptional opportunities for securing reliable information:

"Satisfactory progress has been made in bird protection work in Texas during the past year.

"The search for a remedy for the cotton-boll weevil has been the chief cause of attracting attention to the value of certain birds as insect-destroyers. Numerous newspaper articles and letters on this subject, and

the distribution of Audubon Educational Leaflets and other bird literature have been the means of affording reliable information in regard to the life histories of some of the birds and their food habits.

"The public is becoming interested, the use of birds more appreciated, and the importance of protecting them more greatly recognized than formerly.

"By the newspaper clippings I have sent from time to time you will notice that the subject of bird protection is being taken up by our Farmers' Institutes, Truck Growers' Associations and Humane Societies. Until the alarming increase of insect pests of late years, very few people paid any attention to the relation of birds to agricultural and horticultural pursuits. Now there is a demand for information and a desire to form bird protective associations. Unfortunately, the great majority of people in Texas know very little about bird life, habits, etc.

"If the Audubon Society were able to send a bird man to Texas he would find conditions favorable, and many willing to assist in organizing bird protective associations, which would result in formation of a State Audubon Society, with branches and active workers all over the commonwealth.

"The new bird law has undoubtedly resulted in stopping the indiscriminate slaughter of many useful birds, and if those classed as game were not included, it might be said that the present law gives general satisfaction. On account of some of its provisions which relate to certain game birds, there are some who do not favor the law as it now stands. I understand that several amendments will be offered at the next session of the legislature. Objections to the law in its present form come principally from the following classes:

"Professional market hunters and shippers of game, restaurant and hotel keepers and from a great many of the general public, who do not themselves shoot, but who like game in season, and are now prevented from buying it. The chief objection from the latter class is that some of the so-called gentleman sportsmen return from hunting trips with quantities of Ducks, etc., above the limit allowed (*viz.*, twenty-five to each man), having taken negroes and others with them for the purpose of carrying and standing responsible for the birds illegally killed.

"In a state like Texas, with such an immense area, and so many diverse interests, it would have been remarkable had a law been passed including both game and non-game birds that would have suited all parties; however, there seems to be an opinion among certain people that changes of a minor character will strengthen and improve the law. On the other hand, there are those who think that it will be for the welfare of the state at large to let the law stand as it is; it is said that many of those who desire changes are actuated by individual interests.

"The keeper of the Matagorda Lighthouse was employed as a warden during the breeding season. He protected all the birds in his locality, and reports a larger increase in 1904 than at any period for some years past. The birds protected were Royal and other Terns, Laughing Gulls, Black Skimmers, etc."

Vermont.—The report of the secretary, Mrs. Barrows, shows very satisfactory progress, especially along educational lines:

"During the past year the Audubon Society has endeavored to form branch societies in various parts of the state, with notable success in several towns. Societies have been organized in Castleton, Proctor, Essex Junction and Springfield. We had previously organized societies in Williamsville and Putney. Our three traveling libraries have been in circulation in several towns during the year, and we have received appreciative letters from the teachers who have had the use of them in their schools. One teacher writes, 'Before these books were placed in the hands of teachers and pupils, there was practically no interest in the subject of birds on the part of either. Now there is no lack of interest in the community. It scarcely seems possible that so much could have been learned in so short a time.' In our own town, while there has been little organized work done, there has been much individual work, and a stimulus given to bird study and protection. Many of our citizens are interested in feeding the birds through the winter months; and it is pleasant to record that several of the teachers in our public schools have placed shelves outside the school windows for the benefit of the birds who come there for daily lunch, thus pleasing and interesting the children who watch them. The Educational Leaflets published by the National Committee have been bought and distributed. A copy of BIRD-LORE has been placed on the reading table in our public library. Our society has contributed twenty-five dollars to the National Committee to aid in its work of bird protection. We have purchased a lantern, and hope to secure the slides necessary for a traveling lecture the coming year.

"To Rev. Wm. R. Lord, of Rockland, Massachusetts, we are much indebted, for work in summer schools held for teachers. His illustrated lectures were received with great appreciation and enthusiasm."

Virginia.—Eight wardens were employed during the past breeding season, this being the fifth consecutive year that special protection has been given at the extensive breeding grounds in Accomac and Northampton counties. The chairman, early in July, explored this territory quite thoroughly and made the acquaintance of nearly all of the wardens. No one can realize the vast extent of the beaches and marshes that stretch from Chincoteague on the north to Cape Charles on the south. At intervals of

a few miles the beaches are cut by inlets from the ocean; some of these are narrow and choked with sand-bars, while others are wide and deep enough to admit coasting vessels of some size. From the inlets radiate channels in every direction through the marshes which lie back of the sandy barrier beaches. The beaches are not usually wide, never more than a few hundred yards, but the green marshes extend for miles back to the uplands. Both the beaches and marshes are used as breeding homes by birds. The trip was made in a small gasoline launch of light draught, but the channels were so tortuous and at low water were so shallow that progress was exceedingly slow, for hours were lost every day while waiting for flood-tides in order to cross shallow bays and bars.

During the six days spent in exploring this territory, Laughing Gulls were never out of sight and the cackling note of the Clapper Rail was a common sound. These two species of birds were by far the most common, and were breeding in large numbers. Young Laughing Gulls, seen on July 4, were as strong on the wing as the parent birds; this shows that the first laying of eggs had not been disturbed. Least Terns were seen in considerable numbers fishing in the channels near Chincoteague Inlet. The wardens, on acquaintance, proved exceptionally intelligent men, and all of them expressed an earnest desire to give the best of care to the breeding birds. The vast extent of the territory under the care of each warden makes it physically impossible for him to do more than exert a moral influence and thus create a public sentiment among the baymen, and other residents, in behalf of bird protection. It was found that eggging was still carried on to some extent, but it is believed that it is not nearly as prevalent as it was in former years. The provisions of the new law are generally known, and it is thought they are respected by the citizens. The chairman was very much encouraged by the outlook and considers the wardens' salaries money well expended.

Audubon matters in Virginia are not as flourishing as they should be. The secretary, Mr. E. C. Hough, briefly reports as follows:

"We have tried to interest people in our efforts to establish our state society upon a firm basis, but have met with but little success. I have written letters to the parties whose names you sent me, but none of them have rendered any assistance. I have also sent copies of our Digest of the Laws of Virginia relating to bird protection to a number of other parties. We can count but few persons who have paid membership dues, and the money received has not been sufficient to cover expenses of printing, etc. We propose to continue to distribute warning notices and literature, and hope that we can find friends of the movement who will become active members of the state society."

Wisconsin.— This is one of the oldest of the Audubon Societies, and the state was one of the earliest to adopt the Model Law. Bird protection in this commonwealth has intelligent recognition by the citizens. The president of the Audubon Society, Mr. Zimmerman, makes the following report of progress:

"We send greetings and well wishes to you and our sister organizations, with the following report of work accomplished and proposed: The society has continued its policy of improving its collection of slides this year. The slides were divided into groups, for each of which groups a suitable lecture has been written. These slides and lectures have been sent to the various local organizations, where they have been much enjoyed.

"We have assisted in maintaining our organ 'By the Wayside,' published under the able editorship of Miss Ruth Marshall, of Appleton. Our secretary, Mrs. R. G. Thwaites, has been active, as in former years, in interesting people in our cause and in distributing bird literature.

"We feel that much has been gained in the closer relation between the society and State Game Warden Overbeck and his assistants, particularly Mr. Gratz, by whose kindness we have had five of our energetic members made volunteer deputy game wardens, thus effectually assisting in their as well as our work.

"Our plans for the coming year consist mainly in continuing with the above named policies, but include also a determination to especially influence the milliners of the state to desist in all sale of bird pieces under threat of prosecution. One of our wealthy adherents having said he hoped to carry one case through the courts for us. We sincerely hope it may be accomplished this year.

"It is also our desire to further our unity with sister organizations in the various states. From our own standpoint the president feels that much good would come to us by such a unity."

Wyoming.— The report of this society submitted by Mrs. Chivington, the secretary, should be read and its methods followed by many of the other State Societies:

"The Audubon Society of the State of Wyoming is actively engaged in promoting sentiment in favor of the protection of birds.

"To this end, letters have been addressed to those in charge of the schools in every town and county in the state, asking for the organization of all school children into Audubon Societies.

"Appeals for the lives of our song birds have been printed in every newspaper in the state, and during the early summer months of the present year, the state secretary visited every part of the state and talked to club ladies about the work. A general interest is manifested, but written reports of work done are slow coming in.

"The branch associations who have found time to report are as follows: Buffalo, J. A. McNaught, secretary, 450 members; Saratoga, 50 members; Manville, Miss Florence Christian, secretary, 50 members; Parkman, Miss Amelia Mumm, secretary, 15 members; Chigwater, Louis C. Tidball, secretary, 6 members; Sheridan, C. R. Atkinson, membership not sent; Macfarland, Miss Macfarlane, membership not sent; Cheyenne, Mrs. Cordelia Chivington, secretary, 1,200 members.

"Early in the spring the children of the Cheyenne schools gave an Audubon entertainment which was largely attended.

"Our society is not incorporated, as we could derive no particular benefit from incorporation.

"We prefer to keep the financial side of our problem in the background. Sale of buttons and contributions in small amounts from those interested will pay postage when the officers feel unable to meet this item.

"The 'fad' for collecting the eggs of birds seems to have no followers in the state who are willing to exhibit their collections, as they did so insistently three years ago.

"For two years the use of birds for millinery purposes has been obsolete in this state, the milliners taking great pains to show that the few bandeaux offered for sale have been made from chicken feathers.

"The law protecting birds and their nests in Wyoming can be found in Sec. 1, Chap. 37, Revised Statutes of Wyoming; and public opinion is such that the law is pretty well enforced.

"At the present writing I am not able to report very many local societies for the protection of our birds; but public opinion is right, the hearts of the children are right, and I venture to assert that in no state in the Union are the Robins, Bobolinks and Larks as happy as in our Wyoming."

From the following states and territories the National Committee have nothing to report: Arizona, Idaho, Kansas, Maryland, Montana, Nevada, New Mexico, South Dakota, Tennessee, Utah, Washington and West Virginia. The Audubon Societies in Maryland and Tennessee are such merely in name, while in most of the other localities Audubon work has never been started, owing to the small population.

In Kansas and Washington, considerable preliminary work has been done by the committee, but so far without much result.

THE THAYER FUND

The Chairman submits the following statement of subscriptions and disbursements for the fiscal year ending November 1, 1904, to the correctness of which he certifies.

NEW YORK, November 1, 1904.

WILLIAM DUTCHER, Chairman,

In account with Thayer Fund—

RECEIPTS

SUBSCRIPTIONS

Thayer, J. E.	\$500 00	Brought forward	\$2,835 00
Benefactor	400 00	Warren, Miss C.	25 00
"Ormond"	400 00	Reed, Mrs. W. H.	20 00
Hemenway, A.	100 00	A Friend	20 00
Raymond, C. H.	100 00	Watson, J. S.	20 00
Freer, C. L.	100 00	Crane, Miss C. L.	20 00
Pickman, Mrs. D. L.	100 00	Holt, Mrs. H.	20 00
Sears, J. M.	100 00	Smith, Mr. and Mrs. W. M.	15 00
Kane, Miss L. L.	60 00	Elliot, Mrs. J. W.	15 00
Abbott, G.	50 00	Morris, R. O.	15 00
"Sportsman"	55 00	Wadsworth, Mrs. W. A.	15 00
Stone, Miss E. J.	50 00	Gatter, Miss E. A.	15 00
Dodge, C. H.	50 00	Phillips, Mrs. E.	10 08
Macy, Mrs. V. E.	50 00	Parsons, M. L.	10 00
Vanderbilt, G. W.	50 00	Emery, Mrs. L. J.	10 00
Hicks, J. D.	50 00	Emery, Miss G.	10 00
Parker, E. L.	50 00	Christy, B. H.	10 00
Connecticut Audubon Society	45 00	Baird, Miss L. H.	10 00
Freeman, Miss H. E.	40 00	Herrick, H.	10 00
Sharpe, Miss E. D.	35 00	Gwynne, Miss E. A.	10 00
Van Name, W. G.	25 00	Collins, Miss E.	10 00
Kennedy, Mrs. J. S.	25 00	McEwen, D. C.	10 00
Osgood, Miss E. L.	25 00	Gelpcke, Miss A. C.	10 00
Hoyt, F. R.	25 00	Clapp, G. H.	10 00
Pinchot, Mrs. J. W.	25 00	Robbins, R. E.	10 00
Eno, Dr. H. C.	25 00	Howland, Miss E.	10 00
Sage, Mrs. S. M.	25 00	Willis, Mrs. A.	10 00
Webster, F. G.	25 00	Mosely, F. S.	10 00
Hunnewell, H. S.	25 00	Scrymser, Mary C.	10 00
Warren, Samuel	25 00	Greene, Miss M. A.	10 00
Newbold, Hon. Thos.	25 00	Derby Peabody Club	10 00
Hunnewell, W.	25 00	Lawrence, Mrs. R. M.	10 00
Hunnewell, A.	25 00	Ward, S. G.	10 00
Robbins, R. C.	25 00	Boulton, W. B.	10 00
Metcalf, S. O.	25 00	Rainsford, Rev. W. S.	10 00
Corning, Mrs. M. I.	25 00	Graham, Miss M. D.	10 00
Dorr, Geo. B.	25 00	Kimball, Miss H. F.	10 00
Hecker, F. J.	25 00	Mayo, Miss Amy	5 00
Carried forward	\$2,835 00	Carried forward	\$3,290 08

Brought forward	\$3,290 08	Brought forward	\$3,431 08
Mayo, Lawrence	5 00	Smith, C. B.	5 00
Thomas, Mrs. Theo.	5 00	Skeel, Mrs. R., Jr.	5 00
Hunt, Dr. E. G.	5 00	Hinton, Miss S. McV.	5 00
Sand, Miss I. L.	5 00	Students, Miss Baldwin's School	5 00
Winterbotham, Mrs. J.	5 00	Norton, C. E.	5 00
Glessner, F. M.	5 00	Saunders, W. E.	5 00
Cox, Jno. L.	5 00	Baldwin, Mrs. G.	5 00
Donaldson, J. J.	5 00	Miscellaneous	65 09
Van Orden, Miss M. L.	5 00	Sale of Leaflets—	
Chafee, Mrs. Z.	5 00	National Committee, No. 2	3 00
Day, Frank M.	5 00	“ “ No. 3	6 00
Brooks, S.	5 00	“ “ No. 7	40
Clark, The Misses	6 00	Educational Leaflets—	
Fairbanks Museum	5 00	No. 1	30 60
Ricketts, Miss J.	5 00	No. 2	26 45
Duncan, A. B.	5 00	No. 3	32 65
Wheeler, S. H.	5 00	No. 4	52 70
Peters, F. A.	5 00	No. 5	27 99
Richards, Miss A. A.	5 00	No. 6	22 10
Appleton, F. H.	5 00	No. 7	41 92
Trine, Ralph Waldo	5 00	No. 8	12 60
Lord, Miss C.	5 00	No. 9	3 70
Nicoll, Benj.	5 00	No. 10	3 70
Torrey, Miss J. M.	5 00	No. 11	3 40
Howland, Miss I.	5 00	Protection Committee Reports	56 20
White, Miss H. H.	5 00	Florida Audubon Society for pay-	
Brown, H. W.	5 00	ment of warden	215 00
Clarke, Miss H. E.	5 00		
			<u>\$4,069 58</u>
Carried forward	\$3,431 08		

EXPENDITURES

Deficit brought forward from 1903		\$158 90
California—General expenses, Audubon work	\$20 00	
Express	2 15	
		22 15
Delaware—Legal evidence		1 03
Florida—Legal evidence	25 61	
Express	4 10	
Repairs and supplies for "Audubon"	27 70	
Telegrams	1 28	
Painted sign	20 67	
Wardens—four	591 00	
		670 36
Georgia—Legal work	10 00	
Traveling expenses of T. G. Pearson	27 60	
Express	1 90	
		39 50
Iowa—Printing	10 75	
Express	1 30	
Legal expenses	25 00	
		<u>\$37 05</u>
Carried forward		\$928 99

The Thayer Fund

119

Brought forward	\$928 99	
<i>Louisiana</i> —Telegrams	\$9 60	
Express	2 50	
Map	2 00	
Legal evidence	6 85	
Warning notices	16 50	
Printing	10 00	
	<hr/>	47 45
<i>Massachusetts</i> —Telegram	25	
Express	4 00	
J. E. Howland—traveling expenses	4 00	
Warden—one	25 00	
	<hr/>	33 25
<i>Maine</i> —Wardens—thirteen	360 00	
A. H. Norton—traveling expenses	93 10	
Warning notices	16 50	
Express	2 45	
Charts	2 38	
Advertising	1 03	
	<hr/>	475 46
<i>Michigan</i> —Express	1 35	
Bird charts	9 32	
Printing	8 25	
Warden—one	15 00	
	<hr/>	33 92
<i>Mississippi</i> —Express	11 90	
Certified copy law	2 53	
	<hr/>	14 43
<i>Ohio</i> —Printing	2 25	
Express	1 10	
	<hr/>	3 35
<i>Oregon</i> —Warden	150 00	
Certified copy law	3 75	
Warning notices	16 50	
	<hr/>	170 25
<i>New Jersey</i> —Express	2 05	
Telegrams	1 00	
Wardens—two	40 00	
Printing	18 00	
Certified copy law	1 03	
Chairman—traveling expenses	6 25	
	<hr/>	68 33
<i>New York</i> —Telegrams	1 23	
Express	90	
Postage	20	
Printing	7 25	
Advertising	5 00	
Detective	10 00	
Wardens—two	40 00	
	<hr/>	64 58
<i>North Carolina</i> —Express	2 60	
Telegrams	50	
Slides	12 60	
Printing	5 50	
Map	2 20	
Wardens—two	224 00	
	<hr/>	247 40
<i>North Dakota</i> —Express		2 00
		<hr/>
Carried forward		\$2,089 41

Brought forward		\$2,089 41
<i>Pennsylvania</i> —Express		2 60
<i>South Carolina</i> —Telegrams	\$1 04	
Express	1 00	
Printing	12 75	
		<hr/> 14 79
<i>Virginia</i> —Telegrams	1 33	
Certified copy law	1 75	
Chart	2 00	
Wardens—seven	230 00	
Warning notices	16 50	
		<hr/> 251 58
<i>Texas</i> - Warden	20 00	
Warning notices	16 50	
Express	2 00	
		<hr/> 38 50
<i>General Expenses</i> —Printing	788 08	
Advertising	4 84	
Letter cases	2 25	
Cabinet and cards	7 82	
Postage	277 10	
Protection Committee reports	166 70	
Slides	92 45	
Clasp envelopes	27 00	
Press clippings	23 64	
Bird drawings for educational leaflets	56 00	
Express	11 50	
Telephone	75	
Sundries	6 19	
		<hr/> 1,464 32
		\$3,861 20
Balance forward to 1905		208 38
		<hr/> \$4,069 58

Contributions for North Carolina Launch

John E. Thayer	\$200 00
John L. Cox	5 00
Swan Island Club, Boston, Mass.	50 00
	<hr/> \$255 00

Audubon Society Subscriptions to Funds for Clerk Hire

Vermont	\$20 00	Connecticut	25 00
Massachusetts	100 00	Rhode Island	10 00
New York	125 00	Pennsylvania	50 00
Illinois	50 00	Ohio	25 00
Florida	50 00	New Jersey for 1903-4	40 00
New Hampshire	10 00	North Carolina	50 00
District of Columbia	50 00		
		Total	<hr/> \$605 00



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EDITED BY
FRANK M. CHAPMAN

PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

HARRISBURG, PA.

NEW YORK

LONDON



Bird = Lore

March - April, 1905

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. VII

MARCH — APRIL, 1905

No. 2

The Cormorants of Great Lake

By T. GILBERT PEARSON

With photographs from nature by the author

HIDDEN among the cypress swamps of eastern North Carolina there lies a beautiful sheet of water known as Great Lake. Roughly estimated, it is about five by seven miles in extent, and is the largest of an irregular chain of lakes extending across the counties of Jones and Craven. A heavy forest surrounds it, which for two-thirds the distance is a dense cypress swamp reaching away for miles in its unbroken, primitive condition. There are few human habitations in this territory, and many of the wild tenants of the forest are still found in their original abundance. This sequestered lake is never disturbed by the passing of a boat, except at intervals of a year or more, when some adventurous hunter carries his canoe a long distance through the tangles of the swamps and camps for a brief time upon its shores.

Great Lake is the summer abode of the only colony of Florida Cormorants known to breed in North Carolina. A strong desire to become more familiar with the habits and activities of these wary birds led me to journey to this region last summer during the early days of June. As our canoe emerged from the heavy growth of cypress trees fringing the lake, we saw, about a mile distant, the whitened trees which compose the rookery. These were adorned with numerous black spots which, upon a closer approach, proved to be Cormorants. The colony at that time was found to be in the height of the breeding season. The heavy nests of sticks and twigs occupied low-spreading cypress trees standing solitary here and there in the water, usually from fifty to one hundred yards from shore. A number of the trees were occupied by the domicile of a single pair of birds; others contained two, three, five, seven or eight nests; one tree held sixteen and another thirty-six cradles of these great birds. One hundred and twenty-one homes of the Cormorants were counted, twenty-eight trees in all being used for their accommodation.

So seldom are the birds disturbed that here they show far less fear of man than they usually manifest when found feeding about the harbors, or in the shallow salt water sounds. In an open canoe we approached within sixty feet of some of the mother birds brooding their eggs, and photographed them as they sat on their nests, with their long necks stretched and their sharply hooked beaks pointing inquiringly in our direction. Many, however, left the trees when our boat arrived within a hundred yards of their breeding territory. They fly heavily, and in many instances strike the water



YOUNG CORMORANTS

within one hundred yards of their perch, but ricocheting quickly they are soon strong upon the wing, and, like departing bombshells, their black figures rush hurtling across the lake. In striking the water, it is only the posterior portion of the body which splashes, and this doubtless gives variety to the belief, entertained by my guide, that the "nigger goose" can not fly "until it wets its tail." The old birds, frightened away by our approach, soon returned in a body, but after flying about in circles for a short time settled out on the lake several hundred yards distant.

Anxious to secure photographs of the nests and young, I climbed into one of the trees containing a number of nests, and was interested to find not only eggs but young in various stages of development. The parents evidently furnish their offspring with an abundance of food; for many of the nests, and in places the limbs, also, were strewn with fragments of eels and



CORMORANTS' NESTS IN CYPRESS



CORMORANTS' NESTS



"ONE TREE . . . HELD THIRTY-SIX CRADLES OF THESE GREAT BIRDS"

fish, and the young birds, excited at our approach, showered upon us and our boat generous quantities of half-digested fish.

Many of the young were old enough to leave their nests and clamber awkwardly along the limbs. Although apparently much annoyed at first by our presence, the young soon became accustomed to the unusual appearance in the tree, and many of them eagerly sought to swallow the fingers of my extended hand.

Alligators gather about the colony, probably to feed, in part, upon the



YOUNG CORMORANTS

fragments of food which fall from the nests above. Six were counted at one time within easy rifle range of the boat. One of the young, while climbing along a slender limb, lost its balance and fell with a splash into the water. It immediately dived, and, coming to the surface about twenty feet away, began swimming up the lake with long and rapid strokes. By the time I had descended to the boat with my cameras, the bird was fully fifty yards away. To our horror, a large alligator had given chase, and was rapidly approaching the swimmer. We immediately started in pursuit, and, after an exciting chase, rescued the young Cormorant; but not until the alligator had made two unsuccessful snaps at his intended victim, which escaped only by diving with marvelous quickness just at the proper instant.

Six years ago one hundred and fifty pairs of birds were breeding here. For some reason the colony has decreased in the number of mated birds.

This falling off in numbers, however, may be only temporary in character, as Cormorants are known to have but few natural enemies, with the exception of Fish Crows. These black marauders were seen continually dodging about the colony. We saw one flying away with an egg stuck on the end of its beak, and, in another case, one was observed devouring a nest of young birds newly hatched. Many Fish Hawks breed along the shore of the lake, and a few pairs of Great Blue Herons and Black-crowned Night Herons had made their nests in the same trees occupied by the Cormorants. In one Blue Heron's nest a young Cormorant was found crouching between two frightened young Herons, apparently quite at home.

The Cormorants breeding here on Great Lake probably retire to the South upon the approach of winter; and the Cormorants observed along the North Carolina coast during the colder months will doubtless prove to be the Double-crested, whose summer home is in the far north.

Some Early American Ornithologists

I. MARK CATESBY

By WITMER STONE

THE history of bird study in America dates back some three hundred years, but the contributions of the first century are little more than publications of myths and names of birds derived from the Indians, with attempts on the part of the author to correlate them with well-known birds of the Old World.

Many of the early narratives of voyages to America or reports on the early colonies devote a page or a chapter, as the case may be, to such sketches of the bird life. The authors were not ornithologists, and their productions have little value except as literary curiosities.

In 1712, however, there came across the water a young man thirty-two years of age—Mark Catesby by name—who was destined to produce the first reliable work upon North American birds. Catesby was a true naturalist, and, though we may smile at his crude pictures and his antiquated style of composition, we appreciate the spirit which prompted his work and recognize in him a brother ornithologist, well qualified for membership in the American Ornithologists' Union, had that body been in existence in his day.

Catesby was born in England in 1679 or 1680, and, though he had "an early inclination to search after plants and other productions of nature," it was "much suppressed by his residing too far from London, the center of all science"; just where he did live, however, he does not tell us. His

desire to broaden his knowledge of natural history caused him to contemplate a visit to America, and, having relatives in Virginia, he made that colony his objective point. He arrived April 23, 1712, and remained five years, familiarizing himself with the strange plants and animals that everywhere confronted him. Upon his return to England, he seems to have experienced much regret at not having obtained more substantial results and he soon determined to visit again the New World and prepare an account of its natural history suitable for publication.

A number of prominent men lent him financial assistance, and on the 23d of May, 1722, he arrived at Charleston, S. C. To quote from the introduction of his work, he explored the "low country" during the first year, "searching after, collecting and describing the animals and plants"; he then went "to the upper uninhabited parts of the country, and continued at and about Fort Moore, a small fortress on the banks of the river Savanna." He found the life in the upland quite different from that of the lowland, thus giving us one of the first intimations of the effect of altitude upon geographic distribution. "This," he says, "encouraged me to take several journeys with the Indians higher up the rivers, toward the mountains, which afforded me not only a succession of new vegetable appearances, but the diversion of hunting Buffaloes, Bears, Panthers, and other beasts."

He took with him a box in which he placed his dried plants and his painting materials; for, though he admits that he "was not bred a painter," he boldly attempted to portray the birds and plants that he discovered, with the result that, though "violent both in drawing and color,"* his plates are almost all easily recognizable.

Catesby spent three years in Carolina and Georgia and then visited the Bahamas—"Providence, Ilathera, Andros and Abbacco." Reaching London in 1726, he set about publishing his book, but was deterred by the great expense involved in such an undertaking. However, he began learning the art of etching on copper, and, having acquired sufficient skill for his purpose, he, himself, prepared the 220 folio copper plates which illustrate this remarkable work; and, with pecuniary assistance from his friends, the work appeared in two large volumes, entitled, 'The Natural History of Carolina, Florida, and the Bahama Islands,' the text printed in English and French, in parallel columns. The first volume was published in 1731, and the second, 1743, and an appendix in 1748. Two other editions appeared later.

Regarding the preponderance of birds in his work, Catesby says: "As there is a greater variety of the feathered kind than of other animals, and as they excel in the beauty of their colors * * * I was induced chiefly to complete an account of them, rather than to describe promiscuously insects and other animals, by which method I believe very few birds have escaped my knowledge, except some Water Fowl, and some of those which frequent the sea."

* Coues.

In all, he described and figured upward of one hundred species, and in his plates seems to have been the first to group together birds and plants in the manner later followed by Audubon, Gould and others. His descriptions are recognizable and his brief accounts of the habits of the birds interesting, though they frequently contain amusing myths obtained from the settlers or the natives.

Of the Wild Pigeon, or Pigeon of Passage, as he calls it, he says: "The people of New York and Philadelphia shoot many of them as they fly, from their balconies and the tops of their houses." The Mockbird of Catesby upheld its reputation as a vocalist then as now, and imitated "all bird notes from the Hummingbird to the Eagle"; while this latter bird, whose head he tells us, notwithstanding its name of bald, is as well feathered as any other part of its body, pursued the 'Fishing Hawk' across Catesby's pages, just as it has done in the works of his successors.

The Purple Jackdaws—our Grackles—he tells us, "have a rank smell and their flesh is coarse and black and is seldom eat," while their relative, the Red-winged Starling, he was informed, can be taught to talk and sing in captivity. The seasonal change in plumage of the Bobolink was noted by this observant naturalist, but he sagely remarks, "When they return south in the fall they are all hens," a mistake shared by later writers also.

Our Blue Jay recalled the old-world Jay, having the same "jetting motion," but it struck him as more tuneful.

Two of our finest birds, now on the verge of extinction, Catesby describes with care, and includes some notes of much interest—these are the Ivory-billed Woodpecker and the Carolina Parakeet. The large white beak of the former, he tells, us is in great demand among the northern Indians, in whose country the bird does not occur, and they trade for it with the more southern tribes, giving two or three buckskins for each bill. After a good account of the Parakeet, he adds the highly useful information, "Their guts is certain and speedy poison to cats,"—probably one of the first contributions to economic ornithology in America.

Catesby was the first describer, if not the actual discoverer, of most of our familiar birds but, owing to no fault of his, this credit usually goes to another. After the Latin names of these birds in our check-lists we usually find the authority *Linnæus*, and by many the great Swedish botanist is looked upon as their discoverer. As a matter of fact, Linnæus was simply the discoverer or rather the inventor of the 'Binomial System' of names, which has been in use among naturalists ever since. Catesby and his contemporaries, in giving a Latin name to a bird, used as many words as they deemed desirable; but Linnæus recognized the utility of a system of two words only, one for the genus and one for the species. Having applied this successfully in his favorite study—botany,—he extended it to zoölogy, and named all the described species on this plan, basing his names largely upon

the published works of others, as he was himself familiar with but a small portion of the animal kingdom. So far as North America was concerned, he relied almost entirely upon Catesby's 'Natural History' and gave a binomial name to each of the birds described and figured in that great work. So that the Mockbird, *Turdus minor cinereo-albus non maculatus* of Catesby became the *Turdus polyglottos* of Linnæus, and in our present nomenclature we have nothing to perpetuate the name of this worthy man.

In the history of North American ornithology, however, Catesby will always stand out prominently as the pioneer, and our only regret is that he has not left us more details of his life and character; for a man with the enthusiasm and energy necessary for the production of such a work, in the face of such difficulties as must necessarily have confronted him, was a man whom we should like to know better and whose character must have been one well worthy of study.



CEDAR WAXWING ON NEST

Photographed from nature by R. H. Beebe, Arcade, N. Y., July, 1903

The Chimney Swift

By GUY A. BAILEY

With photographs from nature by the author

IT has not been many years since Chimney Swifts gave up nesting in hollow trees and began building in chimneys. At the present time, however, it is no uncommon occurrence to find their basket-like nests in barns and other outbuildings.

During the season of 1904 I had the good fortune to find three such nests, —two in barns, and one in a granary. Just how general this practice is among our Swifts, I am not aware; but I suspect it must be common. My observations have been made in the valley of the Onondaga Creek, near Syracuse, N. Y. The views herein contained are flash-light photographs, taken in a large barn on two consecutive afternoons; daylight being so dim that artificial light was necessary.

The nest was built of sticks in the usual way, near the ridge, on the south gable. A large circular hole near the top allowed the birds ready passage to and from their nests. With the aid of a ladder, to which I fastened the camera, I was able to work at close range without visibly disturbing their regular labors.

The flash-light gun was used to explode the powder, and was most convenient. The parent birds were not usually frightened away by the explosion, although the powder was not more than two feet distant from the dusky family. Each flash was answered, however, by a chorus of creaking voices, in which both the young and old birds took a part. Although the heat was stifling, and the gases from the



A WELL-FILLED NEST. YOUNG SWIFTS

powder suffocating, the birds seemed to endure the siege better than I.

By reference to the photographs, it will be seen that the nest is by far too small to hold the brood comfortably. One photograph shows one of the adults

actually crowding out the young birds. This practice was brought to my attention early in my observations, and was often repeated. In my opinion, it was a deliberate act on the part of the adults. By being thus forced out, the young birds are taught to cling to the side of the barn and to make proper use of the claws, wings and tail. The young thus become accustomed to this mode of perching, and retain it through their life-time.

The action of the adult birds was, at all times, of a mild, suggestive nature. Generally, after feeding the young, the old bird crawled over to one side of the nest and cautiously insinuated its body behind the



CHIMNEY SWIFT CROWDING YOUNG FROM NEST

young birds. The adult bird kept crowding until all but one or two of the brood of five were forced out of the nest and took up positions on the vertical roost. The remaining birds would sometimes leave the nest of their own accord and follow their mates. This was noticed especially after those clinging to the boards had been fed.

It often happened that the adult birds would remain away from the young as long as twenty minutes, during which time the little ones would return to the nest. Usually, however, one parent would remain with the brood until relieved by the mate. On such occasions there was a period of several minutes when both parents were present.

One of the adults is shown spreading its wings over the young as if to protect them from falling, or to allow them to shift about. This was a common occurrence and seemed to contrast with their rather ruthless custom of crowding them out of the nest.

It will be noticed that the birds are seen usually to the left of the nest. This position was farther from the camera and the large opening in the gable, and hence more desirable for the more or less suspicious birds. I was about four feet from the birds and in plain view from the light of the

opening. The birds seemed to be aware of my presence, but regarded me with indifference. There was no increased creaking except at the instant

of the explosion, and this was brief. Subsequent casual observations were taken for nearly two weeks and the birds were found still clinging to the boards. They sometimes came down the side, nearly two feet to a girder, but I did not see them rest in this convenient place.

Not far away, in the same end of the barn, two broods of Barn Swallows were being reared. The relations between the Swifts and the Swallows were harmoni-



CHIMNEY SWIFT BROODING YOUNG

ous, all using the same entrance. The Barn Swallows did not enter during my stay, but kept a constant vigil at the opening, wailing bitterly as they flew up to the opening and caught a glimpse of me so near their nests.

If Chimney Swifts will continue to build in such accessible places, it is possible that we may learn many things concerning their interesting life-history.

The Woodcock's Wooing

By WINIFRED BALLARD BLAKE

Peent, -peent, -peent, -peent,-
 From the thick grass on the hill;
 Peent, -peent, -peent, -peent,-
 At eve when the world is still.

Then a sudden whistle of whirring wings,—
 A rush to the upper air,—
 And a rain of maddening music falls
 From the whole sky,—everywhere!

For Teachers and Students

Bird-Lore's Advisory Council

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

To those of our readers who are not familiar with 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 four years which it has been in operation fully equals our expectations; and from both students and members of the Council we have had very gratifying assurances of the happy results attending our efforts to bring the specialist in touch with those who appreciate the opportunity to avail themselves of his wider experience.

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

NAMES AND ADDRESSES OF MEMBERS OF THE ADVISORY COUNCIL

UNITED STATES AND TERRITORIES

- ALASKA.—Dr. C. Hart Merriam, Biological Survey, Dept. of Agr., Washington, D. C.
ARIZONA.—Herbert Brown, Yuma, Ariz.
CALIFORNIA.—Charles A. Keeler, Calif. Acad. Sciences, San Francisco, Calif.
COLORADO.—Dr. W. H. Bergtold, 1460 Clayton Ave., Denver, Col.
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., Tallahassee, Fla.
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, Dept. of Agr., Wash-
IOWA.—C. R. Keyes, Mt. Vernon, Ia. [ington, D. C.]
KANSAS.—Prof. D. E. Lantz, Manhattan, Kan.
LOUISIANA.—Prof. George E. Beyer, Tulane University, New Orleans, La.
MAINE.—O. W. Knight, Bangor, Me.
MARYLAND.—F. C. Kirkwood, Box 364, Baltimore, Md.
MASSACHUSETTS.—William Brewster, Cambridge, Mass.

- MICHIGAN.—Prof. W. B. Barrows, Agricultural College, Mich.
 MINNESOTA.—Dr. T. S. Roberts, 1603 Fourth Avenue South, Minneapolis, Minn.
 MISSOURI.—O. Widmann, Old Orchard, Mo.
 MONTANA.—Prof. J. M. Elrod, University of Montana, Missoula, Mont.
 NEBRASKA.—Prof. E. H. Barbour, University of Nebraska, Lincoln, Neb.
 NEVADA.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW HAMPSHIRE.—Prof. C. M. Weed, State Agricultural College, Durham, N. H.
 NEW JERSEY, Northern.—Frank M. Chapman, Am. Mus. Nat. History, New York City.
 NEW JERSEY, Southern.—Witmer Stone, Academy Natural Sciences, Philadelphia, Pa.
 NEW MEXICO.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washington, D. C.
 NEW YORK, Eastern.—Dr. A. K. Fisher, Biological Survey, Dept. of Agr., Washing-
 NEW YORK, Northern.—Egbert Bagg, 191 Genesee Street, Utica, N. Y. [ton, D. C.
 NEW YORK, Western.—E. H. Eaton, Canandaigua, N. Y.
 NEW YORK, Long Island.—William Dutcher, 525 Manhattan Ave., 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.—A. W. Anthony, 761½ Savier St., Portland, Ore.
 PENNSYLVANIA, Eastern.—Witmer Stone, Acad. Nat. Sciences, Philadelphia, Pa.
 PENNSYLVANIA, Western.—W. Clyde Todd, Carnegie Museum, Pittsburg, Pa.
 RHODE ISLAND.—C. Abbott Davis, Museum Natural History, Roger Williams Park,
 SOUTH CAROLINA.—Dr. Eugene Murphy, Augusta, Ga. [Providence, R. I.
 TEXAS.—Prof. Thomas A. Montgomery, Jr., University of Texas, Austin, Tex.
 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. Rathbun, Seattle, Wash.
 WEST VIRGINIA.—Dr. W. C. Rives, 1723 I Street, Washington, D. C.
 WISCONSIN.—H. L. Ward, Public Museum, Milwaukee, Wis.
 WYOMING.—Dr. Mortimer Jesurun, Douglas, Wyo.

CANADA

- BRITISH COLUMBIA.—Francis Kermode, Provincial Museum, Victoria, B. C.
 MANITOBA.—Ernest Thompson Seton, Cos Cob, Conn.
 NEW BRUNSWICK.—Montague, Chamberlain, 45 Milk St., Boston, Mass.
 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, Can.

MEXICO

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

WEST INDIES

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

GREAT BRITAIN

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

The Migration of Warblers

NINTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

KENTUCKY WARBLER

Ranging in the winter from southern Mexico to Colombia, the Kentucky Warbler starts northward in time to reach the United States the first week in April.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
Tarpon Springs, Fla.			April 6, 1886
Atlanta, Ga. (near)	6	April 7	April 1, 1896
Asheville, N. C. (near)	3	April 21	April 18, 1894
Raleigh, N. C.	7	May 1	
Washington, D. C.			May 3
Beaver, Pa.	2	May 1	April 30, 1902
Waynesburg, Pa.			May 1, 1892
Berwyn, Pa.	6	May 7	May 3, 1900
New Orleans, La.	4	April 1	March 30, 1895
Helena, Ark.	8	April 20	April 15, 1896
Eubank, Ky.	9	April 21	April 15, 1893
St. Louis, Mo.	4	April 24	April 21, 1886
Brookville, Ind.	4	May 6	April 20, 1896
Keokuk, Ia.	4	May 7	April 26, 1898
San Antonio, Texas.	5	April 14	April 8, 1890
Northern Texas	7	April 15	
Onaga, Kan.	9	May 5	April 26, 1896

FALL MIGRATION

The southward movement begins the last of July, and on October 7 the species has been taken at the extreme southern limit of its known range in Colombia, South America. Some records of the latest observations are at Berwyn, Pa., September 4, 1896; Beaver, Pa., September 13, 1888; Cadiz, Ohio, September 23, 1900; Eubank, Ky., September 6, 1888; Raleigh, N. C., September 12, 1894; New Orleans, La., October 19, 1895.

CONNECTICUT WARBLER*

This is one of the few species that seem to travel different routes during the two yearly migrations. The spring migration is through Florida to the Mississippi Valley and thence north to the breeding grounds. The few records of spring migration note the arrival of this species in southern Florida, May 4-19; northern Florida, May 10-11; Chester county, S. C.,

May 10; St. Louis, Mo., May 14-22; English Lake, Ind., May 4, 1891; Glen Ellyn, Ill., May 12, 1896; southern Michigan, May 17, 1894; southern Ontario, May 16, 1892.

FALL MIGRATION

The vicinity of Chicago is one of the few places in the United States visited by the Connecticut Warbler during both spring and fall migration. Here the average period of fall occurrence is from August 31 to September 10, with extremes of August 30 and September 17. The path of fall migration passes principally east of the Allegheny Mountains and some dates of occurrence along the Atlantic slope are at Saco, Me., September 8-15; Shelburne, N. H., September 14; Pittsford, Vt., September 20; Portland, Conn., September 17 to October 1; southeastern New York, August 26 to October 12; Englewood, N. J., September 3 to October 11; Washington, D. C., August 28 to October 12; Raleigh, N. C., October 14-24; southern Florida, October 9. So far as known, the Connecticut Warbler has not been recorded anywhere during the half of the year from October 22 to April 9.

The Warbler Book

As the season approaches for the return of the Warblers, I again ask the coöperation of bird students in the preparation of a volume devoted to these attractive birds.

Since the announcement in BIRD-LORE for April, 1904, of plans for this book, many contributions to it have been received. For the greater part, however, they relate to the migration of Warblers; while material of this kind is always valuable, it is less desirable, in the present connection, than information concerning the life histories of these birds.

The appended study of the Worm-eating Warbler closely approaches the character of manuscript needed. It is plainly based on continued field study with an evident end in view. If you would sound the depths of your knowledge of your commonest Warbler, attempt to write a sketch of it similar to that by Mr. Burns. Doubtless you will discover room for further field work, and this we sincerely trust you will find time for during the present season.

F. M. C.

The Worm-eating Warbler

By FRANK L. BURNS, Berwyn, Pa.

The Worm-eating Warbler is here a common summer resident. First arrivals: May 3-14. Common: May 7-22. Departs: August 29—September 5.

Song.—I can distinguish no difference between the notes of this species and the Chipping Sparrow; the first may be a trifle weaker perhaps. The series of notes may be uttered while perched, or creeping about the lower branches of the trees, sapling tops, bushes or fallen brush, or while on the ground. With slightly drooping tail and wings, puffing out of body plumage, throwing its head back until the beak is perpendicular, it trills with swelling throat an unvarying *Che-e-e-e-e-e*, which does not sound half so monotonous in the woods as does the Chippy's lay in the open. The first song period is from the time of arrival until June 24 to July 5, but during the last two weeks, when housekeeping is a thing of the past and the hot days have come, it is seldom heard except in the early morning, beginning about four o'clock, and in the cool of the evening. The second song period is very brief and follows the molt. I have no dates.

Courtship is brief if, indeed, the birds are not mated upon arrival.

Haunts.—The bird is extremely local, inhabiting the wooded hill slopes. I do not remember having ever met with it in the open or in the small groves of the bottom-lands. It is at home in the second-growth timber of the hills, and is very deliberate in its movements, seeming never in a hurry and yet never idle. Stepping out with dainty tread and bobbing head, it is a really graceful little walker on ground or tree.

Nesting-site.—The nesting-site is seldom in the denser undergrowth, but preferably the more open woods, and the nest is usually at the foot of a small stub, laurel sprout, or spray of wild huckleberry, against which there has been a lodgment or drift of dead leaves; and, as the bird always removes the leaves from the exact site, sometimes scratching out a slight hollow in the mold, the finished nest, sunk to the rim and protected by the leaf drift above and on the sides, has the appearance of being placed in a miniature cave. The bird exhibits a remarkable love for its chosen nesting haunts, building the second and third nest within a radius of a few hundred feet when disturbed, and returning year after year to the same place if successful in raising a brood. I have not observed a single pair building on the exact site of former years, but on several occasions within a few feet of it. While the female takes the leading part, the male is always present and seems busy, a by no means silent partner in the selection of site and construction of nest.

Composition of Nest.—Dead chestnut, beech and oak leaves, sometimes, also, a few dogwood, cherry or maple leaves, almost always well rotted and

partly skeletonized; an occasional strip of grape-vine bark, stem of the walking-grass, oak or hickory blossom finds its way in the rim of the nest. It is noteworthy that the bird seems to prefer leaves of more than a single season's decay, probably on account of the lessened bulk and better binding quality, as the nest is an exceedingly flat and compact structure for a ground-building Warbler. It is invariably lined with the flower-stems of the hair-moss, with only an occasional black horse-hair in a series of nests. The bright, reddish lining is about all there is to catch the eye, and that can seldom be seen from more than one point. When the bird is covering it, the blending is perfect at a short distance. The nest averages about three days in construction; the second and third buildings are frailer, showing haste. The nest is commenced May 15 to 20; the eggs are deposited and incubation is usually begun about May 28.

Eggs.—The eggs number four or five, usually the latter, rarely three, unless imposed upon by the Cowbird. Second sets—the first having been destroyed—seldom consist of more than four, and sometimes of only three eggs. There can be no set rule as to time when the first egg is deposited. If it is ready it is deposited immediately upon completion of nest, usually one or two days elapse. Deposition occurs daily, in most instances before 10 A. M., one instance every other day, when four eggs were in the set.

Incubation.—Incubation does not always commence immediately after completion of set, particularly if the season be young. It is probable that the second night witnesses the beginning of that period and, as far as my experience goes, I believe it is performed by the female alone. The male feeds her when covering newly hatched young. The home-coming of a brooding bird, after a brief airing and feeding, is heralded several hundred yards distant by frequent *chips* and short flights from branch to branch near the ground, in leisurely fashion and circuitous route, until at length, arriving above the nest, she runs down a sapling and is silent. The bird is a close sitter and if approached from the open front will often allow a few minutes' silent inspection, eye to eye, at arm's length, sometimes not vacating until touched, then she runs off in a sinuous trail, not always feigning lameness before the young are out. When disturbed with young in the nest she will flutter off with open wings and tail, and, failing to lead one off, will return with her mate, who is seldom far off at this period, circling about the nest or intruder, and, if the young are well feathered, she will dash at them, forcing them from the nest and to shelter. Once this brave little bird dashed at me and ran up to my knee, scratching with her sharp little claws at every step. On the return the birds always make the vicinity ring with their protests—a quickly repeated *chip*. The period of incubation in one instance was thirteen days.

Young.—Young fear man soon after their eyes are open, and a menacing finger will cause them to scamper out and away, repeated replacing in the

nest proving of no avail after they became panic-stricken. At three days of age they made no outcry but opened their mouths for food, which consisted of a species of white moth, or 'miller,' and soft white grubs, supplied by either of the parent birds. At that period they were naked except a fluff on head and wing quills, just showing feathers at tips. In the presence of an intruder and absence of the parents, they will sit motionless if not threatened, and, but for the blinking, beady eyes, one might mistake them when well fledged, at very close range, for dead leaves. The head stripes became visible under the nestling down on the seventh day, and they left the nest ten days after leaving the shell, in the one case I have kept record of. The parents keep the young together for several days at least, just how long is impossible to say. One brood is all that is reared in the season, I think.

Enemies.—This Warbler's enemies are wood-mice, red squirrels and hunting dogs; the latter will sometimes push up and overturn the nest; an occasional weasel or blacksnake may destroy a few young. The percentage of loss while in the nest cannot be high.

A Vote for the National Association Bird

ST. LOUIS, MO., February 10, 1905.

DEAR MR. DUTCHER:—

You want a thoroughly representative bird, suitable for a seal of the N. A. A. S., a bird found throughout North America from the Arctic to Panama.

There is really not much material to choose from. It should be a truly American bird, identifiable by its contour alone,—one in which no color is needed to distinguish it from other birds of similar outline, as would be the case with the Bluebird, Robin, Swallow and others, all of which have resemblance in outline to Old World relatives. It shall not be a commonplace bird, like a Hawk or an Owl, though they need our attention as much as anything else; even more so, because misunderstood and maligned. Neither would it do to take a game-bird for an Audubon Society, which has no sympathy with the hunter and is unwilling to recognize any of its proteges as game. I know of no bird which would fill the place on the seal better than a Hummingbird. North American Hummingbirds are found from Alaska to Panama and from Labrador to Alberta. The outline of a Hummer is unmistakable in any position in which it may be pictured; it is the exponent of elegance and grace in form and action, and of brilliancy in plumage. It is one that needs protection more than any other bird, because so much sought after by taxidermists, milliners and makers of artificial flowers. The destruction has been such that certain species with a restricted habitation are said to be already exterminated or at the point of extinction. I therefore ask, could anything be more appropriate than a Hummingbird? Universally known, popular throughout, unmistakable, truly admired for beauty and behavior, exclusively American, a fit subject for protection wherever it occurs, a living incentive to immediate extension of Audubon work over the entire Western Hemisphere.

Yours truly,

O. WIDMANN.

Note on the Migration of Warblers from the Bahamas to Florida

By FRANK M. CHAPMAN.

WHILE sailing from Miami, Florida, directly east across the Gulf Stream to the Bahamas, in May, 1904, I observed three small bodies of migrating Warblers flying toward Florida. The birds were not so high in the air as we might have expected them to be, but were flying low, within a few feet of the water.

The first group of six or seven birds, among them a Redstart, was seen about 6 A. M., May 10, when we were some six miles from land, which was still, of course, plainly visible. Later in the day, when we were about midway between the Florida coast and the Biminis, the nearest Bahaman land, a compact flock of seventy-five to one hundred Warblers passed us, flying slightly north of west. The birds were not more than ten feet above the water and were evidently not guided by sight in their choice of direction.

On the morning of May 11, as we approached the Bahaman banks, between the Biminis and Great Isaacs, a third group of Warblers was seen, and they, like the two preceding, were flying toward Florida within a few feet of the water.

April 28, 1904, a migratory 'wave' of Warblers passed over Sebastian on the east coast of Florida, Cape May Warblers being among the common species. Nine miles further north, on the east shore of the Indian river at Oak Lodge, the home of Mrs. F. E. B. Latham, which visiting naturalists always recall with pleasure, Mrs. Latham supplies the birds with water, which, as the accompanying photograph shows, is eagerly accepted.



THIRSTY TRAVELERS

Migrating Warblers at Mrs. F. E. B. Lathams, Oak Lodge, Florida. Photographed by Miss H. B. Wood

For Young Observers

Edited by T. GILBERT PEARSON

Address all communications for this Department to the Editor, at Greensboro, N. C.

To Study Bird Tenants

IF those Young Observers who put out bird-boxes this spring will watch closely, they may see many new and delightful things happen when the birds come to make their nests in them. Let me suggest that each of you have a note-book and keep a diary of what takes place about the bird-box. When you once begin this, there will be so many things to write down that you may find it hard to know just what to include in your notes. In order to guide those who may be interested in keeping a note-book, I am going to ask some questions, which if you can answer correctly at the end of the summer will show that you have made a good study of the birds you have been watching. With this information all carefully preserved in your note-book, you will be able to write an article for the 'Young Observers' department, and thus let us all share something of the pleasure which has been yours during the days when you so carefully watched the pair of bright birds flying daily about your home.

POINTS TO BE NOTED

1. What date did the birds first appear to take notice of the box?
2. What kind of birds chose the box as their home, and did any other species attempt to drive them away?
3. When did they first begin to bring material for the nest, and how many days before they ceased to perform their work?
4. What time of day did the birds work most at their task, and how early in the morning and late in the evening did you see them thus engaged?
5. Did the male and female both build their home; if not, which one appeared to be the most active in the work?
6. On what date was the first egg laid, and when did the last one appear?
7. Which bird sat on the eggs to incubate them, or did both birds take turns attending to this duty?
8. How many days passed before the eggs hatched?
9. How often were the young fed between eight and nine o'clock in the morning and between four and five o'clock in the afternoon on two different days? Did both birds feed the young, and could you tell what they fed them?

10. How many days after the eggs hatched before the young left the nest ?

11. Did the young know how to fly at once upon leaving the box, and do you think the old ones taught them to fly ?

12. When the birds have left the nest not to return again, take out the nesting material and see of what it is composed. How many feathers, twigs, strings, pieces of grass or other articles did it contain ?

PRIZES FOR THE BEST REPORTS

BIRD-LORE offers three prizes for the best studies of bird tenants on the lines laid down above. The prize will be a bird book or books to the value of \$2.50 for the first prize, \$2 for the second prize, and \$1.50 for the third prize.

A Boy's Invention

By ALBERT B. CANFIELD (aged 12 years), Curran, Ill.

One day I felt like hammering nails, and I wondered what to make. I thought about a bird-food shelf. I got a board one foot wide and two feet long. I tacked a strip around the four sides to keep the food from blowing off; then I bored four holes, two at either end, and ran wire through to hang it up by. If it is hung with wire, the English Sparrows will not alight on the shelf; I mean they will not get on anything that swings.

We have a bird-pole twenty-five feet high; it has a fine Martin house on top, and about four feet down is a Bluebird house. I nailed a board on the bird-pole about twelve feet from the ground and put walnuts on it; and we have had, in one day, forty Juncos, ten Chickadees, eight Tufted Titmice, three Hairy Woodpeckers, two Downy Woodpeckers, seven Blue Jays and one Cardinal. The pole is ten feet from our kitchen window, so we watched them all day, as we were home from school. I wish every farm had a bird-food shelf. If they loved birds as well as I do, they would; it is so interesting to watch them eat, and a comfort to know the English Sparrows will not get on a shelf that swings.

Notes from Field and Study

A New Wren Song

At the village of Shanesville, Tuscarawas county, Ohio, I heard a Carolina Wren sing a new song on the morning of December 3. The bird was perched in plain view on a peach tree, in a friend's rear yard, and sang precisely like a Song Sparrow, except that the tones were stronger and fuller. The tune, pitch and phrasing of the song were just like one of the Sparrow's favorite runs. Neither the quality of tone nor the technique was that of the Wren. I was greatly surprised to hear this song, for I have been studying the Carolina's minstrelsy for many years and in many parts of the country. A young man of the town told me afterward that he had been hearing the bird sing for some time, and thought, too, it was a Song Sparrow until he saw the bird plainly, and noted that it was a Carolina Wren. I am interested in knowing whether any one else has ever heard this Wren borrow the Song Sparrow's trills, or whether our little musician was an 'original.'—LEANDER S. KEYSER, *Canal Dover, Ohio.*

Sport in Italy

A portion of a letter by Mr. J. Rowley, formerly of the American Museum of Natural History, dated from Rome, will interest BIRD-LORE's readers. Mr. Rowley writes that "the Italian 'sportsman' uses a live Owl—a little gray fellow, without horns. These little Owls may be seen at this season exposed for sale all over the town. A good lively Owl sells for one dollar. The 'sportsman' sticks up his Owl, as shown in the enclosed photograph, and takes his stand some distance away. When the small birds gather around to mob the Owl, the sportsman gets in his work on them. In Italy, no bird is too small for the sportsman. They kill anything with feathers upon it. A small gray Lark is the bird that is most highly prized, and these sell for 4 cents each in the markets. It is a common thing to see men roaming about the streets, hawking small birds for

sale—pecks of them, all strung by the nostrils. The chief ones are: Starlings, Goldfinches, Sparrows (not English), small Larks, Thrushes, Quail and Lapwings. I always thought of Mr. Dutcher when I saw these



AN ITALIAN 'SPORTSMAN'

strings of poor little things offered for sale for food purposes. The Italians are brought up to this here, so we can't wonder at their carrying the custom to America with them."

A Belated Robin

On October 29, 1903, in Brandon, Vt., a Robin was seen sitting on a nest in a leafless tree, near a house. The person who saw it went to the house and obtained permission to look into the nest from an upstairs window. There were seven or eight eggs seen when the Robin left the nest. It was not possible to learn how long the Robin had been brooding, for the occupant of the house had "something else to do besides watch birds," and knew nothing about it.—CAROLINE GRAY SOULE.

The Massachusetts Audubon Society's Check-Lists

In order to encourage an active interest in field work on the part of its members, the Massachusetts Audubon Society supplies them with blank bird-lists on which to record the species they have identified in Massachusetts during the year.

The names of the authors of the best nine lists for the year ending December 31, 1904, with the number of birds recorded by each, are as follows: Lilian E. Bridge, 181; Elizabeth S. Hill, 144; James Lee Peters, 139; Lilian Cleveland, 137; Samuel D. Robbins, 113; Sarah K. Swift, 103; Louise Howe, 96; Bertha Langmaid, 86; Georgie M. Wheelock, 72.



A FIVE-STORIED PHOEBE'S NEST
Photographed by Redington Dayton

An Interesting Phœbe's Nest

Back in the country, on a road now little used, stands one of the original 'little red schoolhouses.' I had long wished to visit it and was enabled to do so for the first time in the summer of 1904.

The door was fastened, but the bottom sash of a west window was missing, and through this I climbed into the schoolroom where the desks and benches were still in place, carved and cut full of initials, mute testimony of the boys' jack-knives, and in the corner still stood the teacher's desk, above which, on the projecting edge of the window-frame, a pair of Phœbes had built their nest.

The nest measured nine inches, and was so near the ceiling as barely to admit the old birds upon it; and, the young having flown and it being in perfect condition and well built, I took it for my collection, not noticing any further peculiarities until showing it to some bird students, when we found that the birds had repaired and built upon the original nest, each time adding more moss and less mud. Upon separating it we found five nests built into one, each division showing plainly that young birds had been raised in each nest.

I have often known Phœbes building on the ruins of their old nest, but never have seen any to equal this one, and send the photo showing the divisions, thinking it may interest readers of BIRD-LORE.—
WILBUR F. SMITH, *So. Norwalk, Conn.*

A Note on the Food of the Bronzed Grackle

Last fall I made an interesting observation on the food of the Bronzed Grackle. This bird occurs here only in the migrations, our summer resident bird being its near relative, the Purple Grackle.

On November 8 I came upon a large flock of Bronzed Grackles in the woods. They were constantly in motion, actively engaged in hunting for food among the dead leaves covering the ground. Several times I saw a bird fly up with a curious object in its bill. Finally one alighted near me and I saw that the object was a wood frog, a small brown frog very common in our damp woodlands.—
W. DEW. MILLER, *Plainfield, N. J.*

Book News and Reviews

FIELD BOOK OF WILD BIRDS AND THEIR MUSIC. By F. SCHUYLER MATTHEWS. G. P. Putnam's Sons, New York. 1904. 16mo. Pages xxxv + 262; pll. mostly colored), 55.

This is the most interesting and successful attempt to treat the subject of bird song with which we are familiar. If we frankly acknowledge that in most instances no description, notation or graphic representation will give one an adequate idea of a bird's song one has never heard, there is still much the describer of bird music may do to aid the bird student in identifying the voices of unseen singers. This Mr. Matthews proceeds to do by a variety of means — notation, ingenious diagrams, syllabification, description, etc.

Mr. Matthews is evidently well qualified to handle his subject, both from the ornithologist's and musician's point of view. He avoids the mistake, common to most writers who render bird song by musical notation, of assuming that every bird student reads music, and furnishes a special chapter for those whose education in this direction has been neglected, which should go far toward making his book intelligible to them. He does well, we think, to emphasize the importance of rhythm over tone, not only because rhythm is less variable than tone but because it can be more readily and clearly expressed.

Mr. Matthews' illustrations are by no means the least interesting part of his book. Most of them are colored, from a commercial standpoint successfully colored, that is, they are easily recognizable, and all are the work of an artist rather than a bird artist. Some of them are decidedly attractive, but since Mr. Matthews calls the scientist to order for using the term "purple" for "crimson" (a mistake, by the way, for which the scientist is no more responsible than he is for the misapplication of the name Robin), we cannot forbear asking Mr. Matthews why he so often refuses to give nine- or ten-primaried oscines only four primaries!—F. M. C.

CASSINIA; PROC. DELAWARE VALLEY ORNITHOLOGICAL CLUB, viii. 1904. 8vo. Pages, 80.

The annual publication of that successful and progressive organization, the Delaware Valley Ornithological Club, contains, as usual, evidences of the continued activity of the club and its members. Without further comment than a suggestion that those interested secure this excellent publication, we append a list of its contents: 'Samuel W. Woodhouse' (portraits), Witmer Stone; 'A Chimney Swift's Day,' Cornelius Weygandt; 'The Long-billed Marsh Wren,' Chreswell J. Hunt; 'The Short-billed Marsh Wren in Eastern Pennsylvania and New Jersey,' LaRue K. Holmes; 'The Barn Owl in Chester Co., Pa.' (ills.), Thomas H. Jackson; 'Summer Birds of Pocono Lake, Monroe Co., Pa.,' John D. Carter; 'Summer Birds of Port Alleghany, McKean Co., Pa.,' Thomas D. Klim; 'A Glimpse of Winter Bird Life in Delaware,' Charles J. Pennock; 'Report on the Spring Migration of 1904,' Witmer Stone; City Ornithology, Abstract of Proceedings; Club Notes, list of officers and members, the former being: President, Spencer Trotter; vice-president, William A. Shryock; secretary, William B. Evans (56 N. Front St., Philadelphia); treasurer, Stewardson Brown.—F. M. C.

ABSTRACT OF THE PROC. LINNÆAN SOCIETY OF NEW YORK FOR THE YEARS ENDING MARCH 10, 1903, AND MARCH 5, 1904. 8vo. Pages 69.

In addition to the customary 'Abstract of Proceedings,' this publication contains 'Field Notes on the Birds and Mammals of the Cook's Inlet Region of Alaska' (ills.), J. D. Figgins; 'Some Notes on the Psychology of Birds,' by C. William Beebe; 'Some Apparently Undescribed Eggs of North American Birds', by Louis B. Bishop.

The Linnæan Society is, or should be, to New York what the Delaware Valley Club is to Philadelphia, or the Nuttall Club to

Cambridge; but when we compare its 'Abstract' with 'Cassinia,' the publication of the Delaware Valley Club, above reviewed, we are led to believe that the comparative degree of interest in ornithology in and about both cities is fairly well expressed in the respective organs of these societies. The Linnæan Society does not appear to have had presented before it a single paper on local ornithology worthy of publication; its meetings were often suspended or were abandoned for lack of a quorum, and the highest attendance of members at any meeting—one of exceptional interest—was eleven, the average being about eight.

The Delaware Club, on the other hand, seems not to have missed a single meeting; its average attendance of members was 23; the highest, 37.

Ornithologists about New York may well consider the significance of these figures.—F. M. C.

The Ornithological Magazines

THE CONDOR.—With the close of 1904, 'The Condor' completed its sixth year. This volume is larger than any previous one and contains nearly twice as many illustrations as that for 1903. The November-December alone contains two full-page plates and eighteen half-tones in the text, most of them accompanying a paper on the habits of the 'The Black-headed Grosbeak,' by Wm. L. Finley, and an article on 'Albatross Pictures,' by Walter K. Fisher.

In 'Extracts from Some Montana Note-books, 1904,' Silloway gives the results of collecting near Lewistown, Mont., written ostensibly from the standpoint of the birds which have suffered from the raids of the egg-collector. In 'An Early Notice of Philippine Birds,' McGregor republishes from a collection of voyages and travels, issued in 1704, some notes made by Dr. John Careri, who visited the Philippines in 1696-97. These notes are interesting historically and are sufficiently definite to make it possible to identify seven species specifically and to recognize allusions to several groups such as the Quail and Parrots, which are represented in the archipel-

ago by a number of species. Bowles contributes an interesting account of two sets of eggs of the Western Golden-crowned Kinglets, found in Washington in 1904, and Sharp describes 'A Set of Abnormally Large Eggs of the Golden Eagle,' collected a few miles west of the Escondido Valley, Cal., March 12, 1904.

In making a comparison between the bird-life of the Pajaro Valley, Cal., and that of Sioux county, Neb., Hunter records 106 species from the former locality and 103 from the latter. Of these, 45 species are common to both regions, but, in the opinion of the author, gallinaceous birds and the best songsters are better represented in Sioux county. Among the short notes, Schutz's account of 'The Destruction of Bird-Life by Light Towers' in Austin, Texas, deserves special mention. The series of portraits is continued by an excellent picture of Dr. Leonhard Stejneger, of the U. S. National Museum.—T. S. P.

THE AUK.—The January number of this journal is up to its usual standard, containing, as it does, several important articles and a large number of valuable notes and reviews. A particularly noteworthy paper is by Irene G. Wheelock on 'Regurgitative Feeding of Nestlings,' the claim being urged that among many broods carefully watched, chiefly of Passerine species, "every brood hatched in a naked or semi-naked condition was fed by regurgitation a period varying from one day to four weeks." The accuracy of the observations seems beyond question, and the novelty of the facts forms a valuable contribution to our knowledge of the home affairs of birds. The temporary storage in the crop of food for the young has previously been detected in only a few species, and we are here still left in doubt as to how much of the disgorgement is from the pharynx and how much from the œsophagus itself. As practically no digestion takes place in the crop of any bird, the assumption is unwarranted that a mass of the soft parts of insects and seeds mixed with the saliva of the crop is "partly digested"; still, the mere fact that any sort of regurgitation takes place is one that is novel and of some importance as showing to what extent birds employ the

natural storage capacity of their throats in the transportation of food to their young.

Dr. L. B. Bishop, writing on the 'Status of *Helminthophila leucobronchialis* and *H. lawrencei*' furnishes strong evidence in favor of the view that Lawrence's Warbler is a hybrid between the Golden-winged and Blue-winged, while Brewster's is merely a leucochroic phase of the Blue-winged, still, if this be so, how is it that the song of Brewster's Warbler is said to be sometimes indistinguishable from that of the Golden-wing? W. W. Cook in 'Routes of Bird Migration' indicates that a large number of species fly directly across the Gulf of Mexico, a much smaller percentage following around its shores, contrary to what has generally been supposed; Dr. J. Dwight, Jr., discusses 'Plumage Wear in its Relation to Pallid Subspecies'; and R. Deane presents a letter from Swainson to Audubon.

Two local lists are in evidence, one by T. H. Montgomery, Jr., on the birds of Brewster county, Texas, and one by N. A. Wood and E. H. Frothingham on those of the Ausable valley in Michigan. Interest centers in the latter locality because of its being the long-sought breeding ground of Kirtland's Warbler. The annotated part of the Michigan list is as dry as a table of logarithms, and the reader is left to flounder through a mass of details as best he may. A Sparrow of California is still without a breeding range, according to J. Grinnell, who writes under the title 'Where Does the Large-billed Sparrow Spend the Summer?' but the number of like mysteries is reduced nearly to the vanishing point. So, too, are a number of species of birds, and E. H. Forbush's 'Decrease of Certain Birds in New England' is a melancholy commentary, from the birds' standpoint, on the benefits of civilization!—J. D., Jr.

THE WARBLER.—'The Warbler' for the 'first quarter' of 1905 appears as the first number of a new series greatly improved in character and contents.

The present number contains colored illustrations of the eggs of Kirtland's and Olive Warblers, the first with descriptive text by Edward Arnold; a note on a special

copy of the elephant folio edition of Audubon, lately acquired by the editor of 'The Warbler'; 'Notes on Some Adirondack Birds,' by George Chahoon, with a half-tone illustration of a Loon, whether from life or not is not stated; 'Feeding a Baby Hummingbird,' by Ira Lord McDavitt; 'The Alameda Song Sparrow,' by H. R. Taylor, with an attractive illustration of the haunts of this bird; 'The Starling,' by R. W. Shufeldt, who has a great deal to say about Starlings abroad and very little to say about their history in this country; 'A Mammoth Hawk's Nest,' by W. A. Hart, and 'Birds Found Breeding Within the Limits of the City of New York,' by John Lewis Childs.

The list of New York City breeding birds should closely approach a hundred species, we imagine, and if all are annotated as fully as those grown in the first instalment of this paper we shall have quite a contribution to the study of urban bird life. Surely we do not understand Mr. Childs aright when we read, "I know of but one place in Greater New York where the Wood Thrush breeds."—F. M. C.

WILSON BULLETIN.—'Wilson Bulletin' for December, 1904, completing Volume XVI of this excellent publication, contains 'Kearsarge Birds,' by E. H. and H. E. Porter; a July to September list of 69 species observed at Kearsarge, N. H.; 'An October All-Day at Blaine, Washington,' by William Leon Dawson; 'A Summer Porch List' of 49 species recorded near Chicago by Esther Craigmile; 'Some Observations on a Captive Red-tailed Hawk,' by W. F. Henninger; A call for a New Year Bird Census by the Editor, which we trust met with hearty response; 'Brewster's Warbler in Pennsylvania,' by Frank L. Burns and in Ohio by W. F. Henninger, editorial and other notes, reviews, and the announcement of election returns, from which we observe that the officers of the Wilson Ornithological Club for 1905 are: President, Lynds Jones; vice-president, W. L. Dawson; secretary, John W. Daniel, Jr.; treasurer, Frank L. Burns; executive council, H. C. Oberholser, John H. Sage and A. W. Blain, Jr.—F. M. C.

Bird-Lore

A Bi-monthly Magazine

Devoted to the Study and Protection of Birds

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Edited by FRANK M. CHAPMAN

Published by THE MACMILLAN COMPANY

Vol. VII Published April 1, 1905 No. 2

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico twenty cents a number, one dollar a year, postage paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

BIRD-LORE's editorial office is at present temporarily established in a photographic observation blind on Pelican Island, Florida, whence the editor, on behalf of the wards of the government and of the Audubon Societies, by which he is surrounded, sends greetings to all bird lovers who, directly or indirectly, have made their life one of comparative security.

Pelican Island today differs from Pelican Island prior to the establishment of the warden system chiefly in the greater tameness of the adult birds and in the scarcity of dead young birds. In 1898, on our first visit to the island, the old birds arose before one was within gunshot and usually alighted in the water some distance off shore, there to swim about until one had departed or concealed oneself. Today one may walk to within thirty feet of sitting birds before they leave the nest, and if one remains still they will soon return. This change is chiefly attributable to the fact that for years not a gun has been fired on Pelican Island, as well, also, to the further circumstance that even unarmed visitors to this natural ornithological park have not been permitted to wander about at will for an unlimited time, but have been warned by ever-vigilant Warden Kroegel that the birds were not to be unduly disturbed.

As a result, fewer unfeathered young have succumbed to the sun's rays through the enforced absence of the brooding parent, while birds which had left the nest are not

driven about until they become lost or exhausted.

Nevertheless, the colony does not appear to be much larger than it was seven years ago; high water incident to northers having caused great mortality on several occasions since the birds were protected from human enemies. Warden Kroegel believes that the greater part of the island would now be covered with nesting birds if all but its eastern rim had not been flooded in the latter part of December. Hundreds of young were then drowned, and the lower portion of the island is still thickly dotted with eggs which were washed from the nests.

Ninety per cent of the birds now nesting on the island occupy the high land of the eastern border. Without knowing of the fate of the birds that nested on the lower ground, one might be led to infer that the birds now nesting had selected their nesting site because of its elevation, whereas they evidently are merely survivors who by good fortune escaped the disaster which befell their neighbors.

Experience apparently does not teach, and year after year birds nest where they are certain to be swamped when the water rises.

The possibility of planting the island with red mangroves, which might make land as well as furnish nesting sites for the birds, is worthy of consideration.

The Pelicans take kindly to the observation blind, and from its shelter one can study them at short range. Birds of all ages and voices are within a radius of a few yards, from the grunting, naked, squirming new-born chick, or the screaming, pugnacious, downy youngster, to the silent, dignified, white-headed parent.

At a glance one may see all the activities of Pelican home-life, nest-building, laying, incubating, feeding and brooding young, bathing, preening, yawning—and the Pelican yawn is indeed a yawn—sleeping, all may be readily observed from the blind, whence, in truth, one may learn more about Pelican ways in a morning than in days of watching from a distance.—*Pelican Island, Florida, March 12, 1905.*

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

Wild Hedges

Much of the work on behalf of bird-protection today is not so much the conceiving of new ideas as of repeating and insisting upon certain fundamental needs. For every time we say *hands off* we should say *food and shelter* at least ten times.

Shelter of bird-houses and lunch-counter viands belong either with our mid-winter thoughts or early spring preparations; but, when the season is fairly on us and the sap begins to ascend in the veins of both plants and men, and we wait for the first willow wand, food and shelter mean trees, then we cry anew, Plant trees, vines, bushes, wild hedges,—anything that has sheltering leaf and edible berry!

If the plan is to be well conceived and carried out, it implies much thinking, as in a region of fruit farms or gardens it is not enough to plant at random; a wild counter-attraction must be supplied the entire fruit season from the ripening of the earliest strawberries to the grape picking. While certain berry-bearers are valuable for their winter food, supply such as the red cedar, juniper, bittersweet, black alder, Virginia creeper, catbrier, the sumachs and frost grapes. The "protective" summer berries, those that if planted in accessible seclusion may reasonably be expected to at least partly deter Robins, Catbirds, Thrashers, etc., from the fruit garden, must have special consideration. With people owning large tracts of land, tree- and bush-planting is comparatively easy, and everything may be done on a large scale; but it is the small home-garden, often over-neat and prim, that needs to offer hospitable shelter; so let us consider how this can be done as cheaply and expeditiously as possible.

If the boundary be a wire or picket-fence,

first secure the coöperation—or at least consent—of your next-door neighbor, so that you may not injure some favorite flower-bed that needs sun; then make the list of trees, shrubs and vines needed, the quantity of course, to depend upon the space. Keep one thing in mind from the beginning: you must let this wild hedge grow into a veritable jungle if you wish to get the best results, and all ideas of neatness and prim, set form must be cast to the winds. Dead wood may be occasionally removed, but be wary of doing that too often.

As for vines, give them something on which to drape themselves and let them alone to grow upside down if they will, thereby increasing in beauty and offering more nesting nooks. One of the most awkward spectacles I ever saw was a giant vine of the waxwork, or bittersweet, one of the most persistent of spiral climbers, fastened tight and flat to a green latticed trellis. Every tendril seemed bound to squirm itself free, and the whole effect was as awkward as that of a man with his head turned over one shoulder and trying to walk backward.

For the taller shrubs and trees to be placed next the fence (or, if fence there is none, for the backbone of the hedge), choose early sweet cherries, flowering dogwoods, staghorn sumach, mountain-ash, Russian mulberry, sheepberry, wild black cherry, spicebush and shadbush (or service-berry),—this last being valuable because of the early ripening of the fruit in June. Next elderberries, wild plums, flowering raspberry, barberries, currants, both black and red. For vines, the smaller fruited varieties of wild grapes (or Concordes will do very well) that may be easily grown in pots from seed and set out when six months old, Virginia creeper, waxwork and the yellow Chinese

honeysuckle, which, as well as the bush honeysuckle, has edible berries.

Surround this hedge by a border of rich earth a foot wide, in which plant either wild strawberries, transplanted from the fields, or the castaways from the home bed, and every six feet stick in a plant of the Lucretia dewberry. Then, when this is once started, hands off; don't peek and pry and intrude, —simply let Nature take her course and the fittest will survive.

If, in due time, a tree or shrub is blown over or dies, still keep your hands in your pockets; the charitable vines will soon hide its downfall and prepare a retreat from which a Carolina Wren may send forth his delicious notes. Let the leaves lie where they fall; who knows but what a quail may take a notion to nest among them! If strong canes of wild blackberries and barbs of greenbrier make a fence about the shrubbery, so much the better; the prowling cat must stay outside, the snake finds climbing uncomfortable, and for all else, wild bird and wild rabbit alike, the wild hedge should be Sanctuary.

M. O. W.

Notes and News

The Directors of the National Association held a meeting for organization and election of officers January 30, 1905.

The officers elected were as follows: President, William Dutcher; vice-president, John E. Thayer; second vice-president, Theodore S. Palmer; secretary, T. Gilbert Pearson; treasurer, Frank M. Chapman.

This being a year when legislative sessions are held in forty-three states and territories, law-making is active; and necessarily the officers of Audubon Societies have had to be alert and watchful to defend good bird- and game-laws now in force and to work aggressively for new legislation.

MISSOURI.—A new law in this state was greatly needed for several reasons: it is a great cold-storage center; the present law is absolutely worthless; the state is a great game country, and, finally, because the Audubon bill introduced at the 1903 session of the legislature was killed by boodle. The Audubon Society, while discouraged

at that time, was not disheartened, but renewed the fight at this session. Fortunately, the chairman of the House Fish and Game Committee was the Hon. Harry R. Walmsley, one of the vice-presidents of the Missouri Audubon Society. He made a splendid fight for House Bill No. 15, and was supported by all real sportsmen, the Audubon Society and the press of the state. The bill is practically the same as the one defeated in 1903 and is the A. O. U. model law, and, in addition, a complete game- and fish-law, providing very short open seasons, no sale, and a bag limit. The bill successfully passed both branches of the legislature and has been approved by Governor Folk. It is hoped that the Audubon Society will in some measure become legally responsible for the enforcement of the new law.

SOUTH CAROLINA.—A bill copied almost verbatim from the Louisiana model law has passed both branches of the legislature and has been approved by the Governor. The A. O. U. model law is now in force in every coast-wise state in the union, with the exception of Alabama.

FLORIDA.—Early in 1904, it was discovered that a commercial bird-skin collector, J. R. Jack, of Punta Gorda, was sending to so-called scientific dealers in the New England states and Canada, skins of the rare and almost extinct Ivory-billed Woodpecker which were collected in direct violation of the Florida law, inasmuch as Jack did not have a permit from the Secretary of Agriculture of Florida to collect for scientific study.

In a letter Jack stated: "I have no more Ivory-bills to sell at \$15. I offered you what I had at your own price, and, if you can't pay that, all good and well; I will keep my birds. I also note what you say regarding the birds in small doses. As for my part, I prefer them in as large doses as I can get. I now have orders for quite a lot, and expect to get them if they are in the state, and I think they are. As soon as I can get off, I expect to go and get all the birds I left. I am also counting on getting some Everglade Kites and a few Parakeets."

So far as known, this species of Woodpecker is now to be found only in a very

restricted area in Florida and a still smaller one in Texas. Every bird of this species that is now killed hastens the day when the race will become extinct. These facts rendered the act of Jack and the spirit which prompted him the more despicable; and the northern dealers who received his illegally secured goods were in no wise excusable. To verify the facts and get evidence for a prosecution, a letter was written to Jack asking whether he could furnish two skins. These were promptly forwarded, and subsequently he sent two skins of the Florida Cardinal and two of the Florida Bob-white, the latter being game-birds which were killed during the close season. The chain of evidence being complete, it was forwarded to the Department of Agriculture at Washington, which has charge of the enforcement of the Lacey Act that prohibits interstate commerce in illegally killed birds and game. Jack, in addition to killing non-game birds illegally and game-birds out of season, also violated the Federal Act by delivering them to a common carrier for transportation beyond the state, without having the nature and contents of the package distinctly endorsed upon the same. The Department of Agriculture placed the matter in the hands of the United States Department of Justice, and the latter caused the arrest of Jack. On furnishing bail he was released, to stand trial at Tampa, at the February term of the United States Court for the Southern District of Florida. Jack, having no defense to offer, plead guilty and was fined. It is hoped that the drastic lesson given in this case will serve as a warning to all persons who do not yet seem to realize that the National and State Audubon Societies are determined to see that the state and federal laws for the protection of birds and game must be respected and observed.

TEXAS.—The Audubon Society of this state, although but recently organized, has been precipitated into a strenuous fight to prevent the amendment of the present excellent game-law in respect to wild fowl. The bag limit is now twenty-five birds per day, none of which can be shipped out of the state, nor can they be transported in the

state, except when accompanied by the sportsman

A combination of market shooters, pot-hunters and other selfishly interested parties, are making a determined effort to remove all restrictions to their trade. To get game for market, disreputable means are sometimes employed by dealers. The following extract from a letter written by a St. Louis commission house to a prominent citizen of Texas shows the importance of good laws well enforced.

"I was advised if I, or others, were able to obtain game, to ship the birds under a fictitious name, giving a fictitious name for myself and billing to a fictitious firm in St. Louis. Further instructions were to notify the commission house of the shipment and the name to which the package was sent. They could then manage to obtain it without risk to themselves or to the party at this end."

Secretary Davis, of the Audubon Society, aided by hosts of others who have the best interests of the state at heart, are doing everything possible to prevent any change in the law. The press, with one voice, is opposing change and is giving very valuable aid by editorial comment, and is also freely printing many long and valuable articles from the pen of Mr. Davis, whose activity and earnestness, together with that of his Audubon associates, is in the highest degree commendable. In this connection, it is a pleasure to mention the high civic stand taken by General Passenger Agent Anderson, of the Southern Pacific Railway Company, who is very earnestly working to prevent any change in the law.

The legislature will remain in session for some time, and it is impossible to determine at this writing what the outcome will be; but it is hoped that the law will remain as it now is.

NEW YORK.—The Audubon Society is having its annual fight to prevent the repeal of that section of the game-law which prohibits wild-fowl shooting after January 1. The society is not working alone, by any means, for sportsmen and naturalists from all parts of the state are arrayed against a small but determined band of baymen,

hotel-keepers and a few sportsmen from Long Island, who, without regard to the fact that it is morally, scientifically and economically wrong to kill a bird, be it game-bird or other, while it is on the northward migration to its breeding grounds, demand the repeal of the law without regard to the wishes of the citizens of the balance of the state. The advocates of repeal say that Ducks were never so numerous on the Long Island waters as they are at the present time; but they refuse to acknowledge, what is an indisputable fact, that the increase is due to the stopping of spring shooting in many parts of the United States and the Canadian provinces.

At the last election, the repeal of the Duck law became a political issue on Long Island. The question is not a political one, but an economic one, and is, whether the remainder of the wild Ducks shall be conserved or shall be recklessly slaughtered in the spring simply because a few interested persons wish a special privilege given them at the expense of the balance of the state. The law in question was enacted in 1903, was successfully defended from repeal in 1904, and the Audubon Society is putting forth its greatest strength to defend it again.

The Society is also working for the Armstrong Bill, which aims to prevent unnaturalized persons from carrying firearms. Should this become a law,—it has passed both Houses,—it will save the lives of thousands of song-birds in the state. The uneducated foreign laboring element, especially if from the south of Europe, knows no law and regards everything with feathers or fur as legitimate prey for the kettle.

The aigrette question is one of the most important now before all the Audubon Societies. The use of these plumes seems to be increasing rather than otherwise, notwithstanding the milliners' agreement that their sale should cease January 1, 1904. The Millinery Merchants' Association is disbanded, largely owing to the question of the sale of aigrettes, and therefore the Audubon Societies are relieved from any obligation regarding laws that were entered into under the terms of the agreement.

In view of this fact, the New York Society has had introduced in the legislature, through the courtesy of Senator Armstrong, the following amendment to Section No. 33 of the present law.

"Feathers or plumage commonly known as aigrettes, or the feathers or plumage of any species of the Heron family, whether obtained within or without the state, shall not be bought, sold, offered or exposed for sale at any time." If this passes, it will materially reduce the sale of aigrettes. Many of the retail dealers will be glad of an excuse for not keeping these plumes for sale, as they are compelled to do now because competing stores sell them. The few wholesale dealers who control the trade in aigrettes, and are actively opposing the bill, claim that all of the plumes now offered for sale are imported and are taken from Old World or South American Herons. This is not a fact, for the National Association has positive evidence, in the shape of letters and circulars, showing that there is a contraband trade in these plumes going on in this country. To save the remnant of White Herons yet remaining in the United States, it is necessary to stop the sale of aigrettes in this country. It is absolutely impossible to distinguish the plumes of an American White Heron from those taken from an African or Asiatic bird. Dr. Richmond, of the Smithsonian Institution, an ornithologist of international reputation, states that he has been unable to distinguish them even with the aid of a magnifying glass. Under these circumstances, the only possible way to save our own birds is to prevent the sale of all aigrettes. The New York public who are interested in this important matter can materially aid in the passage of the Aigrette Bill (Senate No. 110), now before the Legislature, by writing to their senators and assemblymen urging favorable consideration for the bill.

Space will not permit presenting other 'Notes and News' of great interest, which will have to be deferred until the next issue.

WILLIAM DUTCHER.

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

EDUCATIONAL LEAFLET NO. 13



THE OSTRICH

Order — *Struthioniformes*

Family — *Struthionidae*

Genus — *Struthio*

Species — *Camelus*

The Ostrich

By WILLIAM DUTCHER

President National Association of Audubon Societies

A technical description of this exotic bird is omitted, as the public is already well acquainted with the strange creature that, feathered like a bird, is unable to fly, but can run with a speed like that of a horse.

Linnæus recognized only one species, but later naturalists have divided the genus into four or five races. The ancestral home of the Ostrich is the whole of Africa, together with Arabia and southeastern Persia, in Asia.

The importance of this bird as a commercial asset is so great that in portions of Africa it is protected by law. Cape Colony has a duty of £5 on each egg and a much larger sum on each bird exported. Ostrich-farming is an important and rapidly growing industry in Africa, and within the last twenty years has been successfully introduced in the United States, where it will soon occupy a very important place in the commercial enterprises of the country. *The Audubon Societies are not opposed to the use of feather ornaments which can be obtained without cruelty or the sacrifice of the lives of birds. The feathers of wild birds cannot be obtained unless birds are killed, and therefore should never be worn; on the other hand; Ostrich feathers are legitimate as well as beautiful decorations and are approved by the Audubon Societies. Their use does not entail the sacrifice of life, nor does it cause the slightest suffering to the Ostrich; taking plumes from an Ostrich is no more painful to the bird than shearing is to a sheep. Further, the Audubon Societies do not approve of the use of Ostrich feathers in combination with aigrettes as is so often done; they are the antithesis of each other, one plume being obtained without loss of life or pain to the Ostrich while the other is only secured by killing White Herons during the breeding season and thus causing suffering and death not only to the parent birds but also to the helpless nestlings. Furthermore, the use of Ostrich plumes encourages an important industry which gives employment, in this country, to an annually increasing number of people.*

The following interesting information regarding the Ostrich industry in America is furnished by Mr. Edwin Barbour, secretary of the Phœnix-American Ostrich Company, Phœnix, Ariz., and Mr. Edwin Cawston, owner of the South Pasadena, California, farm; the latter also furnished the photograph of the method of plume-cutting which illustrates this article:

In 1882, Ostriches were first introduced into the United States for breeding purposes by a Dr. Protheroe. A number were shipped from Cape Town, Africa, some of which survived to reach New York, where they were shipped overland to California, only twenty-two birds arriving, which were the nucleus of the farm started at Anaheim, the corporation being known as the California Ostrich Company. During the next four years three other parties ventured in the field of Ostrich-farming, the most suc-

cessful of these persons being Mr. Edwin Cawston, who went to South Africa and returned with forty-four selected birds. These were later divided, some going to South Pasadena, Cal., where the original importer owns at the present time the finest show farm in the United States. The remainder were taken to Whittier, Cal., where a breeding farm was established, at present containing over three hundred birds; from this shipment fully eighty per cent of the Ostriches in America have descended, besides those contained in Mr. Cawston's farm at Nice, France. During the Pan-American Exposition at Buffalo (1901), the last lot of Ostriches were brought to the United States. These were twelve Nubians, the most gigantic and magnificent of all the species. After the fair, six of these birds went to Mr. Cawston, who arranged the importation, the remainder going to the Pearson ranch in Arizona. The first appearance of the Ostrich in Arizona was in 1888, when Clanton & Co. purchased of Mr. Cawston one pair of breeding birds and eleven chicks. During transportation ten of the chicks met with accidental death and the following year the hen was killed. From the survivors, the male bird and one chick, ninety-seven full-grown birds were sold to the Arizona Ostrich Company in 1898. In the same year, Mr. A. Y. Pearson and Mr. J. Taylor established the Florida Ostrich Farm at Jacksonville, with thirty birds purchased from Mr. Cawston, and the original Dr. Protheroe shipment. In the spring of 1899 this firm dissolved, Mr. Taylor retaining the Florida farm, which is one of the finest exhibition places in the country. Mr. Pearson took the California interests of the firm, and in November, 1899, he purchased a large tract of land ten miles west of Phoenix, Ariz., to which he removed his California stock and also purchased two hundred more birds from the Arizona Ostrich Company. The Pearson Farm is now known as the Phoenix-American Ostrich Company, the corporation owning over one thousand birds, making it the largest Ostrich ranch in America. There is also the National Ostrich Company near Phoenix and the Tempe Ostrich Company, of Tempe, which together own several hundred birds. A new farm has lately been established near Phoenix, by J. M. Harmon, which is known as the Big Five Ostrich Farm. Besides the above there are about three hundred birds owned by the Bentley farm at San Diego, and the Leach farm at San José, Cal., the Coburn farm, Hot Springs, Ark., and a few at Asheville, N. C. There are today something less than three thousand Ostriches in America. Until recently most of the farms were maintained for exhibition purposes, and it is only within the last few years that serious attention has been directed to the commercial possibilities of Ostrich-farming. It is not a wild hazard to believe that in five years Arizona alone will contain ten thousand Ostriches, valued at \$3,000,000, with an annual output of feathers valued at \$350,000.

South Africa exports annually Ostrich feathers to the value of about \$6,000,000, of which nearly one-third finally reach the United States. A

breeding pair of Ostriches will produce from ten to twenty chicks per year, which are worth, when six months old, \$100 each; at one year, \$150; at two years, \$200; at three years, \$300 to \$350. They commence to breed when four years old, but do not breed satisfactorily until they are six or seven years of age, when, if prolific, they are valued at from \$700 to \$1,000 per pair. Exceptionally fine birds sometimes bring as much as \$1,000 each. Good birds will produce from \$35 to \$50 worth of feathers each year, and exceptional ones from \$75 to \$90 annually. Probably there are no wild Ostriches now killed for plumage. The feathers of the domesticated bird are very much finer and better than those of the wild Ostrich.

Plucking is done by putting the Ostrich in a V-shaped corral just large enough to admit its body, with room for the workman. A hood, shaped like a long stocking, is placed over the head of the Ostrich, when it becomes perfectly docile. The workman then raises the wings and clips the feathers that are fully ripe. Great care is exercised at this time, as a premature cutting of the feathers deteriorates the succeeding feather growth.

There is no possibility of inflicting pain in plucking an Ostrich; not a drop of blood is drawn, nor a nerve touched. The large feathers are cut off, and in two months' time, when the quill is dried up, it is pulled out. By taking the feathers in this way it causes the bird absolutely no pain at all. An Ostrich is first plucked when it is nine months old; then it is about six feet high. This crop of feathers is of little value; succeeding crops are taken every nine months, the third plucking being the full crop, which will weigh about one pound. Ostriches mate at four years of age and remain paired for life. The nest, which is simply a hole in the ground scooped out by the breastbone of the bird, is about one foot deep by three or four feet in diameter. Eggs are laid every other day until twelve or fourteen are deposited, each of which weighs from three to four pounds. The eggs are turned daily in the nest by the birds, and are incubated forty-two days, the male taking the nest at five in the afternoon, where he remains on duty until nine the following morning, when the female goes on duty. The chicks, when hatched, are about the size of a domestic hen and present a mottled appearance. They grow about one foot in height every month until they attain full growth, about seven to eight feet, when they will weigh from three to four hundred pounds. When fourteen months old the plumage gradually changes, the female taking on a dull gray and the male a glossy black, both growing long white wing-feathers.

For a history of the Ostrich, read *Vögel Ost-Afrikas* of Drs. Finsch and Hartlaub.

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EDITED BY
FRANK M. CHAPMAN

PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

HARRISBURG, PA.

NEW YORK

LONDON



Bird = Lore

May - June, 1905

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* * * Manuscripts intended for publication, books, etc., for review and exchanges should be sent to the Editor, at the American Museum of Natural History, 177th Street and 8th Avenue, New York City, N. Y.



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3. MOURNING WARBLER, MALE.
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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. VII

MAY — JUNE, 1905

No. 3

The Motmots of our Mexican Camp

By C. WILLIAM BEEBE
Curator of Ornithology, New York Zoölogical Park

With photographs by the author

NEXT to actually discovering a new and interesting fact of natural history, comes the pleasure of verifying one of which we have read; and our first meeting with the Mexican Motmot (*Momotus mexicanus*), and the observing of his peculiar habits, brought as sincere a thrill of delight as if we had been the first to report them.

It was a sultry day in late January in the mountains of west-central Mexico when we first saw a live Motmot. Our camp was pitched near a grove of magnificent wild fig trees bordering a stream in one of the great gorges or barrancas which radiate from the majestic sister peaks ever looming over us,—one dead and hoary with snow, the other vital with earth-fire, pouring forth smoke and ashes.

Following the wise custom of most of the creatures of this *tierra caliente*, we were taking a midday siesta in the shade of a flowering acacia. A Black-throated Gray and a Pileolated Warbler were feeding fearlessly within a few feet, snatching tiny insects from the sweet-pea-like blossoms. Every green and golden feather on the body of the little Pileolated was unruffled, and his tiny monk's cap shone in the sunlight like burnished jet. My glance slipped past him and there, sitting motionless, was a Motmot.

I had often wondered when I saw mounted specimens in museums with what special immunity from danger these birds are blessed; their beautiful coloring would seem to be such a startling advertisement of their whereabouts. But in reality the very diversity in tint is their protection, and they merge perfectly into the green foliage and bright sunlit spots. One's first impression of a Motmot, as seen at a distance, is of a large-headed, brown and greenish bird, with a broad bar of black on the head; but we were fortunate enough to be able to study one of these birds in our very camp.

A slightly injured bird soon recovered, and remained about the camp for more than a week, retaining its full liberty, feeding upon scraps of meat or

occasionally catching insects for itself. Its favorite perch was a branch of flowering *Clavillina*, to which one end of the ridge-pole rope of our tent was attached. Here, day after day, it unconsciously posed before the camera, leaving nothing for regret except that its exquisite coloring, which showed so beautifully on the ground glass, must be lost in the negative. It



MEXICAN MOTMOT

left this perch only when hungry or when the great heat of midday drove it to the shade of the tent or a neighboring tree.

I will quote some notes which I made in my journal. The bill of this Motmot is large and deeply serrated, or toothed on each edge, and when angry, after being teased with a piece of meat, the bird darts at and takes firm hold of one's finger and suffers itself to be carried, dangling, several yards before flying off. The crown of the head and the neck are bright cinnamon, shading into a beautiful grass-green on the back and wings.

The large, soft brown eyes are surrounded by a ring of feathers, very small, circular, and black in color. Back of the eye is a broad tuft of black, banded above and below with beautiful blue. The breast is a most delicate emerald green, shot with pale blue, while exactly in the center is a twin black feathery pendant or tuft, similar to the eye-tufts.



MOTMOT, SHOWING THE PENDULUM-LIKE WAGGING OF THE TAIL

The most remarkable character about the bird is its tail, which is long and greenish blue in color, while the two central feathers, still longer than the others, are bare of barbs for about an inch of their length, each feather ending in a full-vaned racket. The strange thing about this ornament is the fact that it is produced by the bird itself. When the young birds attain their full plumage, the elongated pair of feathers in the tail are perfect from base to tip. Guided apparently by pure instinct, each Motmot begins to

pick and pick at these feathers, tearing off a few barbs at a time with its bill. This is kept up until the tail is in the condition which is shown in the photograph, and at each succeeding moult the process is again repeated.

This symmetrical denudation of the tail feathers might be instanced as a remarkable attempt at esthetic self-ornamentation on the part of the male bird to make himself more beautiful in the eyes of the female. But, unfortunately for this theory, the habit is as strongly pronounced in one sex as in the other!

When the feathers grow out anew, although the barbs are all present, the vane at this point is narrower than elsewhere, showing perhaps that the long-continued exercise of the habit for generation after generation is in some way having an hereditary effect. But we cannot be at all sure about this. The inheritance of acquired characters is too unproved a theory as yet. The real cause of the habit would be a most interesting one to solve. In some of the individuals which we see, the process has just begun, only a few barbs having been torn away.

Although a Mexican Motmot measures over a foot in length, yet its voice, more often than its color, betrays it. This is a most startling utterance: several harsh *churrs* followed by three distinct, beautifully liquid notes. But even when this is heard near at hand, little clew is given as to the bird's exact whereabouts, for the tones are so startlingly loud and have such ventriloquial power that they seem to come from all directions at once. No sound that I hear them utter can possibly be construed into the syllables *mot-mot*.

These birds are not shy, but will permit one to approach quite closely before taking a short flight to a neighboring tree or bush. Just before they fly they usually give utterance to a low *chuck! chuck!* evidently an alarm note. This is always the most common sound of my tame bird when I attempt to approach it. What betrays a Motmot more surely than its color, or even its voice, is the curious pendulum motion of the tail, from side to side and more rarely up and down. When the bird blends so perfectly with its surroundings that the eye fails to locate it, the horizontal swing of its tail reveals it. This is not a true pendulum motion, as the tail snaps to the highest point of the swing, and is held there for a moment before being jerked to the opposite side.

Although the feet of the Motmot are weak and adapted only for perching, and its usual method of feeding is to catch insects upon the wing, yet more than once, while watching these birds I see them fly to the ground and scratch awkwardly, picking up food after each disturbance of the leaves. Another habit I should dismiss as an individual freak, except for the fact that it is observed in three different birds. These particular Motmots are not aware of my presence and, after feeding for a time, they fly to a sunny open spot, fling themselves flat upon their backs and spreading wide their

wings, enjoy a bath in the early morning sun. The only other birds which I have ever known thus voluntarily to invert themselves are a Parakeet, a Caracara and a Condor, all in captivity.

Like their distant cousins the Kingfishers, these birds bore a tunnel into a vertical bank and make their nest at the end, six or eight feet deep in the earth. The pure beauty of the water-lily is conceived in the filthy, noisome muck at the pond bottom, and the delicate hues of the Motmot are acquired in a black, ill-smelling, underground hole.

We will ever regret not seeing these birds during the period of courtship and nesting, but, as with most of the other birds of this country, that occurs later in the year. One must visit Mexico in the early summer to study the birds at the most interesting of all times — the breeding season.



MOTMOT'S TAIL-FEATHERS FROM WHICH THE BIRD WAS JUST BEGINNING TO PICK THE VANE, AND FEATHERS IN WHICH THE TRIMMING WAS COMPLETED

Some Early American Ornithologists

II. WILLIAM BARTRAM

By WITMER STONE

ON the thirtieth of September, 1728, a thrifty Quaker farmer by the name of John Bartram purchased a tract of land on the banks of the Schuylkill river at Kingsessing, near Gray's Ferry, now within the limits of the city of Philadelphia, erected with his own hands a substantial stone dwelling, and laid out a garden.

Here he indulged his interest in botany, planting trees and shrubs from all parts of the world, and in this attractive retreat, surrounded by birds and flowers, he passed his years in the enjoyment of nature, while he corresponded with botanical friends abroad, especially with Peter Collinson. Here the famous Swedish naturalist Peter Kalm stopped on his travels and enjoyed the hospitality of a host with kindred tastes.

And here, on February 9, 1739, was born a son, William Bartram, who was destined not only to continue the care of the botanic garden but to give, both directly and indirectly, a great impetus to the study of American birds, in which he became deeply interested.

Young Bartram's surroundings were well calculated to make a naturalist of him, in addition to which his father took much interest in his education, fostering his love of nature and encouraging his efforts at drawing.

When the boy was sixteen years of age, the father writes of him, "I design to set Billy to draw all our turtles," and later he sent samples of his drawings to his friends abroad.

The question of an occupation for young Bartram troubled the father not a little; he wished him to make his own living, but did not desire to interfere with his drawing or his studies. Benjamin Franklin, who was a friend of the family, offered to teach him printing, and other suggestions were made, but William finally entered a business house, and, after a few years, removed to Cape Fear, North Carolina, where his uncle had previously settled, and here established himself as a trader.

The elder Bartram had at various times made explorations in different parts of the country in search of curious plants and seeds, which he sent abroad along with garden and vegetable seeds. In 1765, through the efforts of his English friends, he was appointed by King George III Botanist of the Floridas, at a small salary. He at once prepared for an excursion into this little-known territory, and took his son William with him. The latter was delighted with the country and its strange plants and birds, and determined to revisit it if possible. Accordingly, in 1772, at the expense of Dr. Fothergill, of England, he began a much more extended tour of Florida, Carolina and Georgia, which lasted for some five years. His collections,

drawings, etc., were sent abroad to his patron, and in 1791 he published an account of his travels. In this volume, besides much botanical lore, he presented important accounts of the birds that he observed and, what is of more interest, a complete list, or 'Nomenclature,' of the birds known to him as occurring from Pennsylvania to Florida east of the Alleghanies.

This was a landmark in the progress of American ornithology, the next in importance to the work of Catesby, and the first ornithological contribution worthy of the name written by a native American. Unfortunately, Bartram neither adhered to the Linnæan system of nomenclature nor did he describe the birds which are here for the first time mentioned; and, although we can identify all the species of his list, we cannot use his names. Bartram was very modest; he had no intention of writing an ornithology, and merely gave his list, as such, for the interest of his readers; and so, perchance, we are compelled to take it, only regretting that we cannot bestow more credit where credit is due.

But Bartram's claims to consideration as one of the pillars of American ornithology do not rest wholly upon his 'Travels' or his 'Nomenclature.' It was his profound knowledge and the assistance that it enabled him to offer to others that have done more for ornithology than his own publication, and most generously and cheerfully did he share his store with those who came to him for aid.

In the year 1800, at the age of sixty-one, after his father's death, he lived with his brother at the Botanic Garden, happy in his congenial surroundings and sufficiently removed from the smoke and bustle of the neighboring city. Here, as was customary with men of his day, he kept a diary, in which the daily phases of nature were faithfully recorded; and this little volume, with its time-stained pages and faded writing, now lies before me. Here are records of the "Mock-bird" at various dates in the winter, the arrival from the south of the Blackbird, the Pewit and other harbingers of spring, as well as the blooming of the various spring flowers and the first piping of the frogs.

Alas! the Mock-bird no longer comes so far north as Philadelphia at any season, except as the rarest straggler, and so closely have the railroads and the oil-works encroached upon the historic garden that the wild birds do not visit it as frequently as they once did. But things are not all changed: one evening the diary tells us of the presence of the "Little Horned Owls" in the bushes before the door, and on my last walk through the shaded paths of the garden I came suddenly upon a pair of these same "Little Horned Owls" hiding in the ancient box-bushes. Were they the lineal descendants of those that Bartram heard hooting a hundred years ago? Who can say? At all events, it is pleasant to think that they were.

In the retirement of his garden the venerable naturalist lived his peaceful life, and there he ended it suddenly on the 22d of July, 1823, in his eighty-fifth year. But during this time many a friend was entertained,

many a word of advice and encouragement was given, and many a question was answered.

In that year of 1800 there lived close by, on the cliffs overlooking Gray's Ferry, Dr. Benjamin Say, whose little son Thomas, then a boy of thirteen, and later a naturalist of note, carried to Bartram all the curious specimens that he chanced to find on his rambles. Dr. B. S. Barton, the young professor of botany at the University of Pennsylvania, also came to him for assistance; while up at Milestown, a short distance north of the city, lived a young Scotch schoolmaster, Alexander Wilson by name, who was then about to take the school at Gray's Ferry, and to make the acquaintance of Bartram, under whose guidance he was soon to become one of the most famous ornithologists that our country has ever produced.

In the development of all these men, and in others as well, much is to be attributed to the influence of William Bartram; and, when we form our judgment of his worth, we must look, as in the case of other modest men, beyond the work which he accomplished himself and consider also that which he inspired in others.



SPOTTED SANDPIPER ON NEST

Photographed from nature by R. H. Beebe, Arcade, N. Y.

The American Bittern at Home

By E. G. TABOR, Meridian, N. Y.

With photographs from nature by the author

THE American Bittern is a summer resident throughout central New York, and wherever there are favorable marshes to furnish feeding and breeding grounds, 'plum pud'n' notes are common sounds as the sun sinks in the west and twilight begins to gather. At this time it has always been the delight of the writer to be at one of the numerous marshes that border our lakes and creeks in this locality and listen to the 'booming' of the Bittern, the clatter of the Rails, and the chatter of Blackbirds, Marsh Wrens and other small birds as they go to their accustomed roosts to pass the night. Nighthawks come forth from their hiding-places and dart down through space in their plunges; Wilson's Snipes mount into the air and soar and drum until lost from sight in the darkness and nothing but the whir of their wings is heard as they pass and re-pass within a few feet of your head. Finally they, too, are still, but the frogs and mosquitos have taken up the chorus, and many nights have I gone home wondering how anything could sleep in such a place.

One might imagine that it would be an easy task to locate a Bittern's nest. However, if you consider that a marsh may contain from ten to one hundred acres, and that the female may be out feeding instead of incubating, you will realize that a nest represents a very minute spot in that area.

Usually it requires several days of persistent search to reveal the nest on the opposite side of that vast mixture of water, mud, rushes and bogs. But, de-



NO. 1. AMERICAN BITTERN'S NEST WITH FOUR EGGS

pend upon it, on one of these many bogs, but a few inches above the level of the water, on a mere handful of dry marsh grass, are the four to six brownish-drab colored eggs.

About ten years ago, before I was interested in photography, I found a nest whose mistress was so persistent that only after I had pushed her from the nest with my gun did she deem it expedient to leave her home at my

mercy. During the seven years that I have used a camera, I have searched the Bittern's breeding-grounds in vain for a like opportunity to make photographs of this odd yet very interesting inhabitant of our marshes. Each year I have found several nests, all being in places, however, where approach in anything like a noiseless manner was an impossibility, and I have failed to get a single exposure at an adult bird, until last year.

One day, when I was returning from a trip with my camera, I met a farmer who, knowing I was a bird photographer, imparted the news that he could show me a Mudhen's nest. I gladly promised to be on the spot early next day. Upon my arrival, he conducted me to the nest, which he had accidentally found in going for a drink to a spring near by. The nest was situated in a swampy spot in a small



NO. 2. AMERICAN BITTERN BROODING YOUNG

piece of woods adjoining his cornfield. There were only four eggs in it at that time. I made photograph number one of it, and arranged with my farmer friend to keep watch and let me know when the eggs commenced hatching.

One evening, several weeks later, his son came to me with this information: "Dad says she's hatchin'." Next morning I was again on the ground, and approached the nest very cautiously; sure enough she was at home, and I hastily made photograph number two. While preparing to take



NO. 3. AMERICAN BITTERN AND YOUNG



NO. 4. YOUNG BITTERNS ABOUT ONE WEEK OLD

another, two of the young crept out from under her, and I made photograph number three and others varying but slightly.

The young at this time showed no signs of fear, but when I returned, a week later, and made photograph number four, they were evidently much frightened.

The following week I could find neither parent nor young, and as the young are unable to fly at the age of two weeks, I concluded that the parent must have led them away on foot.

While I much regret that I did not get a larger series of pictures of these birds, experience teaches me to be thankful for those I did secure, which, with these few words of explanation, I submit to the readers of BIRD-LORE as a contribution to the life history of one of our most interesting birds.

The Fourth International Ornithological Congress will Convene at the Imperial Institute, South Kensington, London, June 12, 1905

The Committee of Arrangements has issued this preliminary programme.

Monday, June 12—9 P. M., informal reception at the Imperial Institute. Tuesday, June 13—10 A. M., general meeting; 3 P. M., meetings of the Sections; evening, social gathering at some place of entertainment. Wednesday, June 14—10 A. M. and 3 P. M., meetings of the Sections; evening, conversazione at the Natural History Museum. Thursday, June 15—Excursion to Tring; there will be lectures, and the members of the Congress will be the guests of the Hon. Walter Rothschild. Friday, June 16—10 A. M., general meeting; afternoon, reception by the Right Hon. the Lord Mayor of London at the Mansion House; evening, dinner given by the British Ornithologists' Union. Saturday, June 17—10 A. M., meetings of the Sections; 2.30 P. M., general meeting, conclusion of the Congress. Sunday, June 18—the Natural History Museum, the Zoölogical Gardens, and the Royal Botanical Gardens at Kew, will be open to members of the Congress. Monday, June 19—excursion to the Duke of Bedford's Park at Woburn. Tuesday, June 20—excursion to Cambridge; Professor Newton will welcome the members of the Congress, and luncheon will be served at Magdalene College. Wednesday, June 21—Excursion to Flamborough Head in Yorkshire (breeding place of many sea-birds). The Zoölogical Gardens at Regent's Park and the Library of the Zoölogical Society at 3 Hanover Square will be open free to all members of the Congress throughout the week.

The Migration of Warblers

TENTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

MOURNING WARBLER

The Mourning Warbler is one of the latest of the family to reach the United States from its winter home in Central and South America. It is not known in the Gulf States at ocean level east of Louisiana, nor in Georgia and South Carolina outside of the mountains, and there are only a few records south of Pennsylvania. It probably reaches the United States late in April or the first week in May.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
Beaver, Pa.	2	May 11	May 6, 1902
Renova, Pa.	8	May 11	May 4, 1896
Scarboro, N. Y.	2	May 10	May 9, 1897
St. Johnsbury, Vt.			May 20, 1900
Montreal, Can.			May 30, 1888
St. John, N. B.			May 24, 1891
North River, Prince Edward Island			June 15, 1888
San Antonio, Texas			April 24, 1890
Victoria County, Texas			May 3, 1887
Brookville, Ind.			May 7, 1881
St. Louis, Mo.	6	May 15	May 10, 1886
Chicago, Ill.	7	May 19	May 17, 1902
Southern Mich.	4	May 17	May 14, 1892
Listowel, Ont.	12	May 17	May 8, 1900
Parry Sound District, Ont.	7	May 22	May 17, 1895
Ottawa, Ont.	8	May 24	May 10, 1891
Lanesboro, Minn.	8	May 18	May 13, 1886
White Earth			May 18, 1885
Aweme, Man.			May 23, 1900

FALL MIGRATION

An unusually early migrant was seen at Lanesboro, Minn., July 1, 1888. The species moves south in July and August, and reaches Costa Rica the first of September. The last has been noted at Ottawa, Ont., August 28, 1896; North River, Prince Edward Island, September 3, 1890; Cleveland, Ohio, September 26, 1896; Renova, Pa., September 26, 1899; Cambridge, Mass., September 30; New Orleans, La., October 7, 1896.

MACGILLIVRAY'S WARBLER

This is one of the common and characteristic Warblers of the western United States. It breeds from the foothills to the Pacific Ocean and

winters from Lower California to northern Southern America. It appears in southern California the last of March; southern Arizona early in April; northern Colorado the middle of May; northern Montana the last of May; at Beaverton, Oregon, May 18, 1885; Chelan, Wash., May 21, 1896; Burrard Inlet, B. C., June 2, 1885; Chilliwack, B. C., June 8, 1888.



SUMMER WARBLER ON NEST

Photographed by Maunsell S. Crosby, Rhinebeck, N. Y.

A Black and White Creeper Family

By GORDON BOIT WELLMAN, Malden, Mass.

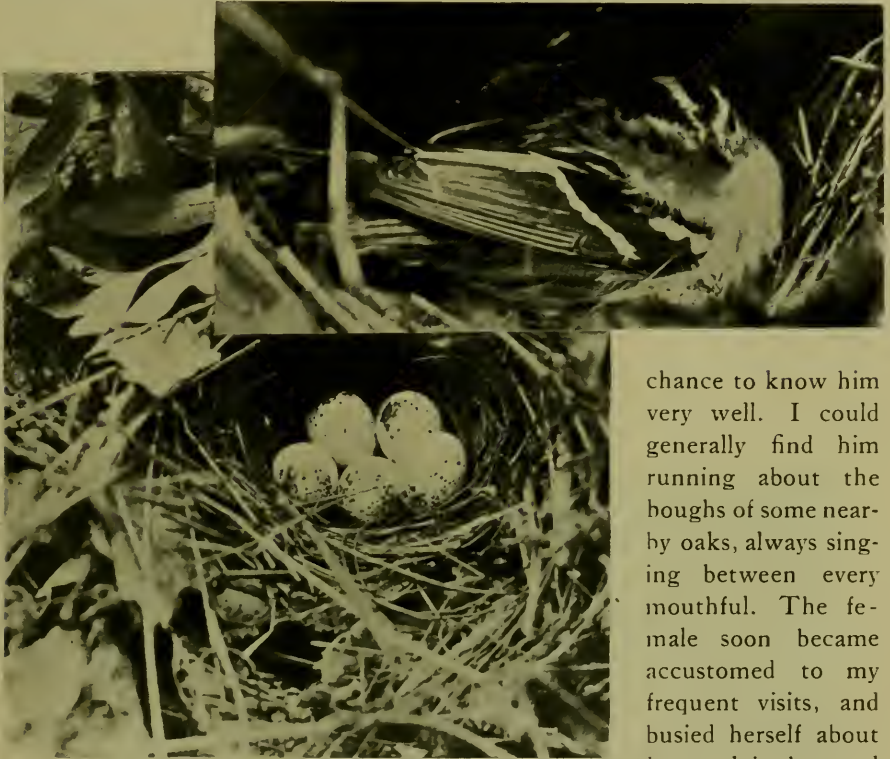
With photographs from nature by the author

AMONG the large number of nests I found last spring, the most interesting of all was that of a Black and White Warbler. I was passing through the oak grove where her nest was finally built, one afternoon in late May, when I first saw her. She was carrying a straw from place to place, trying to find a good foundation on which to start her home.

After about fifteen minutes' waiting, I made up my mind she had found the right place; for she had spent some time under the edge of a projecting ledge, picking up the leaves with her feet and bill, and had finally gone,

after laying her straw across the desired place. I did not wait longer that day, lest I drive her away by my presence.

Not many afternoons passed before I visited her again, and found everything running smoothly and made the acquaintance of the male. He was a finely marked fellow; but he was always very shy and never gave me a



BLACK AND WHITE WARBLER, NEST AND EGGS

chance to know him very well. I could generally find him running about the boughs of some nearby oaks, always singing between every mouthful. The female soon became accustomed to my frequent visits, and busied herself about her work in the usual manner.

The male did not take any active part in the building, although I saw him drop three or four straws on the nest.

When she had begun to lay I visited her every day, lying nearer her each time as I watched her. By the fifth of June five eggs were laid. The first week after she was done laying she did not seem to be so careful about staying on the nest, for twice I found her off feeding with the male. But toward the last of the incubation time one of the birds was constantly on the nest. I found the male sitting usually at about dusk, but I think the female sat on the eggs over night. She would not leave even if I touched her, nor would she move if the camera was set close beside her. I think I never heard an alarm note from her when I was there alone, but if I brought a friend she would grow very nervous and snap at my finger, drag-

ging her wings on my hand. At those times even the male would come swooping by our heads.

The young birds were all born within three days of each other. They were little, naked, squirming fellows, all mouths and stomachs. The mother seemed very proud of them, for she would walk back and forth around the edge of the nest with her little head cocked on one side, that she might watch me and the young at the same time. She would never condescend to let me feed them.

When they were a week and a half grown they filled the nest to the brim. She was very careful then not to leave them, and I think the father fed both her and the young birds those last two days. She would stand up, but would keep trotting around on their heads lest one get out, which she well knew would mean to have them all hopping about in the leaves before she was quite ready.

At last the day came when I found the nest empty, and located three of the young birds in the grass. Both mother and father must then have had a busy week.



JUNE EXPECTATIONS

From nature by A. L. Princehorn

Notes from Field and Study

A Recent Visit of the Evening Grosbeak

Somewhere about February 1, 1905, a flock of black and white birds flew over in rapid flight. They were rather high up, and I took them for White-winged Crossbills. Their course was undulating, with a succession of rapid strokes and then a break, as so many of the *Fringillidæ* practice. I was struck with the somewhat bizarre effect of the black and white colors, even in the rapid flight of the flock past me. This fact I recall on looking back. But I kept watch of the tamarack and other coniferous trees, even going out on snowshoes to visit them. But I found no Crossbills. During several seasons, in other years, these birds have been very abundant here. On February 11, 1905, directly in front of my house in the broad street of Litchfield, I saw a number of black and white birds, running about in a nervous way in the middle of the road, and flying one over the other. I still thought them to be the White-winged Crossbill, only I wondered at several things:

First, they were picking up the undigested grains from the horse droppings in the middle of the road. This I had never seen the Crossbills do. Second, the birds looked too large. And, third, the black and white were so pronounced. When the flock took wing, the bizarre effect of their flight was so striking as to suggest the blurring of one's eyes in vertigo, or extreme dizziness.

The birds took to the elms bordering the street, but were very soon down in the road again. I reckoned that the flock numbered about thirty. In a moment I had the glass in hand, and then the revelation came that I was looking at the Evening Grosbeak.

There was no pink tinge about the birds, but there was a very decided suggestion of yellow. This color was most prominent on the forehead and nape. The breast and throat were lightish. The wings, back and head were black, and the tail black and rather short than otherwise. There was the

white on the different parts which it would be hard to locate unless one had the bird in his hand, and I am describing only the impressions made upon one standing at a distance. But the feature that impressed me was the vividness of both the black and the white.

A passing vehicle put up the birds again. This time they simply circled round and pitched again into the road behind the sleigh. Its two male occupants, I made note, were so blind to the rare wonders of bird life that they did not even look up at the beauties.

Drawing quite near again, for the birds were very tame, I could discover that the strikingly black and white ones made up only a part of the flock. On these the yellow of the forehead was also more decided and clearly defined. These may have been the older and more matured males.

Although very tame on approach, the birds were as actively nervous as any which I have ever seen. They ran about up and down and across the road, picking the seeds from their snowbed; and then, too, the rear guard, as they were all moving forward, would take wing and fly over the heads of those in advance, in order to get better picking, just as I have often seen the Wild Pigeon do, forty-five years ago.

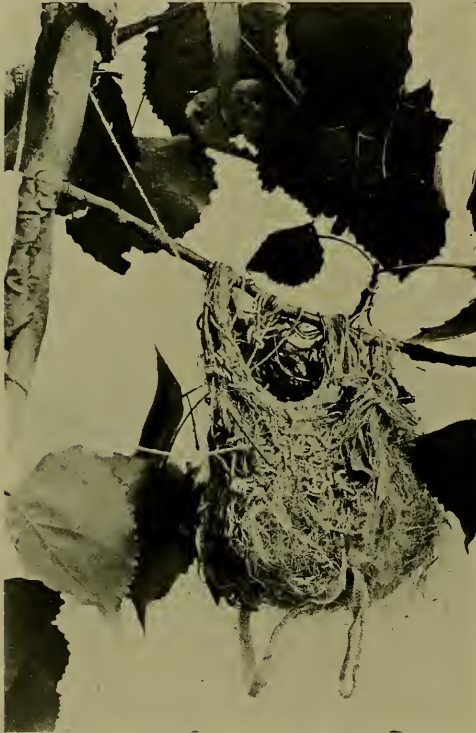
On February 12 and 13 the birds were still hanging about the village, and I had a report of them on the 14th.

I had hoped that they would do as their cousins the Pine Grosbeaks have often done, and stay about during the whole winter. A report only yesterday, February 21, from the neighboring village of Bantam, said they were there, feeding near the grist-mill. And this may have been true. But as all of our own bird-loving contingent, when they saw the Evening Grosbeak, at first thought they were looking at the Snow Bunting; so some one, seeing the Snow Bunting, may have thought that he was having a sight of the Grosbeak which I had described in the local paper.

The books report this Grosbeak as hav-

ing been recorded in New England only once, in the winter of 1889-90, when there were a number of records.

But now, from his home in the far Northwest, he has come again all the way to our North Atlantic states. Should he make himself seen again, BIRD-LORE shall have further intelligence.—JOHN HUTCHINS, *Litchfield, Conn.*, February 22, 1905.



A WELL-GUYED BALTIMORE ORIOLE'S NEST

A brood was raised in this nest in June, 1904. It was placed in a cottonwood tree twenty-five feet from the ground at the end of a branch six to eight feet from the trunk. Photographed by George P. Perry, Sterling, Ill.

Starving Crows

Crows have had a hard time this past winter, more so than for several years. Deep snow which for weeks has covered their ordinary food supplies has driven the Crows to the verge of starvation. Many have actually succumbed, usually first going blind and then dying of starvation and cold

combined. But for the improvidence of one farmer near here, who neglected to husk and take in his corn, many more Crows must have died. Several thousand found in this cornfield food for a week. About ten acres in extent, it had yielded a good crop. The Crows ate virtually all the corn, even tearing their way into the shocks to get at the ears inside. In and about this cornfield there were fifteen dead Crows. One had been eaten, but, as the others had not been touched, it argues that even when almost starved the Crow does not become a cannibal. Possibly the one Crow had been the prey of a Hawk.—SAMUEL H. BARKER, *Glenside, Pa.*, February 26, 1905.

Our 'Pioneer Tenants'

Having completed a new home during the latter part of autumn, 1902, and it then being too late to do anything in the way of inducing bird neighbors to settle around us, I began forming plans of action for the coming year, and the following story narrates the arrival and sojourn of the first and only birds to remain on the new property the next summer,—hence my terming them 'pioneer tenants'.

With the earliest indications of returning spring, in accordance with my usual custom, I daily watched and waited for signs of the return of the more hardy members of the feathered fraternity, and during the latter part of February (1903) my vigil was rewarded by seeing and hearing Bluebirds on several occasions. Sometimes there would be two or three together; at other times a small flock would be observed. They generally flew high, but the unmistakable sweet call-note came down to eager, listening ears. Throughout the month of March I saw three or four of them around our house and garden at different times. They would sit on the fence or a clothes-line pole in the yard, and often I saw them perched on the comb of the roof and even on the chimney.

Being extremely anxious to have them settle near by, and realizing that they were probably looking out for a location to be made use of later on, I lost no time in preparing and putting up a wooden box for their benefit. This box was fastened against the house near a second-story window, and was not in position many days before a pair of Bluebirds began to inspect it. We were quite interested in watching them; first one would go inside and remain for a time and come out, then the other in like manner would take a turn at interior inspection. They were all the while 'talking' to each other in animated tones, especially when some particularly good point was noted. They would fly around the box, look in at the door and sit on the top. This continued for a day or two, and the box seemed to meet with approval, as on the 4th day of April both birds began collecting and carrying nesting materials into it. They worked faithfully for about one week, the mother-bird sometimes remaining inside to adjust the materials brought by her mate. We were delighted very much and watched their proceedings with increasing interest. Misfortune was in store for the little workers, however, for on the 13th there came a severe wind- and rain-storm which raged with unabated fury for three days, and which literally tore their box to pieces and scattered it over an adjoining field. An examination of the remains revealed the fact that the nest had been completed but fortunately no eggs were deposited. We found some consolation in this fact, as had there been young birds in the nest—even had the box remained firm in position—they would surely have perished, as did thousands of little broods of different species throughout the country. During the three days of storm we saw nothing of our birds, but on the fourth day (the 16th) when the elements were getting back into normal condition, we observed them in the vicinity. They were evidently viewing the destruction of their intended home and considering what action to take next. We fully expected that, after this accident, they would depart to some other locality, but being determined to do all we could to help them, a new and much

stronger box was hastily made with a neat little front door and cozy porch with a roof, and fastened up in the same place as occupied by the original one. We were delighted to note that both birds were sitting on the fence near by, watching the operation and conversing in pleasant tones—evidently of satisfaction with the prospect of a new home.

I had no sooner completed my task and descended from the roof, when both birds flew straight to the new box, made a hasty examination, and within a half hour had commenced to rebuild with renewed courage and doubled energy. Another week's steady labor completed the second nest, and then for a considerable time (during the depositing of eggs and incubation) we saw very little of them. This set of eggs hatched about the 15th of May; then we saw both birds constantly from early morning until dark, flying to and from the box. A few days gave the young sufficient voice to be plainly heard when we stood by the window above mentioned. This window afforded us an excellent opportunity of watching all that was going on, and the parent birds soon became accustomed to seeing us there—although so close—and would remain on their little porch and look at us without the slightest fear; in fact, we could almost detect the blinking of their bright little eyes. The young birds (four in number) first made their appearance on the porch of the box on May 30, and left it finally a few days afterwards. They did not desert us, however, but took up their abode in a row of poplars bordering our street, and here they remained for about two weeks, the mother feeding them and looking after their general welfare and education in the ways of the world.

During these two weeks we noticed an occurrence of special interest; namely, the careful guarding of the home box against the Sparrows by the male Bluebird. He would daily sit on his favorite clothes-line post or on the fence and keep a sharp watch over his summer home, and should a Sparrow dare to light on it, he would immediately give chase and fight him off. We all looked upon this as an excellent example of

bird diplomacy and foresight, as, while the mother attended to the wants of the little family, the male remained in the rear of the house, keeping away all intruders, thereby holding their domicile for future use. The wise little bird well knew that if he did not keep this watch, the Sparrows would avail themselves of his temporary absence and take possession. Could human reasoning have done better?

The young were now almost as large as the parents, and we daily saw the united family flitting around the house and yard, even alighting on the rails of our back porch. About the middle of June the old ones began repairs to the original nest and in the course of time began depositing the second set of eggs, and now a repetition of the above story began; they were evasive for some time; later a second little brood was hatched, fed and left the home nest like their older brothers and sisters. They, too, remained in the poplars for a period of a week or ten days, when suddenly, the latter part of July, all of them—parents and eight little ones—entirely disappeared and we saw and heard no more of them until the first week in September, when we again heard their call and noticed a few among the trees at different times. They evidently came back to bid us adieu prior to their autumn journey southward.

Thus ends the story of our 'Pioneer Tenants'; in return for a few hours' work and trouble, we were rewarded throughout the season with the presence of a pair of loving, confiding little birds, and had the satisfaction of seeing eight baby nestlings raised to maturity on our premises; a little encouragement will work wonders with the birds.—
BERTON MERCER, *Lansdowne, Pa.*

The English Sparrow as an Evicter

BIRD-LORE is certainly to be congratulated for the quantity and quality of the contents of the January-February number. The articles are all interesting, and those relating to nest-boxes are especially so, and so timely that we may hope they will result in making it possible for many feathered infants to reach maturity that

otherwise would have fallen prey to their natural enemies.

The English Sparrow as the natural enemy of respectable birds is a good subject for discussion in your pages, as the experience of any of your readers who have really discouraged these pests would be of much interest and value to all of us not so successful. Your correspondent from St. Louis, Mo., gives (on page 17) a "simple and effective way of keeping the English Sparrow out of a Bluebird's box" that does not agree at all with a recent experience of my own.

Last spring at my home in Cassopolis, Michigan, two or more pairs of Bluebirds were about the grounds for many days seeking a place to nest, and engaging in unequal warfare with the English Sparrows. I put up three or four nesting-boxes in the trees, and had the satisfaction of seeing the Bluebirds explore them almost as soon as I had left them; but, as soon as they made a move toward building nests, the Sparrows would get after them and drive them away, repeating the attack every time the Bluebirds came back. I never saw more than a pair of Sparrows actually engage in the fight, but there were always several others present uttering their impudent yelps and plainly giving moral support that the poor Bluebirds could not withstand. Except in one case, the Sparrows did not nest in the boxes after they had won possession of them.

I made one bird-house according to descriptions in the books and set it up on a pole about seven feet from the ground, or at just the height that your St. Louis correspondent says would be preferred by Bluebirds and unsatisfactory to English Sparrows. It was by accident that I did so, as the height was determined by the length of a scantling I found available for use as a pole, and not because I had ever heard that an English Sparrow would avoid a nesting-place so easily reached from the ground. Sparrows and Bluebirds at once began a struggle for its possession, the Sparrows winning of course, and they immediately began building a nest in it. Each day for several days thereafter, I raked out of that box a mass of grass, leaves, twigs, etc.—almost enough to

feed a horse (if not very hungry)—and each day the Sparrows renewed it. My standing on a chair, which brought my face to the level of the box, and destroying the nest daily did not discourage them in the least.

Finally, for some reason, I did not destroy the nest for perhaps four or five days. When I did so I found in the long roll of débris that I pulled out of the hole two or three broken eggs and one egg intact, which I emptied and kept, in order that I may know an English Sparrow's egg the next time I see one. After I had pulled everything, as I supposed, out of the box, the female bird darted out of the hole within six inches of my face and made off. She had made no attempt to escape before, and I had no suspicion that there was a bird inside. Within twenty minutes of that incident these birds (I suppose the same pair) had begun building another nest in the box.

About this time, I think probably the next day, the first alarm-clock trill of the season was uttered by the House Wren, and, I quickly located a pair of them in a plum tree only a few feet from the bird-house, as though they had flown straight to it from their winter resort in the South. It was then the tenth of May and the plum trees were in beautiful bloom, making a perfect stage setting for the song of birds. Realizing that I could have no Bluebirds in my box, I concluded that I would have Wrens. Some bird-book or magazine that I had said that a hole one and one-eighth inches in diameter would admit Wrens and exclude English Sparrows. Accordingly, I made such a hole with much care in a thin piece of board and, after once more pulling out the Sparrows' nest, tacked it over the larger hole in the box. About five minutes later I had the chagrin of seeing the cock Sparrow pass through it with seeming ease, and he looked like a large specimen of his kind.

I then made another hole just one inch in diameter in another strip of board and tacked that over the hole. This time I had the reward of the successful inventor, for I witnessed with joy that the violent efforts of the Sparrows to get into the box were

thwarted by the reduced aperture. All this time the Wrens had remained near by and had on several occasions that I witnessed been inside the box, but the Sparrows always drove them away. They returned, however, with more persistence than the Bluebirds had shown, and from the manner in which they addressed the Sparrows, between sweet songs, it was evident that they intended to oust them if such a thing were possible.

Only a few minutes after the smaller hole had proved its ability to exclude the Sparrows, the Wrens had apparently comprehended the situation, and they entered the box and threw out the few remnants of the nest that my hook had not extracted. These they brought to the hole and dropped to the ground, to the great annoyance of the Sparrows, outside and unable to prevent it. The Wrens came out frequently for a short brush with the enemy and always got the worst of it, but they easily got back in the box and continued pitching out the wreckage of the nest. The hen Sparrow seemed to give up the game after a few hours, but the cock stayed there two or three days looking very hostile and unhappy and trying in vain to keep the Wrens from going in and out of the hole. I drove him away many times, and the Wrens were, as a little girl would say, "just as mean as they could be" to him, but it was about three days before the completeness of his eviction fully dawned upon him. Other Sparrows did not take as much interest in this case as they had shown in the earlier troubles with the Bluebirds, perhaps because the season was farther advanced and they were mostly engaged in rearing families; or, possibly, they knew by experience that it would please the Wrens too much to quarrel with them.

When this malevolent bird exhibited such a vindictive spirit by standing guard over the box that he knew he could not use I decided that the best thing to do to him would be to shoot him. To that end I went to a hardware store in the village, where I had seen some 22-caliber guns suitable for both shot and ball cartridges, and began buying one. In the course of the proceed-

ing I mentioned the use I had for it, when the clerk said that he had known other people to shoot English Sparrows, with the result that all other birds were effectually frightened away from the premises. I therefore changed my mind, and the young man lost a chance to sell a gun. One of your correspondents in the January-February number (page 8) writes of keeping these Sparrows away from his bird-boxes by the use of a gun, but it would be interesting to hear further from him as to whether or not the shooting scared away any other birds.—F. M. BENNETT, *Lieut. Comdr. U. S. Navy.*

Protection for Bird Tenants

If it is not too late, I should like to offer a suggestion as to the protection of bird-houses from cats.

A strip of zinc tacked around the pole on which a bird-house is placed will make it impossible for a cat to reach the nest. Of course, the strip must be wide enough so that a cat can not reach over it and far enough from the ground so that it cannot jump beyond it. If painted the same color as the pole it does not disfigure it in any way.

I have often tacked such a strip around the trunk of a tree where a nest seemed in danger. A length of old stove-pipe sometimes answers the same purpose and is probably less objectionable from the bird's standpoint than unpainted zinc. Another device which has proved equally effective is simply a bunch of thorn twigs tied around the trunk or branch of a tree. If properly placed, this forms a most effective barrier.—MARION BOLE, *West Barnet, Vt.*

An Unknown Bird Enemy

At Forest Lawn, June 19, 1904, on the edge of the bluff over a colony of Bank Swallows, I discovered six freshly dug holes about three inches in diameter. Up through several of them were brought the contents of the nests, which consisted of some rather large white feathers and dry grass, together with the wing and downy feathers of a Swallow.

June 25, there were twelve holes. On that date we moved into our cottage near

the colony, bringing an Irish setter dog. After that no more holes were made in the bank. Did the dog drive the enemy away, and what was the enemy?—NETTIE SELINGER PIERCE, *Rochester, N. Y.*

Where the Blue Jays Find a Breakfast

I have been greatly surprised to find where the Blue Jays hunt for a breakfast on cold winter mornings, when the snow lies deep in the woods. They fly to one and another of the old squirrels' nests made of leaves in the crotches of tall chestnut trees and scratch away in search of nuts. Frequently they find chestnuts buried in these leafy squirrel homes, and they open the nuts by hammering them against a limb with their bill.

If it were not for the providence of a chance gray, winter would go hard with these birds. Living almost in the shadow of the woods, two pair of Jays have been feeding at my window-sill since the blizzard, and they greedily eat bread - crusts, pumpkin seeds, dry chestnuts, corn and suet. They come each day at the same hour and take turns at the feast. The scream of the Jay is the signal for all the smaller birds to finish their meal.—W. C. KNOWLES, *Washington, Conn.*

A Shivering Chickadee

Early one morning in January, 1904, I looked out to see if I could get a glimpse of any of the birds which pay daily visits to a birds' table that I keep well supplied with delicacies. As the registering thermometer indicated a temperature of $38\frac{1}{2}$ degrees below zero the night before, and had by that time succeeded in getting up to 29 degrees below, I felt rather anxious for our feathered friends, and little thought that I would see one such a frigid morning; but there sat a Chickadee on the vines of the veranda, its head under its wing, and with every feather on end. Every few seconds its little body would tremble all over, as does a dog's when thoroughly chilled. We have all seen shivering dogs and horses; but who ever before saw a bird shiver?—W. S. JOHNSON, *Boonville, N. Y.*

Book News and Reviews

NARRATIVE OF A TRIP TO THE BAHAMAS. By GLOVER M. ALLEN and THOMAS BARBOUR. Cambridge, Mass. December, 1904. Privately printed. 8vo. 10 pages, illustrated.

This is the descriptive itinerary of a trip chiefly in the islands of Great Bahama, the Abacos, and New Providence, made in July, 1904. The authors propose to publish reports on their collections in various branches of natural history, later; Mr. Allen's, on the birds, has already appeared ('The Auk'). The reader will find here some very useful hints on outfit, as well as descriptions of the islands visited.

Of the Flamingo on Abaco, it is said:

"Formerly these birds nested in great flocks, but, owing to the great destruction of the eggs and young birds by the people of Marsh Harbor, a mere remnant now remains." Let us hope that the recently enacted Bahaman law will at least prevent the wholesale, open destruction of Flamingos and their eggs which has heretofore prevailed.—F. M. C.

BIRDS OF THE BAHAMA ISLANDS. By JOSEPH H. RILEY. Special publication from 'The Bahama Islands,' by permission of the Geographical Society of Baltimore, 1905. 8vo. Pages 347-368.

Mr. Riley here discusses in a workmanlike manner the zoögeographical position of the Bahamas and the origin of their bird-life. He gives, also, a useful list of Bahaman birds, with the islands in the group on which each species occurs. We trust that the other papers in the volume, of which this forms a part, treat of their respective subjects as satisfactorily as does this one.—F. M. C.

BIRD STUDY. Home Nature-study Course, College of Agriculture, Cornell University. New Series, Vol. I, No. 4, April, May, 1905. 16 pages. ANNA BOTSFORD COMSTOCK, Editor.

We have had so many helps to bird study prepared by ornithologists who were not teachers that we should give an exception-

ally cordial welcome to this leaflet written by a teacher of wide experience who has definitely in mind just what teachers as well as pupils require.

The course of study here outlined makes the best use of the most easily available material and seems admirably adapted to arouse and stimulate the child's interest in bird-life. We trust that this publication may have wide circulation, especially among teachers. We know of nothing of its kind which it should not replace.—F. M. C.

The Ornithological Magazines

THE AUK.—In the April 'Auk' we find an unusual number of half-tones illustrating several extremely interesting papers. E. S. Cameron, in 'Nesting of the Golden Eagle in Montana,' takes us into the eyrie of a pair of these birds, and as the weeks roll by we become well acquainted with the growing eaglets and their daily life. The life history of the American Brown Creeper is similarly portrayed by Dr. A. P. Chadbourne and Messrs. Kennard and McKech-nie, all of whom have found this bird breeding sparingly in Massachusetts. A. H. Clark contributes a paper on 'Migration of Certain Shore Birds,' chiefly the Golden Plover, and is of the opinion that these birds find their way by breasting the trade-winds or winds prevailing at the time of their long migration from the Arctic circle to Patagonia. To assume that they guide themselves in this way when passing over the land, as well as over the open ocean, is perhaps pushing the theory to an extreme to which other believers in this idea have not ventured. 'Summer Birds in the Bahamas' is a list containing the description of a new Hairy Woodpecker (*Dryobates villosus piger*), as well as a great deal else that is of more interest to the general reader. Egg-collectors will be specially interested in 'Nesting Habits of Birds in Mississippi,' by C. R. Stockard. The birds seen in a single day in Jefferson Parish, La., are

enumerated by H. H. Kopman, and notes on Long Island, N. Y., are furnished by Dr. W. C. Braislin, while R. Deane contributes another letter by Audubon and some to him written by J. Abert. We note an annotated preliminary list of the birds of Delaware, by S. N. Rhoads and C. J. Pennock, and hope it may escape the fate of other 'preliminary' lists that so rarely get beyond this stage.

The general notes are varied and the reviews comprehensive, especially one of Part III of Ridgway's 'Birds of North and Middle America.' We regret to see the department of 'Publications Received' still relegated to the back cover, for as a record of current literature it deserves a better fate, and those of us who fail to bind in covers will lose a valuable part of the 'Auk.'—J. D., JR.

THE CONDOR.—Two numbers of Vol. VII of 'The Condor' have already appeared. The leading article of the January number is by Finley, on 'Photographing the Aerie of a Western Red-tail,' and is illustrated by a plate and six text figures. Under the title 'An Untenable Theory of Bird Migration,' Professor Cooke presents certain objections to Palmén's theory that "the annual migration route of a species indicates the way by which it originally immigrated into its present breeding home." But in the March number Dr. Stejneger takes exception to Professor Cooke's views and concludes that "Palmén's theory cannot be disposed of in this off-hand manner." An account of 'Old Fort Tejon,' one of the classic ornithological localities in California, is given by Grinnell, who adds a nominal list of 54 species of birds observed during a week's visit in July, 1904. The same trip seems to have included Mt. Pinos, not far distant, where a Sage Sparrow was collected which is described as a new subspecies under the name *Amphispiza belli canescens*. Some Bird Notes from the Central Sierras,' by Keyes; 'Notes from Flathead,' Mont., by Silloway, and 'Summer Birds of the Papago Indian Reservation,' Arizona, by Swarth, all contain records of value to the student of geographic

distribution; while the systematic zoölogist will find much of interest in the extracts from Dr. Jordan's 'New Code of Nomenclature.' A portrait of William Dutcher, president of the National Association of Audubon Societies, concludes the series of portraits of American ornithologists.

The March number opens with 'A Note on the Prairie Falcon' at Pyramid Lake, Nev., by Fuytes, illustrated by a reproduction of a drawing by the author. An interesting bit of historical lore is contributed by Emerson, who tells of the discovery in the Cooper homestead at Haywards, Cal., of some 'Manuscript of Charles Lucien Bonaparte,' comprising the last three volumes of the 'American Ornithology' published in 1825. A facsimile of a page of the manuscript on Steller's Jay and a portrait of Bonaparte add greatly to the interest of the paper. Under the title 'Breeding Notes from New Mexico,' Mrs. Bailey mentions the birds found with young at high altitudes in the Rocky Mountains in July and early August in 1904, and records an instance of Golden Eagles repairing their nest in the Taos Mountains on August 10. Grinnell calls attention to the peculiar 'Status of the Townsend Warbler in California.' The bird "occurs in California in two rôles, as a regular winter visitant and as a rather late spring migrant." Two geographical races are apparently represented, but, although a supposed new subspecies is thus indicated, the author considerably refrains from "burdening it with a name." An important feature of the current volume is a series of portraits of eminent European ornithologists, beginning with likenesses of two prominent Englishmen, Dr. P. L. Sclater and Mr. Howard Saunders; the veteran German, Dr. Jean Cabanis, and the well-known Austrian ornithologist, Count von Tschusi zu Schmidhoffen. A brief statement of the work of each author appears in the column of 'Editorial Notes.' The editor also makes the welcome announcement that the A. O. U. bill, which failed in 1901, has finally become a law in California after undergoing certain modifications which were found necessary to insure its passage.—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

Published by THE MACMILLAN COMPANY

Vol. VII Published June 1, 1905 No. 3

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico twenty cents a number, one dollar a year, postage paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

IN the last number of BIRD-LORE, Mr. Otto Widmann makes an eloquent plea for the selection of the Hummingbird as the national bird. While we freely admit the truth of all that Mr. Widmann so pleasingly says of this exquisite little creature, the fact that it is essentially lacking in the preëminently bird-like characteristic of song should, to our mind, unquestionably prevent its selection as *the* bird of America.

Such a bird should, primarily, it seems to us, possess a song which, because of its musical quality or association with the singer's haunts or seasons, endears it to every nature lover; it should be a bird of wide distribution during the nesting season in order that it may be generally known not only as a song bird but as a home bird; it should be an abundant or, at least, a common bird; it should be typically American, and, as Mr. Widmann says, it should possess sufficient distinction of form and marking to be readily recognized in a figure.

Among other species whose claims to the honorable position of national bird have been urged by writers to BIRD-LORE are the Dove, the Song Sparrow and the Robin.

The Dove conforms to most of the requirements set forth above; indeed, it is perhaps our most generally distributed breeding bird, but its song is too mournful, it does not express that joyousness which we expect to hear from nature's minstrels.

For a large part of our country there can be no doubt that the Robin more nearly

fills the place of national bird than any other, but we have to remember that in the West the Robin is not the familiar, dooryard bird we in the East are accustomed to find it, while throughout the southern tier of states it is only a winter visitant, usually songless, and known chiefly as a basis for potpies.

The Song Sparrow, dear as he is to every bird-lover, too closely resembles some other birds in form and markings to make an acceptable subject for illustration in this connection. and, as we look through the list of North American birds, species after species is rejected for one or more reasons, until there is left, apparently, but one bird which fills all the conditions we have imposed, and that bird is—the Meadowlark.

Including under this name all the forms of this species, we have a breeding range reaching from northern South America to Canada, from the Atlantic to the Pacific, and throughout this vast area the bird is generally distributed and sufficiently abundant to be well known. As a songster the Meadowlark needs no praise; some writers, in fact, give the western form first place among our song-birds; his Americanism is so far beyond dispute that he cannot claim even family relationship outside of this hemisphere; while in form and coloration he is equally distinguished. Hail, then, to the Meadowlark! He has our vote.

THE season is at hand for the study of the home-life of birds, and we again earnestly ask assistance in securing notes on the nesting habits of Warblers for our proposed 'Book of the Warblers.' A series of definite observations on *one* species will be far more welcome and valuable than casual notes on the occurrence of many.

TO our unbounded satisfaction the Bahaman government has passed a law protecting all song and insectivorous birds throughout the year, while for the Flamingo and some other species a close season has been established.

DURING May and June the Editor expects to be in England, attending the International Ornithological Congress, and he begs the indulgence of correspondents during this period.

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

Notes and News

The officers of the National Association always feel a sense of relief when the legislative season is finished; this year the relief was greater from the fact that some vicious attempts to repeal excellent bird laws had to be combated. In order to give the members of the National Association, and also the other readers of BIRD-LORE, some idea of the legislative work of the past season, the following résumé is presented:

MAINE.—A distinct advance was made in the protection of Ducks; for most of the species the close season now commences on the first day of December; this does away with that worst of all practices, spring shooting. On the other hand, a retrograde step was taken by adding Mud-hens and Blue Herons to the wild birds that may be killed at any time. This amendment was instigated by and secured through the influence of a game commissioner who evidently was more interested in fish than in birds and was not willing to permit nature to preserve its own balance. It should be possible to protect local fish hatcheries without sacrificing these two species of birds in all parts of the state; furthermore, it is a question whether the Blue Heron is not a beneficial bird, inasmuch as it is known to eat many suckers, a fish that destroys the spawn and fry of game fish.

It is also hard to understand why a bird like the Bittern—Mud-hen—should not be protected.

NEW YORK.—The fight to preserve the integrity of the anti-spring-shooting duck law in this state was carried on till the very last day of the legislative session. As reported in the last number of BIRD-LORE, the opponents of the law early in the session introduced a repeal bill. After a very ex-

haustive hearing before the Fish and Game Committees of both houses, the bill came up in the Assembly and was defeated by a narrow margin of twelve votes.

Almost immediately after the defeat of the original bill, new bills were introduced in both houses; in the lower House by Assemblyman Hubbs and in the Senate by Senator Burr. The later bills were more insidious and vicious than the first one, inasmuch as they seemingly asked for a small concession; the bills proposed to make an open season of three days in the week from March 1 to April 15. The days selected were Thursday, Friday and Saturday, at the very height of the migration period when the greatest number of Ducks would be in the Long Island waters. The plea made by the Duck shooters was, "Give us our spring shooting in this modified form; we are not asking a great deal." By great activity and other methods of a questionable character this bill was passed in the Assembly. Fortunately for the good name of the state and also for its game interests, the Senate Committee would not and did not approve of the bill, and it consequently failed of passage. The pressure brought to bear upon the Senate Committee was undoubtedly very great, and they deserve the highest credit for the stand they took to maintain New York's present high standard of game laws. The National Association is especially indebted to Senators Armstrong and White, who are bird protectionists of the most advanced type and are earnest friends of the Audubon movement.

The Audubon aigrette bill failed of passage. It passed the Senate quite late in the session and was finally lost in the Committee on Rules, which has charge of all Assembly bills during the last ten days of the session. Had it become a law, its constitutionality

would have been contested by the aigrette dealers. This question is now being tested; the attorney of our association is at the present time aiding the attorney-general of the state of New York in conducting an important suit to establish the right of the Commonwealth to prevent the sale of foreign game, in order to better protect domestic game.

Section 141 of the New York law prohibits the sale of foreign game; if such game can be sold in the close season there is no way to prevent native game being sold at the same time under the name of foreign game. This is one of the most important questions now before the courts, inasmuch as it is absolutely necessary to determine whether a state has the right to prevent the sale within its borders of foreign game; it is hoped that the courts will so construe.

The Armstrong fire-arms bill became a law; this prevents aliens from carrying fire-arms in any public place, such as highways, parks, etc., and will do much to help preserve our song-birds. This is another instance where Senator Armstrong has shown his great interest in bird protection.

CONNECTICUT.—A bill to permit fire lighting, i. e., shooting wild-fowl at night, was introduced. It was defeated through the efforts of the Audubon Society aided by sportsmen who were opposed to such a pernicious and wasteful method of shooting. There is no surer way to drive wild-fowl away than by shooting at or disturbing them in the night-time.

NEW JERSEY.—The only changes in the bird laws during the present session were shortening the open season for wild-fowl fifteen days in the spring and prohibiting the use of batteries or water blinds more than one hundred feet from shore. The Audubon Society of this state should persistently agitate the subject of the abolition of spring shooting of wild-fowl and Snipe. It is wrong to kill these birds while on the northward migration, and an active movement should be commenced at once to carry out this needed improvement. One of the arguments of the Long Island gunners in their attempt to repeal the New York law was that New Jersey permitted Ducks to be

killed in the spring, why should New York prohibit it? The reply of the Audubon representatives was, that because New Jersey is wrong is no reason why New York should be also. An attempt was made to make an open season on the Dove, but it was easily defeated.

RHODE ISLAND.—The legislature is still in session. Slight gains have been made in the laws: 1. Sale of game-birds prohibited. 2. Shooting of pheasants prohibited for five years. 3. Open seasons shortened fifteen days. No action has yet been taken on the ridiculous bounty law on Hawks and Owls. It is simply obstinacy on the part of legislators to retain this law, in the light of the general knowledge of the value of these birds.

PENNSYLVANIA.—This state has just adopted a most excellent and advanced law in many respects. The one vital defect is that it permits wild-fowl shooting from April 1 to April 16. This is just at the height of the migration period and is therefore the very worst time that could be selected. However, to offset this, sale has been stopped, and a bag limit is being enforced. In many other respects the law is a model in its restrictive character. The section referring to non-game birds is the A. O. U. model law. We are glad to be able to shade Pennsylvania on the model law map.

FLORIDA.—The legislature is now in session. A bill has been introduced to establish a Game Commission, which is a much-needed improvement, for at the present time there is no responsible head to see that the game and bird laws are enforced in this large state. Game protection is such a new idea in this commonwealth, and there is so much wild territory to be controlled, that a virile character, with a scientific training, should be at the head of the Commission, if one is established. It will not do to appoint a politician to do the work of an economist.

MICHIGAN.—The president visited the legislature of this state late in March and was given a joint hearing by the Game Committees of both houses. A codification bill had already been introduced by Senator Bland. This bill was discussed in detail, the Audubon representatives suggesting

several improvements. At the close of the hearing your representatives were requested to prepare a bill including all the beneficial changes suggested. This was done, and the remodeled bill is now before the legislature. If the bill becomes a law it will give the Audubon Society the right to appoint four special wardens with all the powers of the state game wardens.

MINNESOTA.—A codification of the game laws made at the last session of the legislature makes this statute probably the most radical and advanced of any in force in the United States. It shows the influence of the highest type of sportsmen and bird protectors on legislation. The wild-fowl close season commences December 1.

OKLAHOMA.—While no bird or game legislation of moment was secured, yet by the persistent energy of Mrs. H. T. Foster, of Tecumseh, a humane education law was passed. This certainly will have a very direct and beneficial influence on bird protection. Under its provisions the public school teachers are compelled to instruct pupils in humane ideas and kindness to wild life, for one-half hour each week. A teacher cannot draw pay unless the above provision is carried out. This splendid law will prevent the spoliation of unnumbered nests and the abolition of boys' missiles, catapults, etc.

TEXAS.—In the last issue of BIRD-LORE a brief statement was given of the attempt to repeal the wild-fowl law by selfishly interested persons. It is with great satisfaction that we are able to report that the attempt was a total failure, and the present law is safe from further attacks for two years. Long before that time the Audubon Society, which did such wonderful work in the campaign just closed, will be thoroughly organized. When men of the aggressive character of Secretary Davis are at the head of a movement for the benefit of a state, in other words, good civics, they soon compel the moral and financial support of the public. Unselfish devotion to the good of the commonwealth always attracts attention and a following.

CALIFORNIA.—Owing to the great edu-

cational work done by the Audubon people of this state and the continuous agitation for better bird protection that they have kept up for the past year, a new law has just been enacted. It contains so much of the model law, and is so far in advance of anything heretofore on the statute books relating to birds, that the Audubon Society is certainly to be congratulated on the result of its efforts. The spirit that moves the workers in this society will surely cause the new law to be enforced.

In addition many marked improvements were made in the game sections, bag limits, shorter seasons, etc. In a recent publication of the Game Commission it is announced that "it is always unlawful to buy, sell, offer for sale, barter or trade, at any time, any Quail, Dove, Pheasant, Grouse, Sage Hen, Snipe, Ibis, Plover, Rail, or any Deer meat or skins." It is unfortunate that Ducks and Geese are not included, but this will come in time. In California the county supervisors may pass special ordinances shortening the open seasons, but cannot make them longer than the state law. Secretary Way writes: "We have just won a great victory in Los Angeles county; the open season for Doves is one day, besides we have secured shorter seasons for valley and mountain Quail and Deer. This result is a most gratifying one, for, two years ago, when I first took up the fight for the Doves, they did not seem to have a friend in the country. I shall now place this matter before the people of some other counties in the state, hoping to make gains there also. I believe this is the beginning of the end, and that public sentiment will compel the next legislature to strike the Dove from the game list." The State Chief Deputy Commissioner, C. A. Vogelsang, has promised to prevent the illegal traffic in the San Francisco markets in sea birds' eggs which has been heretofore carried on so extensively.

To our unbounded satisfaction, the Bahaman government has passed a law protecting all song and insectivorous birds throughout the year, while for the Flamingo and some other species a close season has been established.

WILLIAM DUTCHER.

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

EDUCATIONAL LEAFLET NO. 14



Photograph by S. A. Lottridge

THE AMERICAN BARN OWL

Order — *Raptores*

Family — *Strigidae*

Genus — *Strix*

Species — *Strix pratincola*

The American Barn Owl

By WILLIAM DUTCHER

President National Association of Audubon Societies

DESCRIPTION

The upper parts are a yellowish buff overlaid with grayish, and more or less speckled with white; underparts varying from pure white to ochraceous buff, dotted with black, some individuals profusely and others with but few spots; wings and tail generally lightly barred with blackish; legs long and feathered almost to base of toes; feet dark; very large, white, heart-shaped facial disk, with narrow black and buff edging, this latter appearing as if burnt or charred; maroon-colored spot between eye and bill, sometimes completely surrounding the eye; bill yellow; eye black. The only other species of Owl with black eyes is the Barred Owl, which is a much larger and darker bird heavily barred on head, neck and breast. The two cannot be confused.

Size.—Varies from 15 to 18 inches from end of bill to tip of tail; wings very long, extending beyond tail when folded.

Nest.—None is built; the eggs are laid in a variety of situations, such as hollows in trees, holes in banks or cliffs, abandoned burrows, sides of wells, mining shafts, dovecots, barns, church steeples, etc.

Eggs.—Pure white, from four to seven in a set, sometimes more.

Distribution.—The northern limit of the breeding range is about latitude 41 degrees and extends westward to the Pacific coast. Occasionally a straggler may be found north of this range in favorable localities.

The Barn Owl, Golden Owl, Church Owl, or, as it is frequently called, the Monkey-faced Owl, is almost cosmopolitan, being found in nearly all temperate and tropical climes throughout the globe.

"Alone and warming his five wits,
The white owl in the belfry sits."

The Barn Owl should appeal to man because of two characteristics,—first, its singular and almost weird beauty, and, second, its very great economic value and almost total lack of harmful qualities. If it were a bird that was more frequently seen its beautiful soft plumage of white and gold would attract the lovers of color, but, being nocturnal in its habits, it is not often observed; indeed, even where it is common, when one is shot its strange appearance leads the local newspaper to publish a ridiculous account of a new and grotesque animal, part monkey and part Owl. Like all other Owls, it still bears the weight of the superstitions of over two thousand years; consequently the hand of man is yet against it. Shortly after sundown this "pretty aerial wanderer of the night" commences flitting to and fro "on wing so soft and silent" that it is scarcely heard. During all its nightly wanderings it is working for mankind, its only enemy, while gathering food for itself and perhaps a hungry brood of callow young. Then it is that its peculiar screaming cry is heard, which no doubt is the basis of many of the strange and uncanny stories related of Owls. In Europe this species

is the Owl of the ivy-covered tower and the ruined castle, and by its nightly wailings and wanderings peoples the ruins with ghostly tenants.

The late Major Bendire, in his 'Life Histories,' states: "The Barn Owl, strictly speaking, makes no nest. If occupying a natural cavity of a tree, the eggs are placed on the rubbish that may have accumulated at the bottom; if in a bank, they are laid on the bare ground and among the pellets of fur and small bones ejected by the parents. Frequently quite a lot of such material is found in their burrows, the eggs lying on and among the refuse. Incubation usually commences with the first egg laid, and lasts about three weeks. The eggs are almost invariably found in different stages of development, and downy young may be found in the same nest with fresh eggs. Both sexes assist in incubation." One of the best methods of studying the food habits of Owls is to gather the pellets which they disgorge (Read E. L. No. 12). These consist of the undigested refuse of their food, hair, bones, feathers; etc. Sometimes enormous quantities of this refuse is found in the nesting place of the Barn Owl, one recorded instance being two or three cubic feet. When the tired farmer is buried deep in slumber and nature is repairing the waste of wearied muscles, this night-flying bird commences its beneficial work, which ceases only at the rising of the sun. All that has been written regarding the food of the Barn Owl shows it to be of inestimable value to agriculture. Mr. W. H. Hudson, of England, says of the Barn Owl: "It is surprising that at the present day any one should think it necessary to write a fresh plea for this bird—a bird that has been a favorite of our ornithologists for the last hundred years and whose praises may be read in a hundred volumes on our library shelves! The feathered cat has been minutely and lovingly described by all his biographers! 'He who destroys an Owl is an encourager of mice,' says one writer; and his value as a mouse-killer, and his beauty and singularity are points that are invariably dwelt upon." Major Bendire says: "Looked at from an economic standpoint, it would be difficult to point out a more useful bird than this Owl, and it deserves the fullest protection; but, as is too often the case, man, who should be its best friend, is generally the worst enemy it has to contend with, and is ruthlessly destroyed by him, partly on account of its odd appearance and finely colored plumage, but oftener from the erroneous belief that it destroys the farmer's poultry." Dr. A. K. Fisher, of the United States Department of Agriculture, the greatest living authority on the food of Hawks and Owls, presents in 'Science, N. S. Vol. III, No. 69, pp. 623-624,' the following emphatic brief, showing the undeniable value of the Barn Owl.

"In a work on 'The Hawks and Owls of the United States,' published in 1893, I recorded the results of the examination of 200 'pellets' or 'rejects' of the Barn Owl taken from one of the towers of the Smithsonian Institution, Washington, D. C., June 28, 1890. Since that time:

475 more have been collected — 125, September 14, 1892, and 350, January 8, 1896, making in all a total of 675 'pellets.' Thus abundant material has been carefully examined and found to contain the remains of 1,821 mammals, birds and batrachians, as shown in the following table:

1,119 Meadow Voles	33 Short-tailed Shrews	1 Vesper Sparrow
4 Pine Voles	21 Small Short-tailed Shrews	10 Song Sparrows
452 House Mice	1 Star-nosed Mole	4 Swamp Sparrows
134 Common Rats	1 Brown Bat	1 Swallow
1 White-footed Mouse	2 Sora Rails	1 Warbler
20 Jumping Mice	4 Bobolinks	6 Marsh Wrens
1 Rabbit	3 Red-winged Blackbirds	2 Spring Frogs

A glance at this list will demonstrate to any thoughtful person the immense value of this useful bird in keeping noxious rodents in check. Moreover, judging from the species in the list, it may be seen that the Barn Owl hunts almost exclusively in open country, such as cultivated fields, meadows and marsh lands, where such pests do most damage. In Germany, according to Dr. Bernard Altum (*Journal f. Ornithologie*, 1863, pp. 43 and 217), the Barn Owl feeds extensively on shrews. In 703 'pellets' a number only slightly greater than that which I examined, he found remains of 1,579 shrews, an average of over two to each 'pellet,' while our 675 'pellets' contained only 54 shrews, an average of one skull to every $12\frac{1}{2}$ pellets. On the other hand, our material contained the remains of $2\frac{1}{2}$ mice to each 'pellet,' or 93 per cent of the whole mass. The birds, which constitute about $4\frac{3}{4}$ per cent of the Owl's food, are in the main species of little economic importance."

In the West the food of the Barn Owl consists very largely of pouched gophers, a specially destructive mammal, also ground squirrels, rabbits and insects. In the southern states large numbers of cotton rats are destroyed, a fact which should be appreciated by every planter.

This little tract is presented with the hope that every farmer or fruit-grower who reads it will hereafter extend to the Barn Owl the protection it so richly deserves.

For additional valuable information regarding the Barn Owl, read the following: 'Life Histories of North American Birds,' Bendire, Vol. I, pp. 325-328; 'Hawks and Owls of the United States,' Illustrated, Fisher, pp. 132-139, and 'Leaflet No. 19, Royal Society for the Protection of Birds, London, England.'

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HOUGHTON, MIFFLIN AND COMPANY
BOSTON AND NEW YORK

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EDITED BY
FRANK M. CHAPMAN

PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

NEW YORK

HARRISBURG, PA.

LONDON

Bird = Lore

July - August, 1905

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1. BLACKPOLL WARBLER, ADULT MALE.

3. BLACKPOLL WARBLER, YOUNG AND ADULT IN FALL.

2. BLACKPOLL WARBLER, ADULT FEMALE.

4. BLACK AND WHITE WARBLER, MALE.

5. BLACK AND WHITE WARBLER, FEMALE.

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. VII

JULY — AUGUST, 1905

No. 4



GOLDFINCHES IN THE MAKING

A Goldfinch Study

By R. H. BEEBE

With photographs from nature by the author

THIS past summer (1904), I have noticed a larger number of Goldfinches in this vicinity (Arcade, N. Y.) than I have observed for several years past. During the latter part of July, I found quite a number of nests of this bird. Some of these nests were built high up in the large maple shade trees in the village, while others that I found were built in small bushes about five feet from the ground,— quite a contrast in the two nesting sites. In both cases the nests were built in the crotch of a limb and very carefully concealed by overhanging leaves. The nests are very compact, being constructed of grasses, leaves, pieces of bark, etc., and are very cosily lined with plant-down.

I found three nests, as above described, all of which were situated within a radius of a few rods of each other, two of these nests containing four eggs each and the other one six eggs.

The young in all three nests hatched about the seventh of August, and by August 25 they had all left their respective nests. It was at one of these nests that I obtained the photograph herewith reproduced, showing



the mother-bird brooding the young. I had previously made several attempts to obtain a picture of her before the young were hatched, but was unsuccessful, as she would not



A GOLDFINCH FAMILY

at that time return to the nest so long as the camera was near. But after the young were hatched it

was an easy matter to photograph her at the nest, she even allowing me to stand by the camera while making exposures, and offering to leave only when I attempted to change plate-holders, and then returning at once.

I was also desirous of obtaining a picture of the male bird at the nest, but was unsuccessful, as he at no time came near so long as the camera was in sight, although, after the camera was removed from near the nest, the male bird would readily return and feed his mate, bringing to her quantities of seeds, etc., and feeding them to her as if he were feeding young birds.

Always when coming with his supply of provisions for his mate, he

uttered a peculiar twitter, and she would at once answer him with about the same notes; sometimes leaving the nest and flying to a near-by tree to be fed there, but usually she would remain on the nest and wait for him to bring the food to her.

On August 18 I removed the six youngsters from the nest, and, after arranging them on a suitable perch, made the pictures as herewith reproduced, showing them alone, also with the old birds on the same perch. When I attempted to replace the young in the nest I found that to get them all back as they were at first was an impossibility, so I had to arrange them as well as possible, some of them being in the nest and others perched on the sides. A few days later I visited this nest, and found them none the worse for the disturbance I had caused them a few days previous. They were now ready to leave their home, and did so when I approached too near, all flying into the near-by bushes.



GOLDFINCH ON NEST, BROODING YOUNG



BENJAMIN SMITH BARTON

From Youman's 'Pioneers of Science in America,' by permission of D. Appleton & Co.

Some Early American Ornithologists

III. BENJAMIN SMITH BARTON

By WITMER STONE

BIRD-STUDY has been the hobby and pastime of many kinds of men. Some have made it their life-work and sacrificed everything to its pursuit, while others have reserved it for moments of relaxation from the cares of business. Some of our ornithologists have possessed an inborn love of nature but little or no education, while others have been scholars of broad learning and marked literary attainments.

The first of the latter type to figure in the history of American ornithology was Benjamin Smith Barton, a Philadelphian and an associate of William Bartram, though the difference in their ages placed the latter more in the light of a teacher than of a fellow student.

Barton was born in 1766, at Lancaster, Pa., the son of Rev. Thomas Barton, from whom he inherited, in some degree at least, his love of nature. His mother came, also, of a scientific family, being the sister of the famous astronomer, David Rittenhouse.

Young Barton was left an orphan at the age of fourteen, and removed to Philadelphia, to the home of his elder brother. He studied for a time at the College of Philadelphia, and then turned his attention to medicine, under the guidance of Dr. William Shippen, and later completed his education at Edinburgh and Göttingen. He returned home in 1789 and practised medicine in Philadelphia, where he was shortly elected to fill the recently created professorship of botany and natural history at the University of Pennsylvania, apparently the first of its kind in America. His reputation as a physician increased rapidly, and he was chosen professor of materia medica, at the university. His health, however, had never been good, and the constant application to his profession and his studies weakened his constitution to such an extent that he was compelled to take a sea voyage to France. This, however, proved of little benefit, and soon after his return, in the year 1815, his career came to an end.

Such is an outline of the man's life as the world saw it, but there was another side that commands our interest. From early life Barton was a student; he seems to have read all the principal works on natural history, while he spent much time in original investigation. In 1785, as a member of the commission to survey the western boundary of Pennsylvania, he made personal acquaintance with the Indians, and their history and ways of living constituted a favorite subject for future study. Botany, however, was Barton's chief pursuit, and most of his contributions to natural history were in this field, while his name is fittingly perpetuated in that of one of our most delicate wild flowers, *Bartonia virginica*.

His knowledge of the birds of America was great, but he has left us only one notable publication on the subject, his 'Fragments of Natural History,' published in 1799. This work consists primarily of a table which he styles a 'Sketch of the Natural History Picture in the Neighborhood of Philadelphia.' In parallel columns are given the arrivals of the 'Birds of Passage,' progress of vegetation and miscellaneous observations, from early spring until the close of the year 1791,—much such a table as the Naturalists' Calendar of Gilbert White. Here, we read of the blooming of the skunk cabbage and the arrival of the Red-winged Oriole (Blackbird), then the coming of the Pewee and the blooming of *Draba verna*, while the arrival of the Snipe is coincident with the first catch of shad in the Delaware River.

So we may trace the progress of the seasons in this quaintly worded chronicle. Late in May "the fire-fly begins to illuminate the woods and meadows" and "the young Bluebirds first venture on their wings." By the fourth of July "most of our common birds have done rearing their young and the course of their melody begins to cease." In August "the Katy-did-it begins its cheerful chattering" and "the Blue Jays appear in great numbers, waiting for the nuts of the Beech, Chinquepin and Chestnut." Then follow the Rice-bird, "Prib Chatterers" (Cedarbirds) in flocks, and the varied stream of fall migrants, duplicating in reverse order and direction the northward flow of springtime.

After the table comes a list of the resident birds of Pennsylvania and comments upon various other species, quite as interesting reading as the table itself. Here the broad knowledge of the author is clearly seen. A creditable attempt at synonymy is offered, and the Indian names of the birds are given, while references and quotations from all sorts of works are liberally scattered through the pages. A plea for the protection of birds as insect destroyers and some suggestions for bird-boxes are worthy of the economic ornithologist of today. A final postscript states that "The preceding fragmentary rubbish is thrown upon the public with some degree of confidence merely because it regards a country the natural history of which has been so little attended to. Other instalments of the 'Fragments' are promised, if leisure permits and the reception is favorable. But," adds the author, "I will not say when, for who does not know that the promises of authors are like the promises of lovers?"

Whatever may have been the reception, the leisure seems not to have been forthcoming. Sometimes it is claimed that men like Barton attempt too much—try to cover too much ground. It may be so; but no one can scan the pages of this first local bird list without feeling thankful to its author; and we seem to read between the lines of his work indications of that struggle which must always be present in such men between devotion to their profession and surrender to the allurements of their hobby.

The Olive-sided Flycatcher

By GEO. W. FISKE, Jr.

With photographs from nature by the author

IT was the last part of May, 1903, that I discovered a pair of the rare Olive-sided Flycatchers. They were in the top of a tall dead tree, and I should not have noticed them had not their strange notes attracted my attention. I searched for their nest, but could not find it.

On May 27, 1904, I saw a pair of these Flycatchers in the same tree where I first found them. They preferred the tall trees near a stream for their hunting-ground, and both birds were always near until June 3, when one of them disappeared.

I had not noticed any nest-building, but the sudden disappearance of one of the birds led me to suppose that one of them was caring for the eggs. I searched for the nest, but without success.

One bird still remained, and I began to think that some one had shot the other, when, to my surprise, the other bird returned June 25. I concluded that the eggs had hatched and that both birds were caring for their young.

They seemed quite anxious as I approached some small spruces near



NEST AND EGGS OF OLIVE-SIDED FLYCATCHER

where they were. I concealed myself, and one of the birds soon went to the nest, which was on the horizontal branch of a small spruce. On going up to the nest, I found that it contained one fresh egg instead of the young I expected to find.

The tree was small (about six inches in diameter at the base), and, as the branches near the nest would not stand my weight, I doubled a piece of



OLIVE-SIDED FLYCATCHER ON NEST

rope and tied it to the tree above the nest. With a piece of board this made a good swing to sit in while fixing the camera. I made a bracket for the camera by screwing two pieces of spruce to the trunk of the tree. The nest was out on the branch thirty inches. The birds would fly past my head, snapping their bills fiercely and making their strange cry.

From the time the eggs were laid both birds got their food near the nest. I saw one of the birds catch a large dragon-fly, snap off the wings and eat it. Most of their food consisted of smaller insects.

The male bird fed the female while she sat on the eggs. When either of the birds went to the nest, it would leave the top of some tree, drop almost to the ground under the nest, and approach it with a graceful upward curve.

The nest was composed of small spruce twigs and shaped very much like the nest of the Green Heron.

A Pasture Tragedy

By M. H. PRENTICE

ALL the world was glad on the day that I found the Kingfisher's nest. The soft golden warmth of a fair summer's day lay over village and field and lured me forth.

The previous day, the Wise Man, who knows the ways of beasts and birds, had allowed me to go with him on a field excursion in the capacity of Ignoramus. We had taken six fully feathered young Flickers, or High Holes—a misnomer in this case, for the hole was only six feet from the ground—and photographed them; we had released a full-fledged young Barn Swallow that was bound to his mud home by an entangling horse-hair, and had seen him fly forth “light as a swallow,” and altogether I had begun to feel that a new world was opened to me.

And now the Wise Man was away and the beautiful day called me out to explore. It has always been the way of explorers and discoverers to follow the course of a stream; what was I, that I should disregard their example? So down through the wonderful five-acre daisy field—abomination of all the thrifty farmers thereabout—I went. “And still my heart with pleasure fills,” as its flowers “flash upon that inward eye which is the bliss of solitude.” Then up the hill and down the bank into the pasture through which curled a cheerful little stream, narrow enough in places so that I could step across it. A week later it was a raging flood a hundred yards wide.

No sign of tragedy for beast or bird was there that day. The Thistle-bird winging his yellow zigzag across the field was gladness animate. A Red-winged Blackbird on a hickory tree looked like a note of joy, the “sol” of the musical scale to the people who “see” color in tone.

As I approached, walking through the reeds and grasses of the lowland, this Red-wing became agitated from tip to tail as to his exterior, and, judging from his distressed cries and calls, evidently his mental state corresponded. This interested me but little, for in trustful childhood more than once I had been led by the oriflamme of his wings into bogs that sank beneath me, but never had I been able to find the light-woven nest of wiry twigs which he delights to build, a little above the ground, in some water-loving bush which grows in the midst of marshy ground.

But this time as I, without the slightest purpose of interfering in his family affairs, advanced, he redoubled his demonstrations and was joined in them by a brown-streaked bird, very plain in appearance, his mate, as I afterward discovered. At last they both darted at me with wild cries. Then my dull intelligence took the hint. I was certainly near some treasure of theirs. It could not be their nest, for there was no place near at hand where it could be built. What then?

I experimented. When I walked in one direction, the cries of the birds became louder; when I walked in another, they were less agitated. I guided my actions accordingly, and soon the pair were hovering threateningly over my head and darting at me fiercely with open mouths, the little brown wife being the bolder of the two in the attack, and actually brushing my hat in her self-forgetting courage.

A chirp at my feet, and a little brown bunch rustled through the brown grass for two or three feet and—disappeared! I knew that it was somewhere within a given area of two feet square, but I could not see it, and I actually found it first by the sense of touch; moreover, when my hand rested upon it the bird neither stirred nor made a sound,—so early had he learned to almost completely obliterate himself in case of danger. The little one was an exact counterpart of the mother in coloring,—and she was an exact counterpart in coloring of the brown reeds and grasses.

The excitement of the parent birds was really pitiable, so after a good look at my captive, which lay quiet in my hand with no sign of fear, except his hurried heartbeats and the glance of his scared wild eye, I let him go, and away he rustled out of sight.

Then I sat me down on a knoll at a distance to see if there would be a family reunion. It took more than a half-hour to assure the parents that I meant no further mischief. Then came a pretty scene. The mother flew off down the stream a few rods and alighted, keeping a sharp eye on me. Then she began a series of calls, low, reassuring, with a rest now and then, apparently waiting for a reply. After a time a faint answer came from the grass up stream, and as the call and answer went on one could tell that the youngster was slowly making his way through the concealing grass to his mother. I was watching the pretty play with much interest, when my attention was attracted by the doings of some big birds on the further side of the stream.

In one place on the slope stood a large tree, a chestnut, I think, and to the south of it the bank was more abrupt in its descent. Many Blue Jays had been flying about the tree with their usual busybody interest in everybody's affairs. I had failed to distinguish among them a pair of birds not far from the Blue Jays' size, and making, like them, a flash of blue through the air, but unlike them in the shortness of the tail, the whiteness of the under parts of the body, and the absence of the black collar. It was not until I saw one of them with something in his bill disappear into a hole in the upper part of the bank that I observed more closely and guessed that really for an ignoramus I had made a discovery. By and by out came my bird, perched himself on the fence, made some peculiar sounds (but that would never have led me to deny his jayhood, for a Jay has an unrivaled repertoire of sounds musical and otherwise), and then again flew away down stream.

Once more I watched him come and go, and then I climbed the sandy

bank. The hole was about as big around as a baseball. With the courage of ignorance I thrust my arm in as far as I could reach, and found nothing. (The Wise Man told me afterward that once he had done the same and had encountered a black snake). Then I tried to measure the length of the passage with a stick about three feet long, but the length of the passage was greater than that of the stick. After waiting in vain for some time for the return of the bird, I went home, wondering what the Wise Man would say when I told him that I had discovered a real live Kingfisher's nest.

That night and the next day it rained and rained, not in drops, but in torrents. On Monday afternoon (I had made my discovery on a Saturday) I offered to conduct the Wise Man, cheerful but doubting, to the scene of my discovery.

Over the fields and through the drenched daisies we went, with no Redwing on the hickory tree to redeem the scene with a spot of brightness. We climbed the bank. I had noted my landmarks carefully, and conducted my companion directly to the spot. With blank surprise I saw that there was no hole in the bank. There was a careful and studied considerateness in the Wise Man's gentle smile.

"The Kingfisher doesn't build in a bank of this kind," he said. "He builds in more solid soil and in a more precipitous bank."

"But," said I, "what did he go into the bank and carry things in for, if he hadn't a nest?"

Again the Wise Man smiled indulgently. It was quite evident that there was no hole there, so how could there be a nest?

The next day I insisted on looking once again for the nest with the magic habit of disappearing, and this time the Wise Man was interested in what he saw. In the place where I said the hole had been, digging had been begun. Little headway had been made, but some animal or bird had been at work.

"The earth has caved in," we both agreed. "The nest is buried," and the Wise Man took a stick and dug into the soft earth for some distance, but made no discoveries.

Two days later he came in from an early morning stroll. "Come out after breakfast," he said; "there is something I want to show you."

We went, and there was the Kingfisher's burrow once more dug back further than we could reach. No birds, however, were about. All my leisure time that day I watched, and the next morning we went again. There were still no birds, and at the opening of the burrow small black beetles crawled busily back and forth.

We looked at each other. "It is a tragedy," I said. "Let us know what it is."

It took more than a few strokes of the Wise Man's spade to lay bare

the secret, for the passage was about two feet below the surface and extended back quite five feet from the opening. It ended in a rounded chamber a foot in diameter.

A tragedy it had been. Four little drowned Kingfishers and one pure white egg, not far from the size of a pigeon's egg, lay there.

The Wise Man and the Ignoramus were both sorrowful. The pity of it! When the wild torrents had fallen that night the water had seeped through the sandy soil above the little home (if only the foolish birds had asked the Wise Man about its location!) and at last had come so fast and mercilessly that the poor mother had been driven out by the flood and her babies drowned by it and then entombed by the caving in of the roof of their house.

But afterwards, who can tell what of love and remembrance was in those efforts to dig to the ruined home, and what of sorrow in its abandonment when its tragedy was discovered?



A ROYAL FAMILY

Photographed by Maunsell S. Crosby, Rhinebeck, N. Y.



GROUP OF FLAMINGOS IN AMERICAN MUSEUM OF NATURAL HISTORY
Background painted by Louis Agassiz Fuertes (birds) and Charles J. Hittell (landscape). Birds mounted by Herbert Lang.

The group is 20 feet long and 8 feet wide, and contains 29 birds



GROUP REPRESENTING SUMMER BIRD-LIFE OF THE IRRIGATED PORTIONS OF THE SAN JOAQUIN VALLEY, NEAR LOS BANOS, CALIFORNIA

Background painted by Charles J. Hittell, the birds being introduced by Louis Agassiz Fuertes. Birds mounted by H. S. Denslow

The group is 20 feet long and 8 feet wide, and contains 73 birds, representing 14 species

For Teachers and Students

The Migration of Warblers

ELEVENTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

BLACK-AND-WHITE WARBLER

A few Black-and-white Warblers winter in Southern Florida, so that the only way of knowing the beginnings of spring migration in that district is from the records of the striking of the birds at the lighthouses. Both at Alligator Reef and at Sombrero Key lighthouses in Southern Florida, this species begins to strike early in March. Thence, northward the progress is so slow — an average of twenty miles per day — that it is the middle of May before the species has reached the Gulf of St. Lawrence.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast —</i>			
Northern Florida	4	March 16	March 13, 1885
Atlanta, Ga. (near)	9	April 2	March 21, 1899
Frogmore, Ga. (near)	4	April 3	March 29, 1887
Raleigh, N. C.	16	March 27	March 19, 1894
Asheville, N. C. (near)	5	April 3	March 28, 1891
French Creek, W. Va.	5	April 13	April 6, 1892
Washington, D. C.	4	April 13	April 8, 1888
Beaver, Pa.	6	April 22	April 15, 1891
Renovo, Pa.	9	April 28	April 20, 1899
Germantown, Pa.	7	April 27	April 20, 1889
Englewood, N. J.	9	April 26	April 23, 1902
Southeastern New York	18	April 28	April 22, 1896
Central Connecticut	15	April 28	April 20, 1896
Eastern Massachusetts	15	April 28	April 20, 1896
Providence, R. I.	6	May 5	May 1, 1897
Southern New Hampshire	8	May 1	April 27, 1899
Southern Maine	9	May 3	April 27, 1897
Montreal, Can.	8	May 9	May 3, 1890
Quebec, Can.	5	May 12	May 10, 1895
St. John, N. B.	8	May 14	May 9, 1895
North River, Prince Edward Island	3	May 17	May 13, 1889
<i>Mississippi Valley —</i>			
New Orleans, La.	3	March 27	March 24, 1902
Helena, Ark.	7	March 31	March 21, 1897
Eubank, Ky.	10	April 4	April 1, 1888
Brookville, Ind.			April 3, 1882
Waterloo, Ind.	10	May 2	April 27, 1902
Northern Ohio	8	April 30	April 25, 1885

SPRING MIGRATION, continued

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Mississippi Valley—</i>			
Petersburg, Mich.	13	April 28	April 23, 1894
Listowel, Ont.	11	May 1	April 26, 1896
Parry Sound District, Ont.	6	May 4	April 30, 1899
Ottawa, Ont.	16	May 7	May 2, 1891
Southeastern Iowa	5	April 19	
Chicago, Ill.	11	April 30	April 23, 1899
Southern Wisconsin	10	May 2	April 28, 1897
Lanesboro, Minn.	5	April 28	April 23, 1888
Elk River, Minn.	5	May 3	May 1, 1886
Aweme, Manitoba	5	May 8	May 3, 1902
Fort McMurry, Athabasca			May 15, 1901
Fort Chippewyan, Athabasca			May 26, 1893
Fort Simpson, Mackenzie			May 28, 1861
Fort Simpson, Mackenzie			May 23, 1904

FALL MIGRATION

The Black-and-white Warbler is one of the earliest fall migrants; it begins to appear in the Gulf states early in July, and reaches southern Florida by the middle of the month. South of the United States it has been noted in southern Mexico August 13, 1895; in Costa Rica August 10, 1883, and in Colombia, South America, August 21, 1898.

PLACE	No of years' record	Average date of last one seen	Latest date of last one seen
North River, Prince Edward Island	2	September 4	September 5, 1887
St. John, N. B.	3	September 12	September 19, 1891
Southern Maine	5	September 19	September 28, 1898
Southeastern New York	5	September 24	October 15, 1891
Central New Jersey	4	September 24	October 12, 1894
Germantown, Pa.	6	October 1	October 12, 1885
Great Falls, Mont.			September 18, 1889
Ottawa, Ont.	4	September 13	September 20, 1887
Southern Michigan	3	September 13	September 15, 1892
Chicago, Ill.	7	September 22	September 27, 1896
Grinnell, Iowa	3	September 22	September 23, 1889
Raleigh, N. C.	9	October 8	November 10, 1885
New Orleans, La.			October 21, 1897
Rodney, Miss.			October 3, 1888

BLACK-POLL WARBLER

No Black-poll Warbler seems to spend the winter north of South America, while the southernmost breeding grounds are in northern New York and central Colorado. Therefore, no Black-poll Warbler can have a migration route less than twenty-five hundred miles in length, and the extremes of the range—Alaska and Brazil—are twice that distance apart.

This species is correctly considered one of the latest migrating Warblers, and is seldom seen in the Gulf states before the last week in April. It makes the trip from Florida to Maine at twice the speed of the Black-and-white Warbler, and the individuals that nest in Alaska travel at an average speed of not less than seventy-five miles per day.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
Atlanta, Ga. (near)	6	April 25	April 22, 1902
Raleigh, N. C.	11	May 2	April 28, 1894
Asheville, N. C. (near)	5	May 5	April 29, 1893
Washington, D. C.	5	May 6	May 4, 1890
Germantown, Pa.	6	May 8	May 5, 1887
Englewood, N. J.	5	May 14	May 6, 1900
Southeastern New York	14	May 15	May 2, 1899
Central Connecticut	11	May 15	May 11, 1889
Providence, R. I.	6	May 15	May 12, 1900
Boston, Mass.	14	May 17	May 10, 1897
Southern New Hampshire	9	May 21	May 16, 1892
Lewiston, Me.	6	May 23	May 16, 1901
Montreal, Can.			May 28, 1892
Upper Hamilton River, Quebec			May 31
Placentia, New Foundland			June 1, 1890
<i>Mississippi Valley—</i>			
St. Louis, Mo.	7	April 30	April 28, 1888
Southern Ontario	6	May 17	May 12, 1894
Ottawa, Ont.	14	May 21	May 15, 1900
Southern Michigan	6	May 14	May 11, 1900
Chicago, Ill.	9	May 13	May 1, 1899
Southern Wis.	8	May 16	May 12, 1889
Keokuk, Iowa (near)	7	May 9	May 7, 1902
Grinnell, Iowa (near)	7	May 10	May 9, 1889
Lanesboro, Minn.	8	May 16	May 8, 1887
Aweme, Man.	5	May 13	May 8, 1902
Southeastern Nebraska	5	May 18	May 5, 1903
Colorado Springs, Colo.			May 8, 1882
Cheyenne, Wyo.	2	May 9	May 8, 1888
Great Falls, Mont.	3	May 19	May 18, 1892
Fort Chippewyan, Athabasca			May 23, 1901
Fort Simpson, Mackenzie			May 22
Kowak, Alaska			June 2, 1899

FALL MIGRATION

Moving northward late in the spring, the Black-poll Warbler is almost equally late on its return. It starts south late in August and reaches northern South America the first week in October.

FALL MIGRATION, continued

PLACE	No. of years' record	Average date of first one seen	Earliest date of first one seen
Ottawa, Ont.			August 9, 1893
Glen Ellyn, Ill.	7	September 3	August 23, 1897
Providence, R. I.	3	September 18	September 16, 1900
Croton-on-Hudson, N. Y.	5	September 17	September 12, 1888
Beaver, Pa.	6	September 5	August 27, 1891
Englewood, N. J.	3	September 5	August 30, 1887
Washington, D. C.			September 1, 1889
Raleigh, N. C.	7	October 2	September 24

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Great Bear Lake, Mackenzie			August 29, 1904
Ottawa, Ont.	3	September 19	September 27, 1889
Glen Ellyn, Ill.	7	September 17	September 25, 1898
Croton-on-Hudson, N. Y.	3	October 12	October 26, 1888
Beaver, Pa.	7	October 19	October 21, 1900
Renovo, Pa.	6	October 20	October 27, 1896
Englewood, N. J.	3	October 6	October 8, 1885
Washington, D. C.			October 20, 1889
Raleigh, N. C.			November 5, 1886
Southern Florida	3	November 11	November 16, 1887
New Providence, Bahamas			November 26, 1898



MALE BOB-WHITE ON NEST

Photographed by Maunsell S. Crosby, Rhinebeck, N. Y.

The Bird to the Bird-lover

By CHRESWELL J. HUNT

A FRIEND said to me the other day: "I don't see what you can find in the woods and fields to warrant spending so much time there."

I said, "Birds!" but he seemed no more enlightened than before. What was there in a bird worth a long tramp simply to look at it? What, indeed!

I did not attempt to explain. One cannot put into words the pleasure he feels at meeting a new bird—new to him. We would gladly walk miles to make a new bird-friend, but we cannot explain *why* to every one's satisfaction. Yes, "All for the sake of seeing a little bird!" One must feel this enthusiasm to understand why. A bird is quite a different thing to a bird-lover than to a disinterested person.

It is no doubt the happening of the unexpected that goes as far as anything toward keeping up our enthusiasm when afield. We are always seeing something new, something we least expect to see. We may take the same walk every day in the year, yet how many times will it be the same? There is always something different. We always carry back with us something new.

I have often skirted a certain mill-pond in the early morning. I have stood and watched the Chimney Swifts taking their morning dip, skimming low over the water and now then dipping one wing beneath the surface with a very audible "slap." Then a Kingfisher drops into the water from an overhanging branch, and, rising again, bears away his prize with a loud clatter.

On another morning three Great Blue Herons waded slowly in the quiet water, making not the slightest ripple. Every little while one would dart his head beneath the surface, bring forth a fish and devour it.

And again two male Red-winged Blackbirds, with angry notes, plunged into the water and fought, as it seemed, for life. Now one would be immersed, now the other, until at last they parted and one beat a hasty retreat. All this while, the cause of the fight, a brown female, clinging to a near-by cat's-tail stalk, scolded and watched the combat, at last to fly away with the victor.

Still another trip was rewarded by a single White Heron, which stood and preened his feathers on a stone in the center of the pond.

I have walked across the meadows in late May, just as the last gleam of the sunset was fading in the west and night had all but settled down, and have listened to the flight song of the Indigo Bunting as he, all but hidden by the darkness, mounted high into the air pouring forth his lisping song.

On one of those early summer nights, ere the insect choruses which enliven the nights of July and August had gotten their instruments into

tune, I was sitting upon a rail fence overlooking a sea of daisies, when from the ground near me came a few twitters and then, full and clear, rang out the whistle of a Meadowlark. It sounded odd in the quiet of the night, but one was impressed with how much there really is in this bird's song.

Again, at night, I heard a Song Sparrow sing—such a drowsy song. The bird seemed to be singing in his sleep, or rather to have roused up and gone off to sleep again without completing his song, as it ended abruptly.

Once I stood watching two White-throats and a Fox Sparrow scratching among the brown leaves which a light March snow had failed to cover. Suddenly from above dropped a Sparrow-hawk. One of the White-throats barely escaped his talons. So engrossed was the Hawk in watching the Sparrows that he had failed to notice me until after his unsuccessful strike, and then, with apparent surprise, he made off in great haste.

On another occasion I fell in with a family of young Screech Owls that had just abandoned their nest. There were the five baby Owls perched on a rather low limb, making the queerest of Owl music. The old birds were very much concerned as to the safety of the young, and at times darted uncomfortably near my face, snapping their bills in a menacing manner.

These are but mere touches of wild life. Yet what they mean to the bird-lover! I felt a hundred times repaid for my tramp. I would gladly have walked twice, yea, thrice as far to have seen them.

Then there are spring days when the bird-lover's enthusiasm fairly overflows,—days when the peach trees blush pink, when the cherry-trees are snow-white and the apple's buds are bursting; when the honey-bees are gathering honey in earnest and mourning cloak butterflies flit here and there; days when woodland hollows are yellow with dog-tooth violets and windflowers nod in moist thickets. Then it is that the bird-lover's cup is full. Then it is that the trees fairly swarm with Warblers and the woods ring with bird songs. We roam o'er the fields and through the woods. We add new birds to our lists. Our enthusiasm gets the better of us. We would shout aloud.

I have watched a calf kick its tail and gallop around a pasture. I imagine the calf feels somewhat as I feel. He feels the joy of being alive.

On these spring days the bird-lover is full of this feeling. He longs for some one to enjoy it with him. The birds have taught him the joy of living, but, when he speaks of it to some one outside the pale of nature-lovers, they laugh and say: "What is there in a bird?"

A WINTER FEEDING NUMBER

In BIRD-LORE for October it is proposed to devote especial attention to methods for feeding birds in winter. Will not our readers send us notes and photographs which could be used in this connection?

Notes from Field and Study

Incidents Among Birds

Birds are not an exception in doing things out of the common. They have their freaks and fancies, which are interesting to the student and give additional pleasure to the observer. Habits are often changed by surroundings, but many strange things are done without apparently good reasons. For the past two seasons a Flicker has built her nest in an unused chimney on our country cottage. Surely it is a safe place. Very few enemies could reach the nest and it could be easily defended.

This past season an English Sparrow occupied one of three spaces in a bird-house of three apartments, while the other two were occupied by Wrens. Last year a Bluebird had the Sparrow's apartment, while the Wrens had the other two. All lived in peace and raised their families. Another Wren built in the spout of a discarded iron pump which had been left in an upright position in a corner of the yard.

A strange thing happened two years ago. Two Wrens built nests about sixty feet distant from each other,— one in a stump, the other in the bird-house. One day I noticed a male flying first to one nest and then to the other with food. He was feeding the females. A friend and myself watched him, and we knew him to be the same bird, as in many instances he was not out of our sight. This continued for many days. Our opinion was that one of the males had been killed and this one was doing double duty as a benefactor, for neither of us had ever heard of a polygamous Wren.

In the fall of 1903, among a flock of English Sparrows on the court-house square at St. Paul, was one having a white back and wings and gray breast. It attracted the attention of many people. A policeman told me it had been among the flock for several weeks. I saw it several times at a

distance of a few feet, and it was evidently an albinistic English Sparrow.

One day I discovered an old cocoon of the *Cecropia* moth. Opening it, I found a shelled peanut and a kernel of corn, both placed there, I have no doubt, by a Blue Jay. On a winter morning we found a mouse in a wire trap. Not wishing to kill it, I took it to the front lawn and let it out. It started to run, but had not gone ten feet before a Shrike pounced upon it and carried it away. The Shrike was probably in a tree overhead. On another occasion, hearing a noise in a tree I found a Robin dangling at the end of a string which had become wound around the foot. As I climbed the tree the Robin kept perfectly quiet, evidently knowing that help was intended. When released it flew to another tree and gave a song of thanks.

Last summer I saw two Yellow Warblers feeding a young Cowbird as large as both the Warblers. They could not fill him up. His mouth was ever open, crying for more. Of course a Cowbird's egg had been laid in the Warbler's nest. Did these birds care for the intruder with a parent's love? Were they ignorant of the imposition? They not only do this thing once, but they, and other birds, continually care for these youngsters. Can it be possible that they are deceived? Who can say?

One day we were sitting upon the lawn and saw a red squirrel run up a tree in which there was a Kingbird's nest. The owner of the nest uttered an angry cry, and almost instantly a score of birds of different species flew to the tree and at the squirrel. He had business elsewhere immediately. Birds unite against a common enemy, although not always friendly to each other. I observed a Blue Jay one spring eating the eggs in another Blue Jay's nest. This was something new to me and very like cannibalism, I thought.

There is ever something happening among our birds which teaches that with all our watching and study we have yet much to learn before the subject can be exhausted. He who lives with outdoor nature finds many pleasures. Probably one of the greatest of these is to know the feathered tribes and to be able to call them by name. To him no walk is lonely, for he is constantly meeting friends. Writing of meeting friends, how often you see birds touching bills with a caress, as human beings do their lips! Dogs and horses often put their noses together, and dogs kiss each other with their tongues and salute their owners in the same manner. The human has apparently no patent on kissing. However, I believe the love demonstrations of the birds to be the sweetest and most affectionate, of all creatures.—JOHN W. TAYLOR, *St. Paul, Minn.*

A Bluebird and His Mates

In the early days of April, 1904, a pair of Bluebirds came to visit us. Almost any time during the hours of daylight we could find them among the trees or frequenting the garden at the rear of the house. Their bright presence and their clear, cheerful calls gladdened the time so much that we wished to keep them near. A wooden box with a small hole near the top was nailed to a tree ten feet from the ground, and almost immediately the birds chose it for their home. When the nest was completed we saw but little of the female, for her time was largely occupied with the five pale blue eggs hidden in the box. But the male was usually near by, and we were all glad together and waited with pleasant anticipation the time when the young should appear.

One cool rainy evening the darkness came on early. All night the wind blew in gusts and moaned through the trees. Some time during the black hours the little Bluebird in the box must have heard a scratching of claws on the bark outside and a moment later beheld the gleam of two green eyes at the entrance hole. Be that as it may, in the morning there were many wet feathers scat-

tered on the lawn, and beneath our window we found the wing-tips of a Bluebird.

All day the bereaved male haunted the box and near-by trees, calling, calling continually for his mate. However, the next morning we found that his anxious cries had turned to notes of good cheer and that another lady Bluebird was among the trees. At eleven o'clock I saw her enter the box. Then I knew that the lonesome bird had found another mate. The old eggs were removed from the nest and the box was swung by a wire two feet below a limb. Here the second wife took up her abode and later deposited four eggs. But again the cat climbed the tree and in some way reached the box, and a second time the male was without a companion.

For eleven days he mourned and then the third time mated. This time his home was not invaded, for the cat never came to the lawn again, and a little later five young Bluebirds climbed out of the box and learned to fly and gather food and sing just like other little birds the wide world over.—T. GILBERT PEARSON, *Greensboro, N. C.*

Chimney Swift Notes

The interesting article on the Chimney Swift in the last number of BIRD-LORE reminds me of a note on the habits of this species that may be worth recording.

It was at Keokuk, Ia., on the 6th of August, 1897, about 6.30 P. M., that I noticed an exceptional number of Swifts flying near the gable of our house. This gable was covered with shingles and in it was a small recessed porch; it faced southwest and was strongly lighted by the setting sun. I ascended to the porch for a nearer view. The birds were flying so near to me that I began to grab at them as they passed. I then noticed that some birds fluttered into the porch and lit there, and several of these I caught easily; many were also alighting on the wall of the house and resting a few moments before resuming their apparently meaningless flight. They were not circling as they so commonly do at sundown, but were flying irregularly near the gable of the building as if there was some attraction

there. No movement or noise that I could make seemed to disturb them, and I feel sure I could have caught many of those that rested on the shingles could I have reached them. I could see no insects nor attraction of any sort, nor any unusual condition except perhaps the strong yellow light from the sun that illuminated the brown shingles.

I had to leave while the birds were still at it, and darkness had fallen before I returned. There was now no trace of the birds; none were roosting either on the porch or on the shingles. Swifts were common around the house and a few bred in the chimneys, but conduct such as this I never witnessed before or since.—W. M. E. PRAEGER, *Chicago*.

The Song of the Carolina Wren

Mr. Keyser's experience with the Carolina Wren that sang the song of a Song-sparrow interested me much, because I twice heard a Carolina Wren imitate the Catbird's warning *Zeay, Zeay!* so perfectly that I fully expected to see the Catbird and was amazed to see the Wren instead. A young one repeated the cry. It was because of a cat—a danger ahead. I heard the same warning a second time—perhaps from the same Wren!—ELLA MOSBY, *Louise Home, Washington, D. C.*

Opposed to Compulsory Instruction on Birds

5105 Morgan St., St. Louis, Mo., March 15, 1905.
Mr. F. M. CHAPMAN, Editor Bird-Lore.

Dear Sir: I send you enclosed clipping from the 'St. Louis Republic,' which I think is too good to pass by unnoticed. Such wise words of one of our Missouri senators may deserve publication in BIRD-LORE, as they show with what stuff the Audubon Society has to contend.

Yours truly, O. WIDMANN.

P. S.—I have just mailed Senator Fields Educational Leaflet No. 1, and he will get one leaflet every day now for the next eleven or twelve days.

By a Staff Correspondent.

Jefferson City, Mo., March 14.—Walmsley's bill compelling teachers to devote one hour a month to teaching the habits of birds and insects caused an hour's discussion in the Senate this afternoon. Senator Fields grew almost dramatic in his denunciation

of the bill, and, on a roll call, the bill was killed, 16 to 16.

"Do you think an educated school teacher can tell as much as a country boy about birds?" asked Fields. "Nobody outside of the Supreme Court knows what the fish and game laws are for. They have the last guess. Then you have here a bill making a poor girl school teacher try to tell something she or no one else knows anything about. Why, you would make the poor children listen to the reading of Government reports! Can you, Senators, be serious in this?"

The vote was then taken.

Pine Warblers Eat Suet

I was very much interested, last spring, in watching a pair of Pine Warblers eat suet which was put out for the Woodpeckers and Nuthatches. I have had it on the trees several years but never saw the Warblers eat it before.—ELIZABETH A. S. PENNELL, *Brunswick, Me.*

A Peculiar Snare

While observing birds on State College campus this morning at 7:30 o'clock, a small bird fluttered down from the branches above to the grass about three yards away. Locating and easily identifying it as a Black-and-white Warbler, *Mniotilta varia*, I cautiously approached to within two feet of it and stooped to pick it up, when it fluttered away some two yards further. It was then easily captured and found to be in fine plumage and good health. Examining for the cause of its disabled condition, I found one of its own feathers, one and one-fourth inches long, attached from the primaries of one wing to the primaries of the other, binding the tips of the wings together. In this condition I exhibited it to eight or ten State College students and released it in their presence. It was unable to fly away, though it made strenuous efforts. It was captured a second time and the feather removed, the removal showing that it was firmly attached at either end. On being again released, it flew away. The feather is retained as a souvenir.—R. H. DEAN, *Lexington, Ky.*

Book News and Reviews

WILD WINGS, Adventures of a Camera Hunter Among the Larger Wild Birds of North America on Sea and Land. By HERBERT KEIGHTLEY JOB. With an Introductory Letter by Theodore Roosevelt. Houghton, Mifflin & Co. 8vo. xxviii+341 pages, 160 half-tones from photographs by the author. Price, \$3 net.

Since the publication, in 1902, of his 'Among the Wild Fowl,' Mr. Job has been hunting birds with a camera from Bird Rock, in the Gulf of St. Lawrence, to the Florida Keys, and the most important results of his work are given in this handsome volume.

Those who have been so fortunate as to hear Mr. Job describe his adventures afield will realize the charm of this book when we say that he has succeeded in transferring to the printed page the glowing enthusiasm which adds so much to the interest and attractiveness of his recountal of experiences while in pursuit of birds.

Like many another writer, however, he confesses he "cannot adequately explain the fascination which the wild birds have" for him; though every bird-lover will sympathize with his effort to explain the bird's power to awaken responses silent to every other stimulus. Armed now with more adequate photographic apparatus than that with which the illustrations for his earlier volume were made, Mr. Job has here done greater justice alike to his subject and to himself. But, even with the best available camera and lenses, bird photography is sufficiently difficult to tax the energy and patience of its most ardent disciples, and only the experienced can realize the effort required to obtain as many excellent illustrations as are contained in this book. The description of the manner in which the splendid picture of the Laughing Gull (page 132) was secured recalls a comment made, a week or two later, to the reviewer, by the captain of the life-saving station where Mr. Job stayed while visiting the Gulls' haunts, who, *apropos* of the time required to secure

this particular photograph, remarked, "that man Job is sure well named."

No experience, however, is required to enable one to appreciate the hardships endured by Mr. Job in southern Florida, or the pluck needed to persevere in the face of the difficulties one encounters there. The tragic death of Warden Guy Bradley, who was Mr. Job's guide in this region, lends a melancholy interest to the chapters on Cape Sable and the Cuthbert Rookery, to which the warden took Mr. Job, and the latter's graphic account of the trip gives one a vivid impression of the hopelessly desolate country in which for several years Mr. Bradley labored so faithfully.—F. M. C.

THE BIRDS OF ESSEX COUNTY, MASSACHUSETTS. By CHARLES WENDELL TOWNSEND, M.D. Memoirs Nutt. Orn. Club, III, Cambridge, Mass., published by the Club, April, 1905. 4to, pp. 352, 1 half-tone, 1 map.

This elaborate treatise contains not only an annotated list of Essex county birds, but also chapters on 'Topography and Faunal Areas,' 'Lighthouse Records,' 'Ornithological History of Essex County, 1616-1904,' and on the characteristic bird-life of the ocean, sand beaches, sand dunes, salt marshes, fresh marshes and ponds. Based on long-continued, minute and sympathetic observation, these introductory essays contain much that is of scientific importance and at the same time are most interesting reading. Few portions of America have an ornithological history extending over nearly 300 years, and Dr. Townsend has evidently availed himself of all desirable sources of information concerning the bird-life of eastern Massachusetts when the Great Auk, Labrador Duck, Sandhill Crane and Swan were doubtless common there. We note that the Great Auk is said to have ranged southward only to Virginia, the discovery of humeri in a shell-mound at Ormond, Florida, having evidently been overlooked. (See BIRD-LORE, IV, 1902, 97.)

Summing up his own observations in Essex county during the past twenty-eight years, Dr. Townsend concludes that "shore birds have diminished in numbers" and that while Gulls and Terns decreased "during the early years of this period, they have noticeably increased during the last few years owing to the efforts of the Audubon Society." He adds that "the establishment of public reservations where shooting is forbidden is doing a great deal to bring back former conditions."

The 'Annotated List,' occupying pages 77-321 of this 'Memoir,' treats of 319 indigenous, and two introduced species.

The annotations include a statement of the birds' manner of occurrence, migration and nesting dates for the migrant and breeding species, and much intimate biographical matter, several pages often being devoted to a single species. Indeed, this portion of the work contains so much more information than is found in the stereotyped 'Annotated List' that it is deserving of a more dignified and comprehensive title.

We must refer to it not only for information concerning the local status of the birds of Essex county, but for much new and valuable material in relation to their habits. The appearance of birds in life is often described at length, a fact which should make this book particularly helpful to students of birds with a field-glass.

It is, however, greatly to be regretted that the usefulness of this admirable work is largely impaired by a bulkiness which renders it cumbersome to handle and denies it a place on our book-shelves with other faunal lists. Quarto size for works of reference is now considered excusable only when illustrative matter demands a large page. It seems, therefore, most unfortunate that the Nuttall Club should adhere to this antiquated form for the exceptionally important material contained in its 'Memoirs.' It is, we think, safe to say that, in practice, the reference value of Mr. Brewster's essay on migration, the first memoir of the Club, would have been doubled had it appeared as an octavo rather than a quarto.—F. M. C.

THE DECREASE OF CERTAIN BIRDS, AND ITS CAUSES, WITH SUGGESTIONS FOR BIRD PROTECTION. By EDWARD HOWE FORBUSH. Fifty-second Annual Report of the Massachusetts State Board of Agriculture, pages 429-543.

This is a capital paper. Prepared with due regard to the difficulties incident to the proper treatment of the subject, it possesses a value wanting, to say the least, in those surprisingly definite papers on bird destruction where the percentage of decrease in the bird-life of a given region is stated with the exactness of a government census.

Long-continued observation and detailed notes are the only satisfactory basis on which to make a comparison of the past and present bird-life of a given region. Mr. Forbush thoroughly understands this and, after weighing the evidence presented by some two hundred observers, concludes that probably "the smaller birds in general have not decreased greatly in Massachusetts, as a whole, in recent years, except in and near centers of population."

The expert testimony secured is presented in detail, and the status of the birds reported as diminishing is discussed at length. The causes of the decrease of birds are then considered; man and his works being the artificial cause, while among the natural enemies of birds are included cats, foxes, Crows, red-squirrels, English Sparrows, certain Hawks, Blue Jays, weasels, minks and skunks. It is interesting to note that Mr. Forbush, like all unprejudiced observers of the cat in relation to birds, considers it the most destructive of all animals. We agree, too, with his estimate of the Crow's destructiveness to bird-life in the nest.

Suggestions for the better protection of birds concludes this sane and valuable contribution to the literature of avian economics. It should be read by every one who ventures to have an opinion on the points at issue.—F. M. C.

'Some Benefits the Farmer May Derive from Game Protection' (Dept. of Agri. Year-book for 1904, pages 509-520) is a practical discourse which should appeal effectively to every one who appreciates a logical argument.

Bird-Lore

A Bi-monthly Magazine

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

Edited by FRANK M. CHAPMAN

Published by THE MACMILLAN COMPANY

Vol. VII Published August 1, 1905 No. 4

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico twenty cents a number, one dollar a year, postage paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

FEEDING birds in winter not only yields exceptional opportunities for bird study and enables us to establish delightfully intimate relationships with our feathered guests, but is a practical means of bird protection within the reach of every one who is within the reach of birds.

It is proposed, therefore, in the next issue of BIRD-LORE to devote especial attention to this subject, and we shall be glad to receive from our readers notes on proper kinds of foods and methods of feeding, with descriptions, drawings or photographs of feeding-tables, etc. The appearance of this matter in BIRD-LORE for October will enable those who so desire to avail themselves of the suggestions then offered before the season arrives when food is at a premium.

THE program of the Fourth International Ornithological Congress which was published in BIRD-LORE for June (page 168) was carried out so successfully that every one in attendance formed a resolution to be present, circumstances permitting, at the Fifth Congress to be held in Germany, probably at Berlin, in 1910

There were papers on systematic, on economic, and on bibliographic ornithology, museum methods, migration, oölogy, nesting habits, zoögeography, the significance of certain plumages, aviculture, bird protection and legislation, all emphasizing the breadth of the ornithological field and the demand for many workers.

A mere statement of the formal, scientific

proceedings of a Congress of this kind is, however, far from expressing its far-reaching influence. One does not go to hear papers, they can be read when published, but to meet the men that write them; and the bounteous hospitality which characterized this Congress afforded the best opportunities for the development of the social instinct.

ONE of the essentials of an exhibition collection of birds is that it contains features which shall not only force the attention of the casual visitor but that their influence shall spread beyond the museum walls and induce the presence of those whose interest has been aroused by a description of them.

In practice it has proved possible to achieve this result by appealing to the objectless public through the universal love of the beautiful; not merely by the display of cases of gaudily colored birds but by carefully planned and executed groups which, so far as is possible within museum walls, shall represent the bird in nature or, in other words, the living bird in its haunts. We refer here not only to groups with natural accessories of branch, leaf and blossom, representing the nesting habits of a single species, but more particularly to those which aim to portray some more striking scene in bird-life where vast numbers of birds of one or more species together form what has become known as a bird colony.

In reproducing such groups on a large scale, it is possible to use a painted background so effectively that at a short distance one cannot readily distinguish where the group proper ends and the background begins. Not only is the beauty and realism of the group thereby greatly enhanced, but the introduction of birds into the painting make it possible to represent nature in a way which would be impracticable if only mounted birds were employed.

In this issue of BIRD-LORE we present photographs of two such groups which have recently been completed at the American Museum of Natural History. While these illustrations do scant justice to the originals, they will at least serve to convey an idea of the subjects they represent.

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

A Stronghold to be Conquered

August, to the great majority, is probably the most enervating and irresponsible month of the entire year. It is high tide to the superficial eye, a time when everything on land and sea is at an apparent standstill, and we ourselves are supposed to follow Whitman's invitation to "loaf and invite your soul."

There is also a lull in bird affairs, the nesting being over and the moulting begun. I have even thought at times that it would be a relief to bird protectionists if, for this one month, they might also moult to the extent of shedding their ever-present sense of responsibility. But, on the contrary, the last month of summer calls one and all to special effort, for with September comes the universal opening of the public school, and this, the greatest of all American institutions, is a stronghold to which the cause of protection of bird and beast must not only gain admission, but in a proper sense dominate and possess for its own before we may feel our position in any way secure.

In America, where it is the reflex influence of the child upon the parent, more than the direct parental influence upon the child, that molds the point of view, it is necessary to meet the child face to face and win him in the early school years. How this may be done must be thought out now, in order to be ready for action at the opening of the schools.

Lack of tact on the part of well-meaning enthusiasts has done more to keep birds and flowers out of schools, than either politics or the so-called "stupidity" of schoolboards. *Bird Study* has a hard sound and suggests one more text-book to

be bought, another task to be added as a link in the chain of studies already too heavy. Bird Life or Bird Play—according to the grade and age—has a far more alluring sound, and to be both attractive and beneficial the matter should be introduced as one of the extra "topics of the day" rather than as a task of regular and fixed times.

How can this be accomplished? you ask. By skilfully influencing the supplementary reading of the schools within reach, and so creating a demand for nature books.

Here in Connecticut we first coöperated with the intelligent and progressive State Board of Education by adding nature libraries, bought with the money of the Audubon Society, to the other sets of books that are circulated free in all school districts. Then we asked, what next?

"Give us pictures and reading leaflets so arranged that they can be passed from hand to hand and desk to desk, that the children may feel the interest of personal possession," was the response.

We sent out colored pictures of birds, flowers, shells, trees, etc., all mounted on stout cardboard. The success was instantaneous—"More, give us more, the children learn to read the books through the interest created by the pictures. The charts, etc., hung on the wall have their place, but the portfolios of pictures that may be handled and enjoyed at close range are much more practical, and can be kept in the teacher's desk to be taken out at odd moments."

Let every officer of an Audubon Society while he or she is taking the August rest, swinging in a hammock or in a boat, camping in the primeval forest or simply reveling in the comfort of a rural home, put on a thinking-cap of leaves and devise some

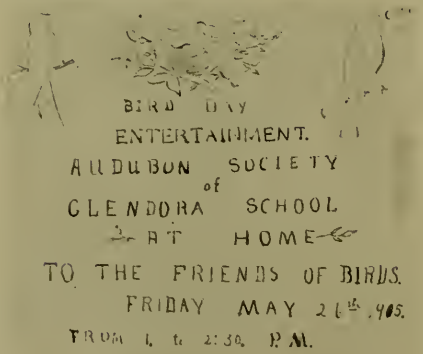
means of bringing birds and all nature into the schools, in their proper guise of recreative uplifters.

Begin by compiling some simple pamphlet that, starting with the autumnal migration, shall follow the bird year to its spring climax. Print it either by private subscription or state coöperation, and see that a copy is in the hand of every teacher in a public school by October first. Next procure as many sets of the colored pictures (twenty-five to a portfolio) as you can beg or borrow the money to procure, and distribute them, while following in the wake of these must come the more serious ammunition of bombardment—the well-chosen libraries of nature books.

Thus, having gained admittance to the stronghold, its complete conquest is a matter of tact combined with the knowledge of human nature, without which no man or woman is qualified to be called a citizen of the world or aspire to teach or lead others.—M. O. W.

Notes and News

Apropos to Mrs. Wright's suggestion of a method to secure the interest of the children of the country, through the medium of the school and the teacher, it is a pleasure to mention the excellent work of the Glendora, California, public school, which is doing fine work both in bird study and protection. Recently the scholars gave an entertainment in the interest of birds, with a good program and an invitation so unique and suggestive that it is reproduced for the benefit of other juniors.



The children of the Kenwood School, in Minneapolis, are even more ambitious than the young Californians, for they have commenced the publication of a magazine, 'Wood Folk.' Their Audubon Society was organized three years since. It speaks well of the continued interest, which must be largely fostered and guided by the teachers, that the children started an organ on the birthday of the great artist-naturalist, Audubon. Miss Marian Conner, editor, in her introductory editorial says: "The Audubon Society was started to encourage birds to make Kenwood their home. The oldest residents claim that birds in unusual numbers and varieties have been observed in the summers since the organization of the society. Many of the children have established lunch-counters for the birds. The work of the Audubon Society has extended beyond the school to the home. Many of the mothers have taken up the study of birds with their children, and accompany them into the woods to study the habits of the feathered songsters." 'Wood Folk' is a magazine of sixteen pages of original matter, all of which is bright and entertaining, and will serve as a model for other junior Audubons. Unfortunately, there are other sections where the Audubon spirit does not yet exist. One of the Humane officers in Kansas City recently found some boys who were trying to make little Indians of themselves. They had made a wigwam, and from this headquarters they sallied forth and shot all the birds they could find; these they hung from their belts in lieu of scalps and on returning to the wigwam would compare notes, the most successful hunter being the big chief. Perhaps the boys were not so much to blame as were their parents. Certainly the children of the Glendora and Kenwood schools will make the better citizens.

MICHIGAN.—Michigan adopted the model law June 21, under an "Act to revise and amend the laws for the protection of game and birds." It is an admirable statute in that it materially shortens seasons, prevents sale and transportation, and permits spring shooting for only a few days. In addition, it permits the Audubon Society to name

four of the deputy game-wardens, who have all the powers of the other game-wardens (see BIRD-LORE, June, p. 184).

LOUISIANA.—President Miller, of the Audubon Society, has just returned from a trip to the Breton Island Reservation and the other islands in charge of Wardens Sprinkle and Halford. He says: "I wonder at the faithful performance of duty by these wardens, owing to the unprecedented numbers of green flies which make life a misery. Even now, when they are disappearing, they are so bad that they drove me in; I simply could not endure them." Thanks to the good work of the wardens, the coast of Louisiana is richer by between 15,000 to 20,000 young Laughing Gulls, Royal, Wilson's and Cabot's Terns. It is a grand showing, an inspiring sight which I wish you could see. We have strong evidence and can undoubtedly make a good case against the crew of the Schooner Alpha for egging. Am now working on it and shall push it to the limit."

MASSACHUSETTS.—Excellent work is being done by the State Fish and Game Commission, the president of which is Dr G. W. Field, a member of the Executive Committee of the Massachusetts Audubon Society. The dealers in aigrettes were notified as follows: "I beg to call your attention to our state laws covering the possession or wearing, for the purpose of dress or ornament, the body or feathers of insectivorous or wild birds, whether taken in this commonwealth or elsewhere. This law covers the skins and feathers or parts thereof especially of insectivorous birds, Herons (aigrettes), Gulls, Terns, shore-birds, etc., 'whenever and wherever taken.' We respectfully suggest that you can best observe the spirit and letter of the law by removing from sale all such feathers, and return them to the wholesalers; and, further, by refusing to buy or sell such feathers, aigrettes, etc. Certain dealers are claiming that the bird laws are not to be enforced, or that their particular goods, notably aigrettes, are manufactured, and therefore not prohibited by this law. In case such statements are made, the writer will be glad to give an opinion as to whether any particular feathers come

within the scope of the law, and whether such are liable to seizure, and the possessor liable to arrest.

"The state authorities entrusted with the protection of bird-life wish to secure results with the least possible hardship to the public and the 'trade,' and therefore ask your cooperation.

"In any event, however, we beg to formally notify you that we shall use every legitimate means to enforce the laws of the commonwealth, and all persons having such birds and feathers in possession, whether as dealers or wearers, are liable to arrest."

OREGON.—Messrs Bohlman and Finley, the well-known bird photographers and students, have been appointed special deputy game-wardens, and have gone to the extensive breeding grounds in the saline lakes in southeastern Oregon, where they will carry on their studies and photography, and at the same time protect the breeding colonies of water-birds, as the representatives of the National Association. It is proposed to have them give an illustrated account of their summer's work at the annual meeting of the Association in October next.

DELAWARE.—At the last session of the Delaware legislature, at the request of the Audubon Society, the penalty clause of the model law, passed in 1901, was amended as follows: "Any fines collected by any Justice of the Peace or Constable of this State, under the provisions of this Act, shall be forthwith paid by him to the Treasurer of the Delaware Audubon Society." This refers to the fines for the illegal killing of non-game birds, and should result in a fund of considerable size which will be used for bird protection and educational purposes. It would be a wise move on the part of every state to follow the example of Delaware and North Carolina, which has a similar law. It is very certain that disinterested and public-spirited citizens like those engaged in Audubon work will administer a fund resulting from fines much more satisfactorily than will the ordinary game commission, which is generally composed of politicians, although there are some very marked exceptions to this rule, for instance, in Massachusetts and some other states.—W. D.



GUY M. BRADLEY

THE startling announcement was sent to the National Association on July 14, that Guy M. Bradley was shot and instantly killed while making an arrest at a rookery on Oyster Key, Florida, on July 8. Full particulars of this unfortunate affair have not been received, although it is known that his murderer has been captured and is now confined in the county jail at Key West. Senator Harris has been retained to represent the National Association at the preliminary hearing in the case. The deceased acted as warden in Monroe County, a wild and thinly settled district, for over three years, having commenced his duties in May, 1902. During all this time he faithfully guarded his wards, the plume birds, traveling thousands of miles in the launch Audubon, in order to watch over them. He was originally recommended to the Association by Mr. Kirk Munroe, one of the Vice-Presidents of the Florida Audubon Society, who said that he was fearless and brave and had an extensive knowledge of the country and the birds that lived there. A number of well-known ornithologists and members of the Association visited Bradley at different times, and always found him alert and faithful in the performance of his duty, and willing to undergo any hardship to protect the birds. He took a personal interest in his work and was genuinely proud when he could report an increase in numbers. He told the writer in February last that he felt while he was away from his home, cruising among the Keys, or patrolling the swamp, that his life was in his hands, for the plume-hunters, whose nefarious traffic he so seriously interfered with, had sworn to take his life. Even this knowledge did not deter him, and he proved faithful unto death. Personally he was gentle and somewhat retiring, was pure in thought and deed, deeply interested in and a supporter of the small Union Church near his home. A young wife is left to mourn his sudden and terrible death, and his two children, too young to realize their loss, will never know a father's care.

A home broken up, children left fatherless, a woman widowed and sorrowing, a faithful and devoted warden, who was a young and sturdy man, cut off in a moment, for what? That a few more plume birds might be secured to adorn heartless women's bonnets. Heretofore the price has been the life of the birds, now is added human blood. Every great movement must have its martyrs, and Guy M. Bradley is the first martyr in the cause of bird protection.

WILLIAM DUTCHER.

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

EDUCATIONAL LEAFLET NO. 15



THE YELLOW-BILLED CUCKOO

Order — *Coccyges*

Family — *Cuculidæ*

Genus — *Coccyzus*

Species — *Americanus*

The Yellow-billed Cuckoo

By WILLIAM DUTCHER

President National Association of Audubon Societies

DESCRIPTION

The general color above is a uniform olive-brown, in some lights showing considerable bronze reflection; there is quite a large area of bright reddish brown or cinnamon on the primaries; under parts pure silky white, faintly tinged with gray on upper breast; tail black below with six outside feathers showing large terminal white spots which are always visible, also showing from above when the tail is spread; legs and feet dark; bill, upper mandible and tip of lower one black, the remainder of the lower one yellow.

Size.— From tip of bill to end of tail varies in individuals from 11 to 12.70 inches.

The Black-billed Cuckoo (*C. erythrophthalmus*) is very similar to the Yellow-billed in appearance, but may always be readily distinguished by the color of the bill, which is entirely black. The cinnamon color on the primaries is lacking. It may also be quickly recognized by the color of the under part of the tail, which is gray instead of black and the terminal white spots are very small.

The Mangrove Cuckoo (*C. minor*) is very similar to the Yellow-billed except that it lacks the cinnamon on the primaries and below is a uniform dark buff instead of white.

Nest.— Is a very poorly constructed and frail affair, merely a platform of small sticks, with a little lining of moss, grass, pine needles, dry blossoms, etc.

Eggs.— From two to five in number, of a pale greenish blue color.

Distribution.— The Yellow-billed Cuckoo is found during the breeding season in all parts of the United States east of the Rocky Mountains and as far north as the upper border of the States. The Black-billed Cuckoo is found from about 35° north latitude to 47° in the East and as high as 51° in the West. West of the Rocky Mountains the California Cuckoo is found, ranging as far north as southern British Columbia. This Cuckoo is almost an exact counterpart of the Yellow-billed Cuckoo, being slightly smaller in size. The Mangrove Cuckoo is a West Indian form, which is confined in the United States to the border of the Gulf between West Florida and Louisiana.

The Cuckoo is probably one of the least known of North American birds. This is due to the fact that it is very retiring in its habits, secretive being the word that best describes its method of hiding in the thick foliage or shrubbery. It is a very striking bird in appearance, not so much on account of its color, which is severely plain, almost Quaker-like in its modesty, but on account of its shape, which is so narrow in proportion to the length that it always reminds the writer of an arrow. The flight of the Cuckoo is also a marked characteristic and when once known will serve as a sure means of identification. It has several notes, the most familiar one being *Cow-cow*, or, *coo-coo*. However, learning the notes of birds by actual observation is one of the essentials that the writer suggests to his readers. The series of leaflets now being issued in BIRD-LORE is primarily to introduce the bird to the reader; an intimate acquaintance can follow only as the result of repeated visits. The Cuckoo is with us only during the breeding season, retiring southward in the autumn. Its nesting habits are of special interest and will well repay the student and bird-lover for the time

devoted to their investigation. Special care must be taken, however, as the Cuckoo is somewhat slow in making new acquaintances and sometimes resents the too earnest endeavor of the observer and abandons its home. The Cuckoo, or Cuckow of the Old World, is a singular contrast to its relative of the New World. The former bird is a parasite in the sense that it does not care for its own offspring, but entrusts them to the care of foster parents, the female bird secretly depositing her eggs in the nests of smaller birds. Our Cuckoo has better habits, inasmuch as it tries to care for its own young; indeed, the parents are very courageous in their defense, but the architecture of the Cuckoo is so very inferior that it is really remarkable that many young reach maturity. The nests are often so frail that the eggs can be seen through the bottom and are so small that they are strikingly out of proportion to the size of the incubating bird. The Cuckoo has quite a list of names, among them Rain Crow, Rain Dove, etc. It will be very interesting and important data to collect a list of the names the Cuckoos of North America bear. The writer would be glad to have all local names sent to him; these will be published in BIRD-LORE.

While the life history of the Cuckoo is of great interest to the teacher and student, and also to the lovers of the curious in nature, yet the relation that this family of birds bears to agriculture is by far the most important. The Cuckoo may be placed in the highest class of birds that do good to man and in the class that has the fewest objectionable characteristics. The Apple-tree Tent-caterpillar is one of the greatest and most destructive pests that the farmer has to contend with. Unless vigilance and care is taken the webs of this pest are soon in evidence. Even before the leaves open these caterpillars appear and feed on the buds, but the greatest damage is done to the fresh green foliage. Forth from its tent this destructive army marches each day to feed. It is like an army of men in light marching order, that carry few rations, but depend entirely on what they can secure by foraging. As the human army devastates a region leaving ruin in its train, so do these caterpillars leave ruin, and in many cases, death to the trees on which they feed. The writer in his early years spent many hours in clearing apple trees of this pest. Having a decided dislike to handling the repulsive crawlers, he devised a simple but effective method of destroying both the caterpillar and its tent home. A cheap gun, a pound of cheap powder, and a box of old-fashioned G. D. percussion caps, did the work. A thimbleful of powder in the gun, without a wad, held about 15 or 18 inches from the tent, was the means used. The explosion blew the caterpillars to pieces and the tent was burnt off the limb as clean as a prairie fire sweeps off dead grass. In those days little was known of the food habits of birds; now their relation to agriculture is very well defined and it has been found that the Cuckoo is one of the birds that considers the Tent-caterpillar a dainty tidbit. The food habits of the Cuckoo is a subject well worth the study of every

agriculturist and every lover of trees. A few quotations from well-known authorities will serve to confirm the above opinion. Mr. F. E. L. Beal, of the Biological Survey, U. S. Department of Agriculture, in his paper on the relation of Cuckoos to agriculture, "The Food of Cuckoos," says:

"The insect food of Cuckoos consists of beetles, grasshoppers, cicadas, bugs, ants, wasps, flies, caterpillars and spiders, of which grasshoppers and caterpillars constitute more than three-fourths. In 129 stomachs examined, 2,771 caterpillars were found, or an average of 21 in each. In May and June, when tent caterpillars are defoliating fruit-trees, these insects constitute half of the Cuckoo's food. One stomach was so full that the bird had evidently devoured the whole tent colony, as there were several hundred in the stomach. This diet of hairy caterpillars has a curious effect on the birds' stomachs, the lining of which is often pierced by so many hairs as to be completely furred, the membrane itself being almost entirely concealed. It seems hardly possible to overestimate the value of the Cuckoo's work. All caterpillars are harmful, many of them are pests, and any of them are likely to become so. The common tent-caterpillar formerly fed on the wild cherry, but has now turned its attention principally to apple trees, sometimes completely defoliating them."

Mr. E. H. Forbush, Ornithologist to the Massachusetts Board of Agriculture, says:

"There is no question as to the value of Cuckoos; they feed mainly on the medium-sized and larger caterpillars. Whether there is any other family that is as useful in this respect as the Cuckoos, is still an open question."

Major Bendire says:

"Their benefit to the horticulturist is immense, and he has certainly no better friends among our birds."

The Cuckoo is certainly entitled to the respect and the protection of man for the good it does, and the forester, the orchardist and, in fact, everyone who tills the soil should count himself specially favored if he can number among his bird guests some Cuckoos.

Study Points for Teachers and Scholars

Trace distribution of the Cuckoos on the map. Which species is found in your locality? When do they arrive in the spring, and depart in the fall? What can you tell of their food from personal observation? Describe nest, materials, location in tree, kind of tree, period of incubation, number and color of eggs. How long do young remain in nest? Local name.

For additional valuable information read the following: "Life Histories of North American Birds," Bendire, 1895; "Bulletin No. 9, U. S. Dept. of Agriculture," Beal, 1898; "Bulletin No. 5, Massachusetts Crop Report," Forbush, September, 1899; "Little Brothers of the Air," Mrs. Olive Thorne Miller.

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Bird-Lore



EDITED BY
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PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

HARRISBURG, PA.

NEW YORK

LONDON



COPIES OF BIRD-LORE WANTED.—We will give 25 cents each for the first 50 copies of Bird-Lore for February, 1905. Vol. VII, No. 1, returned to us at Harrisburg, Pa., in good condition. Mail copies flat under three cents postage.

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September - October, 1905

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. VII

SEPTEMBER — OCTOBER, 1905

No. 5



A BOB-WHITE LUNCH PARTY
Photographed by John Tresilian

Our Avian Creditors

By ERNEST HAROLD BAYNES, Meriden, N. H.

IT is not an act of charity, this feeding of the birds at a season when even *their* great courage and energy often go unrewarded. Call it an act of friendship, and I will not dispute it; but, after all, it is a duty — the partial payment of a debt, for the hundred joys which birds have added to our lives. But, though they were not our creditors, the fact that we call ourselves 'bird-lovers' should be sufficient to insure our feeding them in winter; for it is not conceivable that we would allow those we love to run the risk of starving to death, if by any reasonable effort we could prevent it. In spite of all we may do, many birds will die this coming winter; but

the more of us there are who will give even a little thought and go to even a little trouble for their welfare, the fewer deaths there will be.

The branch of bird-feeding work which is, perhaps, most in need of consideration at this time is that which provides for the great army of birds which do not come to our houses and gardens, but which struggle along as best they can in the woods and fields. It would seem to be the duty of the people of every town where deep snows prevail in winter to see that their own birds are provided for and not allowed to starve, and it has been my experience that decent people of all classes, are of just one mind on this subject.

No doubt there are many plans for carrying on this work, but I will give the one which follows, because it has proved very successful in several different towns.

First of all, two or three enthusiasts call a meeting of all those interested in the welfare of the wild birds. This is done through the local paper, if there is one, or through the school children, or both, or in any other way which may be convenient. A special effort is made to have this meeting attended by the Superintendent of Schools, and as many principals, teachers and ministers as possible: this tends to impress the school children and



LUNCHEON FOR TWO
Photographed by Louise Birt Baynes

others with the dignity and importance of the work, and has a good general effect. The necessity for feeding the birds in winter is explained very carefully, and then a few committees are appointed to arrange details. One committee devotes itself to obtaining bird food, and money to buy food, and sometimes calls to its assistance such available outsiders as may be able to help. There are very few people in any American town who will refuse to help such work along in one way or another, if the matter is brought directly to their attention in a proper way. It is usually possible to approach many people personally; but, in any case, the school children can be urged to explain the matter to their parents,



A CHICKADEE FRIEND. THE RIGHT KIND OF A BIRD IN THE HAT
Photographed by the author

and local papers are usually very willing to make known the needs of the committee. Local grocers, butchers and grain-dealers I have found to be among the most generous of contributors, and often, after they have given all they can afford, they will sell to bird-feeders a considerable quantity of food at cost.

In the meantime, another committee is busy getting the names of volunteers to distribute the food in the woods and fields. Here let me say that this work is not, as a rule, suitable for small children, girls or women; it should be done by strong, healthy boys and such men as can afford or will

make the time. It has been my experience that no better workers can be found than the boys from the High Schools and the upper grades of the grammar schools, especially if their work is superintended by some older person in whom they have confidence. But, whoever the workers are, they should have the support of the entire community; they are engaged in a public work.

The coming of the first real snow-storm is considered the signal for the beginning of operations. The volunteers meet at some convenient



SQUAD OF STONEHAM, MASS., HIGH SCHOOL BOYS MAKING A
FEEDING STATION IN AN OPEN FIELD

Photographed by A. J. Sears

building, like the High School or Town Hall, where the bird food has previously been stored, and, if they are wise, they come dressed for work in the snow. The country in and about the town is divided into sections, and a squad of boys, two, three or four in number, is assigned to each section. Each squad is provided with snow-shovels, a bag or basket to carry the grain or bird seed, a quantity of fat meat or suet and plenty of string with which to tie it to the trunks and branches of trees. The suet or other fat, which is of course intended chiefly for the insectivorous birds, is displayed in conspicuous places on trees, and the string is wound round and round, so as to form a sort of net which prevents the food from falling to the ground,

even after it has grown beautifully smaller under the attacks of hungry birds. If there is danger of Crows, Jays or red squirrels carrying off more than their share, it is found to be a good plan to flatten out a lump of suet against a tree trunk, and then tack down over it a square foot of half-inch wire netting. This enables any bird to get a meal on the spot, but prevents the selfish fellows from carting off the entire banquet at once.

As a rule, the best places to distribute the grain, seed etc., are in the middle of wide, open fields and pastures, which can be seen for a considerable distance by birds flying over. On reaching such a spot, the members of a squad fall to with their shovels and clear a space from ten to twenty feet square, right down to the bare ground. If the food were thrown upon the snow, it would be liable to sink in at the first thaw, and then it would be quite out of the reach of most of the hungry ones. After scattering a quantity of grain, the squad moves on perhaps half a mile, and repeats the operation, establishing as many feeding stations in its own section as possible during the time at its disposal.

Of course it is somewhat disappointing to find that all the seed scattered during the afternoon is covered up by snow the next morning, as sometimes happens; but boys with the right stuff in them will not be discouraged, but will stand up to their work until it is finished. The High School boys of Stoneham, Mass., were among the first to show that no amount of snow could discourage bird-feeders who had the proper spirit, and, in the unusually severe winter of 1903-1904, they got out with their snow-shovels and grain and suet after every storm, and established and



TYING SUET IN THE TREES
Photographed by the author

maintained a chain of seventy-five feeding stations around their town, so that no intelligent bird could get either in or out without taking a meal, if he wanted one.

The school children of Canton, Mass., have also done notable work in this field, and were greatly encouraged, last winter, by the offering of sundry prizes at the end of the season, for the best essays on bird-feeding written entirely from personal experience. Very appropriately, these prizes consisted of bird books by Chapman and Torrey, respectively.

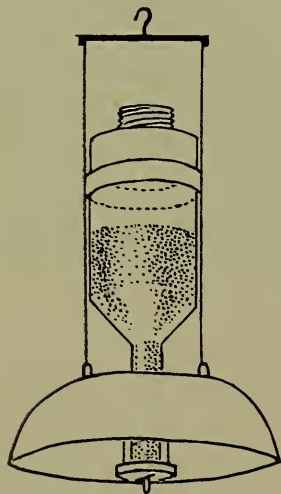
Space will not permit of my giving directions for attracting and feeding birds about private houses and gardens, and, besides, such directions will doubtless be given elsewhere in this number by those who have had much more experience than I have.

The Winter Feeding of Birds

A Suggestion for Coöperation

By MABEL OSGOOD WRIGHT, Fairfield, Conn.

WHILE many individuals make a practice of feeding birds during the season when hunger and cold silently join the ranks of their enemies, any coöperative movement of community or Audubon Society toward this end is unusual. About the villages and even remoter farms, food is to be found scattered both by accident and design; but this avails nothing to the roving flocks of the shyer birds that find themselves snow-bound between settlements, in the regions of deserted forest camps or shore cottages. Also the usual supply of nuts, suet, cracked corn, or dog-bread offered by the well-supplied "lunch counter" of the hospitable, fails to reach the Ruffed Grouse or Quail coveys of wood-lot and stubble-field. These two noble game-birds forage bravely for themselves during temperate seasons, but in severe and ice-bound winters, such as the last two, they have fallen in bands from the weakness of hunger that has prevented them from breaking out from under the snow crust that had formed above them when they had burrowed to find shelter from the biting wind.



A SELF-FEEDING FEEDER
From Berlepsch's 'Der Gesamte
Vogelschutz'

In dealing with the winter protection of birds, food and shelter must go hand in hand; for one without the other is very much like the prescription for an appetizer given by a charitable doctor

to a poor feeble man, who straight-way asked for the meal tickets to accompany it.

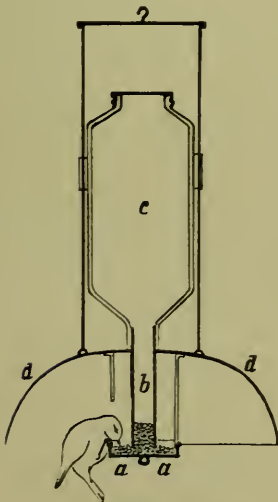
One of two things must be done at the beginning — either a feeding place must be made close to suitable shelters, or, lacking this, the shelters themselves should be provided; and, to create a successful system of feeding, at once complete and effective, an organization should be formed in every village, either in connection with the local branch of the Audubon Society or other nature club, or as an independent Society for the Winter Protection of Birds.

The work of this body should be under three separate heads — Home, School and Field, and, from its necessities and diversity, people of all ages and both sexes may be utilized.

The Home branch, of course, is the simpler — the feeding about houses and barns; but no little study and skill are required to note the needs of the



AN APPLE-TREE RESTAURANT
 Photographed by M. O. W. at Fairfield, Conn.



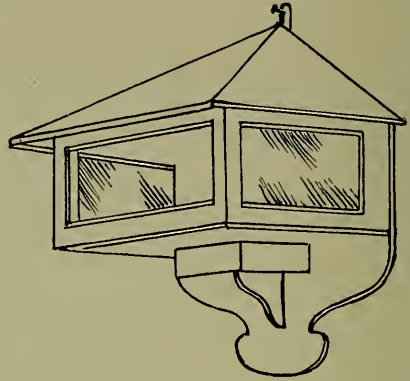
A LONGITUDINAL SECTION OF
 THE SELF-FEEDING FEEDER
 From Berlepsch's 'Der Gesamte
 Vogelschutz'

different birds and place the food where they will take it naturally, and yet be out of the reach of marauding cats. For during the past dozen winters I have seen many little whims displayed by birds feeding in and about my apple trees, and though all the sparrow tribe feed naturally on the ground, the tree-feeding birds, like Nuthatches, Chickadees, Woodpeckers, Cross-bills, etc., relish their food better and are fully at ease only when they find it placed in a situation like to that of the grubs and insects they pick from twig and bark.

To study and adapt the location to the individual is, therefore, one duty of the Home branch, to outwit the English Sparrow is another, and I assure any one who has not tried that it is a process as full of mental discipline as an entire course of mathematics. I have waged a rather successful warfare on this Sparrow, and the few

who venture about always scatter at the approach of a human being, whom they evidently associate with guns and such things. To my surprise, the past winter these Sparrows, that had scattered instantly when alone, remained and fed boldly whenever they could mix with a flock of Snowbirds, Juncos or Tree Sparrows. I believe they were conscious that these other birds shared a protection that was not accorded them. (If I belonged to the School of the Long Bow instead of the A. O. U., I might write of a conversation overheard between a benevolent Junco and a hungry English Sparrow, where the former offered the latter the protection of his company.)

The school feeding branch is of great importance and the six or a dozen scattered schools of a country township may be made important feeding centers, if the coöperation of the teachers can be secured and system and regularity in the matter enforced. The following suggestion for such feed-



FEEDING-BOX

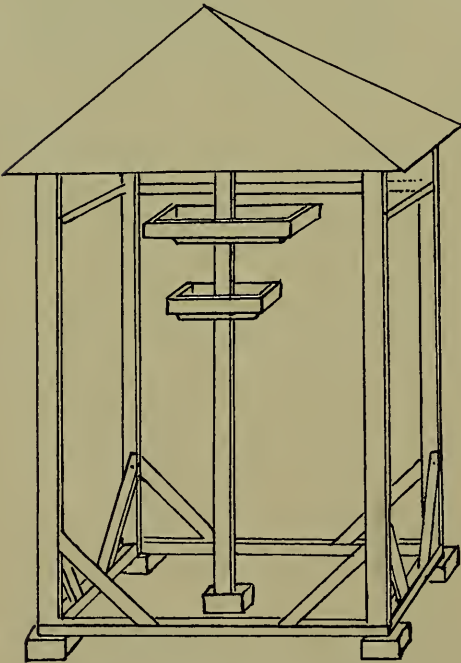
From Berlepsch's 'Der Gesante Vogelschutz'

ing, written for a little book compiled for the use of the rural Connecticut schools and recently issued by the State Board of Education may not be amiss here:

"Every school has a flag-pole, and, while some are fastened to the building itself, many stand free and are planted in the yard.

"Around this pole a square or circular shelf about eight inches wide can be fastened, four feet from the ground, and edged with a strip of beading, barrel hoops, or the like. A dozen tenpenny nails should be driven on the outside edge at intervals, like the spokes to a wheel, and the whole neatly painted to match the pole.

"Then each week one child



FEEDING-HOUSE

From Berlepsch's 'Der Gesante Vogelschutz'

should be appointed as *Bird Steward*, his or her duties being to collect the scraps after the noon dinner hour and place them neatly on the counter, the crusts and crumbs on the shelf and the meat to be hung on the spikes.

"Nothing will come amiss—pine cones, beechnuts, the shells of hard-boiled eggs broken fine, apple cores, half-cleaned nuts; and, if the children will tell their parents of the counter, they will often put an extra scrap or so in the dinner-pail to help the feast. Or the fortunate children whose fathers keep the market, the grocery store, or the mill, may be able to obtain enough of the wastage to leave an extra supply on Friday, so that the pensioners need not go hungry over Sunday.

"All the while the flag will wave gaily above little Citizen Bird, as under its protection he feeds upon his human brothers' bounty."

The field-work section will give employment to both boys and men, two classes in the community that the ordinary method of the Audubon societies often fails to interest, through lack of giving them physical labor to perform. A man, preferably a sportsman either by nature or training, should plan these feeding stations according to his knowledge of the haunts of the birds, set up shelter of brush, of the hayrick type, constructed with due regard to protected ingress and egress—

that, by the way, must in no wise cause suspicion as being a trap—or else stack corn-stalks on either side a snake or stone fence, and straightway appoint his feeding-wardens who will take the supplies of buckwheat, cracked corn, etc., to the station twice or thrice a week. By employing a number of boys, the task need not lie heavily, and a small compensation might be added as an incentive, if the district be a poor one; this, with the legitimate chance for an outing, will be motive enough, while those who really care for birds will most likely have valuable observations to report concerning the working of the scheme.

Besides this, there are a dozen ways of having food distributed to these shelters—via the traveling peddlers, grocery men, teamsters and rural mail-



A BIRD'S TEPEE MADE OF LIMA BEAN POLES
WITH THE VINES STILL ATTACHED
Photographed by F. M. C. at Englewood, N. J.

carriers. Of course a small fund must be raised for the carrying on of so extensive an enterprise; but, when it is known that contributions of grain and mill-sweepings are even more acceptable than money, the material will not be lacking.

Then, when one village tries this experiment and enthusiasm is kindled, another is sure to follow, like the leaf fire that runs along the fences in autumn until all the country-side seems bound by it. In due time, the whole country might be joined by a chain of stations for food and shelter, if each society for bird protection will not only lend a hand, but stretch it far out toward its remote neighbors.



'CLEARING UP'

A disastrous proceeding for summer, as well as for winter birds
Photographed by A. C. Dike, Bristol, Vt.

How to Attract the Winter Birds About Our Homes

By EDWARD HOWE FORBUSH, Wareham, Mass.

TWENTY-NINE years ago I first began feeding the winter birds. In those days no observing boy who roamed the woods in winter could help seeing that Crows, Jays, and Chickadees came, at regular intervals, to feed upon the skinned bodies of foxes and other animals left hanging in the trees by hunters and trappers. So, in the winter of 1876-77, I provided a goodly feast for the birds within sight of my window.

People have complained to me that the birds would not come to the food provided for them; but when this is the case the fault is usually their own, as they have not gone about feeding the birds in the right way. There is no obstacle to the plan of assembling native birds at feeding places in the city or country, if we except the Sparrow and the cat, both of which must be eliminated to insure signal success. If you wish to attract birds about the house next winter, do not wait until the ground is covered with snow, but begin now. Scatter a little hayseed, from the barn or stable floor, on the bare ground about the yard. Millet or any bird-seed will do as well. Hang some small pieces of suet or beef trimmings on the branches of the trees beyond the reach of dogs and cats. If, at first, these pieces are somewhat widely scattered at points radiating from the house as a center, your success should be assured. Your lures will keep best at this season if tied on the shady side of a tree trunk; but in winter they should be put on the sunny side. They should be well wound to limbs with twine or covered with cellar-wire netting so that neither Jays nor Crows can carry them off bodily.

You are then ready to attract and hold birds that might otherwise pass on to the South. The birds may not find the food at once, but usually they will find it sooner or later. When the Chickadees have discovered it we are ready for the next move.

Fresh meat or suet is now put up on the trees nearest the house, to accustom the birds to coming there. Gradually the more distant feeding stations are given up and all the fresh food is put out near the house.

A block having a slot cut in it to receive the butt of a limb is next nailed up on a window-sill. A branch which will spread over most of the window is then thrust in the slot, so that it stands up in front of the window like a little tree. Suet is the best food to be used here, as elsewhere, for, while it provides the birds with much of the heat and energy they need, they are still obliged to hunt constantly for insect food to secure their daily allowance of protein or muscle-forming material. In this quest they clear the hibernating insects and insects' eggs from our trees and shrubbery. Small pieces of suet are wound on the limb or its twigs so that no one piece is within a foot of any other. If this direction is observed there will be little

quarreling, and several birds may often be seen feeding at once at the same window.

The Chickadees soon discover this new source of food supply, and they become so tame as to come and feed even when some one sits at the window. Next come the Nuthatches and perhaps a little later the Woodpeckers appear. With the first heavy snow-storm, even the wary Blue Jay may venture to the window.

By this time the seeds scattered about the yard have attracted Tree Sparrows, Juncos, Fox Sparrows, Quail, and the introduced Pheasant.



DOWNY AT THE WINDOW

Noticing how attractive to birds were the scratching sheds of the poultry, we provided a similar feeding shelter near the house by setting out a large dry-goods case minus the cover. This should be placed several rods north of the house at first and laid upon one side with the opening facing the house. Chaff, sand, seed, cracked grain, etc., may now be put in and, if there are cats about, it will be well to cover the opening with common poultry netting through which the smaller birds can readily pass, while the cat is kept out. If Quail are about, the mesh must be large enough for them to pass through or the wire must be raised somewhat at the bottom. There must be no projecting points to tear, or otherwise injure, the birds.

When the birds have found the food in the box (an event which may be hastened by scattering some seed on the ground near by), it may be moved, daily, a little nearer the house, until you have your flock feeding under your windows. Quail may be thus tamed so that they will come and pick up grain that is thrown to them, while Pheasants will come close to the house.

It is not easy to get these larger birds to feed, except on the ground, but for watching the smaller birds at close range we find the window-shelf the most satisfactory device we have tried.

The sill is, ordinarily, too small for a feeding-shelf. It lacks elbow-room and does not give the birds that sense of security that they feel when gathered in numbers on a large shelf.

The shelf may be made of any light boards, or the side of a large shoe box. It should be put up on the south side of the house. Its appearance, when in place, is shown in the cut, which is reproduced from a photograph taken at a window of our house. The little tree was first added to the shelf one Christmas morning and we have since called it the "birds' Christmas tree."



THE BIRDS' CHRISTMAS TREE

A large window awning that could be lowered during storms to keep off the rain or snow might be an improvement, but the tree is much prettier when laden with snow, although we shall often have to sweep the snow from the shelf during a storm, if it is not protected by an awning.

This style of shelf soon becomes popular with the birds, and on snowy mornings we may find from six to a dozen birds at a time on shelf and tree. Where myrtle-berries or bay-berries grow, a few of the bushes may be set up

on the shelf, as they are seen in the illustration; for nearly all birds eat them and they may attract the Myrtle Warbler or some other bird, not ordinarily seen at the window. Chestnuts are the most attractive food for Jays, but corn or suet will call them. Crumbs from the tables, scraps, pieces of doughnuts or crullers, nuts, sunflower seeds, frozen milk and many other food materials may be utilized, if one wishes to experiment. Those who are not accustomed to approaching birds will be able to come quite near the window without disturbing them, if a lace sash-curtain is hung across it, for the birds will not be able to see through this distinctly. To me, the great advantage of feeding birds in this manner is that they may be studied, sketched or photographed at close range and in comfort, during the coldest winter weather. We may learn much, in this way, about the food preferences of birds, the amount of food they require, their manner of feeding and drinking, their hours of rising and retiring.

Other interesting habits will be observed. Someone not long since asked in Bird-Lore the question, "Did any one ever see a bird shiver?"

Probably all who have maintained a window-shelf for feeding birds in this latitude have seen this. Fox-sparrows, Song-sparrows, Juncos and Chickadees tremble with cold early on severe mornings.

With the thermometer at 28 degrees below zero, they were obliged to hold each foot alternately up under the feathers for warmth. In such weather, and during cold storms, some birds succumb, and their little bodies may be picked up, now and then, in the snow. It is of the greatest importance, then, when once we begin feeding birds, to keep a constant supply available for them throughout the winter, that they may have it to rely on in the most inclement weather; for it is then that they are most in need of it. We also continue feeding them for the summer and so maintain a larger number of birds about the house than would otherwise live there,—but that is another story.

This method of attracting and domesticating the birds has proved so successful with us that they will, in some cases, feed from the hand. It has become necessary to keep doors and windows closed at our house if we wish to keep the birds out of our rooms. Chickadees build their nests in spring, and rear their young in boxes put up for them at door and window.

The birds now furnish entertainment and amusement to the household throughout the year. Any family in this latitude may have a similar experience, though the number of birds attracted may be less in bleak localities.



For Teachers and Students

The Migration of Warblers

TWELFTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

NASHVILLE WARBLER

Wintering principally in Mexico, the Nashville Warblers of New England seem to reach their summer home by a migration route that shuns the lowlands of the southeastern United States. The species is almost unknown in this district south of Virginia.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
French Creek, W. Va.	4	April 28	April 23, 1891
Washington, D. C.	4	May 5	May 4, 1887
Beaver, Pa.	5	May 1	April 25, 1891
Southeastern New York	7	May 3	April 30, 1900
Portland, Conn.	6	May 7	May 5, 1894
Boston, Mass.	12	May 5	May 1, 1896
Randolph, Vt.	5	May 7	May 3, 1894
Southern New Hampshire	9	May 5	April 30, 1902
Lewiston, Me.	6	May 9	May 7, 1897
Montreal, Can.			May 10, 1890
Quebec, Can.			May 14, 1890
St. John, New Brunswick	5	May 16	May 6, 1895
Petitcodiac, New Brunswick			May 5, 1886
<i>Mississippi Valley—</i>			
San Antonio, Texas	3	March 25	March 21, 1889
St. Louis, Mo.	6	April 26	April 20, 1885
Chicago, Ill.	6	May 3	April 27, 1897
Brookville, Ind.			April 15, 1887
Northern Ohio	6	May 5	May 2, 1895
Petersburg, Mich.	8	May 7	May 1, 1887
Southern Ontario	7	May 6	May 2, 1898
Ottawa, Ont.	11	May 14	May 5, 1902
Keokuk, Iowa	8	May 6	April 28, 1896
Lanesboro, Minn.	8	May 9	May 1, 1888
Minneapolis, Minn.	4	May 14	May 13, 1888
<i>Pacific Slope—</i>			
Yuma, Ariz.			March 11, 1902
Huachuca Mountains, Ariz.			April 1, 1902
Dunlap, Cal.			April 23, 1891
Revelstoke, B. C.			May 9, 1890

FALL MIGRATION

The arrival of migrants south of their breeding grounds has been noted at Chicago, Ill., August 16, 1896; Beaver, Pa., September 5, 1903; Ossining, N. Y., August 11; Englewood, N. J., August 26, 1887; Washington, D. C., September 5; French Creek, W. Va., September 7, 1890; St. Louis, Mo., September 17, 1885, and at Gainesville, Texas, October 11, 1885.

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Lanesboro, Minn.	4	September 27	September 29, 1889
Grinnell, Iowa			October 1, 1886
Ottawa, Ont.	6	September 20	October 10, 1900
Mackinac Island, Mich.			September 24, 1889
North River, Prince Edward Island			August 10, 1887
St. John, New Brunswick	3	September 2	September 5, 1895
Southern Maine	5	September 11	September 27, 1902
Renovo, Pa.	7	September 26	October 3, 1902
Croton-on-Hudson, N. Y.	2	October 3	October 7, 1888
Cooney, N. Mex.			September 30, 1889
Dunlap, Cal.			October 12, 1890

ORANGE-CROWNED WARBLER

This species winters in the south Atlantic states as far north as southern South Carolina, but is elsewhere so rare east of the Allegheny mountains that its normal times of migration in the north Atlantic states cannot be stated with any degree of accuracy.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
Onaga, Kan.	5	April 24	April 17, 1892
St. Louis, Mo.	4	April 27	April 22, 1885
Chicago, Ill.	5	May 6	May 1, 1899
Southern Ontario	3	May 13	May 11, 1889
Ottawa, Ont.	2	May 18	May 17, 1890
Lanesboro, Minn.	7	May 2	April 27, 1888
Aweme, Manitoba	7	May 7	May 1, 1901
Loveland, Colo.	2	May 3	May 2, 1889
Columbia Falls, Mont.	5	May 5	April 30, 1897
Red Deer, Alberta			May 14, 1892
Fort Resolution, Mackenzie			May 22, 1860
Fort Simpson, Mackenzie			May 21, 1904
Kowak River, Alaska			May 25, 1899
Central California	4	March 12	March 7, 1885
Northern Oregon	3	March 23	March 19, 1885
Chilliwack, B. C.			April 17, 1889

FALL MIGRATION

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Near Fort Rae, Mackenzie			August 16, 1903
Chilliwack, B. C.			September 5, 1888
Columbia Falls, Mont.			September 12, 1895
Aweme, Manitoba	2	September 27	October 3, 1901
Lanesboro, Minn.	5	October 1	October 6, 1891
Ottawa, Ont.			September 30, 1889
Chicago, Ill.			October 1, 1896
Berwyn, Pa.			October 12, 1894

TENNESSEE WARBLER

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
Rising Fawn, Ga.			April 26, 1885
Beaver, Pa.	4	May 9	May 5, 1902
Central New York	4	May 13	May 8, 1887
Eastern Massachusetts	2	May 14	May 13, 1900
Corpus Christi, Texas			April 3, 1891
San Antonio, Texas			April 21, 1891
St. Louis, Mo.	7	April 27	April 24, 1886
Brookville, Ind.	3	May 4	April 20, 1884
Chicago, Ill.	10	May 9	April 30, 1897
Southern Wisconsin	6	May 16	May 14, 1885
Southern Michigan	7	May 15	May 12, 1894
Ottawa, Ont.	6	May 16	May 12, 1901
Grinnell, Iowa	6	May 5	May 1, 1887
Lanesboro, Minn.	6	May 11	May 7, 1885
Lincoln, Neb.	3	May 7	
Aweme, Manitoba			May 13, 1903
Fort Simpson, Mackenzie	2	May 29	May 26, 1860
Caribou, B. C.			May 22, 1901

FALL MIGRATION

PLACE	No. of years' record	Average date of first one seen	Earliest date of first one seen
Hallock, Minn.			August 2, 1899
Mackinac Island, Mich.			August 8, 1889
Chicago, Ill.	5	August 20	August 13, 1896
Englewood, N. J.			August 26, 1887
Washington, D. C.			August 31, 1890
Key West, Fla.			October 5, 1887
New Orleans, La.	3	September 21	September 18, 1899

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Aweme, Manitoba			October 3, 1901
Grinnell, Iowa			October 1, 1886
Ottawa, Ont.			September 30, 1889
Chicago, Ill.	5	October 2	October 9, 1894
Beaver, Pa.	4	September 30	October 11, 1890
Washington, D. C.			October 12, 1890
St. Louis, Mo.			October 20, 1885
Asheville, N. C.			October 29, 1894
New Orleans, La.	6	October 28	November 3, 1900

Notes on Winter Feeding

From Dorchester, Mass.

We live quite near to the city proper and the electric cars, yet we have many bird visitors who become very tame. Our methods of feeding the birds in winter are very simple, such as any householder could easily employ.

We use mostly beef fat; preferably the outside fat of the beef-leg. This we nail in strips to the side or a shed where woodbine overgrows it, so that the birds can sit on the vine to pick the fat. We also have a wide stick secured among the lower branches of a pear tree, to which we tie the fat so that the birds can stand on the stick to eat.

Sometimes, having many small bits of fat, we melt these slightly; so in winter they soon cool into one mass, which is easily secured for the eager birds.

In an old apple tree we have nailed a piece of board a foot square. To this we sometimes tie a large soup-bone, after it has served its purpose in the kettle, and the birds are to be seen about it almost any time picking at every bit of meat or gristle. We tie it so that the cats cannot get it to the ground. We also tie the bony frame of any fowl, after it has become unfit for the table, among the outer twigs of a tree away from the reach of cats and dogs.

No matter how deep the snow or how fierce the wind, the birds are eating by daylight and late at night. The Blue Jay, Flicker, Downy Woodpecker and Chickadee are frequent guests, besides the ever-present English Sparrow. Even Crows sometimes come near enough to the house to carry off at once a piece of fat large enough to last the smaller birds several days.

For many years we have had this great joy of watching the birds eat of our bounty in the cold and wintry storms.—GERTRUDE A. SHATTUCK, *Dorchester, Mass.*

From Lake George, N. Y.

In the winter of 1903-04, I put suet into trees on the south side of the house, only a

few feet away, and soon noticed Blue Jays, Chickadees, White-breasted Nuthatches and Hairy Woodpeckers eating it. One morning, I found the supply entirely gone, and soon discovered that Crows had taken it. I then tried to arrange some way in which I could continue to feed the smaller birds, and resorted to the following plan:

I took a small-sized grape basket and cut the top of it off to within about an inch of the bottom, leaving that as a rim all around for the birds to stand on, then I nailed it at right angles on a strong stick, about eighteen inches long and two inches wide, and then nailed the free end of the stick to the window ledge, leaving space to open and shut the window easily.

I had two or three trays, one from a second-story window and one from the first. Into them I put bread-crumbs and suet, tying the latter in, by putting cord around it, and fastening it to the stick, just next the tray; this kept it from falling out, when the birds pecked at it vigorously.

Gradually, by shortening the stick, I brought the trays nearer the windows, and found that Chickadees, Nuthatches and an occasional Woodpecker did not hesitate to come to them, even though someone was sitting on the window-seat.

The trays were kept filled until the middle of June and used daily, though only bread-crumbs were put into them after the warm weather came.

One day in that month, a White-breasted Nuthatch made twenty-three trips to the tray. I have not had an opportunity to try the plan again, but I think it might be necessary first to put suet into nearby trees, to attract the birds.—ELLA F. LUTHER, *Lake George, N. Y.*

From Berlin, Conn.

In these days of systematic winter feeding, I think that our wild birds are not so likely to suffer from hunger as from thirst. I have reached this conclusion from observation of

the many birds who visit my window food-shelf. Here I keep a cup of fresh water the year round, and the birds drink eagerly at almost every visit for food. During very cold weather this water has frequently to be thawed.

When the weather was extremely cold and the water was put on the shelf in a steaming-hot condition, I discovered that both Chickadees and Nuthatches found it very grateful. They used the cup as a foot-warmer, and, after a drink of its contents, would very evidently be warmed and made more comfortable.

This hot water also accomplished an accidental cure. The patient was one of my Nuthatches whose feet became somewhat paralyzed. He appeared otherwise ill; losing his appetite; sleeping for hours on the shelf; and being so weak as easily to be caught in the hand. While I was trying to think of some safe and possible remedy to try upon a sick wild bird, he solved the problem himself.

Happening to fly to the shelf just after I had placed a cup of very hot water there, he drank deeply of it and, settling close to the warm cup, remained there for along while. When he finally left the shelf, his whole aspect showed remarkable improvement, and, with a drink of hot water each morning, he was an entire convalescent inside of a week, regaining the use of his feet, which now seem almost normal, except for the nail of the back toe, which is transparent red, showing distinctly the central vein.

I ascribe this bird's recovery partially to the bird-*tonic* which I mixed with his chopped nuts. This tonic was that which I use for my Canary, and I tried it upon the Nuthatch, doubting much if he would eat it; but he enjoyed it greatly from the start and was, I think, benefited thereby. However, I feel warranted in attributing the cure mostly to the hot water, and I think that if those who feed the birds would also give them water, especially in winter when natural supplies are frozen, they would find that it was appreciated as much as the suet, nuts and other food — HARRIET S. SMITH, *Berlin, Conn.*

From Sherman, Conn.

For three years I have fed an annually increasing flock of birds. Last winter, eight different kinds came every day for weeks and brought brightness into the dreariest weather. Suet nailed to the tree-trunks attracted Nuthatches, Chickadees and Downy and Hairy Woodpeckers. Cracked corn scattered near the house and under the trees brought Tree Sparrows, Juncos and Blue Jays. About the middle of February, a flock of Snowflakes discovered the feast and came many times a day for nearly two weeks, settling upon the ground like a cloud and devouring the corn. We counted at least sixty in the flock, and thought we did not count them all. Guests and neighbors, as well as ourselves, were fascinated with these daintily clad birds, and in the first days of their coming we ran from window to window to watch them as they flew from one feeding plot to another. Our bird-books told us that Snowflakes were never known to perch upon a tree, but we saw them again and again on the branches of fruit trees in the yard, and wondered how the books could have made such a mistake.

A shelf under one of the south window-sills was convenient in a storm or in deep snow early in the morning before the paths were made. Without going outdoors, I could spread the table from the open window with crumbs, suet, broken nuts, hemp seed and corn. All the birds except the Blue Jays, Juncos and Hairy Woodpeckers came to the window, the Nuthatches being particularly fond of the nuts.

In March, after the spring birds had begun to arrive, there came a light snow and an ice-storm, and Fox Sparrows and Song Sparrows were glad to eat at the winter birds' table.

Late in the winter, two or three English Sparrows came uninvited and lifted up their wretched little voices among the musical notes of the Tree Sparrows, the gentle twitter of the Snowflakes, and the merry 'Spring here' of the Chickadees. A neighbor with a gun was summoned at once, and the 'little beasts' were quieted.

No money I ever spent brought me more

pleasure than the little I paid last winter for the bird guests' supplies.—RUTH ROGERS, *Sherman, Conn.*

From Englewood, N. J.

Among the various trees whose ripening seeds now attract the birds, few can be more popular than a certain fine specimen of the white magnolia (*M. glauca*), which, though only thirty-five feet from the house, has so many other trees in its neighborhood that the birds do not fear to visit it freely. As the seed-heads were beginning to open, exposing the scarlet seeds (the third week in September), a large flock of Robins appeared about the lawn, and it was not long before they discovered this food supply, since which time only a small proportion of the seeds has gone to waste. Now that plenty of the heads are open, the Robins come at all times of day, and in numbers far exceed all the other birds I have seen there. Sometimes a Flicker comes, and for several days a Yellow-bellied Sapsucker has frequented the tree; the latter species is a common migrant here, but usually a very

silent one. This bird constantly makes known its presence by a call strongly resembling the Blue Jay's usual scream, only much weaker and more shrill—in fact, just such a note as one would expect from a young Jay whose voice had not reached its full strength.

The above birds, I am positive, eat the seeds, and in addition to these a Wood Thrush, a Catbird, and a Downy Woodpecker have been seen in the tree, presumably for the same purpose.—ISABEL MCC. LEMMON, *Englewood, N. J.*

From Middle Haddam, Conn.

The accompanying group of Crows was taken February 19, 1903, by placing the camera in a small poultry door in the barn fifteen feet distant.

We made a practice that winter of throwing refuse food on the frozen ground at a particular spot which we took pains to keep uncovered when the snowstorms came.

The Crows were regular visitors in the extremely cold weather when the snow was deep on the ground. The Jays also came,



THE CROWS COME
Photographed by Bert F. Case

and, of course, the English Sparrow was always present.

Some may question the desirability of helping such birds to winter, knowing something of the destructive bird-nesting habits of the Crows and Jays and the unpraiseworthy qualities of the English Sparrow.

But feelings change in the barren winter season. We feel well disposed toward every form of outdoor life, and perhaps cherish the hope that the memory of our bounty will work a desirable change in character when the milder weather comes. Such hopes are, of course, vain,—but that is no reason, I take it, why we should stop feeding the birds that are brave enough to spend the long, cold winter with us here in the North.

The photo of the food table (Camera, Brownie No. 2), was taken from within the kitchen to the sill of one window to which the table was nailed. The table, so arranged, brought the birds to close quarters. We could stand close to the window and watch the birds feeding. If ice formed on the table, a little hot water quickly cleared it. We nail the table in place regularly with the advent of winter, and it never lacks guests.

The first season, among our more common visitors, we had a pair of Red-breasted Nuthatches, the first we had ever seen. They stayed with us a number of weeks, and that one experience was worth all the trouble of keeping the table up, though we never thought of "trouble" in that connection. It is a great place to study bird character.

All Chickadees look alike to us when seen in the trees at a little distance, but on the table a few feet distant they are just as different in appearance and manners as people are. Five Chickadees and a Nuthatch were on the tray at one time; again, five Chickadees and a Downy Woodpecker; again, three Chickadees, a Downy and a Nuthatch. One morning five Blue Jays were there together. But, with the Jays present, the only bird that we ever saw come to the

table was a Chickadee, and he appeared rather ill at ease.—BERT F. CASE, *Middle Haddam, Conn.*

From Jacksonville, Illinois

As you request notes on feeding birds in winter, for the October number of *BIRD-LORE*, I venture to send in an account of my experiences, which, though somewhat com-



A WELL-PATRONIZED LUNCH COUNTER
Photographed by Bert F. Case

monplace, may prove helpful to people who are too busy, or otherwise unable to plan an elaborate entertainment for their bird friends. Ever since I began bird-study, six years ago, I have kept a simple winter table; and it has been a never-failing source of pleasure and instruction to me, as well as a help to my guests during the bad weather.

We have an acre of ground around our home, and fine trees, but there are streets on all but the north side, so I chose that side for the bird table, as it is the most sheltered, and at the same time affords us the best chance to watch the birds from the house. I began by tying lumps of suet up in some small trees near the windows, and very soon my guests began to arrive. I generally set the table early in October and keep it spread until late in the spring.

After the first winter or two, I devised a plan of bringing the suet-eaters within closer range. I fastened a rough stick, about two or three inches in diameter, to the window-shutters, across the window a little below the middle sash, and upon this stick I tied my lump of suet. From that time on, we have had the pleasure, all winter long, of watching our bird neighbors at their lunch,

while sitting at our own dining table. I also fastened a wooden tray to the sill, in which we put cracked nuts and chopped suet.

While sitting at breakfast or dinner on a wintry day, we will hear a merry 'chickadee-dee-dee' or a loud 'pique,' and looking up will see a Chickadee, or a Downy or Hairy Woodpecker. We cannot number a very great variety among our bird guests, but they are all interesting and more than welcome. The most constant visitors are the Chickadees and Woodpeckers; then Blue Jays, Titmice, Juncos and the Nuthatches, with once in a great while a Cardinal. Of these the Chickadees and Downies are the most tame. The Hairy Woodpecker is always suspicious, and keeps a sharp eye on the window and an ear open for every sound.

The Chickadees often sit on the sill to eat their bit of nut or suet, calling cheerily between whiles. They are so very dainty and quick in their movements. The Blue Jays are very greedy, and quickly carry off a pile of nuts. We are always delighted when a White-breasted Nuthatch visits the window-sill. They have a different note from their usual nasal 'yank-yank' while feeding. However they may fly onto the window tray, when they are ready to leave it they start head downward, as though ready for a coast. We strew fine seeds around for the Juncos and such seed-eating birds during snowy or icy weather.

When the spring migrants return, we find Black-birds and Catbirds patronizing the suet. Almost all of the winter birds are fond of both nuts and suet. No one need ever waste old or rancid nuts. The birds will be glad to get them.

One June, we had several days of cold rain, a steady downpour, and it was well-nigh impossible for the birds to forage for themselves, not to mention feeding a family. There happened to be a left-over piece of suet on the stick, and one day we saw a Catbird on it, digging at the suet, while just below her clung two young ones, shaking their wings in their helpless, imploring way. The children were about as big as the mother, but she thrust the food down

their throats patiently. After a while, however, she grew tired of it and flew away, when the young quickly discovered that they could feed themselves, if they tried.

Some people have suggested that such birds as the Woodpeckers will not look after the trees for us if they can obtain their food without labor. But our Woodpeckers are so superior to these would-be moralists that they go all over the trees in the neighborhood of the winter table, searching in every crevice of the bark. They scorn to live without labor and only accept our bounty in the way of dessert, or when food is scarce. But, after all, it is not bounty, as we are always in their debt.— ANNE WAKELY JACKSON, *Jacksonville, Illinois.*

From Curran, Illinois

Last fall, I hung a bird-food shelf at our south study window and early each morning put cracked nuts, suet and bird-seed on it. Several Tufted Titmice visited it the first morning, and, in a day or two, Juncos and Chickadees came in flocks. White-breasted Nuthatches, Downy, and Hairy Woodpeckers, a White-crowned Sparrow and a Red-bellied Woodpecker were constant visitors all winter, often coming several times a day. A Mockingbird came until the middle of December, making, in all, nine kinds of birds.

The Tufted Tits were the tamest and would eat nuts from my hand. They, and the Chickadees, ate shelled nuts and suet from the shelf, or, flying away with a cracked nut, lighting on a nearby limb, would hold it in their claws, picking out the kernels. Sometimes the walnuts were so heavy they would drop them several times before reaching a perch, and would have to fly down, get them, and start over.

The Nuthatches sometimes ate off the shelf, but more often carried pieces to the tree and buried them under the bark, then ate them out.

The Woodpeckers, besides eating what was provided for them, pecked the shelf hard with their bills, perhaps looking for grubs. These birds all enjoyed the fresh fat pork I had nailed to a nearby tree.

The Juncos and the Sparrow ate seed as Canaries do, ejecting the hulls, and they also liked bread crumbs and nuts.

The Mockingbird ate bread and milk, and some of the birds drank from a tin of water put there for them. Though not singing at this time of year, they all, except the Mockingbird, made themselves known by their call-notes, and "Chickadee-de-de," "Yank-yank" and the sharp "click" of the Woodpeckers, together with the warbles of Juncos and Tree Sparrows and the occasional certain long-drawn-out notes of the Chickadees, made it lively around our house—for winter.

The Tree Sparrows, though numerous, coming with the Juncos, always fed on the ground.

The Tufted Tits were the first to sing, and a loudly-whistled "Peto-peto-peto," when the snow was still on the ground, was a very pleasing harbinger of spring.

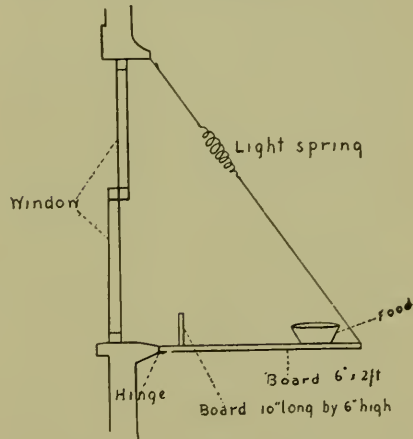
I wish to add that I made my shelf after a plan seen in BIRD-LORE, and thank the inventor of it, as this shows it was successful. The fact that it swings prevents English Sparrows from using it.—ABBIE VREDENBURGH, *Curran, Ill.* [A description and cut of the device mentioned above are here republished.—ED.]

From Campbellsville, Ky.

Last winter, I cleared in the snow a place about six feet square near my sitting-room window and scattered in it grains of corn and seeds from the barn floor. After the snow had been on the ground more than a week, I counted sixteen Cardinals at one time feeding on the grains of corn. The brilliant red of these birds, with the snow for a background, made a beautiful scene. The birds continued with us as long as the snow lasted, being in evidence especially at morning until ten o'clock, and afternoon until near dark. Seeds from the barn floor served as food for several kinds of birds other than the Cardinal; the Cardinals ate only the corn. The first day I noticed a single Cardinal and his mate I felt very much elated; but, after this pair had fully advertised our

feast among their starving brothers and sisters and they flocked in sixteen strong, I felt that I was extremely fortunate. This beautiful sight attracted the attention of so many persons who passed by our place that quite a number of *spreads* were established for our bird friends at other places. The Cardinals nearly always came in pairs; the day I counted sixteen, eight were males and eight females, a strong tribute to their conjugal fidelity.

As indicative of their appreciation, a pair of Cardinals nested in the vines of our front porch this summer, only a few feet from their winter feeding place. Very probably this was one of the sixteen pairs.—WILLIAM M. JACKSON, *Campbellsville, Ky.*



An Anti-Sparrow Food-Shelf

Mr. W. W. Grant of Summit, N. J., sends us the accompanying plan for a window food-shelf, to which, he writes, such comparatively wild birds as Tanagers, Flickers and others come, but which the English Sparrow will not, after one trial, visit. A board is hinged to the window-sill, and from the far end (see cut) a string is run to the top of the window, with a light spring between. When a bird alights on the platform, the latter will swing up and down, the amount of swing depending on the birds and the weight of the spring, to which the string is attached.

Book News and Reviews

FIFTY COMMON BIRDS OF VERMONT. By CARLTON D. HOWE. Prepared for Teachers and School Officers. Issued by the Department of Education, Montpelier. 12 mo. Pages 92; numerous half-tones in text.

The Department of Education of the State of Vermont has set an excellent example in providing its teachers with a text-book on the commoner birds of the state, while the book itself may also serve as a model for works of this kind.

A Prefatory Note contains sections on 'The Economic Value of Birds,' 'How to Attract the Birds,' and 'Instructions to Teachers.' About a page is devoted to each species, and in nearly every instance this descriptive and biographical matter is accompanied by an illustration.

An admirable feature of the book is a series of local lists from various parts of the state, a nominal list of the birds of the state, and an Information Bureau giving the names of twenty-three persons who "will give information to teachers and pupils in regard to the birds of their localities."—F. M. C.

HOW TO KNOW THE WILD BIRDS OF ILLINOIS. 16mo. Pages 100.

HOW TO KNOW THE WILD BIRDS OF OHIO. 16mo. Pages 95.

HOW TO KNOW THE WILD BIRDS OF MISSOURI. 16mo. Pages 95.

HOW TO KNOW THE WILD BIRDS OF INDIANA. 16mo. Pages 64.

By D. LANGE. Educational Publishing Company, Boston, New York, Chicago, San Francisco.

The booklets are designed to identify the commoner birds of their respective states and are evidently intended for school use. A simple color key leads one to various groups of land-birds, while the water-birds are arranged according to their habits.

Under each species is given a description of the plumage, nest, notes and status in the state in question.

The introductory matter should set the student on the way to a proper appreciation of the rights of birds, and these booklets, which will doubtless have a wide circulation, should exert a most excellent influence.—F. M. C.

The Ornithological Magazines

THE AUK.—The contents of the July 'Auk' very fairly reflects current activities in American ornithology. C. W. G. Eifrig writes on the 'Canadian Neptune Expedition to Hudson Bay and Northward'; H. C. Oberholser describes a Rocky Mountain form of *Helminthophila celata*; Ruthven Deane publishes some interesting letters by Swainson to Audubon; A. F. Clark tells of extirpated West Indian birds and discusses the Lesser Antillean Macaws and West Indian Conures. There are articles on 'Warbler Migration in Southeastern Louisiana and Southern Mississippi,' by H. H. Kopman, and on the 'Winter Ranges of Warblers,' by W. W. Cooke. Outram Bangs revives the name *Urubitinga gundlachii* (Cabanis) for the Cuban Crab Hawk; B. S. Bowdish lists forty species of birds, represented by three hundred and twenty-eight individuals from St. Paul's Churchyard in the heart of lower New York City, while in recording the purchase in London of a Great Auk skin and three eggs, John E. Thayer raises both the number of skins and eggs of this bird in this country to five.—F. M. C.

THE CONDOR.—The May and July numbers of 'The Condor' contain several continued articles and may therefore be noticed together for the sake of convenience. Of special interest to the general reader is a series of four letters from eminent authorities on 'The Future Problems and Aims of Ornithology,' among which letters those of Dr. Leonhard Stejneger and Mr. Wm. Brewster will well repay careful perusal. Dr. Stejneger makes a strong plea for work

on broader lines, and declares that much of that already done must be done over more thoroughly and with improved methods. Mr. Brewster lays emphasis on the importance of careful and long-continued study of the birds in the immediate vicinity of the observer's home as a basis for more exact knowledge of geographic distribution. The two continued articles entitled 'Midwinter Birds on the Mojave desert,' by Mailliard and Grinnell, and 'Summer Birds of the Papago Indian Reservation and of the Santa Rita Mountains, Arizona,' by Swarth, are important contributions to the list of papers on desert bird-life. During a stay of less than a fortnight (Dec. 21, 1904, to Jan. 2, 1905), seventy-two species of birds were observed near Victorville in the Mojave Desert. On December 31, 1904, a single specimen of the Bohemian Waxwing was collected, which is noted with the remark, "the present record is apparently the southernmost (34½°) for North America and even for the world!"

The leading article in the May number is contributed by Finley on 'Humming-bird Studies' and is illustrated by half-tones of six excellent photographs. 'In Alaska's Rain Belt' is an account by Osgood of some of the difficulties of collecting on Prince of Wales Island. The number also includes portraits of four eminent European ornithologists,—Dr. Anton Reichenow of Berlin, Mr. H. E. Dresser of London, Count Tommaso Salvadori of Turin and Dr. Otto Finsch of Brunswick, Germany—and a directory of the Cooper Ornithological Club showing a total of two honorary, and 231 active members.

The July number contains several articles on the habits of birds. In 'A Study in Bird Confidence,' Finley gives an account of the breeding habits of the Bush Tit, illustrated by five half-tones; and in 'Scraps from an Owl Table,' Bailey describes the bill of fare of a pair of Great Horned Owls in the Davis Mountains, Texas. Rev. S. H. Goodwin describes the habits of the Bohemian Waxwing in Utah and L. E. Burnett those of the Sage Grouse as observed in Wyoming. Mention should also be made of Kaeding's 'Birds from the West Coast of Lower California and Adjacent Islands,'

as a local list of more than ordinary interest.—T. S. P.

BULLETIN MICHIGAN ORNITHOLOGICAL CLUB.—The December, 1904, number of this Magazine contains the conclusion of Professor Barrow's paper on the 'Birds of the Beaver Islands, Michigan,' in which, among other notes of interest, is one on the breeding of a Piping Plover which he "was sure was not *circumcincta*," an interesting point in connection with the status of this supposed race. Frank Smith describes 'An Unusual Flight of Sparrow Hawks,' and Prof. C. C. Adams gives an outline of the University of Michigan's expedition to the northern part of the state. Notes from the Field and Museum and the Audubon Society contain much of interest, while an editorial announces that Professor Barrow's 'Birds of Michigan' has been prepared for the press.

Numbers 1 and 2 of Vol. VI, March-June, 1905, are issued together. They contain 'A Hyperlaken Migration Route,' by P. A. Taverner, in which the author discusses the irregular distribution of certain species; 'The Occurrence of Bewick's Wren (*Thryomanes bewickii*), at Grand Rapids,' by Leon J. Cole, which contains more information than is indicated by the title; 'Nesting of the Woodcock,' by Gerard Alan Abbott, which, were it not for the pictures from photographs by Robert Hegner, seems to be chiefly a record of eggs collected and opportunities lost. Max Minor Peet gives some interesting 'Observations on the Nesting Habits of a Pair of House Wrens,' and Norman A. Wood, a list of 'Birds Noted en route to Northern Michigan.' There are a number of 'Notes from the Field,' and pertinent editorial comments.—W. S.

JOURNAL OF THE MAINE ORNITHOLOGICAL SOCIETY.—The October, 1904, number of this 'Journal,' which appeared in January, contains a 'Life History of the Water-Thrush,' by J. Merton Swain, and a long article entitled 'When Birds are Companions,' describing the shore light-stations of the Maine coast. A record of migration for 1902 at eight stations and several notes of local interest complete the number.

Beginning with March, 1905, the Society starts Volume VII of the 'Journal' much enlarged and improved in typography. The Ninth Annual Meeting of the Society is treated in full. F. T. Noble discusses the question, 'Are the Choicer Varieties of Ducks Increasing in Maine Waters, and if so, Why?' He inclines to the affirmative, and attributes the increase to the spread of wild rice. J. Merton Swain writes a 'Life History of the Mourning Warbler'; C. H. Clark gives some 'Additions to an Eastern Maine Collection,' and there are numerous notes of local interest. This number is by far the most creditable yet published. The June number maintains the new standard, the leading articles being 'Notes on the Birds of the Lower Dead River,' by J. M. Swain; 'The Black and White Warbler,' by E. E. Johnson, and an account of 'A Nest of the Northern Raven,' by C. H. Clark. A migration report covering four localities for the spring of 1903 is published.—W. S.

THE WILSON BULLETIN.—The issue of this standard journal for June (New Ser. XII, No. 2) contains a list of one hundred and sixty species of birds seen within the limits of Greater New York "during the past year" by George E. Hix; 'Birds vs. Street Cars,' by Marion E. Sparks; 'Autumn Birds of Leo Cheneaux Islands,' a briefly annotated list of forty-eight species by Walter C. Wood; 'The Spotted Sandpiper,' by Chreswell J. Hunt; 'Bird Horizons from Russellville, Ky.,' by G. C. Embody; 'Winter Notes on the Yellow-bellied Sapsucker,' by C. H. Morris, and nesting of the same species by J. Claire Wood.

In 'All Day With the Birds at Durmid, Va.,' W. F. Herninger, records one hundred and five species, and six hundred and four individuals as noted on May 8, 1905. Under 'Some Further Suggestions for Bird Study,' Lynds Jones calls attention to the importance of accurate local lists, "the need for more extensive and more exact knowledge of the breeding habits of birds," the possibilities of embryological studies and of observations on distribution and migration. Above all, he emphasizes

the need of definiteness in planning our studies. Do not attempt to do too much. "One minor-point under one of the minor heads is worth earnest effort." 'General Notes' and 'Book Reviews' conclude the number.—F. M. C.

THE WARBLER.—The two numbers of 'The Warbler' (Nos. 2 and 3, New Ser. Vol. I) which have appeared since our last notice of this quarterly contain much interesting and scientifically valuable matter. In Number 2, A. T. Wayne's account of the Little Black Rail in South Carolina should settle the identity of the bird which, known as the Kik-ker, puzzled Cambridge ornithologists for several seasons; F. B. Spaulding writes of 'Bicknell's Thrush'; John Lewis Childs presents 'California Notes,' as well as a continuation of his 'Birds Breeding within the Limits of the City of New York.' R. D. Hoyt records the taking of two sets of two eggs each of the Ivory-billed Woodpecker, and P. B. Peabody discourses on the 'Nesting of the Yellow Rail.' The eggs of the two Rails mentioned are figured in color, and there are half-tones of Golden Eagle and Ivory-bill eggs. Important papers in Number 3, are 'Eggs of the Ipswich Sparrow' (with colored plate), by W. E. Saunders; 'A Night Among the Clouds with Bicknell's Thrush,' by John Lewis Childs; 'Recollections of the Passenger Pigeon,' by John Burroughs, with contributions on the same subject by John Lewis Childs and W. Otto Emerson; 'The Tolmie [-Macgillivray; the common name of this bird has not been changed] Warbler in Wyoming,' by P. B. Peabody; 'Eggs of the Rufous-crowned Sparrow' (colored plate); and 'In the Haunts of the White-throated Sparrow,' by H. Nehrling. Mr. Childs continues his paper on 'Birds Breeding Within the Limits of the City of New York,' treating here of eight species. Local ornithologists, we imagine, would not always agree with Mr. Childs' statements, and we suggest that a discussion of these papers at the Linnæan Society, before publication, would result in their more fully reflecting our knowledge of the birds nesting in the area in question.—F. M. C.

Bird-Lore

A Bi-monthly Magazine

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

Edited by FRANK M. CHAPMAN

Published by THE MACMILLAN COMPANY

Vol. VII Published October 1, 1905 No. 5

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico twenty cents a number, one dollar a year, postage paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

Mr. Edward Howe Forbush, of Wareham, Mass., ornithologist of the Massachusetts State Board of Agriculture, is preparing a volume on useful birds and bird protection, which will be published as a special report of the Board. He desires information on the following subjects:

The decrease or increase in numbers of birds; the destruction of birds and its causes; devices for protecting, attracting and feeding birds; birds feeding on important insect pests; protective laws and their operation; the breeding or migration of the Purple Martin in Massachusetts or adjacent territory. Correspondence is particularly desired with those who have been able to increase the number of birds about their homes.

THE Bird - House number of BIRD - LORE (February, 1905) was so well received that it is now virtually out of print, and we are trying to secure copies to complete our sets of the magazine.

We trust that this Winter-Feeding number will meet with an equally cordial reception. Our contributors assuredly invest this subject not only with a personal interest but a public importance. It is not alone our pleasure and privilege to feed the birds at our doorstep but our duty to remember those of the field.

It is rather difficult to say who benefits most by a practical, sympathetic association of this kind — bird or man. The humanizing influence exerted by creatures which

accept of our bounty and are perhaps dependent on us for continued existence, is no small part of the return we may expect to receive from our care for the birds.

It might be supposed that a discussion of this subject would be more timely in December than in October, but, as Mr. Forbush says, "if you wish to attract the birds about the house next winter, do not wait until the ground is covered with snow, but begin now, when," as he adds, "you may hold birds that might otherwise pass on to the South."

MUCH to our surprise, the figure of the female Black-and-White Warbler published in the last issue of BIRD-LORE (frontispiece) appeared with a pronounced yellow mark below the eye, a feature not shown in the proof of the plate in question. This mishap prompts the statement that without experience no one can realize the difficulty of securing accurately colored plates of birds. The plate in the present number of BIRD-LORE, for example, after having been shipped from the engraver in New York to BIRD-LORE's printer in Harrisburg, was found not to conform to the standard we have tried to establish for this series of plates. The whole edition was, therefore, returned to New York for alteration, and, after being received a second time in Harrisburg, it was found essential to go over each plate and make additional corrections by hand.

WITHIN the next two months two meetings of great interest to bird students will be held at the American Museum of Natural History in New York. The National Association of Audubon Societies holds its first meeting on October 31, as announced on the following page, and the Twenty-third Annual Congress of the American Ornithologists' Union convenes on November 14. We understand that this Congress will be of exceptional interest and will well warrant an unusual effort on the part of bird students to be present.

Information in regard to membership in the Union may be obtained from its treasurer, J. Dwight, Jr., 2 East 34th St., New York City.

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

Notice of Annual Meeting of the Members of the National Association

The Annual Meeting of the Members of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, for the election of six Directors, to take the places of the following Directors, Mr. George Bird Grinnell, Mr. Arthur H. Norton, Mr. H. P. Attwater, Mrs. Kingsmill Marrs, Mrs. Mabel Osgood Wright, Mr. Walter J. Blakely, whose terms of office will then expire, and for the transaction of such other business as may properly come before the meeting, will be held at the American Museum of Natural History, Columbus Avenue and 77th Street, in the Borough of Manhattan and City of New York, on the 31st day of October, 1905, at 10 o'clock A.M.

Under Article III, of the By-Laws, the Directors shall divide themselves into five equal classes, one to serve until the first annual meeting and the others for one, two, three and four years thereafter respectively. Thereafter at each annual meeting those whose terms of office shall then expire shall be succeeded by six directors, to serve the full term of five years, who shall be elected by a majority vote of the members present.

T. GILBERT PEARSON, *Secretary*.

October 1, 1905.

Notice of the Annual Meeting of the Board of Directors of the National Association.

The Annual Meeting of the Board of Directors of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, for the election of officers for the ensuing year and for the transaction of such other business as may

properly come before the meeting, will be held at the American Museum of Natural History, Columbus Avenue and 77th Street, in the Borough of Manhattan and the City of New York, on the 31st day of October, 1905, at 11 o'clock A.M.

After a recess for luncheon, an opportunity will be had to see the many beautiful and interesting exhibits of birds, animals and other natural history objects in the Museum, under the escort of the Curators in charge of the various departments.

At 3 P.M. the Association will reconvene to hear illustrated addresses by William L. Finley on his season's work among the birds of the saline lakes of southeastern Oregon, where, with H. T. Bohlman, he acted as a warden of the Association, and by Frank M. Chapman on 'Impressions of English Bird-Life.'

The Executive Committee of the Association take this opportunity earnestly to urge all members to be present at both the business meeting in the forenoon and the illustrated talks in the afternoon. The latter meeting will be open to the public, who are cordially invited to attend; the teachers of Greater New York and vicinity are specially invited, as a matter of great interest to teachers will be announced.

T. GILBERT PEARSON, *Secretary*.

October 1, 1905.

Notes and News

THE BRADLEY MURDER.—The murderer of Guy M. Bradley is still in jail in Key West, having failed to secure bail in the amount of \$5,000. The Grand Jury of Monroe county will not meet until November, when it is hoped that the murderer, Walter Smith, will be indicted. The history of the affair, sent to the Association by our

attorney, Lewis A. Harris, shows that the murder was not only cold-blooded but apparently premeditated. Smith, after killing his victim, allowed the body to float away in a small boat, and it was not found for twenty-four hours after. Bradley was shot with a Winchester rifle, the ball striking the upper part of the right breast, coursing downward through the vitals and coming out at the lower portion of the back, after having broken the back-bone.

His death must have been instantaneous, although Smith, in his statement at the preliminary hearing, said that Bradley, after being shot, fell to the bottom of his boat, but tried to get on his knees so he could shoot again with his revolver. This seems physically impossible; a man with such a terrible wound and a severed spinal column, if not dead, certainly would be paralyzed.

THE MRS. BRADLEY FUND.—The members of the National Association, the readers of BIRD-LORE, all ornithologists, as well as all bird students and bird protectors, are asked to contribute to this fund. The sad and shocking death of this young woman's breadwinner has left her with two young children to care for. His death, occurring while in the employment of this Society, and while in the discharge of his duties, makes the Association morally if not legally obligated to give the widow and children help.

A soldier's widow receives a pension from the government for whose protection her husband's life is sacrificed. Bradley gave his life that the cause of bird protection should be perpetuated. All who desire to have our great movement continued can do no less than to see that the wife and children of the first martyr to the cause shall have suitable care or at least a home given them in a place where the mother can support her children. It is proposed to buy a small house in Key West, for Mrs. Bradley, if a sufficient sum can be secured.

The following subscriptions have already been received:

Brewster, Mr. and Mrs. Wm.	\$25
Chapman, Mr. and Mrs. F. M.	10
Brooks, Mr. F. M.	5

Freeman, Miss H. E.	\$10
Surface, H. A.	1
Latham, Mrs. F. E. B.	1
Smith, Dr. C. H.	5
Rhoads, Mr. S. N.	1
Dutcher, Mr. and Mrs. Wm.	20

If every reader of BIRD-LORE will give a small sum the desired home can be secured. In the tropical climate of Key West, food and clothing are not expensive, and a home there will afford the children good school advantages, and there these two little wards of the National Association may grow up to be good citizens. A prompt response to this appeal is hoped for: "He who gives quickly, gives twice."

THE LEGAL FUND.—The Association has received several letters urging the importance of the punishment of the murderer of Bradley. Prominent among the writers is Mr. Morris K. Jesup, President of the New York Audubon Society, who, when sending his check for \$100, said that it was essential that the National Association should do all it could to help in the prosecution of this case and his contribution was for this purpose. Justice may be defeated if the case is left to the county officials, and it is therefore imperative that this Society shall employ the best legal talent to be found to see that the majesty of the law is upheld and that Walter Smith shall receive his just deserts for the unnecessary, unwarranted and brutal murder of Guy M. Bradley. It is believed that there are thousands of persons in the United States who love the cause of justice and right and will wish to see it upheld in this case. Legal aid is always expensive; this case will necessarily be so, and therefore contributions are asked to enable the Society to continue the services of Attorney Harris, who represented it at the preliminary hearing. Readers of this statement and appeal can best help in this special case by becoming sustaining members of the National Association and asking that their first annual fee of \$5, or such part of it as is necessary, shall be used in the prosecution of the Bradley murderer.

NATIONAL ASSOCIATION MEMBERS.—The future capacity for work by the National

Association depends solely upon, and will be limited by the number of its members. Since the incorporation of the Society, a little over eight months since, nearly six hundred persons have shown their interest in bird protection and their willingness to aid in the movement to preserve the wild birds and animals of the country by joining the National Audubon Society; seventeen of these are life members. This is a splendid nucleus on which to build, but additional members are needed, and that at once. The membership should be increased to at least two thousand in order that sufficient income may be realized to carry out all of the plans of the Executive Committee. The annual fee of the sustaining members has been placed at a low figure, \$5, that it may not be a burden. Every cent of the fees is used in carrying on the several branches of organized work of the Society. The loyalty of the members to the Society, and, in many cases, the special personal interest displayed in securing new members, is very gratifying to the Board of Directors. It will be an easy matter to double our present membership before the close of the year if each member who reads this statement on October first will, before the end of December, secure one new member. Bear in mind the enormous amount of good that this additional membership of six hundred will permit the Association to accomplish in 1906. The number of wardens can be doubled, and the consequent increase of seabirds during the next breeding season will be very large. Preliminary reports from our wardens are extremely gratifying, and show conclusively that the money expended by the Association for their wages could not be put to a better use.

There are still large sections of the coast line and also inland waters that are not now guarded, but should be. Will not every reader assist in guarding them by interesting some friend in the work of the National Association to such an extent that he will become a member? In every future issue of BIRD-LORE it is proposed to show the increase in membership. Let us remember that a large membership, well scattered over the country, will make our Society a great

factor for good, while the influence it may exert cannot be overestimated.

CAGE BIRDS. — Recently it was discovered that some Mocking-birds and Nonpareils were being sent from the South to New York, largely from Georgia. The dealers were cautioned not to sell them, but it was deemed best to ask the coöperation of the transportation companies in preventing this illegal traffic. The Southern Express Company and the Clyde Steamship Company were especially vigorous in their help and have given valuable aid, the former company sending to all of its large number of agents two circular letters, one giving the game laws and the second the non-game bird laws in every state in which they did business. The agents were directed not to accept for transportation birds or game when by doing so the laws of the state in which the office was located would be broken.

ALIENS. — The foreign-born part of our cosmopolitan population are giving the Association a great deal of trouble and some hard work. They seem to have an unconquerable desire to kill something, and have no respect for the laws. Audubon members everywhere should do all they can to suppress the alien gunner and bring him to justice.

A heavy fine is the best method of education; the influence of a fine is widespread among the associates of the person who pays it. In Massachusetts an alien must secure a license, for which he must pay \$15, before he can hunt. This license must be carried on the person while hunting and is good only during open seasons. An alien who is caught hunting without a license is punishable by a fine of from \$10 to \$50. In New York state an alien is not permitted to carry firearms in any public place; therefore when one is seen hunting he should be arrested at once. Any citizen can make a charge. These laws will save the lives of thousands of small birds. Each of the State Audubon Societies should see that the alien license law is adopted in their own commonwealth.—
WILLIAM DUTCHER.

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

EDUCATIONAL LEAFLET NO. 16



THE TREE SPARROW

Order — *Passeres*

Family — *Fringillidae*

Genus — *Spizella*

Species — *Monticola*

The Tree Sparrow

By WILLIAM DUTCHER

President National Association of Audubon Societies

DESCRIPTION

Adult.—The entire crown and back of head bright chestnut, in winter most of the feathers with a very narrow edging of pale buff, which, wearing off by spring, leaves the crown uniform chestnut; line over eye, sides of head and neck gray, this color extending upward, forming a narrow collar; back rusty, each feather having a broad central stripe of black, giving a decidedly streaked appearance; lower back and rump brownish gray, the upper tail coverts being narrowly edged with white; under parts, throat and upper breast light gray, fading to almost white on lower breast and abdomen, the sides and flanks being washed with pale brown; on middle of breast a blackish spot or blotch; wing quills dark brown, the coverts showing a great amount of rusty, each feather with a broad central black stripe, similar to pattern on back, all widely margined with white, thus forming two conspicuous white wing-bars; tail dark brown, the two outside feathers much lighter, all having very narrow whitish edges; legs brown; feet and claws black; bill, upper mandible and tip of lower one nearly black, remaining two-thirds of latter yellow.

Size.—From tip of bill to end of tail from $5\frac{1}{2}$ to 6 inches.

The Western Tree Sparrow (*Spizella monticola ochracea*) differs very slightly from its eastern relative, being buffy instead of rusty on the back, and usually with an ashy crown patch or streak. The differences, however, are so slight that they would have no value to a person studying a strange Sparrow, through an opera glass, in order to identify it.

Nest.—Is built of fine grasses, rootlets, hair feathers, etc., and is placed on or near the ground.

Eggs.—From three to five in number, pale greenish blue speckled or spotted with reddish brown.

Distribution.—The Tree Sparrows are found during the breeding season north of the United States, in Newfoundland, Labrador, and the region about Hudson Bay, while the western race breeds from the Valley of Anderson River, westward through Alaska. How far south the Tree Sparrows breed is very indefinitely known, therefore data on this point are desirable and important. Readers of this leaflet who reside north of the United States may be able to contribute valuable scientific facts as the result of a few careful observations. If Tree Sparrows are found with you during the months of June and July, they are probably breeding, and a note of this fact should be sent to BIRD-LORE. After the breeding season these birds migrate southward and reach the Carolinas and westward as far as middle Texas, Arizona, Utah and Oregon.

The Tree Sparrow, or Winter Chippy, is presented to the readers of BIRD-LORE at this time because it will begin to make its appearance in the United States about the date of the issue of the October number of this magazine. It is a member of the very widely distributed and numerous family of the Fringillidæ, which contains over five hundred and fifty species, that are found in all portions of the world except the Australian region. Of these, North America claims no less than thirty-three genera, and one hundred and eighty-nine species and sub-species. This family contains all the Finches, Buntings, Grosbeaks, Crossbills, Sparrows, Linnets and Siskins. While many of these are dull colored, yet other members of the family are noted for their

exceptionally beautiful and striking plumage, as the Rose-breasted and Blue Grosbeaks, Goldfinch, Cardinal, Indigo and Painted Buntings, etc.

This family also includes some of the best of the singing birds, and, with few exceptions, its members may be included among the birds that are economically of the greatest value to the human race. The bills of the Sparrows, Finches and other members of the family, while widely diversified in form, are always stout and strong and adapted to crushing or opening seed capsules for the fruit within them. Seeds constitute the largest part of the food supply of all the members of this great family. By watching a Canary, a prominent and well-known member of the family, one can see how deftly and easily a seed is cracked and the meat is extracted. The Tree Sparrow is a very common, and should be a well-known winter bird throughout a large section of the United States. It associates freely with the Junco and does not hesitate to visit dooryards and gardens, gleaning from them weed and other seeds, all the while giving voice to contented and happy notes of thanksgiving for food and pleasant companions. Among the experiences of every bird lover, there are incidents that stand out prominently like landmarks and are never effaced from the memory. The name Tree Sparrow always recalls to the writer a beautiful winter picture seen many years since. There had been almost a blizzard, such a storm as Whittier describes in "Snow Bound."

The morning after the storm the sun was shining with that peculiar winter brilliancy when the air seems to sparkle and glisten. Everywhere there was a beautiful, unbroken mantle of snow. In a last year's corn-field, that had been poorly cultivated and was overrun with that most noxious plant known to all farmers as the ragweed (*Ambrosia artemisiæfolia*), there were hundreds of Tree Sparrows clinging to the tops of the weed stalks, just showing above the carpet of snow. They were feeding on the ripened seeds; a long fast and great hunger had made them very tame; they made a beautiful and animated scene, a joyous picture of happy bird-life; everywhere were contentment and voices lifted up in thankfulness for nature's bounties.

What the farmer had neglected to do the previous fall this flock of Tree Sparrows was doing for him. The number of seeds destroyed in that one field on that day alone must have been beyond computation in figures. The owner of the land probably wondered the next season why his field was so clear of ragweeds; he little dreamed of the cleansing process that was carried on that bright winter day by his friends the Tree Sparrows.

The relation that the Tree Sparrow bears to agriculture is an important question, and one that will naturally interest the farmer more than its song or cheerful habits. While this species undoubtedly destroys many insects in its summer home, as all Sparrows do, yet it is only resident in the United States during the season when insects are not plenty with us, therefore the good it does consists in its destruction of weed seeds. No greater

proof can be given of its value as a seed-destroyer than the following statement of Professor Beal, of the United States Department of Agriculture, published in 'Farmers' Bulletin' No. 54, 'Some Common Birds in Their Relation to Agriculture.'

"The Tree Sparrow (*Spizella monticola*) fairly swarms all over the northern states in winter, arriving from the North early in October and leaving in April. Examination of many stomachs shows that in winter the Tree Sparrow feeds entirely upon seeds of weeds; and probably each bird consumes about one-fourth of an ounce a day. In an article contributed to the 'New York Tribune,' in 1881, the writer estimated the amount of weed seed annually destroyed by these birds in the state of Iowa, upon the basis of one-fourth of an ounce of seed eaten daily by each bird, and supposing that the birds average ten to each square mile, and that they remain in their winter range two hundred days, we shall have a total of 1,750,000 pounds or 875 tons, of weed seed consumed by this one species in a single season. Large as these figures may seem, they certainly fall far short of the reality. The estimate of ten birds to a square mile is much within the truth, for the Tree Sparrow is certainly more abundant than this in winter in Massachusetts, where the food supply is less than in the western states, and I have known places in Iowa where several thousand could be seen within the space of a few acres."

Professor Beal's statement refers only to one state; let the farmers of the country try to realize the good done by these Sparrows in all the other states where they are found during a considerable portion of the year, and the sum total seems beyond the comprehension of the human mind. There can be no question of the usefulness of the Tree Sparrow and, further, there is positively no claim that they ever do any harm. Therefore, they are entitled to the fullest protection, especially from agriculturists, and there is no reason why a single one of these birds should ever be killed. The wise and progressive farmer will, when the deep snows of the coming winter cover the ground, encourage his little Sparrow friends to remain on his acres by scattering for them in protected places the chaff and sweepings from his barn. The birds will repay his kindness a hundred fold by destroying the seeds of thousands of noxious weeds and to that extent lighten his labors during the following season.

Study Points for Teachers and Scholars

Can you identify the Tree Sparrow, and distinguish it from the other Sparrows found in your locality? Trace on map of North America where this Sparrow is found in summer. Where in winter. When do you first see them in the fall? When do they leave in the spring? What seeds have you seen them feed upon? How large flocks have you seen? What other birds have you seen them associate with? Have you ever heard them sing? Describe the song. Read "Snow Bound."

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES

SPECIAL LEAFLET NO. 2



THE PURPLE MARTIN

Order — *Passeres*

Family — *Hirundinidæ*

Genus — *Progne*

Species — *Subis*

Issued as a Supplement to *Bird-Lore*, Vol. VII, No. 5, October, 1905

The Purple Martin

By WILLIAM DUTCHER

President National Association of Audubon Societies

THE Purple Martin and its Pacific coast relative, *Progne subis hesperia*, are too well known to need a detailed description. The adult male is a lustrous blue-black, the wings and tail being slightly duller. The adult female and the young of both sexes are grayish brown, glossed with steel-blue on upper parts, while beneath they are dark gray, shading into whitish on the belly. The size of the Martin is about seven and one-half inches in length, but the great spread of wings, from fifteen to sixteen inches, makes the bird look very much larger than it really is.

During summer the Martin is a bird of very wide distribution in temperate North America; in autumn it migrates to the tropics, where it spends the winter. There are eight species of this genus of the Swallow family, all of them being confined to America. Before the white man discovered and settled the western world, generations of Martins had made their annual journeys from their tropical winter homes to the temperate parts of both continents. Their nesting sites were then in hollow trees or in caves. While forests and rocky retreats have not been entirely abandoned by the Martins, yet many of them now breed in homes provided for them by man. The red man, a true lover of nature, invited the cheerful Martins to remain about his tepee by erecting a pole on which he hung a hollow gourd, for a nesting place. The white successor of the aborigine has adopted his red brother's bird friend, often providing a far more elaborate home for its use.

Is there anything in the bird world that represents home life and community of interests as well as a colony of Martins? Contentment, happiness, prosperity are here, and the cheerful, social twitter of the Martins and their industrious habits are a continual sermon from the air to their brothers of the earth. The only note of discord in one of these happy colony houses is from the pugnacious English Sparrow, who covets the comfortable homes of the Martins and tries to evict the rightful owners and substitute his harsh, disagreeable chatter for their pleasant voices.

The value of the Martin to the human race is very great. The birds are so preëminently aërial that their food necessarily consists of flying insects. Among these may be some of the dreaded *Stegomyia*. It is a well-established fact that this and other species of mosquito convey both malarial and yellow fever. Every mosquito, therefore, that is destroyed by a Martin, or, in fact, by any bird, lessens so much the chance of the spread of fever plagues. Human lives are sacrificed every year; immense sums of money are expended for investigation and prevention of yellow fever, yet in some localities where this scourge is found the Martin is not understood and

appreciated as it should be. If one human life is saved each year through the destruction of fever-bearing mosquitos by the Martins, and other birds, it is a sufficient reason why the lives of these valuable birds should be sacred.

The Martin is also known to feed on other injurious insects. Dr. Packard (as quoted by Weed and Dearborn, 'Birds in their Relations to Man,' p. 130), found one of the compartments of a Martin box "literally packed with the dried remains of a little yellow and black squash beetle"; and the same authors state that "ten Nebraska specimens, examined by Professor Aughey, had eaten two hundred and sixty-five locusts and one hundred and sixty-one other insects."

In portions of the northern range of the Martin it is undoubtedly decreasing in numbers, and the houses which they once animated by their welcome presence are now deserted or occupied by the omnipresent English Sparrow.

While their absence may, in some instances, be accounted for by the persecutions of this introduced feathered pest, and also to mortality among the young birds, occasioned by cold weather or prolonged storms during the nesting season, it now seems that their disappearance is in no small measure due to their destruction in the South during their migration.

In a recent issue of the Charleston, South Carolina, 'Post,' the following item appeared: "The sport of shooting Bats [Nighthawks] and Martins is practiced every year all over the State, and thousands of these insect-destroyers are annually slain." The editor adds: "The officers in many counties are looking out for violators of the bird law and intend to stop the evil practice." In response to an inquiry, the fact was disclosed that in Charleston the Martins were considered something of a nuisance on account of their roosting in the trees of the parks at night; an effort was made to drive them out by turning the fire-hose on them with little slaughter, but effective dispersion.

Mr. T. Gilbert Pearson, the Secretary of this Association, who is a resident of North Carolina, contributes the following gruesome story about Martins, and truly adds: "This is one of the wild creatures which increased rapidly with the advance of civilization in the United States until recent years, and its present decrease must in a large measure be due to the persecution which it is receiving today in many localities in the southern states.

"Martins are accustomed to gather in large flocks during the latter part of summer for the purpose of roosting in some favored grove. As they journey southward, apparently, these flocks increase in size, and the writer has on several occasions watched the birds coming to their roosts in the evening in astonishing numbers, estimated at 100,000. They seem to prefer a grove, near a human habitation, for their nightly rendezvous. They create no little comment in the neighborhood because of their numbers,

and by their continuous chatter and fluttering, particularly during the early part of the night. There is usually little prejudice against them, but not infrequently the people in the neighborhood make excuse that the birds are a nuisance and proceed to shoot into the flocks when they come to roost.

"At Wrightsville Beach, North Carolina, a great number of these migrating birds gathered the past summer (1905), and chose as their nightly roosting place the grove of a summer hotel. The proprietor, wishing to rid himself of them, invited a number of his neighbors, who, lying wait for the birds, 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 vary from 8,000 to 15,000. Upon hearing of this tragic violation of the law, the North Carolina Audubon Society sent a warden to prosecute the offending parties, twelve of whom were convicted and fined in the local court. The warden, to prevent any further slaughter, arranged a number of tar barrels to the windward of the grove, and fired them in the evening, thus creating a dense smoke, which drifting over the grove drove the birds away, and they were not seen again. A citizen of the place said it had been very noticeable that since the appearance of Martins there had been less mosquitoes than for many years previous, and he thought that the community would never again allow these valuable birds to be slaughtered in that locality."

The moral of this story is this: You who love the Martin for his cheery social nature and his inestimable worth must do something at once to educate those who do not yet appreciate and value these birds. This can be done by circulating thousands of copies of this leaflet. The National Association has the organization to carry on this necessary educational work; you are asked to contribute financial aid. A membership in the Association costs but \$5 annually, and each member can feel assured that his dues will be the means of circulating hundreds of leaflets, some of which may reach those who are now blind to the beauty and value of these aerial gleaners.

"So were we men and women, and should hold
Our rightful rank in God's great universe,
Wherein, in heaven and earth, by will or nature,
Naught lives for self."

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Bird-Lore



EDITED BY
FRANK M. CHAPMAN

PUBLISHED FOR THE AUDUBON SOCIETIES
BY

The Macmillan Company

HARRISBURG, PA.

NEW YORK

LONDON



Bird = Lore

November - December, 1905

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** Manuscripts intended for publication, books, etc., for review and exchanges should be sent to the Editor, at the American Museum of Natural History, 77th Street and 8th Avenue, New York City, N. Y.



Reduced facsimile of the reproduction of Ernest Thompson Seton's drawing of the Bob-white. Presented to every subscriber to Vol. VIII, 1906, of BIRD-LORE. The original, printed on heavy plate paper, suitable for framing, is nearly life-size.

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

OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. VII

NOVEMBER — DECEMBER, 1905

No. 6

The Structure of Wings

By WILLIAM MORTON WHEELER

OF all the animals that inhabit the surrounding world, none have called forth the admiration and envy of man to such a degree as the animals that can fly. The bird and the butterfly have become symbols of our higher natures—of the hope and the fancy that lighten the burdens of living. Man's admiration of winged things is seen in the multitudinous creations of his art—in his angels, victories, sylphs, griffins, demons and genii. His envy of flying animals is seen in his unceasing efforts to provide himself with wings, in the construction of balloons and flying machines. The myth of Dædalus and Icarus and Santos-Dumont's most recent experiments in aëronautics are only very ancient and very modern expressions of this ever-present longing to leave the heavy earth behind and to breathe the tenuous air nearer the sun.

It is very probable that animals have not acquired the power of flight in obedience to any such longing as man experiences. During the long history of the animal kingdom on our planet, the ability to rise into the air by means of wings, and to move about in it at will, probably first arose in animals that leaped or that had taken to dropping from trees to the ground when pursued by their enemies. In other words, animals were forced to develop wings as a means of escape, and not from any desire to fly. This peculiar power of flight appears to have arisen some four or five times during the course of animal evolution, and, curiously enough, each time it was developed the wings were built on a different plan. There are flying insects, flying fishes, flying reptiles, birds and bats—and these five groups of animals represent as many different forms of wing. Let us examine them in succession.

Insects are the only back-boneless animals that can fly, and most insects have wings. A few species probably never had wings, and some others have given up flying, so that their wings have become small and weak and useless. If we examine any typical insect, such as a butterfly, a grasshopper or a bee, we observe that the wings consist of two pairs of flat, thin struc-

tures, stiffened with branching ribs that make them resemble more or less closely the leaves of certain plants. They are jointed at their attachment to the body and can be moved with greater or less freedom by the insect, the tip of each wing describing a figure 8 in flight. A study of the development of insect wings shows that they are really nothing but great flat expansions of the sides of two rings of the body, the second and third behind the head of the animal. Their shape varies greatly in different insects, and on it depends the character of the flight in any particular instance. Insects with both pairs of wings broad and of nearly uniform shape and size have a



PTERODACTYL

Courtesy of F. A. Lucas

slow, unsteady flight. This is the case with many moths and butterflies. Insects of powerful and rapid flight, like the hawk-moths, often seen hovering about flowers in the twilight, have the fore-wings long, narrow and pointed and the hind-wings small. In some of these swift-flying insects, like the flies,—our common house-fly, for example,—the hind-wings are reduced to little rudiments, called balancers, or halteres, which no longer function as wings. Finally, insects with a gliding flight, like the grasshoppers, have small narrow fore-wings and broad, fan-shaped hind-legs.

The wings of all back-boned animals differ from those of insects in being peculiar modifications of limbs which were originally used for walking, or, in the case of the flying fish, for swimming. They are not mere expan-

sions of the sides of the body, as in insects, although similar expansions may be developed in connection with the limbs in the animals we are now to consider.

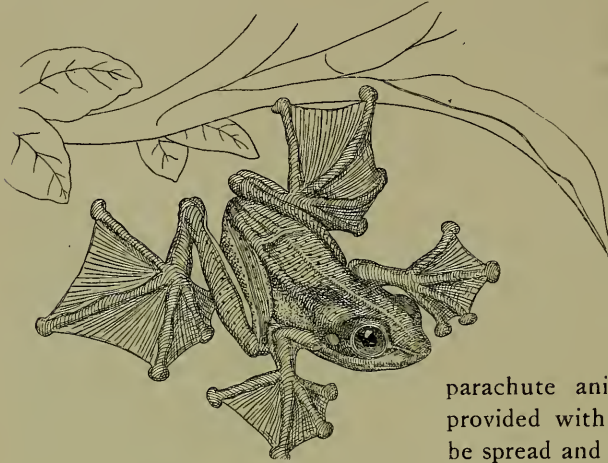
In the flying fish, which inhabit the warmer seas of the globe, the pectoral fins are greatly enlarged, and enable the animals to leave the water and to fly through the air a short distance when hotly pursued by their enemies. The flying fish is not a great master of the art of flight, and can hardly be compared in this respect with birds, bats and pterodactyls.

The pterodactyls were reptiles which, fortunately, perhaps, for us, became extinct many ages ago—in what is known by geologists as the Mesozoic period. Had we been living at that time we should not have feared the smaller species, which were only about as large as sparrows, but the large pterodactyls, with their long, toothed jaws and wings twenty-five feet across when expanded, would have been far more formidable. In the pterodactyl, the wing consisted of a large membrane extending from the posterior surface of the arm and enormously lengthened fourth digit (our ring-finger) of the hand to the anterior surface of the thigh and leg. According to some authorities, it was the fifth digit (our "little" finger) that became the "big" membrane-supporting finger in the pterodactyl. The tail, long in some pterodactyls but short in others, was inclosed in another membrane which connected the inner surfaces of the thighs and legs.

At first sight, the wings of pterodactyls would seem to resemble those of bats, but this resemblance diminishes on closer examination. In the bat, not only is the little finger of the hand enormously lengthened, to support the membrane attached to its posterior edge and extending back to the fore surface of the thigh and leg, but also the fingers of the bat's hand corresponding to our index- middle and ring-fingers are similarly lengthened, and the spaces between them are webbed with membrane as far as their tips. Only the clawed thumb remains small and free from the membrane and projects forward. Our common, insect-eating bats have an additional membrane between the hind legs inclosing the long tail in its middle, but the East Indian fruit-bats, some of which are as large as half-grown kittens, are tailless, and the membrane between the thighs and legs is very poorly developed.

Flight reaches its most perfect expression in birds, and some of these are the largest flying animals now found upon the globe. All birds' wings—from the huge soaring wings of the condor to the little, rapidly vibrating wings of the humming-bird—are built on the very same plan,—a plan, however, that differs very much from the wing-plan of bats and pterodactyls. In existing birds, that portion of the fore-limb which corresponds to our hand has only three fingers, corresponding to our thumb, index- and middle finger, or, according to some zoölogists, to our index-, middle and ring-finger. The thumb is short and unimportant, whereas the index- and middle fingers are united and considerably elongated. To the hind margin of this peculiar

hand very long, stiff feathers, the so-called primaries, are attached, while other, somewhat shorter feathers, the secondaries, are attached to the hind surface of the lower arm. These feathers overlap one another and thus form



FLYING FROG OF JAVA

Most of these animals are inhabitants of the Old World, some of the most remarkable forms occurring in the East Indies. The membranes and devices for spreading them present three modifications. In one form, that of the flying tree-frogs of the East Indies, the toes of all the feet are greatly lengthened and webbed up to their disc-like tips. These tips resemble the toe-pads in our common tree-frogs. The figure shows the Javan flying frog with its parachute spread in the act of gliding through the air.

We find a second modification of the parachute in a small group of lizards of the East Indian genus *Draco*, which comprises some twenty species. These animals have five or six pairs of their ribs elongated and straightened out at right angles to the body. The skin envelops the ribs and is spread between them as a thin membrane. The *Dracos* live in the tree-tops, where they hunt for insects, often gliding from twenty to sixty feet on a stretch through the air in their descent from one branch to another. They rarely, if ever, descend to the ground of their own accord. The parachute membrane is, of course, always expanded and ready for use. Like the expanded wings of butterflies, it is often banded and blotched with brilliant colors

A third method of supporting the parachute is found in three distinct and unrelated groups of mammals — the flying phalangers, the flying lemurs and the flying squirrels. These animals are all nocturnal and all resemble squirrels in size and coloration. They are all provided with a broad fold of skin which connects the fore and hind limbs on either side, and which, like the skin of the remainder of the body, is covered with fur on its upper and under surfaces. The animals leap from the branches of trees, holding their

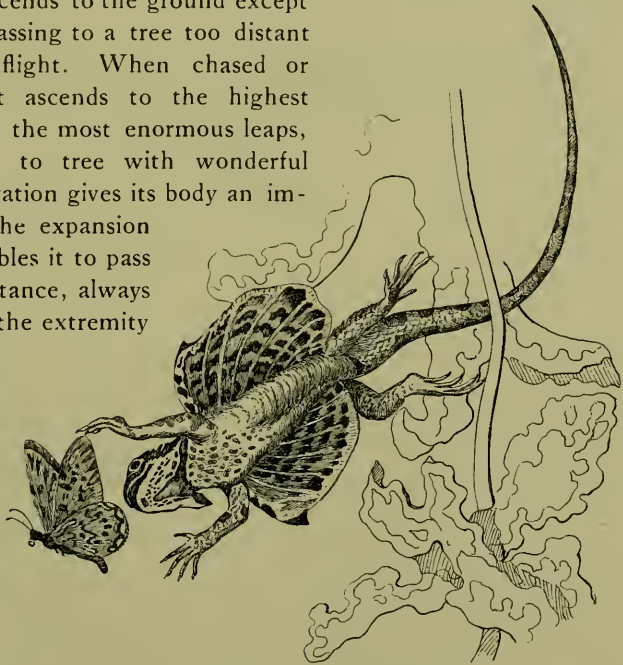
a large expansion, which has the same function as the large skin expansion of the bat and the pterodactyl.

Thus far we have considered only the true flyers. There are, however, several arboreal animals that might be called parachute animals, since they are provided with membranes that can be spread and thus permit a gradual slanting descent through the air.

legs out straight and thereby spreading the parachute membrane. They can guide the course of their gradual descent by means of the tail, which is long and bushy in the flying phalangers and flying squirrels.

The flying phalangers are related to the opossums, and, like most of their allies, inhabit Australia. The habits of the yellow-bellied flying phalanger are described by Mr. Gould as follows: "This animal is common in all the brushes of New South Wales, particularly those which stretch along the coast from Port Philip to Moreton Bay. In these vast forests trees of one kind or another are perpetually flowering, and thus offer a never-failing supply of the blossoms upon which it feeds; the flowers of the various kinds of gums, some of which are of great magnitude, are the principal favorites. Like the rest of the genus, it is nocturnal in its habits, dwelling in holes and in the spouts of the larger branches during the day, and displaying the greatest activity at night while running over the small, leafy branches, frequently even to their very extremities, in search of insects and the honey of the newly opened blossoms. Its structure being ill-adapted for terrestrial habits, it seldom descends to the ground except for the purpose of passing to a tree too distant to be reached by flight. When chased or forced to flight, it ascends to the highest branch and performs the most enormous leaps, sweeping from tree to tree with wonderful address; a slight elevation gives its body an impetus which, with the expansion of its membrane, enables it to pass to a considerable distance, always ascending a little at the extremity of the leap; by this ascent the animal is prevented from receiving the shock which it would otherwise sustain."

The flying squirrels very closely resemble the flying phalangers, although they are



FLYING LIZARD (DRACO)

really more closely related to the squirrels, rats and rabbits. The larger flying squirrels inhabit India, Siberia and eastern Europe. One beautiful little species, however, occurs in the United States, although we rarely see it, because it does not usually leave the hollow tree in which it sleeps till after nine o'clock in the evening. Then it begins a very active search for its

food, running along the branches or gliding through the air with outstretched parachute, from branch to branch or to the ground.

The flying lemurs, of which there are only two species, occur in the Philippines and neighboring islands. They are rather slender animals, about the size of a small cat. Besides the expansion of skin between the fore and hind limb, they have a smaller fold extending along the shoulder and front surface of the arm as far as the wrist, and another larger fold between the hind legs and embracing the tail. The toes of all the feet, too, are enveloped in the skin-fold up to their claws. The flying lemurs are said to sleep hanging to the branches with their heads down, like bats. When climbing about in search of the leaves and insects on which they feed, the parachute membrane is tucked up against the sides of the body. When the membrane is expanded the animal resembles a kite, and in this condition it has been known to traverse a distance of seventy yards at one glide, with a descent of only one yard in five. The flying lemurs are peculiar in many points of their structure, so that zoölogists have found it difficult to give them a permanent place in the classification.



SOOTY TERN HOVERING
Photographed by F. M. C.

This brief study of the wings and parachutes with which different animals are provided leads us to an interesting conclusion. We see the same simple function, flight, performed by a variety of structures, which have only the character of an expansion in common. In most cases the expansion consists of the skin of the animal, but in birds it is made up of overlapping feathers. The skin expansion, again, may be supported in a variety of ways — by the arms and legs in flying squirrels, by elongated fingers in the flying frogs, by both elongated fingers and arms and legs in bats and pterodactyls, by elongated ribs in the flying lizards, and, lastly, by a specially developed branching framework in the wings of insects. Nature thus attains the same simple end by employing a variety of methods. She never grows monotonous, for her ingenuity and resources are alike infinite.



HOUSE FINCHES TWO DAYS OLD

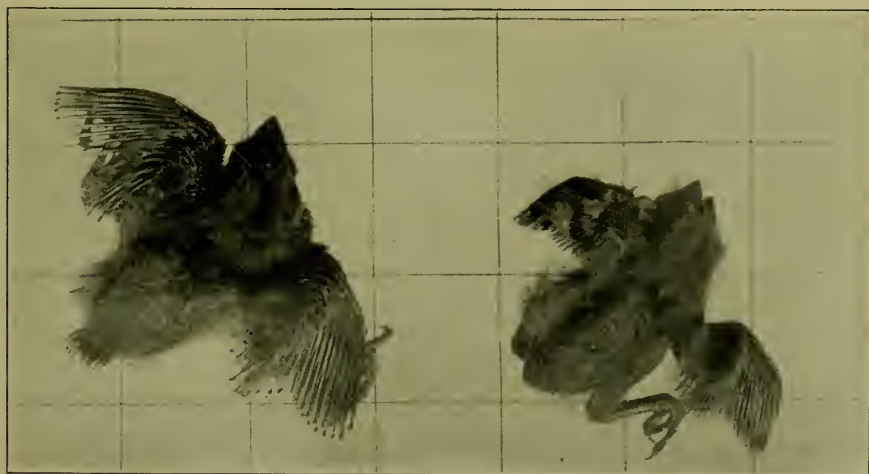
The Growth of a Young Bird

By E. R. WARREN, Colorado Springs, Colo.

With photographs from life by the author

IN the spring of 1903 a pair of House Finches (*Carpodacus mexicanus frontalis*) built their nest on the cap of the columns supporting our porch roof, and laid four eggs. The nest was watched until the eggs hatched, on the 12th of May. Beginning on that day, pictures were taken daily of the young, care being taken always to have the camera as nearly as possible at the same distance from the birds, and to place the birds on a paper ruled into inch squares. The pictures illustrating this article show the changes at intervals of several days.

At first, the birds have nothing but a partial covering of down, and, as usual with such young birds, are hideous, half-naked little things. About



HOUSE FINCHES EIGHT DAYS OLD

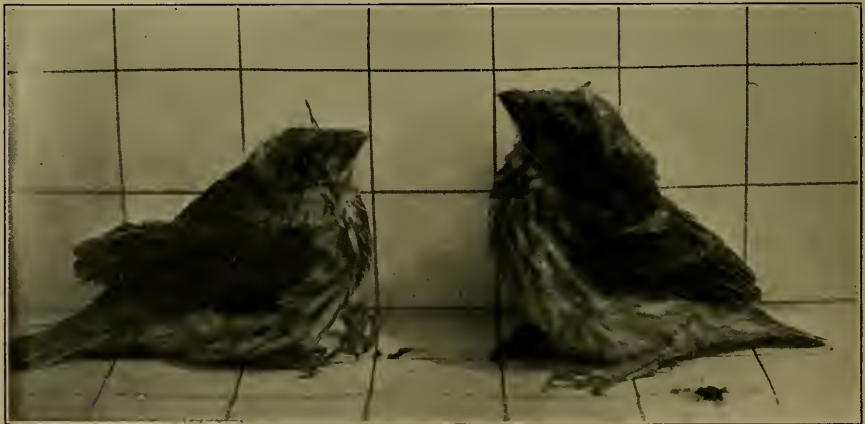


HOUSE FINCHES TWELVE DAYS OLD

the fourth day the feathers begin to show on the wings, and by the sixth these are well advanced and the tail-feathers are beginning to sprout. The eighth day shows still more advance, the web begins to appear at the tips of the sheaths of the wing-quills and the body-feathers show a little. In ten days the birds are quite well feathered, the primaries are well developed and the other wing-feathers are advancing rapidly. The birds begin to show more activity, and, while they have not much use of their limbs, they can wriggle about in a lively, not to say aggravating, manner when one is trying to photograph them.

When they were twelve days old it was found best to take the pictures as side views, instead of placing the camera so as to look directly down upon the birds. They were now pretty well covered with feathers but could hardly sit up straight.

As the days went on they began to get the use of their limbs, and could sit on a perch if one had the patience to pick them up and replace them a dozen or two times. The last picture was taken on the sixteenth day, when only a little of the natal down was left, and that on the head. They left the nest on the seventeenth day after hatching, but, as I had gone away myself the evening before, I got no more pictures.



HOUSE FINCHES SIXTEEN DAYS OLD. THEY LEFT THE NEST THE FOLLOWING DAY

Some Early American Ornithologists

IV. ALEXANDER WILSON

By WITMER STONE

IN 1794 a young Scotchman, Alexander Wilson by name, thoroughly disheartened by his surroundings at home, embarked for America, like many another, who had gone before him, to seek his fortune. He had no definite idea as to what he was to find across the water, but was convinced that no conditions could be worse than those he was leaving behind.

Wilson was at this time just twenty-eight years of age. He was born of poor parents and brought up, like all the family, to the trade of weaving, against which his whole nature rebelled. He was different from his plodding associates and yearned for something better than the loom. He loved Nature and delighted in an outdoor life. He possessed also the spirit of the poet, and tried hard to emulate Robert Burns. Many of his verses were published, but the reception that was accorded them was not very encouraging, and added to his despondency.

So impatient was Wilson after his long sea voyage that he landed at Wilmington, Delaware, and went on foot to Philadelphia, to which port the vessel was bound. He was delighted with the strange flowers and trees, overjoyed to be again on land, and charmed with the songs and bright plumage of the Cardinals and other birds which he encountered.

Arrived at Philadelphia, he was confronted with the old necessity of making a living. There being no demand for weavers, he sought other occupation, and finally became a school teacher—a position which in those days demanded but very meager attainments. Wilson's early education had been very limited, but he had read extensively, developed a good handwriting, and, by studying in his spare hours, he soon found himself sufficiently well-equipped for his new vocation. For seven years he taught school near Philadelphia and at Bloomfield, New Jersey, and spent his leisure in rambling through the woods and fields and in writing verses.

So far, although possessed of a strong love for Nature and of a studious disposition, Wilson seems to have had no thought of a serious study of any of the natural sciences, and chance alone shaped his future career. In 1802 he moved to Gray's Ferry, now within the limits of Philadelphia, to take charge of the school there. Near by was the botanic garden of William Bartram, and a close friendship immediately sprang up between the venerable naturalist and the schoolmaster, which was to alter the whole trend of the latter's life.

In the association and instruction of Bartram, Wilson saw Nature in a new light; his interest and enthusiasm were aroused and he longed to add to his knowledge in this new field. He studied the library at the botanic garden, and was surprised at the lack of information, particularly concerning

the birds, which were objects of especial interest to him. Of many of them he soon possessed more knowledge than the books, and it was not long before he had conceived the idea of producing a work which should furnish a complete account of all the birds of America.

Illustrations were, of course, a necessity, but, nothing daunted, he immediately set about learning to draw. He had no artistic talent, but after



ALEXANDER WILSON

From a drawing in the possession of the Academy of Natural Sciences, of Philadelphia, formerly the property of George Ord. Courtesy of the Delaware Valley Ornithological Club

school hours and until far into the night he worked with pencil and brush until, after many attempts, he was actually able to produce excellent representations of the birds, though his few attempts at backgrounds were almost ludicrous. In 1805, his varied studies gained recognition in his appointment as assistant editor of Rees' Encyclopædia, then being published

by Bradford and Company, which insured him a much better living than his precarious school teaching afforded. Now, at last, he was beginning to realize his hopes. The production of the ornithology became a thing possible; Bradford was to be the publisher, Lawson was to etch the plates, and Bartram gave constant aid and encouragement.

In 1808, with a sample of the first volume under his arm, Wilson set out on foot and by stage to secure subscribers, traveling through New York and New England as far as Portland, Maine, and later, southward to Savannah, Georgia, where he obtained the last of the requisite two hundred and fifty subscribers at \$120 each. He met with many rebuffs, of course, and Governor Tompkins, of New York, told him he would not give him a hundred dollars for all the birds he intended to describe, even if he had them alive. In spite of all, he returned to Philadelphia, triumphant. The publication progressed rapidly, he took a boat trip down the Ohio and went on horseback through the Mississippi wilderness to New Orleans in search of new birds and additional subscribers, and, by 1813, the eighth volume was going through the press. In the summer of that year, however, Wilson, who had been wearing out his delicate constitution by his confining work, was taken sick and died, after a few days' illness, on August 23. His friend, George Ord, completed another volume of the ornithology from the materials left by the author, and so was produced the finest work on the birds of any country that had appeared up to that time; a work that has ever since been a standard and the guide of many a subsequent American ornithologist.

Wilson, at the time of his death, had just begun to reap the reward of his work in the praise that it enlisted, both at home and abroad. Of financial reward there appears to have been none, as all the receipts were consumed in the cost of publication, and, even at that, the work of the engraver was largely a labor of love.

Of Wilson's personality, we learn from those who knew him best that he was honorable and truthful to a degree but of a retiring disposition and exceedingly sensitive to criticism, so that he made friends with difficulty. His enthusiasm was great, but apparently only exhibited to those with whom he was on most intimate terms.

What would have been the effect upon American ornithology had Wilson been allowed to live out his life and publish a popular ornithology and other works, which he seems to have planned, it is hard to say. As it was, his entire ornithological work was accomplished in eight or nine years, and his death came just when he was at his prime. These facts should be considered when comparing his work with those of others who rounded out their full lives and completed their cherished projects.

Alexander Wilson has been called the father of American ornithology, and he merits the honor. He was an ornithologist in the fullest sense of the

word, as ardent a bird-lover in the woods as he was a student of the literature of his subject; and when once he had entered upon his life's work, it occupied his every thought. No one can be said to be familiar with American ornithology who has not read 'Wilson,' and through the pages of the book made the acquaintance of the author.

Blue Jays at Home

By WILBUR F. SMITH, South Norwalk, Conn.

With photographs from nature by the author

TO those knowing the Blue Jay only as the wild, shy bird of the tree-tops, so hard to approach, or, by reputation, as a thief or a robber of other birds' nests, there remains a pleasure like unto finding some new and rare bird, to watch a pair of Jays through the nesting season and to find them so devoted to their nest and young that they lose much of their shyness and allow a familiarity which very few other birds will tolerate.

One pair of Jays built for several years in a tangle of briars near my home, and the female became so tame, through constant visiting, that I could at last spread her wings and tail-feathers without her leaving her nest, and even stroke her back with no further sign of disapproval than a settling lower in the nest and a parting of the bill; as six members of the local Audubon Society will testify. The nest was in too difficult a position to photograph, so I looked forward to the time when I could renew the Jay's

acquaintance under more favorable circumstances, and was happy this spring when, on May 5, I found a nest about seven feet high, in a clump of dogwood saplings, containing five fresh eggs.

Patience is the key to success, with Blue Jays at least, and it was needed here, for both birds were very wild at first, and, indeed, the male remained so, screaming defiance, so it sounded, from a distance, and leaving his mate to guard the nest. Lying on the ground in plain view, about twenty feet from the nest, I waited for the female to return, and this she did, after much flying back and forth from tree to tree,



BLUE JAY SITTING

and dropping from limb to limb, until she stepped into her nest. Gradually she allowed me to come nearer, until I could sit within eight feet of her and walk away without her flying. Now I brought the camera, placing it, without concealment, on a home-made stand, on a level with the nest, and running a string back to a near-by fence. Strange to say, the bird did



INSPECTION



BLUE JAY FEEDING

not seem to have any fear of the camera, and I gradually moved it nearer the nest until it was less than three feet from her and she allowed me to make bulb exposure of one-half second, change the plate and reset the shutter. With one hand against the tree in which the nest was built, I made another exposure with the other hand, put back the slide, took down the camera and left her still brooding her young.

May 15, four eggs hatched, and the next day the fifth egg had disappeared. It would be interesting to know if the Jay carried away any unhatched egg. May 20, the eyes of the young had not yet opened, and what ugly-looking babies they were! But they appeared so only to me, for the mother-bird would stand on the edge of her nest and look at them, this way and that, with apparent admiration before settling down to brooding.

In all my watching these birds, not once did they bring a bird's egg to



BLUE JAY BROODING

their nest, nor did they disturb the small birds nesting near, nor would the male come near the nest while the camera was in position.

Perhaps the prettiest thing connected with the life of this nest occurred when the young were twelve days old. I had taken three friends to see them, and, as we were watching them from behind the fence, the mother-bird brought food and fed one hungry youngster and was looking at them from the edge of the nest, when the male came, also with food. Alighting on the opposite side of the nest, he gave the food to his mate, who in turn gave it to the young, a scene so attractive that I wished all those who cry "thief" and denounce the Jay could have seen it.

Coming and going, the birds were singularly quiet, giving utterance to only a single note, which I associate with their nesting. So marked was their silence while I was about the nest that one must attribute it to a desire not to draw attention to their home.

May 30, the young showed the first signs of fear and a disposition to leave the nest. They were now well feathered, one being especially large and keeping the best position in the now crowded nest. The morning of June 1 they left the nest, and I photographed them on a branch. Now the old birds were furious, and the male had gained the courage to join his mate; several times they struck me in the face with their wings, even swoop-

ing down and striking my dog, who was with me. After all my interference I had the satisfaction of leaving the young in the old birds' care, for had harm come to them through me, the pleasure with which I watched the nest, from the eggs to the birds just flown, would have been changed into regret. Now I can look forward with anticipation to another spring, hoping to renew their acquaintance and perhaps become better friends.

The Story of a Tame Bob-white

By J. M. GRAHAM, Pinewood, Tenn.

Illustrated by the author

'PEEWEEEDIE' is the name of one of eight little Bob-whites hatched under a Bantam hen in June, 1904. When first hatched, he was about one-third larger than a big bumble-bee, and quite wild. The little hen was confined in a pen, out of which the little Quail could not escape. They were fed on bugs, worms, grasshoppers and crickets, with crumbs of egg-bread, until several weeks old, when they were allowed on the lawn with their mother, who was very fond of them, and exerted all her vocal powers to keep them together. When frightened, they would hide in the grass, nor would they reappear for some minutes, although the hen would cluck and call and use every artifice known to her to bring them from their hiding-places.

At night they were caught and put in a box, to prevent cats or rats from getting them. This soon got to be impracticable, so a hole was cut in the



A BOB-WHITE FRIENDSHIP

box, the hen put under, and she would call the little ones, who would go into the hole and be brooded for the night.

The ducks, turkeys and chickens got to devouring them, so they were put in the garden, around which there was a paling too high for the poultry to get over, and in this way Peeweddie and one other were raised until half-grown, when the cat got one—for which she was sent off.

The little hen soon quit the ground and went to roost with the other chickens in an oak that stood within five feet of the kitchen porch. Peeweddie followed her, and continued to roost in the tree until cold weather came on and the chickens went to roost in the hen-house.

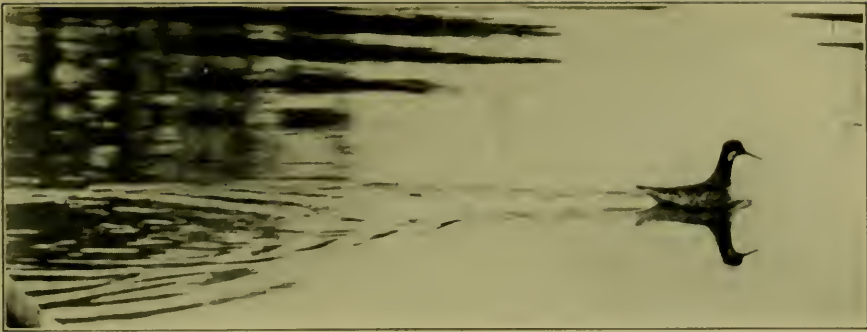
For several nights Peeweddie roosted alone in the grass near the house, but, tiring of that, he went with the chickens to the hen-house, where he has roosted since, managing to get in between two chickens to keep warm.

He eats out of our hands, and when not called for his food he comes on the porch, flies on a table near the kitchen window and calls until he is fed. When we had snow on the ground, he flew from the hen-house to the kitchen, a distance of one hundred yards, got his food and flew back. It is predicted that he will leave me at mating time, but as there is a covey of Quail that frequents the garden and lawn, I trust that he will conduct a successful courtship and induce a mate to keep house with him on the lawn, and allow us to feed them as we have him. If he should leave, the pleasure we have derived from having him is worth all the trouble it has cost us.

The picture shows Peeweddie on a wheelbarrow eating out of my hand.



A PAIR OF FLICKERS AND THEIR HOME
Photographed from nature by A. L. Princehorn



NORTHERN PHALAROPE SEEKING FOOD
Note the feeding-place just abandoned at the left

The Feeding Habits of the Northern Phalarope

By FRANK M. CHAPMAN

With photographs from nature by the author

THE discovery of a well-marked trait or habit in bird-life is so unusual an experience, that among all the interesting incidents which crowded a trip to California, as a member of the American Ornithologists' Union excursion of 1902, I recall with most satisfaction several hours passed with the Northern Phalaropes at Monterey, on May 27.

A record-breaking northwest wind had been blowing for over two weeks. It had evidently rendered navigation impossible for the Northern, as well as Red Phalaropes, and these seafarers among the Snipe, while voyaging to their Arctic summer homes, were stranded on the coast in vast numbers. A week later we found many wrecks of this feathered fleet ashore on the Farallones, their poor, emaciated little bodies floating in the rock-inclosed pools left by the tide.

I had previously known this bird only as an inhabitant of the Atlantic, where I had seen it in great beds resting in the waters or rising in silvery, curling waves before the approach of our steamer, and while I regretted the disaster which had befallen the half-starved little waifs, I realized that their ill luck was my good fortune, and lost no time in availing myself of this exceptional opportunity to make the acquaintance of a bird which but few naturalists have met intimately.

All the quiet bodies of water contained Phalaropes, a large pond in the city of Monterey being fairly speckled with them. As, with several members of the A. O. U. party, I approached its margin, I was not a little astonished to observe that apparently one-half the Phalaropes in it were spinning about in the most remarkable manner. They might have been automatic teetotums.

The sight of this singular action aroused vague memories of a description of it as a courtship ceremonial. It will be remembered that marital relations

among the Phalaropes are somewhat unusual. Not only is the female larger and more brightly colored than the male, but she *is* the male in all but the prime essentials of sex. She woos, selects the nesting-site, and, while of necessity she lays the eggs, the male, unaided, hatches them and rears the resulting family.

These facts suggest that a careful study of the mating habits of Phalaropes will throw much needed light on the problem of sexual selection, and, exulting at the splendid possibilities of the situation, I concealed myself in an overhanging limb which swept the water. The nearest birds were now within ten feet. The larger size and brighter plumage of the females was

strikingly noticeable and no difficulty would therefore be experienced in determining the part in the performance taken by both sexes.

At once the alleged forwardness of the female was discounted by seeing quite as many males as females pirouetting; while the sight of single birds, of either sex, whirling around quite alone, cast doubt on the sexual significance of the evolution.

In short, it required only a few moments' watching to learn that



NORTHERN PHALAROPE WHIRLING

the revolving birds were feeding. The lobed feet were moved alternately in such a manner that the bird spun around in the same spot, making a complete revolution in about two seconds and from three or four to as many as forty turns without stopping. A rotary movement of the shallow water was thus created, bringing to the surface small forms of aquatic life which the Phalaropes eagerly devoured, their slender bills darting rapidly two or three times during each revolution. It was an interesting and, in my experience, a novel method of securing food.



1. CAPE MAY WARBLER, ADULT MALE.

2. CAPE MAY WARBLER, ADULT FEMALE.

3. CAPE MAY WARBLER, YOUNG FEMALE.

4. PALM WARBLER, ADULT.

5. PALM WARBLER, YOUNG.

(One-half natural size.)

For Teachers and Students

The Migration of Warblers

THIRTEENTH PAPER

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

With drawings by LOUIS AGASSIZ FUERTES and BRUCE HORSFALL

CAPE MAY WARBLER

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
Southern Florida	3	April 8	March 3, 1887
Northern Florida	3	April 14	April 3, 1901
Atlanta, Ga. (near)	6	April 25	April 18, 1902
Washington, D. C.	3	May 8	May 2, 1888
Southeastern New York	4	May 12	May 11, 1893
Eastern Massachusetts	5	May 12	May 10, 1897
Montreal, Can.			May 14, 1890
Quebec, Can.			May 16, 1902
Scotch Lake, N. B.	4	May 18	May 16, 1903
<i>Mississippi Valley—</i>			
Brookville, Ind.	3	May 5	May 4, 1899
Chicago, Ill.	8	May 6	April 30, 1899
Oberlin, Ohio	8	May 11	May 5, 1895
Southern Wisconsin	6	May 11	May 6, 1888
Southern Michigan	6	May 15	May 11, 1890
Ottawa, Ont.	15	May 16	May 11, 1900
Lanesboro, Minn.	7	May 16	May 8, 1887
Elk River, Minn.	3	May 20	May 17, 1889
Aweme, Manitoba			May 14, 1900

FALL MIGRATION

PLACE	No. of years' record	Average date of first one seen	Earliest date of first one seen
Aweme, Manitoba			August 23, 1901
Chicago, Ill.			August 20, 1896
Guelph, Ont.			August 23, 1904
Washington, D. C.			August 25, 1890
Mt. Pleasant, S. C.			September 8, 1898
Southern Florida			September 17, 1887

FALL MIGRATION, continued

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Grinnell, Iowa			September 17, 1886
Chicago, Ill.			September 21, 1896
Beaver, Pa.			September 24, 1889
Washington, D. C.			October 14, 1888
French Creek, W. Va.			October 21, 1891
Southern Florida			November 7, 1891

PALM WARBLER

The Palm Warbler has been separated into two subspecies, of which *Dendroica palmarum* ranges west of the Alleghanies, while *Dendroica palmarum hypochrysea*, the Yellow Palm Warbler, occurs along the Atlantic slope. In the following notes, the locality will serve as a general guide to the particular form intended.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
Raleigh, N. C.	7	March 31	February 13, 1890
Washington, D. C.	6	April 6	March 31, 1889
Germantown, Pa.	4	April 14	April 11, 1889
Englewood, N. J.	4	April 14	April 11, 1902
New Providence, N. J.	5	April 17	April 13, 1889
Southeastern New York	5	April 18	April 14, 1893
East Hartford, Conn.	6	April 16	April 9, 1887
Boston, Mass.	11	April 18	April 13, 1897
Southern Maine	10	April 23	April 16, 1896
St. John, N. B.	11	April 20	April 13, 1896
Halifax, N. S.	4	April 27	April 20, 1890
Pictou, N. S.	8	May 1	April 28, 1894
<i>Mississippi Valley—</i>			
St. Louis, Mo.	4	April 15	April 5, 1882
Chicago, Ill.	10	April 25	April 17, 1897
Southern Wisconsin	8	April 30	April 22, 1886
Oberlin, Ohio	8	April 30	April 24, 1897
Petersburg, Mich.	10	April 30	April 26, 1894
Listowel, Ont.	5	May 2	April 28, 1894
Hillsboro, Iowa	5	April 22	April 14, 1896
Grinnell, Iowa	5	April 26	April 22, 1888
Lanesboro, Minn.	10	April 27	April 23, 1890
Minneapolis, Minn.	5	April 30	April 27, 1889
Elk River, Minn.	4	May 3	May 1, 1886
Aweme, Manitoba	6	May 7	May 3, 1901
Fort Chipewyan, Athabasca			May 23, 1901

FALL MIGRATION

PLACE	No. of years' record	Average date of first one seen	Earliest date of first one seen
Northwestern Minnesota	2	September 10	September 9, 1896
Lanesboro, Minn.	2	September 18	September 17, 1888
Chicago, Ill.	3	September 15	September 4, 1900
Oberlin, Ohio	5	September 26	September 16, 1898
Southern Maine	6	September 28	September 19, 1892
Beaver, Pa.	4	September 13	September 7, 1889
Englewood, N. J.			September 26, 1886
Mount Pleasant, S. C.			September 7, 1896

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Aweme, Manitoba	6	September 30	October 6, 1901
Lanesboro, Minn.	4	October 1	October 3, 1890
Chicago, Ill.	6	October 9	October 18, 1896
North River, Prince Edward Island			September 15, 1887
St. John, N. B.	3	October 13	October 18, 1896
Southern Maine	7	October 13	October 20, 1892
New Providence, N. J.	3	October 12	October 18, 1894
Washington, D. C.			October 19, 1890

MARYLAND YELLOW - THROAT

The Maryland Yellow-throat has been separated into some six or more different subspecies, three of which occur along the Atlantic Coast, two in the interior and several on the Pacific slope. It is not possible to apportion the migration notes with any degree of accuracy among these various subspecies.

SPRING MIGRATION

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Atlantic Coast—</i>			
Raleigh, N. C.	13	March 30	March 20, 1894
Washington, D. C.	9	April 21	April 18, 1888
Beaver, Pa.	6	May 4	April 30, 1899
Renovo, Pa.	8	May 4	May 2, 1900
Germantown, Pa.	5	April 29	April 24, 1886
Englewood, N. J.	7	May 4	April 30, 1902
Southeastern New York	14	May 5	April 30, 1900
Jewett City, Conn.	8	May 4	April 29, 1902
Boston, Mass.	15	May 7	May 2, 1896
Southern New Hampshire	9	May 11	May 6, 1902
Southern Maine	10	May 14	May 7, 1902
Quebec, Can.	7	May 17	May 13, 1899
St. John, N. B.	11	May 18	May 11, 1888
Central Nova Scotia	5	May 25	May 18, 1896
North River, Prince Edward Island			June 6, 1891

SPRING MIGRATION, continued

PLACE	No. of years' record	Average date of spring arrival	Earliest date of spring arrival
<i>Mississippi Valley—</i>			
Rodney, Miss.	3	March 28	March 25, 1890
Helena, Ark.	7	April 15	April 9, 1898
Eubank, Ky.	6	April 15	April 10, 1892
St. Louis, Mo.	7	April 18	April 14, 1887
Brookville, Ind.	5	April 26	April 18, 1896
Waterloo, Ind.	10	April 25	April 19, 1891
Wauseon, Ohio	7	April 30	April 26, 1891
Oberlin, Ohio	10	April 29	April 26, 1899
Chicago, Ill.	4	May 1	April 27, 1902
Petersburg, Mich.	11	May 1	April 24, 1886
Southern Ontario	15	May 8	May 3, 1901
Parry Sound District, Ont.	9	May 18	May 13, 1899
Ottawa, Ont.	9	May 16	May 4, 1905
Keokuk, Iowa	8	April 27	April 23, 1893
Grinnell, Iowa	6	April 30	April 22, 1890
Lanesboro, Minn.	7	May 5	April 30, 1888
Elk River, Minn.	7	May 12	May 9, 1890
Aweme, Man.	5	May 22	May 18, 1902
<i>Western United States—</i>			
Onaga, Kans.	7	April 28	April 23, 1896
Cheyenne, Wyo.	2	May 11	May 9, 1889
Great Falls, Mont.	3	May 12	May 10, 1892
Columbia Falls, Mont.	4	May 10	May 9, 1895
Osler, Saskatchewan			May 25, 1893
Beaverton, Ore.			March 21, 1885
Southern British Columbia	3	April 6	April 4 1889

FALL MIGRATION

PLACE	No. of years' record	Average date of last one seen	Latest date of last one seen
Columbia Falls, Mont.			September 24, 1896
Great Falls, Mont.			October 5, 1889
Central South Dakota	4	September 11	September 15, 1902
Lanesboro, Minn.	7	September 28	October 5, 1885
Ottawa, Ontario	4	September 18	September 27, 1889
Chicago, Ill.	4	September 28	October 2, 1894
Waterloo, Ind.	3	October 1	October 8, 1887
North River, Prince Edward Island	4	September 4	September 11, 1887
St. John, N. B.	8	September 26	October 3, 1891
Southern Maine	6	October 3	October 13, 1901
Eastern Massachusetts	5	October 3	October 11, 1895
Southeastern New York	5	October 2	October 14, 1887
New Providence, N. J.	6	October 3	October 23, 1891
Renovo, Pa.	5	October 4	October 6, 1899
Germantown, Pa.	5	October 13	October 30, 1888
Washington, D. C.			October 20, 1890

BELDING'S YELLOW - THROAT

A western species, resident in and restricted to Lower California.

Bird-Lore's Colored Plates

The series of twenty-four colored plates illustrating North America Warblers will be completed in the next volume of BIRD-LORE. The responses to the query, sent out last year, concerning the most desirable group of birds to figure in color when the Warblers were concluded, leaves the choice between the Flycatchers and the Thrushes and we should be glad to receive a further expression of opinion in regard to this matter.

In BIRD-LORE for December, 1904 we stated our desire to add colored plates to Mr. Dutcher's admirable Educational Leaflets, and, to our no small satisfaction, we find ourselves in a position to gratify it.

Hereafter then, in addition to the Warbler plates, each number of BIRD-LORE will contain a colored plate of the male and female of some well-known North American bird.

To teachers who subscribe to BIRD-LORE the Natural Association of Audubon Societies makes this generous offer: on application to the Association at 141 Broadway, each teacher will receive, without charge, two extra copies of each Educational Leaflet together with two colored plates and six facsimile outline drawings of the plate for coloring. Additional copies of the Leaflet, plate, and outline may be had at cost.

Bird-Lore's Sixth Christmas Bird Census

THE plan of reporting one's observations afield on Christmas Day has met with such cordial and practical endorsement by bird students throughout the country that BIRD-LORE'S Christmas Bird Census may now be considered a fixed event, which increases in interest as the accumulating records give additional material for comparison. From a total of twenty-five lists received in 1900 it has grown to seventy-nine lists in 1904, and there is every reason to believe that the returns for the present year will exceed in number those of any previous season.

Reference to the February, 1901, 1902, 1903, 1904, or 1905 number 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 is 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. Time, 8 A. M. to 12 M. Clear; ground bare; wind west, light; temperature 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 from Field and Study

Gulls Destroy Insects and Mice

It is a well-known fact that Gulls eat a great many insects, but it is not generally known that they will also eat mice. The following letter from John E. Cox, of the Utah Board of Agriculture, is of great interest: "Gulls go all over the state for insects, the greatest number visiting the beet fields, where they keep down the crickets, grasshoppers, cutworms, etc. They took a new diet this summer. Some alfalfa fields were so badly honeycombed with mice holes and runs that it was impossible to irrigate them, and they were plowed up, mostly for beet culture. When the water was turned into the irrigation ditches the mice were forced out of their holes, and the Gulls then caught them; they became so perfect in their work that they kept abreast of the head of the water and picked up every mouse that appeared. When gorged with victims they would vomit them up in piles on the ditch bank and recommence their feeding. Gulls are sacred in Utah, and are so tame that oftentimes they may be caught by hand as they follow the plow so closely." —WM DUTCHER, *New York City*.

How the Birds Come

In reading the winter-feeding number of BIRD-LORE, I saw no mention of Shore Larks, yet these birds have been among our winter visitors for four years. On February 21 and 22, 1902, there was a heavy snow-storm, and on the morning of the second day I saw three Shore Larks feeding among the Tree Sparrows close by the house. In the driving storm and bitter cold, they were crouching so that they seemed almost to make nests in the snow. As I stood watching them, softly, like a larger flake of snow, a Snow Bunting came fluttering down; and on that day eleven Larks and thirty-five Snow-Buntings fed on the lawn. Every winter since the Larks have visited us, coming earlier each season, last year

appearing in December. Most of them are *Otocoris alpestris praticola*, but the largest flocks, numbering from forty to sixty, contained also *Otocoris alpestris*.

Last winter, on the 8th of February, eighteen Snow Buntings were feeding on the lawn; but the number increased constantly, until, by the 24th, there must have been five hundred of them.

The fourth day of their coming they brought one Lapland Longspur with them. He would usually be found on the same spot a few feet from the house, where a little heap of corn was kept. Our house is at the edge of a small village, where the farms begin, and there is quite a stretch of lawn free from trees. To attract the ground-feeding birds, we usually keep the snow cleared from a part of the lawn, and scatter chaff and hay seed from the barn floor, to give the appearance of bare ground; in February when the snow is deep in the fields and nature's larder is nearly bare, we look for Snow Buntings and larger flocks of Larks.

We have tried various kinds of grain, but now use chiefly cracked corn, for the large flock last winter scattering twelve or fifteen quarts a day.



SNOW-BUNTINGS

After the Snow Buntings became familiar they frequently perched in the trees: sometimes, as shown in the picture, in a small maple near the house, whence they would drop, a few at a time, to their feeding place, sometimes on the apple trees or on a large elm farther away in the pasture. There I have seen one or two hundred at a time, making the trees look fairly white.

Another pretty sight was a flock sitting on the telegraph wire, after the manner of Barn Swallows.

These birds, with our Chickadees, Downy Woodpeckers, Juncos, Blue Jays, Tree



SNOW-BUNTINGS PERCHING

Sparrows, White-breasted Nuthatches, and sometimes a Meadowlark, give us a variety of winter visitors.

One beautiful morning last February when, with "no cloud above, no earth below," as a Snow Bunting sat on the low fence and poured out his beautiful song as sweetly as a Thrush in June, I thought that even a New England winter is not without compensations for the bird lover.—JENNIE C. BALL, *Oakville, Conn.*

Los Angeles Bird Visitors

It was a glorious winter's morning, and I sat at my window breathing in the pure air.

From the end of the garden hose a little stream of water trickled, making a shallow pool about two feet long, and here the birds were taking their morning baths. Hopping about were several of those handsome little fellows—the White-crowned Sparrows. There was room for several to bathe at once, but not all could get in who wished, and those not in the water sometimes showed their impatience by making a scolding noise, which did not, however, scare or hurry their comrades.

The jolly, handsome House Finches—commonly called Linnets—were also of the party, bathing side by side with the Sparrows, but occasionally making an unfriendly dive at them.

Two dear little Arkansas Goldfinches came flying down to the little pool and with many a friendly, good-natured "Peep, peep?"—"May we bathe, too?" hopped in and began their ablutions.

The White-crowns had kept up a continuous flying in and out of the water, new bathers taking the places of those who were fortunate enough to find the pool first. A Brown Towhee came hopping along with her sociable "Chip, Chip," and, finding a deserted corner of the little pool, jumped in and ducked and splashed to her heart's content, then flew upon the fence and made her toilet—not a long process, as she contented herself with wetting her breast.

When the pool was about deserted, a "tsip, tsip," and a flutter of many plump, hurrying little feathered mites, proclaimed that a flock of California Bush-tits had come for their daily feast of scales and small insects. Lighting in one of my pepper trees, I was delighted to see that some of the busybodies had discovered the water. Down they flew, until there were five of them splashing at one time, making a pretty picture. More of them hopped about on the ground, and would undoubtedly have gone in had not the Sparrows driven them away.

While the bathing went on beneath my window, I glanced out at the vacant lot beyond me. There a small flock of Audubon's Warblers were hopping about on the ground or swinging from a tempting weed.

Hopping or flying about with them were several of those handsome birds the Lark Sparrows and more of the Linnets, and White-crowns were flying about in seemingly utter abandon, their various call notes making a veritable bird-babel. Farther away, at the top of an elderberry tree, sat a California Shrike—silently and quietly minding his own business. "Chä-Chä-Chä," in a quick, scolding voice, proclaimed that a Ruby-crowned Kinglet was foraging in my trees; a dainty Anna's Humming-bird whizzed by my window, stopping long enough to sip fearlessly at the flowers that grew beside me; while above all else rang out the liquid, inspiring notes of a Mocking-bird.

Surely here was a gathering which repaid a half-hour's stay at my open window.—
HARRIET WILLIAMS MYERS, *Los Angeles, Cal.*

Twenty-third Annual Congress of the American Ornithologists' Union

The twenty-third Congress of the American Ornithologists' Union was held at the American Museum of Natural History, New York City, November 13-16, 1905. At the business meeting of Fellows, on the night of the 13th, Charles F. Batchelder was elected president of the Union, E. W. Nelson and Frank M. Chapman, vice-presidents, John H. Sage, secretary, and J. Dwight, Jr., treasurer.

The Fellows elected were: Walter K. Fisher, Palo Alto, Cal.; Lynds Jones, Oberlin, Ohio, and Wilfred H. Osgood, Washington, D. C. The five Members elected were: Austin H. Clark, Boston, Mass.; W. Leon Dawson, Seattle, Wash.; J. H. Riley, Washington, D. C.; John E. Thayer, Lancaster, Mass.; Charles W. Townsend, Boston, Mass. Seventy-one Associates were elected, making the total membership (including all classes) of the Union about 900.

The average attendance was greater than that at any previous Congress, and, in addition to the regular sessions, at which were presented the papers in the appended list, there was a Union dinner, followed by an informal reception at the American Museum, excursions to the Museum of the Brooklyn Insti-

tute of Arts and Sciences, the New York Aquarium, and New York Zoölogical Park.

The twenty-fourth Congress of the Union will be held in Washington, D. C., November 12, 1906.

LIST OF PAPERS

Some Unpublished Letters of Wilson and some Unstudied Works of Audubon, Witmer Stone; The Evolution of Species through Climatic Conditions, J. A. Allen; Summer Birds of the Mt. Marcy Region in the Adirondacks, Elon H. Eaton; Pelican Island Revisited, illustrated by lantern slides, Frank M. Chapman; Some Breeding Warblers of Demarest, N. J., illustrated by lantern slides. B. S. Bowdish; Notes on Wing Movements in Bird Flight, illustrated by lantern slides, William L. Finley; The Status of Certain Species and Subspecies of North American Birds, J. Dwight, Jr.; Wild-fowl Nurseries of Northwest Canada, illustrated by lantern slides, Herbert K. Job; *Andræ Hesselius*, a pioneer Delaware Ornithologist, C. J. Pennock; The Probability of Error in Bird Migration Records, Witmer Stone; Some Observations on the Applicability of the Mutation Theory to Birds, Witmer Stone; The Song of the Hermit Thrush, Henry Oldys; Impressions of English Bird-Life, illustrated by lantern slides, Frank M. Chapman; Exhibition of Lantern slides, William L. Baily; A Lapland Longspur Tragedy, illustrated by lantern slides, Thomas S. Roberts; Similarity of the Birds of the Maine Woods and the Pocono Mountains, Pa., William L. Baily; Discontinuous Breeding Ranges, illustrated by lantern slides, Wells W. Cooke; The Principles of the Disguising Coloration of Animals, illustrated with experiments and slides, Abbott H. Thayer; The Collection of Birds in the New York Zoölogical Park, C. W. Beebe; A Contribution to the Natural History of the English Cuckoo, with a Review of the Literature on the Subject, Dr. Montague R. Levenson; Plumages and Status of the White-winged Gulls of the genus *Larus*, Dr. J. Dwight, Jr.; A Contribution to the Ornithology of South Carolina, pertaining chiefly to the Coast Region, Arthur T. Wayne; Should Bird Protection Laws and their Enforcement be in the hands of the National Government? O. Widman.

Book News and Reviews

TWO BIRD-LOVERS IN MEXICO. By C. WILLIAM BEEBE. Illustrated with photographs from life taken by the author. Boston and New York. Houghton, Mifflin & Co. 12mo. xiii+408 pages, 106 half-tones. Price, \$3 net.

Mr. and Mrs. Beebe went to Mexico, not to collect but to study birds, and the results of their three months' observations are presented in this attractive volume. Beginning at Guadalajara, they worked thence to the coast, thus encountering widely varying climatic and physiographic conditions, with corresponding diversity in bird-life. A camping outfit not only enabled them to make their home where they pleased, but to pass twenty-four hours of each day in the field; and every camper knows how much more intimate relations can be established with one's surroundings under conditions of this kind than when one lives in even a favorably situated house.

Without enforced duties of trapping and shooting, or specimens to prepare, Mr. Beebe could devote his entire time to observing and recording; and the outcome of his labors, as they are here presented, impels comparison with the briefly 'Annotated List' which so frequently forms the only published evidence of months of honest endeavor. The comparison, indeed, may be made in the volume before us, for Mr. Beebe gives an annotated 'List of Birds Observed' in an appendix, and we may count most of 374 pages which precede it as due to the employment of the observers', rather than the collectors' methods. Some day, perhaps, when facts are valued as highly as 'skins,' we may send expeditions into the field solely for the purpose of securing information in regard to the habits of the animals whose bodily remains now tax our storage facilities.

Mr. Beebe had an eye not only for birds but for mammals, reptiles and insects as well, while his enthusiastic admiration of the remarkable scenery one finds in Mexico and his interest in the Mexicans themselves

find expression in well-wordsed descriptions. His book, therefore, possesses a literary charm which will add greatly to its scientific value, for it will both entertain and instruct. The excellent photographs by which it is embellished will also aid the fulfilment of this desirable end.—F. M. C.

THE BOB-WHITE AND OTHER QUAILS OF THE UNITED STATES IN THEIR ECONOMIC RELATIONS. By SYLVESTER D. JUDD, Ass't Biological Survey. Bull. No. 21. Bureau Biological Survey, Washington, 1905.

This is, in the best sense, an economic paper. Based on broad lines, both in research and in conclusion, it shows the Bob-white's value as a destroyer of weed seeds and noxious insects and as a game-bird in whose pursuit hundreds of thousands of dollars are annually expended, a large proportion of which goes to the owner of the land on which Bob-white is found. Living or dead, therefore, Bob-white is a valuable asset, and the problem of maintaining the supply of birds in the face of a constantly increasing demand is worthy of the most serious consideration. That it can be done, with favorable climatic conditions, is beyond question. Short shooting-seasons, strict enforcement of the game-laws, prevention of trapping, prohibition of sale as game, and winter feeding will go far toward keeping the numbers of this prolific bird from decreasing; and we know of no better means to inaugurate a general movement toward this end than to distribute widely this admirable publication, which treats not only of Bob-white but of our six other species of Quails

The appearance of this work so shortly before the unspeakably sad end of its talented young author makes doubly keen our regret at the loss of an investigator whose accomplishments had won him high rank among the real naturalists of this country. It will be difficult to fill his place.—F. M. C.

The Ornithological Magazines

The Auk.—The October number of 'The Auk' opens with two papers by A. H. Clark on the Parrots and Macaws of the Antilles. Digging among the hazy accounts of early writers, Mr. Clark has pieced together a description of an extinct Parrot of Martinique, which he names *Amazona martinica*, Gmelin's name *violacea* being available for another extinct Parrot of Guadeloupe. While the practice of naming vanished birds from the tales of ancient travelers is not new, its usefulness is somewhat questionable, and we may, perhaps, look forward to the day when the Roc of 'Sinbad the Sailor' will be furnished with an appropriate scientific name.

A well-annotated list of the birds of the Bahamas, by J. H. Riley, next attracts our attention; and G. F. Breninger asking 'Are the Habits of Birds Changing?' gives examples of various Arizona species that have adapted their nesting sites to new conditions. A journal of 'A Third Trip to the High Sierras' near Lake Tahoe is written by M. S. Ray, and we would only criticize his comparison of the songs of the Russet-backed and Hermit Thrushes of the region. To our ear it is the song of the former that is "loud and ringing," and the notes of the latter "subdued," not the reverse, as Mr. Ray puts it,—it would not be difficult, though, to confuse the songsters. More mountain species will be found in a list of the 'Summer Birds of Mt. Pinos, Cal.,' by J. G. Grinnell. 'The Direction of Flight in the Fall Migration at New Haven, Conn,' by L. B. Bishop, is a study of the migrants passing a certain hill. Those at a higher elevation fly west, and those at a lower, north.

The breeding of Bachman's Warbler in South Carolina, with a description of its juvenile plumage, is recorded by William Brewster, and there is an article by A. T. Wayne on a surprising number of rare birds of South Carolina.

J. A. Allen takes issue with Mr. Oberholser's conclusions regarding Swainson's genera, and also reviews, at great length, Mr. H. L. Clark's paper on specific and

subspecific differences, but the lay-reader will be more interested in the many notes and items that are published. Among them we find that sixteen specimens of the Ruff have been taken in North America, and that the English Sparrow has at last reached Tucson, Arizona.

An obituary notice of Walter E. Bryant, who died May 21, 1905, marks the passing of a prominent California ornithologist.—J. D. Jr.

THE CONDOR.—The September number of 'The Condor' opens with the first part of Finley's paper entitled 'Among the Sea Birds off the Oregon Coast,' and illustrated with nine cuts from Bohlman's superb photographs. This part deals with the birds found on Three Arch Rocks, sixty miles south of the mouth of the Columbia River. An account of the life and work of the late Walter E. Bryant, accompanied by a portrait, is contributed by Walter K. Fisher, and is followed by a list of Bryant's ornithological writings, comprising forty-four titles, compiled by Joseph Grinnell. These two articles give a good idea of Bryant's contributions to West Coast ornithology. It is noticeable, however, that an important paper on Cerros Island, published in 1886, is omitted. This article, containing the first list of birds of the island, with notes on twenty-seven species, appeared in 'Forest and Stream,' Vol. XXVII, pp. 62-64.

Three faunal papers in this number also deserve special mention. These are the concluding part of Kaeding's 'Birds from the West Coast of Lower California and Adjacent Islands,' Dixon's 'Dry Notes from Dry Lake' on San Geronio Peak, California, and Bishop's 'Notes on a Small Collection of California Birds,' from San Bernardino and San Diego counties. The last-mentioned paper contains a description of Oberholser's Vireo. *Vireo huttoni oberholseri*, based on a specimen collected at Witch Creek, in San Diego county, in April, 1904.

The series of portraits of eminent European ornithologists, begun in March, is continued by those of Dr. Alphonse Dubois, of Brussels, Prof. Max Fürbringer, of Heidel-

berg, and Dr. Rudolf Blasius and Dr. Wilhelm Blasius, of Brunswick.—T. S. P.

Book News

THE MASSACHUSETTS AUDUBON SOCIETY announces the publication of a new Audubon Calendar for 1906. The calendar consists of six new plates of American Warblers, printed in Japan in the best style of Japanese color-printing, from blocks made expressly for this purpose, and tastefully mounted on cards $9\frac{3}{4} \times 14\frac{1}{4}$ inches, with descriptive text on back. These are believed to be the first Japanese reproductions of American birds ever made, and they have the artistic distinction that belongs to the finest Japanese workmanship. The birds represented are the Black-throated Blue Warbler, Canadian Warbler, Yellowthroat, Oven-bird, Black-poll Warbler and Myrtle Warbler. Price, \$1.50, net, postpaid.

Orders should be sent at once, as the edition is small.

In 'Science' for September 1, 1905, W. E. D. Scott states his belief in the origin by mutation of certain North American birds of doubtful status. Mr. Scott's argument centers chiefly about Brewster's and Lawrence's Warblers, which he regards as mutants; but in a succeeding number of 'Science,' Dr. J. A. Allen questions Mr. Scott's conclusions and supports the generally accepted theory of hybridity and dichromatism as accounting for these puzzling forms.

'Farmers' Bulletin' No. 230, of the United States Department of Agriculture, is entitled 'Game Laws for 1905. A summary of the provisions relating to seasons, shipment, sale and licenses.' This useful document was prepared by T. S. Palmer, Henry Oldys and R. W. Williams, Jr.

The report for 1904 of the Director of the Bernice Pauahi Museum of Honolulu, contains 'Notes on the Birds of Waianae Mountains,' 'Notes on the American Birds Collected in the Hawaiian Islands by Mr. Gerrit Wilder,' and several papers describing the nests and eggs of Hawaiian birds, all by Wm. Alanson Bryan.

Publication No. 25 of the Bureau of Government Laboratories (Manila, P. I., 1905), by Richard C. McGregor, contains a paper on 'Birds from the Islands of Ramblon, Sibuyan and Cresta de Gallo,' and 'Further Notes on Birds from Ticao, Cuyo, Culion, Calayan, Lubang and Luzon.' Several new species are described, and there are interesting observations on the nesting habits of the Panay Hornbill (*Penelopides panini*) and Linch's and Whitehead's Swifts (*Salangana linchi* and *S. whiteheadi*), with photographs of nests and eggs.

In 'The Birds of the Genus *Cinclus* and Their Geographical Distribution' (Smithsonian Miscell. Coll. Vol. XLVII, Part 4), Dr. Stejneger concludes that these birds of marked form and habit originated in "that enormous and ancient plateau and mountain region north of India, and east of 90° east longitude, whence they have radiated wherever high enough mountain ranges, or otherwise boreal conditions, permitted them to push forward their colonies." The paper is a suggestive contribution to philosophic zoögeography.

'The Ostriches and Their Allies,' by C. William Beebe (Ninth Annual Report of the New York Zoölogical Society), gives a general account of the Apteryx, Emu, Cassowary, Rhea and Ostrich, and discusses their 'External Structural Adaptations to Cursorial Habits.'

An unusually large collection of the nests and eggs of South American birds is described by Dr. J. A. Allen in 'Supplementary Notes on Birds Collected in the Santa Marta District, Columbia, by Herbert H. Smith, with Descriptions of Nests and Eggs' (Bull. Am. Mus. Nat. Hist., xxi, pages 275-295).

Vernon Bailey ('Birds Known to Eat the Boll-Weevil,' Biol. Survey, Bull. No. 22) lists twenty-two species of birds which have been known to eat the boll-weevil, and says that "it is probable that by carefully protecting such species and by encouraging their increase the good work they now do may be greatly augmented."

Bird-Lore

A Bi-monthly Magazine

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

Edited by FRANK M. CHAPMAN
Published by THE MACMILLAN COMPANY

Vol. VII Published December 1, 1905 No. 6

SUBSCRIPTION RATES

Price in the United States, Canada and Mexico
twenty cents a number, one dollar a year, post-
age paid.

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Bird-Lore's Motto:

A Bird in the Bush is Worth Two in the Hand

An Opportunity for the Local Ornithologist

During the past year our enterprising Pacific coast contemporary, 'The Condor,' has been conducting a discussion of the opportunities for original work offered to the investigator by the study of birds. It is encouraging to note that none of the contributors to this symposium suggests systematic work as the promising field of future endeavor, but that they emphasize the importance of the study of the bird in relation to its environment.

For the greater part, however, their remarks are addressed to those who desire to make ornithology their profession; but the probabilities are that in no other branch of zoölogy are the professionals so outnumbered by the amateurs; and this fact, it seems to us, should be constantly held in mind in any consideration of ornithological interests.

For one person whose official position gives him the time and very elaborate equipment essential to research in technical ornithology, there are hundreds, equally ambitious, but handicapped by limited opportunity and inadequate material.

These are the local bird students whose daily vocation has perhaps no relation to ornithological pursuits, in which, however, they take the keenest interest. To what problems can they turn their attention? How can they gratify their desire to achieve distinction by making some noteworthy contribution to the science of birds?

There is that usual outlet to circumscribed activity—the 'Local List,' a wholly admirable thing, but it is not necessary that every ornithologist publish such a list, though he may contribute to it. There is that so often fatal undertaking, a collection of birds' skins, nests and eggs. Fatal, not to the birds, for reasonably limited collecting never appreciably affected their abundance, but fatal to the ornithological future of the collector.

Once bow the knee to the collecting fetish, and we may as well acknowledge at once its power for all time. The formation and care of even a small collection is more than apt to be the beginning and the end of our labors. The means to the end becomes the end and the specimens themselves acquire a value which makes their acquisition a sufficient reward for our endeavor.

It is true that one of the participants in the discussion we have mentioned considers experience as a collector "essential to success, no matter what department of ornithology the young student may finally decide to investigate," but since he adds that "no young man is justified in thus taking bird life unless he is reasonably sure that his interest in ornithology is likely to be lasting, and that his ability to devote his life to its pursuit is also assured," we may conclude that he is addressing the professional rather than the amateur student of birds.

In what direction, then, can the latter direct his efforts with a hope of making an addition to knowledge? In our opinion, his object may be accomplished by extreme specialization. He should devote himself not to the study of birds, but to the study of a bird, selecting, preferably, the commonest species of his locality.

Once let him determine to prepare as complete a biography of the Robin, Crow, Song Sparrow or Blue Jay as circumstances will permit, and his studies will assume a definiteness, importance and interest which they lacked before. Not only will he pursue his field work with renewed vigor, but his researches will extend to publications which before had no attraction for him; and his search for information will lead to a correspondence with fellow students through-

out the country which will instructively widen his horizon.

It is not to be expected that such a study can be concluded in a single season, but so long as it is incomplete it will repay our attention. Its general features may follow one of the several excellent outlines for birds' biographies to be found in various ornithological text-books, or in *BIRD-LORE* for December, 1904; and in this connection it would be well to consult Mr. Burns' admirable 'Monograph of the Flicker,' issued by the *Wilson Bulletin*, at Oberlin, Ohio.

The possibilities of publishing extended reports of the kind we have in mind remain to be considered; and in this connection *BIRD-LORE* will promise its assistance, agreeing to print and publish, at its own expense, any biographical memoir of a North American bird which, in our opinion, adequately presents its life-history.

It would be well, however, for intending authors to consult us, and, in order to avoid duplication of work, as well as to invite assistance, to announce in *BIRD-LORE* the subject of their proposed biography.

The Cat Question

The exaggerated press reports of the resolution in regard to cats (see page 290) passed by the National Association of Audubon Societies at its annual meeting has exposed the Societies to much unjust criticism. The Societies are accused of urging "a war of extermination" against all cats, and of "interfering with the balance of nature," while the cat is said rarely to eat birds, or, if its destructiveness be admitted, its natural, inherent right to kill in response to instinctive promptings is maintained.

Now, we might say a great deal on the question of birds' rights vs. cats' rights, but we prefer to discuss the question in only its humane aspects, with the reasonable hope we may induce cat-lovers to believe that they may conscientiously join hands with bird-lovers in their efforts to prevent the undue increase of the cat population.

No one, we imagine, would hesitate to condemn the introduction of the Mongoose into this country, or the stocking of our

woods with Ferrets; why, then, should we permit the increase of an equally predaceous animal in such numbers that we cannot care for the fast and ever-multiplying progeny, which, homeless, are forced to provide for themselves. As a result, millions of virtually wild cats are roaming our fields and woods, leading, doubtless, a life of ease during the season of plenty when birds nest, but faring miserably in the starvation time which follows.

It is, of course, difficult to get exact data in connection with this feral cat life of the country, but word now comes of thousands of deserted cats wandering along the beaches and dunes of our coast, where they have been forsaken by heartless 'summer cottagers.'

A startling index of the magnitude of our cat population, and, at the same time, of the endless suffering entailed by irresponsible ownership, is given by certain figures furnished by the American Society for the Prevention of Cruelty to animals.

In the interests of humanity, it is one of the duties of this widely known organization to "destroy homeless, diseased and injured cats," and the need for its activities in this direction is eloquently expressed in the statement that for the first nine months of the present year, it destroyed 53,938 cats in New York City, while the total for nine years up to 1903 is given as 465,065!

Analysis of the figures for the present year shows that while in January when climatic conditions would lead one to expect a high, even if artificial death rate, the sufferings of 2,019 cats were humanely ended, in July the number had risen to 5,533, and a further consideration of the statistics supports the conclusion that this surprising increase in mortality is occasioned by the same thoughtlessness—to use no harsher term—which leaves thousands of cats to starve on our beaches, and the homeless cat, in midsummer, is apparently no better off than the poor wanderer on the winter coast.

In the light of these figures, can any real lover of cats consistently refuse to aid the Audubon Societies in their efforts to secure for these much-neglected creatures the attention and care we should give to every animal for whose existence we are responsible?

The Audubon Societies

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

Edited by MRS. MABEL OSGOOD WRIGHT and WILLIAM DUTCHER

Communications relating to the work of the Audubon and other Bird Protective Societies should be addressed to Mrs. Wright, at Fairfield, Conn. Reports, etc., designed for this department, should be sent at least one month prior to the date of publication.

DIRECTORY OF STATE AUDUBON SOCIETIES

With names and addresses of their Secretaries

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Colorado.....	MRS. MARTHA A. SHUTE, Denver.
Connecticut.....	MRS. WILLIAM BROWN GLOVER, Fairfield.
Delaware.....	MRS. WM S. HILLES, Delamore Place, Wilmington.
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Florida.....	MRS. I. VANDERPOOL, Maitland.
Georgia.....	MARTIN V. CALVIN, Augusta.
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Maryland.....	MISS ANNE WESTON WHITNEY, 715 St. Paul street, Baltimore.
Massachusetts.....	MISS JESSIE E. KIMBALL, care Boston Society of Natural History, Boston.
Michigan.....	JEFFERSON BUTLER, Suite 79, Home Bank Building, Detroit.
Minnesota.....	MISS JESSIE WHITMAN, 2356 Bayless ave., St. Paul.
Missouri.....	AUGUST REESE, 2516 North Fourteenth street, St. Louis.
Nebraska.....	MISS JOY HIGGINS, 544 South 30th street, Omaha.
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Rhode Island.....	MRS. H. T. GRANT, 187 Bowen street, Providence.
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Texas.....	MR. M. B. DAVIS, Waco.
Vermont.....	MISS DELIA I. GRIFFIN, St. Johnsbury.
Virginia.....	MR. E. C. HOUGH, Falls Church.
Wisconsin.....	MRS. REUBEN G. THWAITES, 260 Langdon street, Madison.
Wyoming.....	MRS. CORDELIA CHIVINGTON, Cheyenne.

Notes and News

Pursuant to the notice given in the August BIRD-LORE, the annual meeting of the National Association was held at the American Museum of Natural History October 31. Twenty-seven members were present at the morning session and in the afternoon the west lecture-room of the Museum was completely filled. Members were present from Massachusetts, Rhode Island, Connecticut, New York, New Jersey, District of Columbia, North Carolina and Oregon.

After approving the minutes of previous

meetings, the Treasurer presented his report, which showed the Association to be in a very sound financial condition. The special feature of the report was the purchase of two one-thousand-dollar 4% bonds; these commence the permanent endowment fund which should now grow rapidly. It may here be noted that *all* membership fees, except those paid by annual members, are placed in the permanent endowment fund, none of the principal of which can be used. Friends of the cause of bird protection now have an opportunity of adding to a fund of which only the interest is available, thus insuring

bird protection in perpetuity. The Auditing Committee reported that they had employed expert accountants to audit the accounts of the Treasurer, which were found to be correct, and the report was ordered printed.

The President then gave a résumé of the work of the past year, dwelling on the progress made in the several branches of effort. This report was ordered printed in the December number of *BIRD-LORE*, and also as a separate for general distribution.

The following directors were then reelected for the term of five years; viz.:

George Bird Grinnell, New York; Arthur H. Norton, Maine; H. P. Attwater, Texas; Walter J. Blakely, Missouri; Mrs. Mabel Osgood Wright, Connecticut; Mrs. Kingsmill Marrs, Florida, and Mr. William L. Finley, Oregon, was elected to fill the unexpired term of Mr. Isaac N. Field, in whose death the Association had sustained a great loss.

The afternoon session commenced at 2:30, when discussion on the subject of cats was held. Extended remarks were made by Dr. George W. Field, president of the Massachusetts Fish and Game Commission; Dr. Palmer, of Washington; Rev. William Lord, of Massachusetts, and Mr. Chapman. The consensus of opinion was that if cats could be kept at home, and if their owners could be made responsible for them that the lives of multitudes of wild birds would be saved annually. The following resolution was adopted:

Resolved, That in the interests of humanity and bird protection the National Association of Audubon Societies endorses the movement to make the owners of cats responsible for their acts and welfare.

A meeting of the directors was held, when all of the officers of the Association were reelected for the term of one year. After adjournment of the business meeting, Mr. William L. Finley gave an entertaining

account of his experiences among the large colonies of water-birds breeding in south-eastern Oregon, illustrating his remarks with many photographs taken by himself and Mr. Bohlman. Mr. Finley stated that the Audubon Society was responsible for stopping the slaughter of Grebes in this locality. Mr. Frank M. Chapman followed with a delightful talk on English bird-life.

The annual meeting was a most successful affair, and the members and visitors present were enthusiastic over the bright prospects of the National Association.



SPECIMEN OF OUTLINE CUT FOR COLORING

Six copies of this cut, together with two copies of the Educational Leaflet, containing a colored plate of the bird here shown in outline, will be sent free to all teachers subscribing to *BIRD-LORE*, on application to the National Association of Audubon Societies, at 141 Broadway, New York City.

THE AMERICAN GOLDFINCH*

By WILLIAM DUTCHER

President National Association of Audubon Societies

National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 17

The Goldfinch, which is also known as the Yellow Bird, Wild Canary, Lettuce Bird and Thistle Bird, has been selected as the first of the series of birds to be shown in natural colors. Presentation in this way renders unnecessary a detailed description of its plumage. The English name of the Goldfinch is well chosen, as the bright yellow of the male when in breeding plumage is like burnished gold. The Latin generic name of the Goldfinch has reference to prickly plants, while its specific name, *tristis*, sad, refers to its rather plaintive flight note. The female Goldfinch is more modestly dressed than her mate.

The changes in plumage of the male are very interesting and, to the novice, somewhat puzzling. Until the student becomes acquainted with this bird he may wonder why he sees no males during the winter. The truth is at this season the flocks of supposed female Goldfinches are really of both sexes, the male bird having assumed in the previous fall, usually by the end of October, a plumage closely resembling that of the female and young bird of the year.

The male retains this inconspicuous dress until late in February, when one can notice a gradual change taking place in some of the birds. This molt, or renewal of feathers is actively continued through March and April, and by the first of May our resplendent bird is with us again. The change from yellow to brownish and back again to yellow can be noted by the student in the field, who with a good opera-glass will find that the variations in plumage between the two extremes are without number.

The song period with the male Goldfinch continues as long as he wears his gold and black livery, for it commences as early as the middle of March and ends late in August.

Goldfinches are wee birds, some four and one half-inches in length, but what they lack in size they make up in admirable qualities, one of the chief of which is their gregarious mode of life. Except during the short season devoted to domestic duties, they associate in flocks and live a happy, nomadic existence. Their undulating mode of flight seems to express joy and

* THE AMERICAN GOLDFINCH

Order—*Passeres*

Genus—*Astragalinus*

Family—*Fringillidæ*

Species—*Tristis*



AMERICAN GOLDFINCH
UPPER FIGURE, MALE; LOWER FIGURE, FEMALE.
(One-half natural size.)

exaltation, and when they add song, it is the very abandon of happiness. Even in winter, when the fields are brown and the trees are bare, a flock of Goldfinches adds the charm of life to an otherwise dead outlook.

The Goldfinch migrates, but not to the extent that the truly migratory species do. The Warblers, for instance, desert their summer homes and, after making long journeys southward, spend the winter beyond the limits of the United States; the Goldfinches, on the contrary, gradually move southward



NEST AND EGGS OF AMERICAN GOLDFINCH

Photographed from nature by C. William Beebe

as far as the Gulf States and in winter are found from the Gulf coast as far north as the latitude of central New York. Their breeding range is from the Carolinas westward to the Rocky Mountains and northward to the British Provinces and southern Labrador; consequently they are permanent residents in a large part of the United States where their migratory and breeding ranges overlap. There are several closely related forms or subspecies of the Goldfinch* found in the West and on the Mexican border

* Pale Goldfinch in Rocky Mountain district; Willow Goldfinch in Pacific coast district.

which are so much like the American Goldfinch that it may be said Goldfinches are found in a large part of North America.

Goldfinches are very cleanly in their habits and indulge in frequent baths; indeed, the border of a shallow pool is an excellent place to study this species, as it is not an uncommon sight to see a number of the brightly colored males gathered there. During the breeding season the parent birds seem to have a well-defined route from the nest to a common watering place.

The nesting site may be in an evergreen or deciduous bush or tree, and the nest may be built only a few feet from the ground or at considerable height, where it is saddled on or attached to a forked twig. The nest itself is an exquisite piece of bird architecture, compactly built of dried grasses, leaves and shreds of bark, the outside being embellished with lichens, which Audubon says are attached by saliva. The inside of the nest is lined with the softest plant-down. The mother-bird is the builder of this tasteful home, her handsome consort, during the nest-building time, devoting most of his efforts to singing to cheer his industrious mate. After the four to six bluish white eggs have been laid the singing partner has more work to do, for he has to feed his brooding wife. His frequent visits are always announced with a sweet conversational song, which he seems able to give even though his bill is filled with seeds.

These leaflets are published to induce the boys and girls of the country to keep their eyes wide open and see things out of doors. One of the things we want to know about the Goldfinch is why he begins to nest so late in the season, often long after most birds are through with domestic duties for the year. August is the time he chooses. Surely it seems a strange month for nest-building and the care of young. Does he select it because before that date nature has not provided food suited to the needs of the young Goldfinches?

The Goldfinch belongs to the thick-billed, seed-eating class of birds and is extremely fond of the seeds of thistles, a most noxious weed. Does he postpone housekeeping until the thistle seeds are ripe enough to eat?

The agriculturist should be interested in this bird. Every thistle along the highway is a prolific source of future trouble, but when you see it ornamented with an animated bit of gold and black, you may know that Nature is interposing one of her potent checks to the too rapid increase of weed pests. Every Goldfinch saves the farmer much hard work by destroying weed seeds, which form the bulk of its food supply, although during the breeding season it gives its young considerable animal food, consisting of insects of various kinds.

Questions for Teachers and Students

What is the local name of the Goldfinch in your locality? Describe the plumage worn by the male bird in summer, also at other seasons; how do the plumages of the male and

female bird differ? When does the male bird begin to assume the summer or breeding dress? when the winter dress? How long does it take to make the change? Is there any change in the plumage of the female bird? What is a molt? Do any birds change the color of their plumage without molting? What is such process called? Describe the plumage of young birds at the time they leave the nest. Descriptions should be based on observations made in the field from the living bird, when possible. When does the song period commence? How long does it continue? Does the female have a song? What is the alarm note? The flight note? Give size of Goldfinch, shape of body, wings, tail, bill, feet. What are the habits during different seasons of the year? What is meant by gregarious? By nomadic? Are there any peculiarities of flight? During what portion of the year are Goldfinches found in your locality? Do they breed in your locality? Describe the nest in detail, materials used, size, etc.

(NOTE.—If an occupied nest of the Goldfinch is found, the locality should be described in detail in a note-book, the kind of tree, height of nest from ground, etc. After the nest is abandoned it should be secured, properly labeled, and kept in the class-room for examination and comparison.) When do the Goldfinches nest in your locality? What do Goldfinches eat? (NOTE.—This question will be answered best from personal observation.) Name and describe the plants from which seeds are taken. Name and describe the insects eaten. Is the bird doing good or harm? To whom, and how?



GOLDFINCHES IN THE MAKING



CALIFORNIA GULLS

A portion of an Oregon Colony

Photographed by Finley and Bohlman

Annual Report of the National Association of Audubon Societies for 1905

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REPORT OF THE PRESIDENT

By WILLIAM DUTCHER

IT is with pardonable pride that I present to the directors and members of the National Association, at its first annual meeting as an incorporated body, a brief outline of the results accomplished during the past year. Good results are the measure of success in all corporate bodies, and in this respect this Society is no different from any other.

Your directors and officers are selected from the membership, and to them is entrusted the management of affairs of the Association. If their management meets your approval and shows that the talents entrusted to their keeping for the year are ready to be returned with interest in the shape of material good accomplished, your commendation will be expected. Our Society may be compared with the ocean tides, which never stand still, but ever ebb or flood; let us so do our work that the movement of our Society will always be like the flood-tide, growing broader and deeper day by day and year after year.

The object of this organization is to be a barrier between wild birds and animals and a very large unthinking class and a smaller, but more harmful class of selfish people. The higher and stronger we build our wall the greater our measure of success. The unthinking, or, in plain English, the ignorant class, we hope to reach through educational channels, while the selfish people we shall control through the enforcement of wise laws, reservations or bird refuges, and the warden system. How well your officers and directors have succeeded in their undertaking will be shown in the following report.

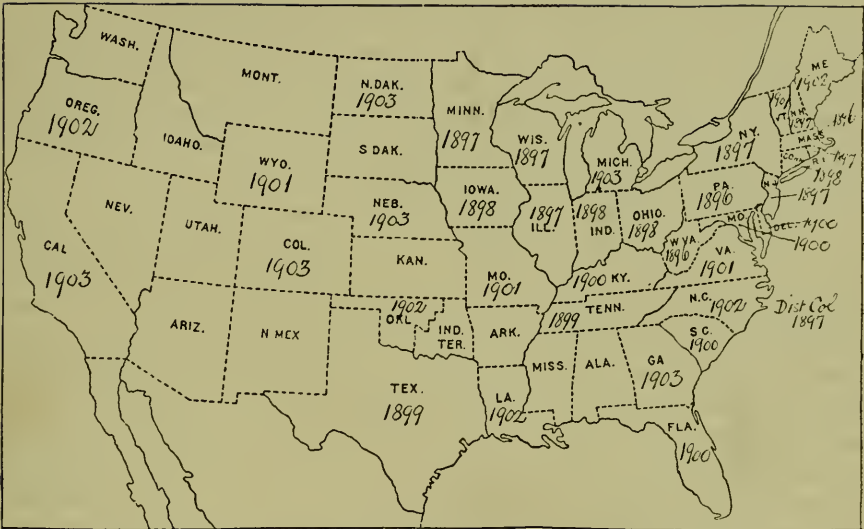
THE YEAR'S WORK

Principal Results.—Since the last annual meeting the National Association has been incorporated, and is now in a legal position to accept and administer legacies either of cash or realty. Already it is known that the Society is mentioned in three testamentary documents, and the directors urge upon the members the importance of this means of providing for the permanency of the Association. Quite recently one of the state societies became a legatee in the amount of \$1,000, this being the first bequest received. It shows that the Audubon Societies are attracting attention, and their work will in time become one of the best known of the philanthropic movements. The Finance Committee have already invested the fees of twenty life memberships in two one thousand 4 per cent gold mortgage trust bonds, issued by the United States Mortgage and Trust Company. This is a beginning on which can be built a great structure of consecrated wealth. The eighty dollars earned each year by our present fund means that some great colony of birds will always be guarded during the breeding season. During 1904 we had 110 contributors to the working fund. Since February 15, last, when a systematic effort was commenced to obtain members for the Association, 490 additional ones have been secured. This is a gain of 450 per cent. In 1904 the total receipts from all sources was \$4,929.58; during the present year the receipts have been \$12,498.07. This is a gain of 250 per cent.

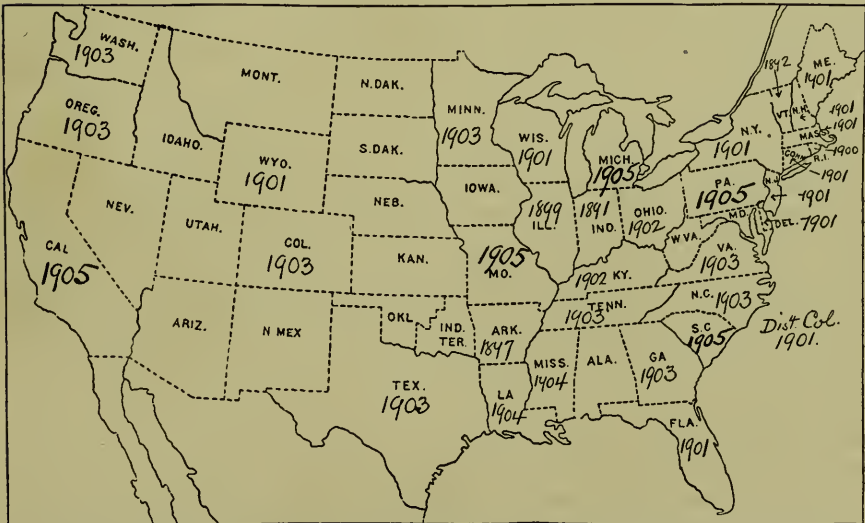
Office Work.—The Officers have to devote far too much of their time to finances, to the detriment of the more pleasant and legitimate work of bird protection. When the National Committee was organized in 1901, no office was necessary and clerical assistance was needed only a portion of the time. The work of the Society has increased steadily, and for a large part of the present year two clerks have been employed. The work outgrew the limits of the president's home, and, on October 1, an office was established at 141 Broadway, New York, which will hereafter be the headquarters, instead of the familiar '525 Manhattan Avenue.' From the office may be heard from morning until night the clatter of typewriting machines sending messages to the public about the protection of wild birds and animals, and through the door is continually flowing a stream of educational literature.

Hundreds of thousands of pages of such publications have been mailed during the past year. The illustrated educational leaflets of the Association now number 16, and, in addition, two special leaflets have been issued, one devoted to the Robin and the second to the Martin. Thousands of pages of letters have been dictated in reply to the ever-growing correspondence.

Legislation.—The legislative work of 1905 was very successful. The Model Law was adopted in five states,—California, Missouri, Michigan, Pennsylvania and South Carolina. There is now only one coast state where



MAP OF STATES HAVING AN AUDUBON SOCIETY WITH THE YEAR IN WHICH IT WAS ESTABLISHED



MAP OF STATES WHICH HAVE PASSED THE A. O. U. MODEL LAW, WITH THE YEAR OF ITS ADOPTION

our law is not in force; therefore sea-birds can more easily be protected. It takes only a second of time to say that five states have adopted the model law; few of you realize what a long process of persistent effort, and educational work on the part of this Association, the State Audubon Society, in some cases the Fish and Game Commission, led up to the final victory. In more than one state the bill was passed after having been presented and urged before three sessions of the Legislature.

In other states important legislative action was taken, notably in New York, where the repeal of the anti-spring duck shooting law was defeated for the second time, largely through the work of the National Association and the New York Audubon Society. The bill defeated was one of the most pernicious pieces of bird legislation considered in 1905, and had it passed it would have been so decided a set-back to bird protection that it would have taken years for the movement to recover. In Texas, after a long and arduous fight, an almost similar bill was killed. This magnificent result was obtained largely by the work of the secretary of the Texas Audubon Society, aided by some earnest and enthusiastic helpers. The National Association could do very little in this fight except to encourage those who were in the field by supplying them with funds and literature. *Wherever and whenever* a Legislature is in session, the National Association arranges with some reliable person at each capital to forward copies of all bills introduced, that relate to wild birds or animals. Good bills are approved and urged; on the contrary, bad bills are combated with all the strength and influence of the Association and of the State Audubon Society.

Reservations.—If the National Association did no other work than to secure Bird Reservations and to guard them during the breeding season, its existence would be fully warranted. There is no more effective method of protection than to guard the birds while they are breeding, and, if this can be done on an island or group of islands set aside as a bird refuge, it becomes doubly valuable. It has recently been discovered that these refuges are occupied by birds at other seasons of the year, as well as during the season when they are rearing their young. Birds soon learn where they are not disturbed, and will remain there and become very tame. Even game-birds will be benefited by the reservations, for on them they may not be disturbed, even in the open season. One of our wardens reports that it is a wonderful sight to see the thousands of Ducks and Geese that gather on the islands and the reservation waters in his charge. The birds seem to know that there they can escape the shooting going on all about them. The result of this year's work is four new reservations made by Executive Order of President Theodore Roosevelt, to whom this Association is deeply indebted for his never-failing interest in and ready help to our work.

The orders are as follows:

It is hereby ordered that the following described islands in Stump Lake in Township 151 North, Range 61 West, 5th Principal Meridian, North Dakota, shown on the official plat approved February 13, 1905, on file in the General Land Office, be, and they are hereby reserved and set apart for the use of the Department of Agriculture as a preserve and breeding ground for native birds, viz.:

Two islands in Section 10, one shown as Lot 3 of the section, containing 12 acres, and one shown as Lot 4 of the section, containing 7.64 acres; one island in Section 11, shown as Lot 4 of the section, containing 2.22 acres; also one island in Section 15, shown as Lot 2 of the section, containing 5.53, total area 27.39 acres. This reservation to be known as the Stump Lake Reservation.

(Signed) THEODORE ROOSEVELT.

The White House, March 9, 1905.

It is hereby ordered that Passage Key, an island near the mouth of Tampa Bay, Florida, as shown on the General Land Office map of the State of Florida of date 1893, and situated in Section 6, Township 34 south, Range 16 east, as the same appears upon the official plat of survey of said township approved March 17, 1877, be, and it is hereby reserved and set apart for the use of the Department of Agriculture as a preserve and breeding ground for native birds. This reservation to be known as the Passage Key Reservation.

(Signed) THEODORE ROOSEVELT.

The White House, October 10, 1905.

It is hereby ordered that the unsurveyed islands of the Huron Islands group, lying near the south shore of Lake Superior, as shown by the General Land Office map of the State of Michigan of date 1904, and situated in Sections 26, 27, 34 and 35, Township 53 north, Range 29 west, as the same appear in part upon the official plat of survey of said township approved June 4, 1847, be, and they are hereby reserved and set apart for the use of the Department of Agriculture as a preserve and breeding ground for native birds, This reservation to be known as the Huron Islands Reservation.

(Signed) THEODORE ROOSEVELT.

The White House, October 10, 1905.

It is hereby ordered that the unsurveyed islands of the Siskiwit or Menagerie group of islands, lying near the mouth of Siskiwit bay, on the south side of Isle Royal in Lake Superior, Michigan, as shown by the General Land Office map of the state of Michigan of date 1904, and situated in Sections 23, 24, 25, 26, 27, 33, 34 and 35, Township 64 north, Range 36 west, as the same appear in part upon the official plat of survey of said township, approved June 4, 1847, be and they are hereby reserved and set apart for the use of the Department of Agriculture as a preserve and breeding ground for native birds. This reservation to be known as the Siskiwit Islands Reservation.

(Signed) THEODORE ROOSEVELT.

The White House, October 10, 1905.

The Stump Lake Reservation is used by Gulls, Terns, Ducks and Snipe.

The Huron Islands and Siskiwit Reservations are occupied by large colonies of Herring Gulls, together with a few Ducks.

Passage Key Reservation, being so far south, is inhabited by an entirely different class of birds in the breeding season, such as Royal, Cabot's, Least and Sooty Terns. Thousands of Herons and also several varieties of shore-

birds breed there. All the sea-birds in the locality resort there every night to roost, also swarms of Ground Doves.

The Association has already secured six reservations, or bird refuges, and the directors expect to be able to secure additional ones in the near future. Reservations can be secured only when the property is still owned by the General Government. Where a colony is located on an island or other property owned by a state, corporation or individual, other methods of control obtain. An effort is now being made to purchase from a state an island on which there is a large colony of Herring Gulls. The Louisiana Audubon Society has taken a ten years' lease of twenty-two islands, each of which is the breeding place of large colonies of birds, such as Laughing Gulls, Foster's Common, Royal and Cabot's Terns, and Black Skimmers. They are also negotiating for the purchase of an island containing over 1,000 acres which now belongs to the State of Louisiana. The warden who has charge of Breton Island Reservation in Louisiana will also guard the territory owned or leased by the Louisiana Society. This territory is quite large, and it is absolutely necessary that our warden should be supplied with a powerful seagoing launch in order that he may rapidly and safely move from island to island during the breeding season so the birds may always be assured of protection. Dependence on a sailing craft is too uncertain. During the present winter it is purposed to build on Breton Island a small house of refuge, which may be used by the wardens or any seamen or fishermen in distress. As there is no drinking-water on the Reservation, it is also purposed to sink a well by the cabin. This will render it unnecessary for our warden to travel to the mainland, a distance of 100 miles, for a fresh supply of water.

Warden System.—The number of wardens in the employ of the Association has been larger during the present year than ever before, and the number will probably increase every year as new colonies of birds are discovered. As the Association grows stronger in members, and consequently has more money to spend, it is purposed to make special investigations of the bird-life of portions of the coast of which we now have only a superficial knowledge. Undoubtedly many large breeding places will be discovered. The magnificent results that have been obtained on the coasts of Maine, Massachusetts, New York, Virginia, North Carolina, Florida, Louisiana and Oregon, and, in the interior, in New York, Michigan and Oregon, make the directors of the Association feel fully warranted in enlarging this valuable means of bird protection. The members and the public must always bear in mind that this Association has grown from the appeal made in 1900 to bird lovers, by Abbott H. Thayer, for special protection to sea-birds during the breeding season, and it is therefore incumbent upon us, as far as lies in our power, to carry out the original idea. The coasts of South Carolina, Georgia, parts of Florida, and especially the Gulf Coast from west

of the mouth of the Mississippi River to the Rio Grande, should have early attention.

Cage-Birds.—This subject has received special and vigilant attention during the present year. New York City is the greatest distributing point in the live-bird traffic, and it is, therefore, comparatively easy to control it and to see that native birds are not dealt in. There have been a few sporadic attempts to bring from the south Mocking-birds and Nonpareils, but they were soon stopped. The dealers now understand that the National Association does not intend to permit any traffic whatever, especially interstate traffic, in live North American birds. In this work the Association has had the heartiest sympathy and coöperation from the officers of transportation companies. Some of them have gone so far as to expend considerable sums of money in printing extracts of the state bird and game laws for the use and guidance of their thousands of local agents.

When the officers of transportation companies are so deeply interested in the subject as to become members of the Association, it is very evident that their influence and support can be obtained at all times.

Foreign Relations—Germany: Early in the year Baron v. d. Bussche, of the Imperial German Embassy in the United States, asked, on behalf of his Government, for a complete history of the Audubon movement and its method of working. This was furnished in the greatest detail, and the occasion was taken to call the attention of the German Government to the very large number of live wild birds that were shipped annually from Bremen. The following note was received in reply:

"I beg to thank you very much for the valuable information you have given me, and for the many reports you have sent. I have not failed to draw the attention of my government to the facts mentioned in your letter that many wild birds are shipped from this country. I hope that the German Government will take steps to stop or hamper this trade. Should the Embassy get any information about this question I will not fail to let you know."

Great Britain: The most cordial relations exist between the Royal Society for the Protection of Birds and this Association. It is suggested to the members of our Association that they subscribe for the Quarterly publication of the English Society, and thus keep in touch with bird protection matters in Great Britain. 'Bird Notes and News' can be obtained for one shilling per year by addressing the Society, 3 Hanover Square, W. London.

Pacific Islands: In the report for 1904, the subject of bird protection on certain islands in the Pacific Ocean was treated of in some detail. This important matter has continued to receive attention, and, owing to the cordial coöperation of the Japanese and United States Governments, the large, important and exceedingly interesting bird colonies are now, it is believed, safe from the ravages of plume-hunters. The official correspondence is so inter-

esting and of such historical value as a record of the work of this Association that it is given in full.

No. 167.

UNITED STATES LEGATION, TOKIO, January 12, 1905.

To the HONORABLE JOHN HAY,
Secretary of State,
Washington, D. C.

Sir:—I have the honor to report that, acting in accordance with your instruction No. 86 of November 11, I have this day had an interview with Baron Komura, the Minister for Foreign Affairs, in which I asked him if he would take some measures to prevent the despatch of expeditions from Japanese ports to destroy sea-fowl on the Midway and other American Islands, and also if the Government of Japan would coöperate with that of the United States in preventing, as far as possible, further destruction of sea-birds on the islands of the North Pacific.

Baron Komura stated in response to my remarks that he would at once cause instructions to be issued to have Japanese ship captains warned not to engage in the business of destroying sea-birds on any of the American Islands. If, he said, after this warning they continue to engage in the business, they do so at their own risk. At the same time, he could not guarantee that they would obey the prohibition, as this class of men was composed largely of lawless adventurers. A special prohibition would be issued to the firm of Kametoki and Mijutane, Fujimi-cho yo, Yokahama, who are known to have been responsible for several of the ventures.

In regard to the general question of joining with the United States to protect the sea-fowl, the Baron stated that there were ships of other nations engaged in the business, and consequently nothing could be accomplished except by international agreement. He was decidedly of the opinion that the matter was not of sufficient importance to warrant a special international agreement.

I have the honor to be, Sir,

Your obedient servant,

(Signed) LLOYD C. GRISCOM.

DEPARTMENT OF STATE, WASHINGTON, February 8, 1905.

The Honorable, THE SECRETARY OF THE INTERIOR.

Sir:—Referring to this Department's letter of November 3 last, I have the honor to enclose herewith for your information a copy of a despatch from the American Minister to Japan, reporting an interview which he has had with the Japanese Minister for Foreign Affairs, wherein the latter stated what steps would be taken by his Government to prevent the further destruction, by Japanese subjects, of sea-birds on Midway Island and other islands of the Hawaiian group.

I have the honor to be, Sir,

Your obedient servant,

(Signed) JOHN HAY.

COPY OF NOTE OF THE JAPANESE GOVERNMENT TO THE
AMERICAN MINISTER TO JAPAN

The Minister for Foreign Affairs presents his compliments to His Excellency, the American Minister, and has the honor to state that the matter of the supervision of predatory hunters of birds on the Midway Islands and other islands belonging to the United

States referred to in a recent interview was immediately brought to the attention of the Minister for Home Affairs, from whom a reply has now been received to the effect that instructions have been issued to the Superintendent of the Metropolitan Police (Tokio), the Governor of Kanagawa Ken and other chief of local officials, and to the Civil Administrator of Formosa, to take strict measures to prevent any persons within their respective jurisdictions from infringing the regulations prohibiting such expeditions.

Early in the year our Honolulu representative called attention to the fact that certain private local interests were endeavoring to secure a concession that would permit them to exploit the birds on a number of Pacific Islands for millinery and other purposes. The facts in the case and the final result can best be given by making the correspondence a matter of permanent record.

HIS EXCELLENCY, THE GOVERNOR,
Executive Chamber,
Honolulu, Hawaii.

HONOLULU, T. H., December 17, 1904

Sir:—Again referring to the question of Laysan Island, Lisiansky Island and French Frigate Shoals, I beg leave to advise, that, in my opinion, I can make a living on them, provided I be granted privileges such that they will warrant me in undertaking the work.

At present the Islands are uninhabited; and are bringing little or no revenue to the Government. They are in the path of navigation. Vessels are liable to be wrecked there; and without assistance their crews necessarily would have to take to small boats to save their lives. The guano beds are practically exhausted, but there are a few pockets that can be profitably worked in a small way. These Islands were formerly the breeding place for sea-birds, but, owing to the depredations of the Japanese, the birds are becoming scarce; and in a few years' time, unless protected, will be entirely driven away.

Believing that cocoanuts would grow there, nine years ago I planted two trees and they have grown well and are now commencing to fruit. All of these Islands can be planted thickly with cocoanut trees which would yield a considerable revenue; and further, would attract rain, so that the Islands in time would become productive. I accordingly make the following proposition:

That I be granted a lease of Laysan Island, Lisiansky Island and French Frigate Shoals, for ninety-nine years on the following conditions:

I will agree for ten years to plant each year not less than one thousand cocoanut trees.

I will agree to pay a royalty of fifty cents per ton on all guano taken from these Islands.

I will agree to protect the birds; but ask for the privilege of killing annually the number stated in my previous letter; the skins of the birds to be turned over to the Territorial Government for sale, and a royalty of ten per cent of the net realizations from the sale of the skins to be retained by the Territory, the balance to be paid to me. . . .

(Signed) MAX SCHLEMMER.

"Different kinds of birds of the Islands and the number that could be killed:

	<i>Variety.</i>	<i>Could be killed as follows.</i>
Number 1.	Black Widacks	5,000 a season
Number 2.	Blue Widacks	2,000 a season
Number 3.	Large Black Birds	200 a season

	<i>Variety.</i>	<i>Could be killed as follows.</i>
Number 4.	Small Black Birds	200 a season
Number 5.	Tropical Birds	200 a season
Number 6.	Love Birds	None
Number 7.	Four large kinds of Mutton birds	5,000 a season
Number 8.	Two small kinds of Mutton birds	500 a season
Number 9.	White Albatross	5,000 a season
Number 10.	Black Gunis	1,000 a season
Number 11.	Frigate Birds	All there could be killed
Number 12.	Large Bubbies	100 a season
Number 13.	Small Bubbies	500 a season
Number 14.	Wingless Birds	1,000 a season
Number 15.	Canary Birds	1,000 a season
Number 16.	Red Birds	100 a season
Number 17.	Miller Birds or insect killer	100 a season

This is the estimate for Laysan Island.

December 23, 1904.

CAPTAIN MAX SCHLEMMER,
Honolulu.

Dear Sir:—Herewith I return the letters received from you on December 19th.

In reference to your proposition to lease the right to take a reasonable number of birds from Laysan Island and French Frigate Shoals, you introduce a new element by offering to plant not less than 1,000 cocoanut trees each year for ten years. And further, that you desire the privilege of taking guano from all these islands, paying a royalty of fifty cents a ton.

I am at a loss to know how many birds it would probably be safe to kill without affecting their numbers. I gathered from our conversation that you thought about ten thousand a season. Your proposition involves 21,800, exclusive of the French Frigate Shoals birds, which I assume are birds of prey.

One suggestion you make, it seems to me, is not at all practicable—that the Territorial Government go into the question of the sale of birds. The policy of the Territory should be, I believe, to keep out of this business.

Naturally, I should refer the whole proposition to Mr. Pratt, the Commissioner of Public Lands, and when it is in shape, I should like to forward it to the Interior Department at Washington, for its approval.

Very sincerely yours,
(Signed) G. R. CARTER, Governor.

HONOLULU, December 24, 1904.

His Excellency, GOVERNOR G. R. CARTER.

Dear Sir:—I received your letter of the 23d inst. As far as the bird-killing concerns, if the government wishes me to find a market for them, it is up to you or Mr. Pratt to set a certain price saying how much the government would want if I undertake the matter myself.

I remain yours

Very respectfully,
(Signed) MAX SCHLEMMER.

February 20, 1905.

The Honorable THE SECRETARY OF THE INTERIOR,
Washington, D. C.

Sir:—The National Association of Audubon Societies (incorporated) has been informed by its representative at Honolulu, H. I., that efforts are now being made by private interests to exploit the colonies of Albatrosses and other sea-birds which breed in large numbers upon Necker and adjacent islands lying toward the western extremity of the Hawaiian group. The killing of these beautiful and beneficial sea-birds is to be done in the interests of foreign millinery trade; and as an inducement to secure a license from the Territorial government for this purpose, the latter is offered a percentage of the receipts from the sale of skins. The parties in interest claim that the Territorial government will receive several thousand dollars yearly as its share in the nefarious business, although, so far as we have heard, no estimate of the length of time the business will probably continue has been offered. The plea is also made that only the annual increase of the birds will be slaughtered.

We submit that the killing of these graceful scavengers of the sea at any time, for the purpose indicated, is indefensible; that to slaughter them (which must be done during the breeding season) with young in the nest necessarily left to starve, is utterly barbarous; that the foreign millinery trade in bird skins should not be encouraged by any coöperation, especially official coöperation, in the possessions of the United States; that the method suggested for raising territorial revenue is unworthy of the American people; that the suggestion of limiting the slaughter to the annual increase is merely an evasion, impossible, and unworthy of consideration, and that the entire annihilation of these breeding colonies of birds would unquestionably follow the action proposed, within three or four years. We submit, also, that all investigations into the broad subject of economic ornithology—the relation of birds in general to human existence—are in favor of protecting the birds, and we therefore feel justified in the belief that a wise public policy will not only discourage the proposed slaughter but, if possible, devise plans and methods of preservation.

In case a contract has been considered along the above lines, it is earnestly desired, on the part of the directors of the National Association, that the matter be held in abeyance until the subject can be taken up personally with your Department and a more detailed protest can be filed.

We do not know whether, under the Territorial conditions, any of these small islands could be protected by being proclaimed bird reservations, as has been done in the case of Pelican Island, Florida, and Breton, and other islands near the mouth of the Mississippi river, Louisiana; but we earnestly ask your advice and coöperation, to the end that early action of definite and conclusive character, if possible, may be taken to preserve these birds.

Very respectfully yours,

(Signed) WILLIAM DUTCHER,
President.

DEPARTMENT OF THE INTERIOR, WASHINGTON, April 15, 1905.

MR. WILLIAM DUTCHER,
President, National Association of Audubon Societies,
525 Manhattan Avenue, New York City.

Sir:—Your letter has been received stating that you have been advised that private interests contemplate the destruction of Albatrosses and other birds upon Necker and adjacent islands lying toward the western extremity of the Hawaiian group for the foreign millinery trade and suggesting that steps be taken looking to the protection of said birds rather than their slaughter.

In response thereto, I have to state that your complaint in this matter was referred to the Governor of Hawaii, and a copy of his report in the premises is herewith transmitted for your information.

It will be seen therefrom that a proposition of the character indicated in your letter was submitted by one Captain Max Schlemmer, but upon consideration thereof it was denied.

Very respectfully,
(Signed) E. A. HITCHCOCK, Secretary.

TERRITORY OF HAWAII, March 29, 1905

Application was made by Captain Schlemmer, under date of December 17, 1904, for a 99 years' lease of Laysan Island, Lisiansky Island and French Frigate Shoals with the option of taking a certain number of birds from Lisiansky and French Frigate Shoals, the Territory to be paid a royalty of ten per cent of net realizations. The proposition was not accepted, and I enclose copy of the correspondence for the information of the Department and of the National Association of Audubon Societies, should the Secretary of the Interior deem it advisable to supply it.

(Signed) G. R. CARTER, Governor.

Mexico.—Bird protection in this Republic must be taking some hold of the citizens as the result of the steady output of valuable educational literature that is being published by the "Comission de Parasitologia Agricola."

Babama Islands, W. I.—Very largely through the efforts of our treasurer, Mr. Chapman, most of the birds of these Islands now receive legal protection during the whole or a portion of the year.

The bill was prepared by our fellow member at the request of the Colonial Governor, and was adopted with some modifications.

SUGGESTIONS FOR THE COMING YEAR

Duty of Members.—At this time, it is pertinent to say something to the members of the Association, and to point out to them their part in this great undertaking. You should not cease to think and act after you have attended an annual meeting and elected managers, or have read the Annual Report, or renewed your yearly subscription. It is your duty, by every means in your power, to uphold the hands of the officers you have chosen and to be loyal to the principles of the Audubon movement. This may mean that you will be called a faddist, or perhaps even that more distasteful title, a crank. For example, I conceive it to be the fundamental principle of Audubonism to eschew the use of all feathers, except those of the Ostrich. While it undoubtedly is permissible to wear the plumage of domestic fowls, either in the natural or manufactured state, yet the true and consistent member of this Society will not use any plumage, either natural or manufactured, that can only be obtained by the sacrifice of life. If this stand is taken, there is no possibility of the feathers of wild birds being used in manufactured orna-

ments. Feathers of wild birds can be dyed and manipulated in such a way that even the expert ornithologist can detect the deceit only after the most careful examination. How, then, can a layman, under such conditions, know what feather ornament to wear? There is only one thing to do — eschew all plumage, except that of the Ostrich, and thus have a clear conscience yourself and set a good example to your neighbor.

Again, it is your duty to do some Association work yourself, and not expect it all to be done by your officers and directors. Our members are widely scattered over the country, and each one has a local influence that can always be exerted in behalf of bird protection and the building up of our Society. A gentle word on a fitting occasion, a warning when necessary, a suggestion of the importance of Audubon work, directing the attention of the agricultural folk to the good birds do, a hint that the Association needs a largely increased membership, and that it depends on dues, gifts and legacies for its support, are all opportunities for the lay worker to secure good for the Society and, by reflex action, for himself.

A membership card and some of the publications of the Association should always be at hand for use at the proper moment, and, above all, the merits of our organ, BIRD-LORE, should be on your mind, and you should by every means in your power widen its chance to do good. It is the medium of communication between workers in widely separated fields, it contains current news of Audubon activities, and the larger its circulation the greater will be its influence.

Legislation for Cats.—The question of the cat as a bird-destroyer is daily becoming of more importance and should have attention from this Association. Reference is made to it at this time in order that some expression of opinion may be given and placed on file. Many of the ornithologists of the country, and others who have made investigations of the habits of the cat, run wild, believe that there is no greater cause of bird destruction than a feline that is compelled by force of circumstances to procure its own living. This Association, being established for the protection of birds and animals, cannot consistently advocate the wholesale killing of cats. It should, however, advocate a larger degree of responsibility on the part of their owners. This class of domestic animals is far too numerous at the present time, and some means should be taken at once to prevent an undue and further increase. This can best be brought about by restrictive legislation similar to that applied to dogs. Every person who owns a cat should be compelled by statute to pay an annual tax on the same, in the same amount that he pays on the dog he owns, and the same care should be exercised to see that the cat should be kept confined and not permitted to range at will. No citizen in any state is permitted to allow his horses, cattle, sheep, or any other domestic animals to range at large to become a nuisance to the public, and there is no good reason that can be advanced why any exception should be

made in the case of the cat. Further, to abandon a cat and thus make it homeless is decidedly cruel; therefore, a law compelling those who desire to keep a cat or cats as pets should be passed, holding owners to the strictest accountability for their welfare and maintenance. In some parts of Europe this question is receiving the most earnest and studious consideration, and in Germany many of the cities have passed restrictive ordinances. This question is too important in the United States to be passed over lightly, and it is hoped that some action will soon be taken to prevent the increase of this most potent of bird-destroyers.

School Bird-Clubs.—Probably one of the most important subjects to be considered by the National Association, a subject ranking with legislation, reservations, or the warden system, is how to interest the boys and girls of the country in the preservation of birds. This subject was mentioned in the president's annual address of 1903 (p. 98) and at more length in that of 1904 (p. 60). Certainly the time has now arrived when this subject should be taken up systematically, and means should be adopted to organize the millions of children in the country into Bird Clubs or Junior Audubon Societies. This, of course, will have to be accomplished through and by the aid of teachers. If we can create among the children an interest in wild life, this Association will grow immensely in strength and ability to carry out the objects for which it was organized. In this issue of BIRD-LORE, a plan is detailed by which the teachers of the country may become auxiliary members of the Association, and through their membership receive all the educational literature that has already been, or will be, published in the future.

So many requests are received for information regarding the method of organizing a Bird Club that it is deemed advisable to publish a leaflet on the subject; this will be ready for distribution about January 1, 1906.

Women's Clubs.—Organization of the women of the country for mutual improvement and sisterly help is going on all the time. The local club which influences the village becomes a part of the State Federation, thus enlarging its influence; the State Federation in turn becomes an influential factor in the National Federation. Women's Clubs exert an ever-growing influence in social purity, village improvement, good civics and other public interests of a like character. There is one other subject that should receive their most earnest attention and hearty support,—the protection of birds. For women, birds were killed, that their plumage might be worn as an ornament,—not a necessary article of clothing, but something entirely superfluous. The club women of America, with their powerful influence, should take a strong stand against the use of wild birds' plumage, and especially against the use of the *Aigrette*. Every club should have its Audubon Committee and should always have Audubon literature and BIRD-LORE in its library and reading-room. A close affiliation between this Association and the National Federation of Women's Clubs will be mutually helpful.

Aigrettes.—The sale of these plumes still continues to such an extent that the White Herons seem doomed to extinction. This beautiful feather is the one that fashion and its votaries will not give up. Almost every show-window displays some, although, to their credit be it said, there are wholesale and retail milliners who will not sell them. The New York Audubon Society had a bill introduced in the Legislature at its last session to prohibit the sale of Aigrettes, irrespective of where they were obtained. This was done primarily to test the constitutionality of such a law. The bill passed the Senate, but, prior to its consideration by the Assembly, a suit was started in New York State against a dealer for the sale of foreign game, during the closed season. This case will settle finally the constitutionality of the New York law which prohibits the sale, during the closed season, of foreign game. If this law is pronounced constitutional it will also apply to, and will, by a slight amendment to the present plumage law, prevent the sale of imported Aigrettes. If such sale cannot be prevented, there is no hope of saving the few remaining American White Herons, for there are, and always will be, some women to whom no appeal is effective.

Sale of Game.—The prohibition of sale of foreign game during the closed season is important, but the non-sale of *all game at all times* is of greater importance. There is no other method that will stop the gradual extermination of the game-birds of the country. This result will not occur in the lifetime of the present adult membership of this Association, but it will surely come to pass if sale is not prevented and cold storage is not forbidden by law. Some of the game-birds of this country are now dangerously near the fatal line, and all legitimate means should be taken to save the remnant for posterity. Stopping sale may seem to many to be a radical move to make, but to those who have given the subject thoughtful consideration there seems to be no other course to take. We do not advocate a perpetual closed season for game, but we do urge a short season only in the fall of the year. This will necessitate a uniform law throughout North America to abolish all spring shooting.

Spring Shooting.—Killing game-birds of any species after January 1, and until the young of the year are able to care for themselves, is indefensible from any point of view. Many of the states have taken very advanced positions in this highly important matter, but other commonwealths still permit this most pernicious and wasteful practice. It is the duty of this Association to agitate persistently this subject and, so far as it has influence, to exert it in behalf of the total abolition of the killing of birds in the spring of the year.

In concluding, permit me to quote from Bishop Brooks: "If you do your work with complete faithfulness and with the most absolute perfectness with which it is capable of being done, you are making just as genuine a contribution to the substance of the universal good as is the most brilliant worker

whom the world contains. You are setting as true a fact here between the eternities as he.

"All our works, even the greatest, are so little in relation to the world's need; all our works, even the least, are so great in relation to the doer's faithfulness. There is the secret of self-respect. Oh, go take up your work and do it. Do it with cheerfulness and love. So shall you shine with a glory which is all your own,—a glory which the great heaven of universal life would be poorer for missing."

"Like as a star,
That maketh not haste,
That taketh not rest,
Be each one fulfilling
His God-given best."

STATE REPORTS

The work of the State Audubon Societies during the past year has progressed in many instances in a very satisfactory manner; in others there seems to be a lack of interest, or, perhaps, of a competent executive body which will devote the necessary time and energy to push bird protection in the way the importance of the work deserves. The growing interest in the subject and its introduction in educational centers will, it is hoped, overcome this difficulty in a great measure in the near future. Many interesting details and valuable hints are presented in the following pages, which will amply repay perusal.

Alabama.—This Gulf state is now the only coastwise commonwealth that has not adopted the Model Law. The next session of the Legislature will not be held until 1907; therefore no effort can be made to change the bird laws before that date. All that can be done is to try to educate the citizens by a liberal distribution of good bird literature, showing how important is the relation between birds and agriculture. The fostering care of the National Association will be extended to this state, especially in its schools and Farmers' Institutes.

Arizona.—The only word from this state regarding birds or game was from an army officer stationed at one of the military posts, who stated that Arizona, so far as he could see, had few game laws, none of which was observed in the slightest degree. While this lack of interest in such an important matter is unfortunate, yet it is not so vital as it would be were the population more dense.

California.—The essential parts of the Model Law are now in force in this commonwealth, having been adopted by the Legislature during the session of 1905. This important change in the law was effected by the active work of the Audubon Society, with the hearty coöperation of the Fish and Game Commission and several of the most prominent ornithologists and bird-lovers of the state. Secretary Way, of the California Audubon Society, sends the following interesting report of progress:

"During the past six months, much of the energy of the Audubon Societies of California has been devoted to spreading throughout the state information regarding the non-game bird law and game law amendments passed by the last Legislature. About 5,000 law leaflets have been sent to school superintendents, teachers, game wardens, farmers' clubs, and individuals interested in bird protection; a second edition will be distributed during the coming school term. Boards of education, superintendents and teachers are cheerfully coöperating with the societies in bringing the new bird law to the attention of pupils.

"The societies have also distributed about 3,000 other leaflets, and, through their educational influence, and by newspaper articles, obtained in five of the seven southern counties ordinances protecting the Mourning Dove until the end of its nesting period. Two counties practically gave no open season for shooting Doves. This action resulted in an attack on the ordinances on constitutional grounds in the District Court of Appeals at Los Angeles. The Court went no further than to decide that a one-day open season for game is not within the intent of the Law, but the decision caused much confusion regarding all county game ordinances and thus resulted in a great deal of illegal shooting. The matter is now before the State Supreme Court, and the right of county supervisors to shorten open seasons will thus be finally settled.

"Two local societies have been recently organized and substantial gains have been made in several other localities. There are now seven Audubon organizations in the state, having a total senior membership of nearly 800. The junior sections number over 500 members. Other organizations, coöperating or affiliating with us, and having special Audubon committees, are doing splendid work. A state organization and federation of the local societies is planned for before the next anniversary of our Audubon movement.

"The Pasadena Society has given three illustrated bird lectures and held four public meetings since the last report. The secretary has delivered a number of addresses before farmers' clubs and other organizations, and Mrs. Myers, president of the Garvanza local society, has addressed a large number of club meetings and educational institutes.

"About 1,000 warning notices have been sent out, and 'No shooting' signs have been furnished free of cost to all landholders who would agree to post them. By this means, birds and game are having almost absolute pro-

tection on many large farms, and especially about the environs of towns and cities. Public sentiment is strongly in favor of the birds in all but a very few localities of the state, and the new non-game bird law is generally respected. The societies have had effective coöperation from the state Fish and Game Commission, which is pursuing a commendably conservative course in the matter of permits for bird- and egg-collecting, and rendering every reasonable aid in the enforcement of the law."

How intelligent this coöperation to which Mr. Way refers is, may be inferred from the following, taken from a California paper: "The Fish and Game Commission has announced that no permits will be issued for collecting the California Condor or its eggs for any purpose. This bird, only surpassed in size by its near relation, the Condor of the Andes, was formerly abundant throughout the coast range of southern California, but is now extremely rare. It is feared that, on account of the high price offered for its eggs, its total extermination would soon be effected."

Connecticut.— In the last year's report special attention was called to the splendid educational work that was being carried on by the Audubon Society of Connecticut in conjunction with the State Board of Education. During the present year that work has culminated in 'Connecticut School Document No. 4, 1905.—A year with the birds. A guide to the naming of 100 birds commonly seen in Connecticut.' Compiled by Mabel Osgood Wright, president State Audubon Society. In this guide Mrs. Wright says: "A word to the teachers. The following pages have been arranged especially for the use of teachers in rural districts, where wood, meadow and orchard often surround the school-house itself, and the daily walk to and from school is through bushy lanes and along tree-bordered highways. Every possible chance for seeing the birds and wanting to know them lies close at hand. If by having this pamphlet to keep in the desk a teacher can help a group of children to name even a dozen birds, they will listen more eagerly to the many books in the libraries that tell fascinating stories of them." Space will not allow a review of this valuable book; it is only necessary to say that were a like volume in use in the schools in every state in the country, the cause of bird protection would be advanced more rapidly than by any means that has heretofore been used. The greatest hope of the permanency of the Audubon movement is the education of the school children. Connecticut is in the van in this respect.

Delaware.— A substantial increase in new members shows life and activity in the Audubon Society of this state. Mrs. Florence Bayard Hilles, secretary of the State Society, sends the following brief but valuable report:

"The Delaware Audubon Society has this year added 1,864 new names to its membership list, has secured a charter, and has had passed by the Leg-

islature an important amendment to its laws, by which the Society has half of the fines imposed for violation of the Model Law. The increased membership is almost wholly due to the illustrated lectures which have been most ably given by Prof. A. R. Spaid. One conviction has been obtained so far this year."

District of Columbia.—The District Audubon Society is aggressive and, necessarily, progressive, as is shown by the following report of the secretary, Mrs. Jeanie Maury Patten :

"Continued good work in fields already covered and the opening up of new channels is to be reported for this season. The annual October excursion on the beautiful Chesapeake and Ohio Canal opened the season, followed by the usual reception at the Washington Club, intended as a purely social function.

"In December began the course of lectures given the first Tuesday in each month, except January, from December to May, when the field meetings begin. The subjects for these lectures were, December 6, Exhibition of the Society's new illustrated lecture, Mr. Henry Oldys; February 7, Economic Relations of Birds, Prof. F. E. L. Beal; March 7, by request, Second Exhibition of Society's Lecture, Mr. Henry Oldys; April 4, Tramps with a Camera, Dr. C. E. Waters, illustrations with lantern-slides. This lecture was mainly to arouse an interest in the Wild Flower Preservation Society, but was a delightful combination of both flowers and birds, and well illustrated by bird notes as well as flower pictures.

"For our annual meeting in January, besides the usual report of the treasurer and secretary, the Rev. William Rogers Lord gave a most fully and delightfully illustrated lecture on the ministry of birds. This was a very successful meeting, and added quite a number to our membership.

"In April and May were given five field meetings. Some were all-day trips, and some were arranged so as to cover two half days. Each meeting was conducted by a number of well-trained ornithologists, and, as usual, created more enthusiasm than anything else we ever do. People who go once nearly always go another season, and so each year the number of those who discover the charms of the woods and fields increases.

"In this connection were held the four bird classes indoors, which are always well attended by older persons as well as children. For these last named, special lectures were arranged and given at the Washington Public Library on Saturdays in April and May, at which talks were given by Mrs. Geo. Cotton Maynard, Prof. Cook, Hon. Job Barnard, Mrs. Vernon Bailey and others. In this connection daily bulletins were posted in the Library relating to the arrival of birds, and charts were hung so that children and others could study them at their convenience.

"The Society's lecture has been in constant use both in suburban places

and in various schools. Between 2,500 and 3,000 publications have been sent out, consisting chiefly of notices of lectures, leaflets of the National Association, publications of the Agricultural Department, and always the circulars of BIRD-LORE.

"The conditions here are particularly advantageous for the study of birds, and, besides this, as the area is limited and distances are comparatively short, the social side of the work has great charm, many of the members meeting frequently in other fields of work, thus creating friendship for each other as well as for the birds. Our season closed most delightfully with a reception given the Society's members by Mrs. Gardiner G. Hubbard, which took the form of a garden party at her lovely home 'Twin Oaks,' on the afternoon of June 5, when the entire place was thrown open, and every one expressed the greatest delight in the beauty of the grounds, the many birds, and lovely flowers. The membership is now about 400."

Florida.—Bird protection in this state is now associated in the mind of the public with a tragedy. The death of the young martyr, Guy M. Bradley, will always be associated with Audubon work, and years hence his name will be as familiar to bird-protectors as it is today.

No marble shaft marks his resting place on the shores of the gulf, but everywhere in the hearts of bird-lovers is sorrow for his loss, and admiration for his bravery.

"And the low-voiced palm tree sighs
O'er thy bed so lonely.
All thy life thou lov'dst its shade,
Underneath it thou art laid
In an endless shelter;
Thou hearest it forever sigh,
As the wind's vague longings die
In its branches dim and high—
Thou hearest the waters gliding by
Slumberously welter."

All of the wardens report a very successful season: Charles Russell was stationed on Bird Key, Dry Tortugas, in charge of the large colony of Sooty and Noddy Terns; Chas. G. Johnson, keeper of Sand Key Light-house, was in charge of several colonies of Terns and Laughing Gulls breeding on the Keys near his station, and Paul Kroegel faithfully watched Pelican Island Reservation. During the coming year a new and very important Reservation will be in charge of an enthusiastic member of the Association. It is not often that one of our members is so situated that he can have the pleasure of acting as warden, nor is the Society often favored in this way. Mrs. Kingsmill Marrs, chairman of the Executive Committee, makes the following splendid report for the Florida Audubon Society:

"Membership, including all grades, 816; leaflets distributed, 12,000; warning notices, for posting, sent out, 900; summary of the State Bird Laws sent for posting in hotels, stations, express offices, etc., 500; Massachusetts Audubon Society Charts, for use of schools, 36; local secretaries, 7; about 700 letters written; teachers enrolled as members of society, 115.

"Four prizes of books were given this year for 'Bird Compositions.' Although an invitation was extended to all schools in the state for pupils to compete for prizes, only the schools of Orlando sent in essays.



PARENT AND YOUNG
A scene on Pelican Island
Photographed by F. M. C.

"The Palmetto Club of Daytona, The Rosalind Club of Orlando, and the Florida Federation of Women's Clubs, have each paid a sustaining membership; the Sunshine Society helps us through the press and by circulating leaflets.

"These statistics, taken from the report of the secretary, Mrs. Vanderpool, show that the general activity of the Society has increased and a more wide-spread interest than in any past year has been shown.

"During the year two 'auxiliary committees' have been formed, one at Port Orange in charge of Mrs. Roe, with a membership of twenty, another at San Mateo, organized by Miss Crosby. Here, besides about twelve mem-

bers, 'The Ladies' Village Improvement Association' has become a sustaining member. We encourage this club membership, as it so facilitates our distribution of literature. The chairman of the 'Bird Preservation Committee of the Federation of Women's Clubs,' Mrs. E. A. Graves, writes that, twenty-two clubs in Florida which belong to the Federation are most of them interested in bird study, and a majority of these have established and observe Bird Day each year.

"The effort to secure the passage of an 'anti-live-pigeon-shooting' bill at the last meeting of the Legislature of Florida was, on all sides, warmly supported. The defeat of the bill was not only a disappointment in the cause of bird protection, but a regret to all right-minded persons, that cruelty and frivolity could triumph, in this twentieth century, over humanity and justice.

"The murder of Warden Guy M. Bradley fills not only our Society in Florida, but the people of the United States, with horror. A brave man shot at his post, defending the helpless against brutality, and all for what? A feather, to adorn the head of some woman!! The picture of the murdered man, and above him the woman's face, smiling, as she carries proudly on her head the beautiful aigrette plume, would have furnished a Goya or a Hogarth a fitting subject for his brush. That the lives of those standing for the maintenance of law and order in the state, are in jeopardy, is a matter of concern to thinking people.

"The following extract from a letter from our honorary vice-president, Mr. Kirk Munroe, will be interesting: 'During the past winter a number of residents along the water front at this place (Cocoanut Grove) have been pleasantly interested in watching, feeding and taming a small flock of Wild Ducks that finally gave ready response to a whistle, and hurried trustfully to the very feet of any person ready to feed them. On the morning of Sunday, February 26, not finding any person present at their usual place of feeding, six of these tamed Ducks ventured near an unaccustomed wharf, on the end of which stood a young man who, when the hungry, trusting birds were about five feet away, fired into the bunch, killing four and wounding two. At the success of his shot he roared with laughter, and expressed the hope that his neighbors would tame more ducks for him to shoot.' Mr. Munroe says: 'As soon as the brutal act was reported to me, I determined, if possible, to punish it, and accordingly prosecuted the offender, in the name of the Audubon Society of Florida, for hunting on Sunday. The case was easily won and the fine with costs, amounted to \$60. It was the first time the young man had ever heard of our Society, and I believe it will be long before he forgets the lesson it has taught him.'

"We would here publicly thank all in Florida who make personal effort for the cause of bird protection. We would also thank all newspapers who have gratuitously printed articles for us, and the Southern Express Company, who have greatly facilitated the posting of the State Laws."

The remarkable tameness of Wild Ducks spoken of by Mr. Munroe, was observed by the president of the National Association while at Palm Beach in February last. It certainly was novel and interesting to be able to call Lesser Scaup Ducks to the shore to feed them.

Georgia.—Mr. Pearson, secretary of the National Association, has spent some time in this state, and is devoting considerable effort to reorganizing the Audubon Society. New officers have been elected, and one of the results of the new life that has been infused is that the National Association



WILD DUCKS AS PETS
Photographed on Lake Worth, Fla.

has now among its members quite a number of prominent citizens of this state. It is proposed by the Audubon Society to make an effort at the next session of the Legislature to secure the passage of a law which will place them in charge of game protection. The successful work of the North Carolina Audubon Society as the Game Commission of that state already is exerting an influence for good beyond their own borders. The National Association is a strong advocate of non-political game commissions, supported by gun licenses. In this way the very best results for game and bird protection are obtained, without a direct tax on the people.

Illinois.—Audubon work in this state is surely attracting attention. This is evident from the fact that Miss Nancy Lawrence, who died in August, left a legacy of \$1,000 to be used in bird protection work by the

Audubon Society. It is good to feel that this work is commending itself to the public. This is the first legacy that has ever been received by an Audubon Society, but the Association feels sure that this one is but the forerunner of many to follow in the future. In these days of philanthropy such an important public movement as organized bird protection is sure to be recognized. The report of the secretary, Miss Drummond, is given in detail:

"The Audubon Society, at its eighth annual meeting, adopted a change in the constitution, increasing the number of directors from fourteen to twenty. From the various reports read at this meeting the following items are taken:

"The membership has been increased by the addition of 88 adults and 5,083 juniors, making the number joining since the organization of the society, about 1,100 adults and 20,142 juniors. Of these, about 115 pay annual dues of one dollar. The organization of a committee of 28 persons, not directors, into a membership committee proved a success, and was partly responsible for the increased membership. No semi-annual meeting was held last fall, the directors feeling that one public meeting a year was all that was needed.

"Only two leaflets were issued during the year, one being a short letter to teachers by our new chairman of the junior work, Miss Ethel E. Hooper; the other, an excellent four-page leaflet on the Study of Birds, prepared by Miss Alice Hall Walter. An excellent little pamphlet, 'Bird Study in the Rural Schools,' by Thomas L. Hankinson, one of our Illinois teachers, has been a help in our work, and a book by Mr. D. Lange on the 'Birds of Illinois' is being published under the auspices of the Illinois Society. Various other leaflets have been purchased from the National Association and elsewhere, so that 9,770 have been sent out. Of these, a number have gone to teachers, farmers, women's clubs, etc., and a letter from the Junior Chairman, enclosing several leaflets, has been sent to each county superintendent of schools in the state. Mr. Charles M. Roe has allowed us to place our leaflets in his book-store in Chicago.

"As a session of the State Legislature was held last winter, our Legal Committee took measures by which all proposed changes in laws relating to birds were at once reported to the chairman, and, when bills were introduced against the interests of the birds, letters were at once written to the proper persons urging adverse action. A letter urging the re-appointment of our present game commissioner was sent to the governor.

"Numbers of meetings have been held during the year by teachers, and farmers' institutes, women's clubs, etc., and our one illustrated lecture, with its fifty-six slides, has done excellent work. For some unknown reason, our libraries lead lazy lives,—there is almost no demand for them. Our school work is most encouraging, many of the teachers being thoroughly interested

and faithful, and we feel that as far as a knowledge of bird life is concerned the children are better informed than their parents. Our farmers, also, are learning to know their good friends, the birds, and last year a number of them fed the birds during the winter, one case being reported of a farmer who drove seven miles with food.

"Through the kindness of the editor of BIRD-LORE, a list of its subscribers in Illinois was sent to the secretary of our Society, when the rather surprising fact was discovered that only about one-third of the subscribers were members of our Society. It seems as if any one who reads BIRD-LORE should be convinced of the necessity of lending a helping hand to their state Society.

"The receipts of the Society for the year have been \$410.68,—the expenses, \$345.76."

President Deane, of the Illinois Society, has just issued an admirable letter to the Farmers' Institute of Illinois, a copy of which is herewith presented, with the suggestion that every Audubon Society takes the same method of urging farmers to join in the movement to protect their best friends, the birds:

"Dear Sir: The directors of the Illinois Audubon Society, appreciating the value of bird-life to the farmers of the state, respectfully urge that the very important subject of Bird Protection be included in your program of lectures to be delivered at the Farmers' Institute meetings in your county for the coming season.

"The farmer is one of the principal personages to instruct as to the usefulness of the birds which live and breed about him, and that are such an important adjunct to the successful raising of his crops; and it is important that he should realize that by feeding the birds in winter and protecting them at all seasons, he is caring for the best workmen he can employ. While the limited number of our directory does not admit of sending speakers through the different counties, we feel sure that there are many located throughout the state who are competent to speak intelligently on the subject and who would gladly offer their services."

Iowa.—This is one of the few densely populated agricultural states where the citizens have not yet demanded the adoption of the Model Law. An attempt was made to pass it at the Legislative session in 1904, but without success. The effort will be repeated at the coming session, which commences early in January, 1906. It seems almost incredible that in a state where the farming interests are so vast but little interest is taken in a matter of such vital importance. Special educational work will be done by the National Association before the next Legislature convenes, in order to create an interest in bird protection and a consequent demand for the passage of the Model Law. Iowa has 34,574,337 acres of farm land, which

produced in 1899 (last census) crops to the value of \$263,000,000. Over \$16,000,000 was paid for labor alone, but not one cent of this large sum was paid to the birds for the labor they freely gave to the agricultural folk in the destruction of noxious vermin and insect pests, nor for the thousands of tons of weed seeds that they destroyed. Then let the farmers, at least, repay the birds by seeing that they are accorded the fullest legal protection.

The Audubon Society can do a great civic work by agitating this subject before every Farmers' Institute in the state. The example of Illinois is a good one to follow in this respect. That the Society has not been idle during the past year is evident from the following report of the secretary, Mrs. William Parrott:

"During the year 1,000 National leaflets, 1,000 No. 1 Leaflets, issued by the Iowa Society, and several hundred BIRD-LORE subscription blanks have been freely distributed at Farmers' Institutes, district meetings of women's clubs, the Iowa Federation of Women's Clubs, the Waterloo Chautauqua, teachers' institutes and public schools. One thousand Audubon pledges are being placed in city and rural schools and public libraries. Two warning notices have been given. Sixty new members have been added to our membership list, making a total of 331.

"Several fine addresses have been delivered throughout the state by enthusiastic bird lovers. Mrs. Freeman H. Bloodgood, of Waterloo, has written several excellent articles for our Iowa papers, and secured many new members for the state Society. Prof. Chas. R. Keyes, Mt. Vernon, Iowa, has furnished the Society with a list of the common birds of our state, which we hope eventually to include in an outline of study for the Iowa schools.

"Mrs. Alice Fletcher, past president of the Iowa Federation of Women's Clubs, rendered valuable service by giving the Audubon Society a place on the Federation programme last May, when the needs of our Society were brought before the club women of the state. We are encouraged to believe that recognition by the Standing Committee in the Iowa Federation of Women's Clubs will be accorded our State society in the near future."

Louisiana.—Although the Audubon Society of Louisiana is not great in numbers, yet it has boundless energy and, therefore, has secured splendid results. No other Society has accomplished more, in the protection of sea-birds. The control by lease of thousands of acres of islands, and the actual ownership of a large area makes the work of this Society unique. The Society has partially developed plans for future work which will add greatly to its power for good. President Miller presents the following report for the year:

"Robbing the nests of the wild sea-birds breeding on the coasts of the

state of Louisiana has been carried on for many years past without protest; the result naturally being the extermination of the birds. This undoubtedly would have been the result if the National Committee had not come to the rescue. With their help, however, the bird-breeding islands have been protected during the past year, and now, instead of a very few, thousands upon thousands of Laughing Gulls, Louisiana Herons, Black Skimmers, Royal, Common, Foster's, and Cabot Terns were raised in 1905. We believe if



A SECTION OF CASPIAN TERN COLONY IN OREGON
Photographed by Finley and Bohlman

this help is continued for a few years longer these islands will show the most marvelous exhibition of bird-life to be found anywhere in this country.

"Our Society has rented, from one of the state boards, twenty-two bird-breeding islands, with a probable area of 5,000 acres. In addition to that we are buying from the state a celebrated bird-breeding island about 1,000 acres in extent, and propose to change its name from 'Battledore' to 'Audubon,' in commemoration of the great naturalist who was born in our state.

"Last year we secured the passage of the Model Law, with the result that trapping and shipping Mockingbirds, Cardinals and Nonpareils from the state of Louisiana has entirely ceased.

"We are working with the school teachers and the editors of our state papers, trying to show them the character and importance of Audubon work,

and in time hope to secure the total abolishment of the killing of non-game birds by all classes.

"We have distributed thousands of warning notices printed on linen. Our president has delivered many lectures on bird-life in different parts of the state. We have 125 active, 10 life, and 6 associate members, and are growing slowly but surely.

"To protect adequately our own bird-breeding islands we are in sore need of a power-boat. With one we could greatly increase the protection given."

Maine.—It was only a few years since that the bird-life of the coast of Maine was in danger of total extermination; how different the conditions are today can hardly be realized by a person who reads the following report: To comprehend fully the splendid results of six years' protection by wardens, a person should visit some of the colonies of Gulls and Terns that are being guarded. It is an imposing sight to see the clouds of birds and their remarkable tameness everywhere along the coast.

The American Eider Duck has for a number of years been on the verge of extermination as a breeding bird in the United States, and, to prevent this unfortunate result, special attention has been given to this species. There is only one island on the Maine coast where it is positively known to breed, although a few pairs may breed elsewhere. The warden in charge was given explicit directions to guard this island with the utmost care, and to prevent the taking of the eggs after they were laid. It is with the greatest satisfaction that the Association is able to quote the following from the warden's report: "May 5, 12 Eider Ducks arrived at the island, which is in plain sight of where I live, so I can watch it thoroughly. I saw at one time three pairs of the Ducks after the young were hatched. There were 22 of the young ones, and I believe that more were hatched that I did not see. I estimate that 2,400 Gulls were raised on the islands in my charge. The birds have had a good season."

The Legislature of Maine should pass a law making the close season on Ducks commence January 1. If this is done the Eider will continue to breed in that state in increasing numbers. The results of special protection on one island this year shows what can be accomplished.

Warden Cuskley, at Libby Island, reports: "About 2,000 Terns arrived May 23, some 1,500 Gulls having come some time before." He estimates that some 1,500 young Terns and 1,000 Gulls were raised. The Terns have established another colony on a near-by island.

Capt. O. B. Hall, warden in the vicinity of Crumple Island, gives a detailed report of a very favorable season for the Gulls, Terns, Sea Pigeons and Blue Herons in his charge. At least 1000 Gulls and 1,500 Terns were raised. He also reports the interesting fact that the Black Ducks which formerly

bred on Great Wass Island all sought a new breeding place. This the warden attributes to the fact that Wass Island was stocked with foxes.

Warden Cummings, of Wash Island, gives a very excellent reason why laws should be passed throughout the country removing the smaller members of the order Limicolae or Shore Birds, commonly known as Peeps or Sandpeeps, from the game laws. They are too beautiful and interesting, and are too much a part of the life of the seashore, sand-bars or salt meadows to be slaughtered. Their bodies are too small to be of value as food, and shooting them for any other purpose is grossly cruel. There is certainly no more beautiful sight than to see a flock of these graceful little creatures swirling about over the strand or daintily running about on the wet sands or kelp-covered rocks. Let the Audubon Societies voice their sentiments in this matter ; it will do good work. The warden writes : "There are hundreds of little Sandpeeps on this and Cone Island, and they form in flocks and sit on the shore. Gunners come here and slaughter them awfully, for it is no trick to fire into a big flock of them and kill and wound a large number. After the gunners have been here my children bring in very many wounded ones, some with broken wings, or legs shot off, or eyes shot out, in all shapes. The gunners don't get half they shoot down. It seems a shame to kill these poor little things, and I hope some time in the near future there will be protection for them, with a heavy fine attached." The warden also writes that the Gulls in his charge are very tame, and that the colony, which is a small one, is steadily increasing in size. Crows did some damage by eating eggs, but effectual means were taken to keep them away.

One of the largest Herring Gull colonies in the United States is located on the Great and Little Duck Islands. They are in charge of Capt. William F. Stanley, keeper of the light station. Both Mr. and Mrs Stanley have always taken a great interest in the protection of these birds, and the reports furnished are of great interest and value. That of this year is as follows :



AN OREGON CORMORANT ISLAND, 25 FEET WIDE BY 75 FEET LONG,
CONTAINING 190 CORMORANT NESTS
Photographed by Finley and Bohlman

"March 9. The first Gulls made their appearance in a snow storm, prospects not encouraging, but they stayed on the Island and commenced building nests (or tearing old ones to pieces). About May 2 Gulls left the shore line and took to the center of the island. May 14, found first egg; first full set, May 19, found first young bird, June 11; August 15, notice some of the old birds are going. A very few birds have been shot from boats; not so many as in former years. I have found 11 dead birds this season that were wounded and came back to the Island to die. The cause of the greatest loss of life is when the young birds are half grown and about ready to fly and persons walking around the shore when there is a surf on, then the young birds are frightened and make for the water, and the sea dashes them against the rocks, breaking their wings and drowning them. That is now the most trouble to guard against; it is not done with evil intent. The old birds do not fail to provide food for their young, although as the birds get large the old ones have to go sometimes many miles to do it, but as a general thing there is plenty for them. I have watched them coming back at night, appearing very tired, flying very low, one behind the other. They would light near where the young should be, and call, and the chicks would rush up to the old bird and pick its bill; after the proper time the old bird will stretch out his neck and up will come a mess of almost everything from bread, sea cucumbers, livers, fish (all the small kind). It is astonishing sometimes how much they will throw up. If there is anything left after the feast the old bird will swallow it again. The only time there is anything left is when the birds are very young, then the old bird will throw up the same mess two and three times in as many hours, being very careful to pick up what is left each time. Woe betide the young bird that belongs to a neighbor who tries to fill up at the wrong place. I have seen a young bird killed by one blow from the old bird's bill, blinded and scalped,— his head torn in two.

"As the young birds gain in size the old birds bring them larger fish to swallow. We have a few old birds this year who know the time we feed the hens, and when that time draws near they are on hand to dine with the hens. There have not been as many birds on this Island this season, but there have been more on Little Duck. I should say we have had about 3,500 birds and about 1,600 nests, and I think more than double that number of young birds. About every nest had three young birds, and if it had not been for the surf business the record would be broken. We have about 300 Sea Pigeons, (Black Guillemots) and the Stormy Petrels number in the thousands. One egg is their limit. We have some 200 or 300 Sandpipers. There have been a large number of field and wood birds' nests on the Island.

"In Southwest Harbor last month it was a beautiful sight to see hundreds of Gulls off the fish wharves picking up the floatings. I heard many remarks in their favor by the summer people."

Warden Johnson, of Swans Island, says in his report: "I could not discover that any Eider Ducks or Sheldrakes bred in this section this year. The reason for this, I think, is the great number of fishing boats which are in the habit of fishing so close to the breeding places. The Gull colonies are in better condition than ever before. At John's Island the young were quite plentiful and tame. At Huron Island the Gull colony has apparently more than doubled. The owners complain that the birds are ruining their sheep pasture on account of the large amount of bird lime. The old birds were very tame, and remained sitting on the tree tops while we passed within thirty or forty feet of them. A conservative estimate of the number of young hatched on this island would be 1,200. The Night Herons seem to be holding their own, if not gaining. The Blue Heron seem to be slowly going down in numbers.

"The largest colony of Herring Gulls on the Maine coast, if not in the United States, is at No-Man's-Land, which is owned by Captain Mark Young, who acts as warden. He reports that "from eight to ten thousand Gulls returned home the last of March and commenced to nest in April. They were not molested,—not a bird shot or egg taken. Over 4,000 young were raised."

Captain James E. Hall, warden at Matinicus Rock, reports: "Six Puffins were seen here. About 10,000 Terns returned to the Rock May 18, but they have done the poorest this season of any since I have been here. They laid as usual, but the week they were hatching there was a rain-storm which lasted two days and the young were drowned in their nests. I do not think more than 1,000 were raised."

Mr. McCarrison, of whom Metinic Green Island is leased, reports that about 4,000 Medrics (Terns) arrived May 3, and remained until September 2. He says: "I think it is a safe estimate that the colony has doubled this year."

The warden at Eagle Island, which is located well up in Penobscot Bay, reports that the "Terns are far more numerous this year than last, in this locality." This is very gratifying, as these birds, before protection was given them, were well-nigh exterminated. On the Channel Rocks, over 100 nests were counted.

Warden Cushman reports that the Terns of Bluff Island were very tame, and that one could walk to within a few feet of them while on the beaches. "I never knew the people to protect them as they do this year."

The Association this year extended the protection service to the Mt. Kineo region. Warden Harlow makes the following interesting report: "My principal work has been protection for the two species of Gulls which annually breed in large numbers about the numerous inland lakes of this section, but I have also given some attention to Partridges and song-birds, such as Robins, Song Sparrows, Chickadees, Wrens, Crossbills, Woodpeckers and the sweet-singing Hermit Thrush.

"Less than the usual number of Gulls arrived here this year, but the nesting season was very favorable, and, in consequence, a larger average of young were raised. Should say 80 per cent of the young birds reached the flying state. Probably 300 large white Gulls, and 200 of the small, black-headed Gulls (Terns) nested here this season.

"Do not think the Gulls were seriously molested, and know of none being shot. However, there are occasional cases of nest-robbing on the part of visiting sportsmen, to procure specimens of eggs to take home, and I have had occasion to call special attention to the law and the notices of warning, in order to convince several parties that they would be prosecuted if they persisted in such acts.

"As to our song-birds and the Partridge (Ruffed Grouse), their nesting season was unusually favorable, owing to the absence of rains throughout June and most of July, for cold rains at such times are fatal to very young birds. Minks and weasels are the greatest enemies these birds have here, but, owing to the high price of furs recently, these deadly animals have been very materially reduced in numbers by the numerous trappers of this region. There has been absolutely no plume hunting, to my knowledge, and all kinds of birds are numerous this year.

"One interesting case of a nesting Partridge came under my personal observation. The bird built her nest early in the season beside a woods road much frequented in June by summer visitors to Mt. Kineo. When she was about half through sitting, two families of cottagers came to live within a few rods of her nest, and each family brought a dog with them. Nevertheless, in spite of the dogs and the noise, and the frequenting of teams and hotel guests, the Partridge stuck to her nest and raised thirteen young, hatched out every one of her eggs, and got away safely with her brood, for my wife saw her depart to the big woods and safety, with her family trailing behind her.

"Better protection to bird-life hereabouts would result if additional warning notices could be posted on the actual breeding grounds along the routes of the great army of campers who come to the Maine woods yearly. At every important camping place warning notices should be posted; also, upon the shores and islands of the big lakes in the deep woods along the northern borders. While sportsmen are generally inclined to respect bird-life, there are quite a number of instances where thoughtlessness leads them to shoot at our song-birds merely as targets. Warning notices displayed on their camping sites would undoubtedly prevent such practices almost entirely."

Our director, Mr. Norton, who takes great interest in, and a careful oversight of bird-protection matters in Maine, writes: "I have visited only two colonies this year,—Falmouth Night Herons, and No-Man's-Land and Matinicus Rock. The Night Herons did about as usual, and no disturbance came, to my knowledge. No-Man's-Land is in excellent condition. It is a

fact worthy of emphasis that nowhere else in New England can one enter a busy harbor and witness the presence of so many species of sea-birds, or ones so fearless.

"The Egg Rocks, in Muscongus Bay, were visited by Mr. J. Stanley Howard, of Franklin, Mass., in June. His report shows that the Terns are again numerous there, and that the small flock of laughing Gulls were still with them.

"At Pine Point the Stratton Island Terns came to the sand-bars and creeks with large numbers of fearless young. Their season must have been successful.

"Some of the summer people at Scarborough were incensed at the shooting of shore birds after the law was off. With our notices before them, and game laws in hand, I am sure that violations would have been dealt with."

Mrs. C. B. Tuttle, secretary of the Maine Audubon Society, reports that work in Maine the past year has been effective, the interest keener and more wide-spread than ever before. The Society has received much assistance and encouragement from women's clubs and farmers' organizations.

"We have succeeded in awakening a public sentiment which I hope will stimulate the good work and win many friends for the birds. We have circulated what literature it was possible for us to procure. At the present time we have 1,068 associate members and 350 members. From all parts of the state reports have been received showing increased popular interest. Inquiries with regard to Audubon work are frequently received from new quarters. In addition to other work we have tried to keep in touch with the societies of other states. Three new local secretaries have been appointed. We believe, with Ella Wheeler Wilcox, that 'there is no religion of any value in the uplifting of the world which does not include practical efforts to protect the dependent creatures of the earth.' "

Massachusetts.—Three wardens were employed in this state. Woe-pecket Island was in charge of Emanuel Nelson who, reports that the Common Terns arrived there the second week in May; he counted 1,320 nests and 3,483 eggs; 2,000 young were hatched, of which 500 died when nearly grown, during the very hot weather in the last week in July. The birds or eggs were not disturbed except by Crows, which did considerable damage; also, a high tide, June 7 and 8, destroyed about 100 nests. The last Tern seen at this station was on September 11.

Warden Smith, of Edgarton, reports a good season for the Terns on Martha's Vineyard. He made daily visits to the beach, and he believes the nesting birds were not disturbed. He suggests that the sale of air-guns to boys be prohibited as a means of saving song-birds.

Mr. George H. Mackay, whose name is so intimately connected with the Terns of Muskeget, was not able to visit the islands the past season, but he quotes a letter from Capt. R. C. Gibbs, of the Life Saving Station: "The Terns had a good breeding season, and I don't think I saw as many dead ones as in some seasons past." Mr. Mackay also sent a very interesting report from Mr. F. A. Homer regarding the Terns of Penikese: "On the morning of May 5, in a thick fog, with a chilly wind from the southeast, the Terns of Penikese arrived at the island and immediately took possession of the prominent points. On May 21, the first egg was observed; on June 16, young were first seen, and, on July 10, the young were just able to fly. On August 2, small flocks assembled and commenced to leave, and by September 10 the island was deserted.

"My observation of these birds extends back over twenty years, and it seems to me I have never seen such large numbers of them as this season. I have also observed that they nested nearer the buildings than ever before, that their nests were better made, and that they laid their eggs and hatched out earlier than in previous seasons. The mortality among the young has been less than usual, and there were very many less crippled ones. This may be accounted for by the fact that we had but twenty sheep on the island."

Mr. Homer writes that the Massachusetts State Board of Charity condemned the island, by right of eminent domain, for a leper colony, and adds: "In taking leave of these harmless birds, I would suggest that you enlist the sympathy of the resident physician, and I have no doubt he will do for them what I have always tried to do."

Miss Kimball, secretary of the Massachusetts Audubon Society, makes the following excellent report: "This year has been a successful one, with a membership of 6,303. We have 119 local secretaries, some of whom are school teachers or members of school committees, and interest in our work seems to be growing in the schools.

"Many circulars, including educational and BIRD-LORE leaflets, cloth warning notices, and copies of the laws, have been distributed freely. The few complaints of violations of law received, were reported to our efficient Fish and Game Commission, the state officers, and were promptly investigated.

"Legislation at the State House was closely watched by our protection committee, and through our local secretaries the successful passage of a bill was helped, which made possible a report of work in the interest of birds, done by the state ornithologist.

"Three traveling lectures and four libraries have been in good demand. Also, our bird charts, calendars, and sets of bird plates, a new edition of one of the charts being found necessary. The new calendar for 1906 has been printed in Japan, in a very beautiful and artistic manner.

"A course of three lectures was given by Mr. Ralph Hoffmann and a public meeting was held, the speakers being Mr. Hoffmann and National Secretary T. Gilbert Pearson."

The activity of the Massachusetts Audubon Society and the influence it exerts is shown by the following item: Mr. G. H. Noyes, millinery buyer for Mr. James A. Houston, of Boston, in a signed article in the 'Millinery Trade Review' of October, 1905, page 35, says, regarding the prevailing fashions at Boston this season: "Birds do not meet with much favor, on account of the strong prejudice aroused by the Audubon Society, which is especially active in this state."

There is one important matter that should receive the earnest attention of the Massachusetts public, and especially the members of the Audubon Society; in fact, it is of interest to all persons who care for wild life. The few remaining Heath Hens on Martha's Vineyard will disappear in a short time if a law, making a close season for at least ten years is not passed by the next legislature. The fine should be not less than \$100 for killing one of these birds or taking any eggs, and they should have special protection by an efficient warden. The small number left is all that exist anywhere on the globe, and when they pass away another race of birds will be extinct. This colony is fortunately so situated that it can easily be protected, and the experiment of trying to save a species of birds on the verge of extinction will be of great scientific interest. The National Association urges upon the citizens of Massachusetts immediate action, and pledges its influence and help.

Michigan.—Very important bird protection work was accomplished in this state. The Model Law was adopted and two splendid bird reservations were secured (see page 299). The State Audubon Society is active and growing; the secretary, Mr. Butler, reports as follows:

"Since the last annual report, the Michigan Audubon Society has, with the help of the national president, secured the passage of a Model Law. We have defeated those who desired an open season for Robins and Kingfishers; have shortened the season for spring shooting of game and birds, and were instrumental in amending the game law so as to protect many of the animals as well. During the year, 7,000 leaflets, government documents, by-laws, reports, etc., were distributed. Warning notices were sent out, local branches posting the cards. The state librarian is preparing a traveling library for the Audubon Society. The secretary gave fifteen public talks during the year, about one-half the number being illustrated. Prof. W. B. Barrows also has given a number of lectures.

"Owing to the impossibility of getting the game wardens to act, no convictions could be secured; however, we were able to drive three men out of the business of killing birds for the milliners by pleading and threats. Two

new branches were established, and another is in the formative period. We are now engaged in organizing the commission designated under our new law, and will apparently begin the year in a more hopeful spirit than has heretofore been vouchsafed us."

Two wardens were employed, both of them guarding large colonies of Herring Gulls, one on what is now the Huron Island Reservation, and the other on the rocks near the Passage Island Light Station. Both of these colonies had a quiet season, the wardens preventing molestation.

Minnesota.—The Fish and Game Commission in this state is very active, and, with the work done by the Audubon Society in its special lines of effort, has made the game outlook bright.

Miss Whitman, secretary of the Audubon Society, gives the following outline of work:

"In addition to report made last year, I can report the formation of four additional branch societies, and quite a number of school 'bird circles' at different points. Our interior reports are very slow in coming, but I am satisfied of more than ordinary progress during 1905. The request for circulars, bird literature, and instructions for forming societies, shows a very decided increase in interest. Quite a strong movement is now being made in Minneapolis, where heretofore we have been unable to get much of a foothold. Our shortage of funds keeps the work back. Such leaflets as we could secure have been sent out, but they have not been numerous. We are more than holding our own in the matter of legislation and the enforcement of the laws which we have secured."

Missouri.—Secretary Reese tells the story of the splendid results obtained in 1905 by the Missouri Audubon Society so concisely that no other word is necessary.

"The following is a synopsis of the work performed by the Audubon Society of Missouri:

"Distributions of educational leaflets interesting the farmers and sportsmen, by a constant supply of pithy articles in the various newspapers and magazines; drafting a bird, game and fish bill, including the Model Law, having it adopted by the game committee of the Legislature as the 'Audubon Bill,' and assisting in its passage.

"To the energy and untiring efforts of Hon. H. R. Walmsley, honorary vice-president of the Audubon Society, and representative from Kansas City, is due the passage of this bill, after a stormy voyage through both branches of the Legislature. We also appreciate the valuable services of the National Association, and those Dr. Palmer rendered in this fight. The Audubon Society is firmly established, and receives the support of the press and those who are battling for the welfare of all wild life."

Nebraska.—The Audubon Society of this state has confined its efforts mostly to the juniors, where it has been very successful. Work along this line is one of the most beneficial that can be accomplished. Miss Higgins, secretary of the Society, sends the following message:

"There is little to report, I am sorry to say, on the work of the Nebraska Society, for the past year. I am looking forward to a better new year, as I shall have more time to devote to the work. Educational Leaflet No. 3, on 'The Meadow Lark' was reprinted in the 'Nebraska Farmer,' and special mention made of it, thus bringing it to the notice of thousands of farmers. Our junior membership is active and increasing. Membership of over 15,000 reported in 1904."

New Hampshire.—The State Audubon Society is doing a quiet but very effective work. It deserves special commendation for its efforts to save from extermination the Wood Duck and Upland Plover. Every Society should agitate a ten years' close season on these two species of birds. Mrs. Batchelder reports as follows for the Audubon Society: "In general, the work has been carried on as hitherto, by the circulation of the Society's leaflets, and those of the National Association, of government publications, of bird charts and of traveling libraries. The traveling lecture, with stereopticon, continues in use. 'The Economic Value of Birds to the State' is ready for circulation.

"With the aid of our energetic Fish and Game Commission, fourteen convictions have been obtained. Of these, ten were for killing song-birds, three for caging wild birds, and one for killing a Great Blue Heron.

"In view of the threatened extermination of the Wood Duck in this state, the Society, in conjunction with Mr. Abbott H. Thayer, has offered a reward of \$25 for the conviction of any person killing one of that species out of season. Attempts by Mr. Thayer and by the Society to obtain by legislative action a five years' close season for Wood Duck and Upland Plover were unsuccessful. The effort will be renewed at the next session of the Legislature."

New Jersey.—The National Association is always exceedingly glad to get in close touch with the Game Commission of a state. Such relations have been established with the Commission of this commonwealth, which is exceedingly active in game and bird protection. A most intelligent knowledge of advanced game-protection methods is shown, and an evident desire to join with those states that have already stopped by legislative action that most wasteful and pernicious of all methods of game depletion, i. e., spring shooting. In many states it is prohibited, and there is a rapidly growing sentiment among sportsmen and others, that shooting of all kinds must stop on January 1, and not be resumed until the fall season opens.

When such a law is general, there will be no excuse for any one carrying a gun during the close season, and when a person is found doing so it will be evident that a violation is contemplated. The public, especially the bird-loving public of New Jersey, should uphold their Game Commission in all their attempts to stop spring shooting. The Audubon Society has had some strenuous fights on its hands in the past, and it has, by strong and concerted action, always been successful. It is not too soon to commence the campaign for the abolition of spring shooting in New Jersey. The photograph



SOME COSTLY WORK BY A BOY WHO NEEDS EDUCATING

shown of the youth who took pride in killing valuable Hawks in the southern part of the state shows that a liberal circulation of educational leaflets is necessary. The harm done by this lad to the farming interests of his locality is beyond estimate, to say nothing of the open and repeated violations of the law. If this boy had been taught in school the value of birds, and also to respect their rights, he might now be a protector of, and not a menace to the birds.

Two wardens were employed, both of whom report a good year for the birds. The Laughing Gulls and Terns seem to be making a slow but steady increase, due to rigid protection, and the stopping of the sale of the plumage of native birds by milliners.

Miss Scribner, secretary of the Audubon Society, reports as follows:

"The present membership is 739, an increase of 75 over last year. The chief work done by the Society during the past year was the successful effort to prevent the passage of a bill allowing an open season for Doves for six weeks in the autumn. The same methods were used as in the previous year, when the Robin was in danger, and several hundred educational leaflets on 'The Mourning Dove' were distributed, while the members of the Legislature were appealed to by influential persons. The bill was defeated by a good majority.

"Three new local secretaries have been added during the past year, and most of our secretaries report increased interest, especially among school children. A large colored bird chart and a number of smaller ones have been distributed for use in schools. An effort is being made to interest the farmers in the protection of Hawks and Owls, and leaflets on these birds are to be distributed throughout the state this fall.

"On a number of occasions, ladies' clubs, which have taken up the study of birds, have written to the secretary for information and literature. Such aid is always willingly and cheerfully rendered."

New York.—Audubon Society work in this state is always active, and in fact, aggressive. The two wardens who guard the Tern colonies at the east end of Long Island, report a normal increase. The fact that these birds are protected both by the state authorities and by the Audubon Society is now so well known that the wardens have little work to do. The increase of Gulls and Terns in the migration period is very marked, thus showing the benefit of the warden system along the coast. There are four beautiful islands on the New York shore of Lake Champlain, opposite Burlington, now known as the 'Four Brothers,' but which the Indians used to call 'The Islands of the Four Winds.' These are the property of a wealthy New York City merchant who has become so much interested in bird protection that he placed a special warden on his islands from May to October to guard the birds, especially a colony of Herring Gulls, which use the islands as a breeding place. It is very gratifying, indeed, to have such a spirit of bird protection, and such liberality shown.

Miss Lockwood, secretary of the Audubon Society, reports :

"The statistics for the past year show the membership increased to 7,042; leaflets distributed, over 33,000, including several thousand law posters in English and Italian. A new prospectus has been issued; also, verse cards for children, and a large edition of Mrs. Mary Riley Smith's 'The Aigrette: An Appeal to Women.'

"The Society was incorporated on November 23, 1904.

"Through one of the honorary vice-presidents, the sum of \$365 was received, which, with other donations amounting to over \$100, was a very

welcome addition to the funds. As usual, \$125 was contributed toward the expenses of the National Committee.

"During the past year the Society was very active in regard to legislation. The utmost effort was made to arouse all possible influence in the state to prevent the repeal of the anti-spring duck-shooting law, which was threatened by the Burr bill; also, to urge the passage of the bill forbidding foreigners to carry firearms, and the bill prohibiting the sale of Aigrettes in New York State. The Society was successful in regard to the Duck and fire-arms bills, but the Aigrette bill is to be again contested. Our Committee on Law was indefatigable in this struggle. It was gratifying to learn that Senator Armstrong had said: 'The work of the Audubon Society has been very effective.'

"The fuller recognition accorded this movement is shown by the way in which the work is extending in new towns, proving that the public are learning the practical, ethical and educational value of this work for the child. Throughout the state a great advance has been made in all branches of nature study. More concerted action is, however, needed, and would make the task of the many individual teachers who are enthusiastically helping the Audubon cause much easier. The outlook for the coming year is very promising."

North Carolina.—The Audubon Society of this state is doing a great and unique work in game and bird protection. It usually publishes a detailed and interesting report, which can always be obtained by addressing its office at Greensboro. Secretary Pearson submits the following résumé of results in 1905:

"The Audubon Society, which acts as a State Game Commission in this state, makes the following report: During the past year, forty-five game wardens have been employed for the whole or part of their time. They have made a house-to-house canvass over large areas of the state, handing out literature and posting notices regarding the bird and game laws. The following literature has been used: 30,000 National Association leaflets, 35,000 state Society publications, and 5,000 Government publications.

"Wardens have seized eighteen shipments of game which were being illegally sent out of the state to northern markets, the contents of the packages being confiscated and sold at auction. Fifty-six convictions have been successfully conducted throughout the state for violations of the bird and game laws.

"The Audubon launch, the 'Dutcher' has been completed, at a cost of \$1,400, and is now patrolling the sounds of Eastern Carolina. By its use, the efficiency of the wardens has been largely increased in protecting the breeding sea-birds.

"The past summer, there were hatched in the Carolina colonies, sea-birds as follows: Wilson's Terns, 708; Least Tern, 577; Royal Tern, 4,632; Black Skimmers, 930; Laughing Gulls, 18, making a total of 6,866. This is the third year the birds have received protection.

"The first year, 1,700 young birds were raised; the second year, about 2,700. The increase has been very marked, especially in the case of the Least Tern, only six eggs being laid two years ago, and about sixty-five last year.

"Much attention was paid to legislation the past winter. Some of the gains were as follows: Prohibiting export of shore birds, making it illegal to kill deer while swimming, close season for game established in many hitherto unprotected counties, and an increase of penalty for violations of the Audubon laws.

"During the six weeks' period of bitter weather in January and February, the wardens and many members of the Society systematically fed the birds. Hundreds of bushels of cracked corn, peas and other food were purchased by the Society for this purpose. The Society pays for sixty copies of BIRD-LORE. The income of the Society the past year was about \$9,500, \$1,000 of this being for membership fees, the remainder from the sale of hunters' licenses to non-residents of the state. The increase of public sentiment favoring bird and game protection is very noticeable in North Carolina."

North Dakota.—The gain in this state is the Stump Lake Reservation. Our warden reports that the following birds bred there this year: Ring-billed and California Gulls, Cormorants, Wilson's Terns, Gadwall, Shoveller, Pintail, Lesser Scaup and White-winged Scoter Ducks, Spotted Sandpipers, Piping Plover, and several kinds of land birds, and that he believes that they were not molested.

Miss Abbott, secretary of the Audubon Society, states in a letter that the best work of the year has been in creating enthusiasm for branch societies, and the exhibition of the lantern-slides of birds.

Ohio.—This state is a close second to Massachusetts in the efforts that are being made by the state authorities to prevent the sale and use of bird plumage as millinery ornaments. The Audubon Society is also active, as the following report shows:

"The Audubon Society for the state of Ohio has been greatly encouraged by the addition of new members during the past year. We have outgrown our cozy room in the Cuvier Club, and, while loth to leave the pleasant environment, deemed it best to hold our meetings in one of the rooms of the Ohio Mechanics' Institute, where we have larger accommodations.

"The interest in our work continues, as is shown by numerous inquiries that have been made, both by residents of Cincinnati and of the surrounding towns. Our corresponding secretary has had considerable correspondence, not only with the Societies throughout the United States, but with the British Society. Much literature has been distributed.

"Our branch Society at Madisonville cheers us with accounts of its increasing growth and interest, and from Dayton comes word of the growth of an increasing public sentiment, which is shown by the special care and supervision given to the breeding birds in that locality. There is a prospect of a branch Society being formed at College Hill.

"At our regular monthly meetings, which are well attended, many entertaining and instructive talks have been given, some consisting of personal observations of birds in the vicinity of the speakers' homes, and other addresses being on birds that are rare, or not common to this locality.

"Following our custom, Arbor and Bird Day were observed, speakers from the Society being furnished the public schools. We gladly take advantage of every opportunity to inspire the children with a love for the feathered citizens of the air, and the need of their protection. The Society is still urging the passage of the bill for the protection of the Mourning Dove, and has had correspondence with the representatives and senators relative to the same.

"We have suffered a great loss in the death of our acting treasurer, Miss Cecilia Ritter, who was untiring in her efforts on behalf of the protection of the birds. Encouraging reports have been received regarding the growth of public sentiment at Dayton and its suburbs."

Oregon.—In this state considerable warden work was done. George W. Phelps had charge of the Arch Rocks (see Report of 1904, BIRD-LORE, February, 1905) on the coast near the entrance to Netarts Bay. The thousands of birds in his charge were undisturbed during the entire season. He writes: "There has not been a person to visit the Rocks this season, although several wished to do so, but I notified them of the consequences if they did and they remained away." A notice was published in the county paper forbidding tugs from taking excursion parties to the Rocks, as had been the custom in previous years. Mr. W. L. Finley, a director of this association, and his field companion, Mr. Herman T. Bohlman, were appointed deputy game wardens by the state authorities, and guarded the extensive rookeries in the Klamath Lake region. Their report is such an interesting and valuable contribution to bird knowledge that it is given in detail. While there they secured hundreds of photographs, a few of which illustrate their report.

"When we crossed the mountains into the lake region of southern Oregon, we found it was necessary to decide on one of two plans. The

country is so extensive that we either had to spend the entire summer in continuous traveling and get only a casual glance at the existing conditions and a general view of the country, or we had to select a certain portion of the country, study it carefully and protect the various bird colonies that existed there. We decided upon the latter course. We procured a boat that was suitable to carry our equipment and provisions, and set out for Tule Lake, a body of water from twenty to thirty miles wide and about



CORMORANTS AND YOUNG WHITE PELICANS IN OREGON
Photographed by Finley and Bohlman

ninety miles around. Its north end was formerly the great Grebe breeding ground. We set out directly across the lake and, striking a heavy wind, narrowly escaped being swamped in the middle. We spent several days cruising about, and found two large Cormorant rookeries (probably the Farallone Cormorant). A few White Pelicans also nested in this locality. There was nothing to disturb these colonies, as only one man and his family live on the peninsula.

"We then had to return for supplies. From information we obtained from an old hunter there we again set out to examine a Grebe rookery on the lake. We found a large number of the Western Grebe, as well as some of the Eared Grebe, nesting here, but from all accounts the colonies had greatly decreased. The Grebes at this locality are undoubtedly now on the increase, as there is nothing to disturb them. We also found large colonies of Forster's and Black Terns, American Avocets and Black-necked Stilts, all doing well.

"The locality is the greatest rendezvous for Ducks and Teal we have ever seen, and that right in the midst of the breeding season. In a little patch of about an acre in extent, we found seven different nests of the Cinnamon Teal and the Pintail. The meadows at the mouth of the river are

a kind of roosting place at this season, and the Ducks come in by the hundreds in the evening and depart in the morning. We found the people living about this locality, as a rule, very careful about shooting Ducks in the nesting season ; but after the young are partly grown they make no bones about killing in season or out. There was no hunting in the locality while we were there, but later in the season this is the great shooting ground of the market hunters.

"Later we had our boat hauled overland to White Lake, and set out to investigate the Lower Klamath Lake. The south end of the Lower Klamath was formerly a great breeding ground for the Western Grebe, but these colonies were largely destroyed by hunters. We cruised over a large part of the lake, and found that the large rookeries of Cormorants, Grebes, White Pelicans, Great Blue Herons, California Gulls and Caspian Terns form one of the most extensive bird colonies we have ever seen. Doubtless this locality has never been disturbed to any extent by man. This is the great breeding ground of that whole region.

"It would be difficult to say how many birds are breeding about this one locality, but, as near as we could estimate, we judged there were about five



YOUNG WHITE PELICANS IN AN OREGON ROOKERY
Photographed by Finley and Bohlman

hundred nests of the Caspian Tern, and this was the only colony. There were from fifty to one hundred Great Blue Herons nesting on the tule beds. There were three large colonies near by of the California Gull; the largest contained about one thousand pairs of birds and the next about six hundred. The Western Grebes were nesting all along the edges of the tule islands and their nests were only a few feet apart. On one side of a small

island, about half an acre in extent, we counted over sixty nests containing eggs. There were perhaps three thousand five hundred nests about that locality. The Cormorants were all hatched and grown; about one thousand five hundred were swimming about in the water. The Pelican rookeries were scattered along for about two miles. There were eight or ten, each containing from four to six hundred birds, then there were twelve or fifteen that had all the way from fifty to two hundred birds, besides a number of smaller ones.

"I should have said before that these colonies are situated miles out from the main shore of the lake. All the intervening space is covered by the rankest growth of tules, through which run innumerable little channels, cutting up the whole into hundreds of islands. These flat, floating tule islands are the nesting places of the birds. Most of these are buoyant enough to hold a man; in fact, they were the only camping spots we had all the time we were on the lake.



NEST AND NEWLY HATCHED YOUNG OF
WESTERN GREBE

Photographed by Finley and Bohlman

"From some of the old hunters we collected the following facts concerning the Grebe hunting. They told us that no Grebes were shot last year or this year for the market, and investigation about these lakes showed that this was true. The last year that Grebes were hunted in this locality was in 1903. The two years previous great numbers were shipped from this point. One of the hunters told us he saw \$30,000 worth of skins piled up ready for one shipment from Merrill. At the time there were twelve different hunters along the north end of Tule Lake.

"One of the hunters told us he shot 135 Grebes at one sitting. After hunting for two years the professional hunters realized that the birds were getting scarcer, and they held a meeting in order to protect the birds during the breeding season. The farmers would not agree to this,—they were going to shoot at any time; so, after that, the hunters shot whenever they could find birds, in nesting season and out. At first the skins brought from sixty

to seventy-five cents apiece, then they fell to forty cents and later they were bringing only about twenty-five cents.

"When influence was brought to bear on the Milliners' Association to refrain from using the skins of our native birds, Grebe hunting was abruptly stopped by sending word to the hunters that no more Grebe skins would be bought. This proved to us a good example of what the Audubon Society has accomplished by cutting at the roots instead of hacking off the branches.

"We wish to call attention to a few facts concerning the protection of Wild Ducks in this section of the country.

"The Lake region of Southern Oregon is perhaps the greatest feeding and breeding ground for water fowl on the Pacific coast. All the lakes east of



YOUNG WESTERN GREBE
Photographed by Finley and Bohlman

Klamath county are fairly well protected, because, as yet, the Ducks and Geese that live there are out of reach of the market hunter. This is not the case in Klamath county. Although these lakes are about seventy miles from the nearest railroad station, yet they are in the hands of market hunters, who slaughter the ducks by the thousands for the San Francisco markets.

"There are from twenty to thirty camps of these professional hunters, stationed along the border of Lower Klamath and the north end of Tule Lake every winter, and shooting is carried on the entire season. When the Ducks are flying, each hunter will bag from 100 to 150 birds a day. These hunters keep two wagons at work the entire season. When the weather is moderate the wagons visit the camps three times a week and collect the Ducks in sacks, which are sent to Montague, California, where they are expressed to San Francisco. In colder weather these wagons go only on Tuesdays and Fridays. We were told there were 120 tons of Ducks shipped

from this point winter before last (1903.) The hunters receive the following prices per dozen: Teal, from \$2.50 to \$3; Mallards, \$3 to \$5; Sprigs, \$5 to \$7; Canvasbacks, \$8 to \$9.50. One of the hunters said he shipped thirty-nine dozen Ducks at one time.

"The difficulties in securing protection from the market hunters are these: All this hunting ground is very near the Oregon and California boundary line, yet most all the Ducks are killed in Oregon. The Oregon game law allows a hunter fifty birds a week. The California law allows a hunter fifty a day. Oregon provides so little for the game warden in this section of the country that he is unable to cope with the situation. The hunters keep watch of his movements and send out couriers whenever he visits that locality. The hunters work secretly and ship at night, or, when an Oregon warden appears, all they have to do is sail their scows across the border into California. Both states have made some attempts to stop this traffic, but they have always left loop-holes. It seems California made a law that prevented hunters shipping to commission men in San Francisco, whereupon the hunters shipped to themselves in care of the Game Transfer Company, an organization of commission men. Each hunter shipped under half a dozen different names, recognized as one individual by the commission people; thus the hunters evaded the bag limit. Oregon has just passed a law providing that each hunter must take out a hunter's license. The professional hunters are now taking out a number of licenses under assumed names, we were told. These conditions cannot be effectually met until laws are made to control the market. A hundred laws might have been made preventing the shooting of Grebes, but so long as they were there in thousands and each skin was worth fifty cents the hunters shot them, and it would have taken a large number of game wardens to stop them. A little work at the right end put an entire stop to the slaughter. It is largely the same with Duck hunting in this locality.

"In addition to the above, it may be said that among other birds that were shot for plumage, Forster's Tern was diminished in numbers till few were left. The wings and tail of this bird sold for twenty cents, and great numbers were killed and shipped out with the Grebe skins. The following well-known habit would soon have led to the extinction of the species in this region. As soon as one bird was shot and fell to the water, the other Terns, through curiosity or for some other reason, crowded about from all directions, and all the hunter had to do was sit and shoot his birds right and left. This beautiful Tern was formerly very common about these lakes, but we were able to find only two small colonies. So far as we could discover, this species is now left undisturbed and will undoubtedly soon increase in numbers.

"For a while the White Pelicans were also shot for their plumage. In 1901 fifty skins were shipped to New York, and brought one dollar each. A

little later a consignment of five hundred skins was sent, but, not being paid for, the further shipments of these skins stopped, as far as we could discover.

"There are perhaps still some cases of plume hunting in this section of the country. We were told of a small colony of White Cranes that were nesting at Clear Lake, about thirty-five miles from Merrill. These birds were hunted almost to extinction, and from one source we heard that hunters were still after them in their breeding haunts. But this was only a report, and we could not learn anything more definite."

Pennsylvania.—In this state the Legislature entirely remodeled the bird and game law, which is now in excellent form.

The Game Commission is enforcing the law intelligently and effectively. A large amount of Audubon work is being done in the western portion of the state by the Western Pennsylvania Audubon Society and the Burroughs Club. At the eastern end of the state, organized work seems to have diminished somewhat, although some splendid individual bird-protection work is being done. Miss Reed, secretary of the Western Pennsylvania Audubon Society, sends a brief report:

"This Society enrolls about 800 members. Meetings are held on the second Wednesday of each month, in the burgess' office, Wilkinsburg. In educational lines, the Society has distributed about 400 circulars, has interested the press of Pittsburg and Wilkinsburg, and has awakened considerable interest in the public schools. One of the Wilkinsburg weekly papers, 'The Call,' gives half a column to Audubon notes.

"'Bird Day' has been established in some of the schools. Local secretaries are being appointed as rapidly as possible. Our largest auxiliary formed is at Sayre, Pa. In law enforcement, 250 warning notices have been posted, and nine convictions have been secured through the work of this Society."

Rhode Island.—The Roger Williams Park Museum, Providence, has issued a most helpful pamphlet for teachers and others (Bull. No. 15). It is a 'Check-List' of the birds of the state. On one page are the common names, and opposite, spaces are arranged to note arrival and departure. School-teachers are requested to note on school blackboard all arrivals of birds reported by pupils. The pamphlet is an excellent scheme to interest both the teacher and the scholar, and it deserves a wide circulation. The Audubon Society continues its good work, as is shown by the appended report from Mrs. Grant, its secretary:

"The Society, which held its eighth annual meeting, has a total membership of 860. There are 19 branches conducted by local secretaries. The work done during the past year has been mainly educational. Four traveling libraries and a traveling lecture, with lantern and slides, have been in constant use; a dozen of the Massachusetts bird charts have been given to the

schools; copies of the state laws relating to birds, and 2,000 leaflets have been distributed.

"In February, Mr. Frank M. Chapman delivered a lecture upon Flamingos, under the auspices of the Society. A very successful feature of the year's work was a luncheon, given to the local secretaries by the directors, the occasion furnishing opportunity for mutual acquaintances and consultations.

"Public sentiment in this state seems to be very favorable to the objects of the Society, still but little has been accomplished in the way of legislation. The law providing a bounty for Hawks, Owls and Crows has not been repealed, but the State Bird Commissioners have been active in enforcing existing laws, and report over twenty convictions for shooting song-birds.

"In February, the Society sustained a severe loss in the death of its distinguished president, Dr. Alpheus S. Packard. The vacancy has been filled by the election of Dr. Albert Davis Mead."

South Carolina.—During the year our secretary visited South Carolina, and the Audubon Society of that state was reorganized. Senator B. F. Tillman was elected president; President H. N. Snyder, of Wofford College, vice-president, and State Superintendent of Education O. B. Martin, of Columbia, secretary. A strong board of directors was selected. Over two hundred dollars in membership fees and gifts were collected, which is being used in furthering the organization and distributing educational literature in the state. An educational department of the work was also formed, and Miss Minnie McFeet, of Rock Hill, is chairman of the committee having this branch in charge. Two hundred and twenty-five teachers have been enrolled. We expect good results in South Carolina during the coming year.

Texas.—One warden was employed on the coast at the Matagorda Light-house Station, who reports that the Black Skimmers, Royal, Common and Least Terns in his charge were not disturbed, although he was compelled to stop the attempts of two parties to egg, and a third from killing young birds. He estimates that at least 2,000 Skimmers were raised at his station. The immense coast of Texas is practically unknown to the Association. Its examination, and the bestowal of such care as is found necessary, will be one of the first special works undertaken.

Vermont.—In this state very excellent educational methods are followed by the Audubon Society. The appended report of Miss Griffin, the secretary, shows the special efforts made to reach the schools.

"In May, the headquarters of the Society was transferred to The Fairbanks Museum, at St. Johnsbury, and that institution is to coöperate in

Audubon work. The president of the Board of Trustees and the director of the Museum are, respectively, president and secretary of the Audubon Society. It is hoped that this will result in renewed interest and in an aggressive line of work, particularly among the young people.

"There are eleven branch societies in Vermont. Frequent field trips are conducted by these branches, lists of birds are made and the school children are interested and instructed concerning bird-life.

"Three traveling libraries have been circulated among the rural schools of the state, and Mr. Carlton D. Howe has given five illustrated bird lectures, the lantern and the slides which he used being the property of the state Society. Mr. Howe has also written a pamphlet entitled 'Fifty Common Birds of Vermont,' which was issued by the state superintendent of schools as a 'Circular of Educational Information'; it has been sent to each teacher in the state. The gross membership of the Society is 443, of which 300 are juniors."

Virginia.—The secretary reports as follows: "The work of the Virginia Audubon Society has been limited during the year to the distribution of warning notices for posting, and of copies of a digest of the game law. The illustrated bird lecture prepared by the District of Columbia Society has been used a number of times in the northern part of the state."

Warden work in the state has been continued by the National Association with excellent results. As for the past five years, eight men have been employed. Their methods and the good they accomplish have been detailed in so many previous reports that it is unnecessary to repeat the details here. All the wardens report for 1905 an excellent season for the birds, which made a normal increase. Fortunately, no high storm-tides occurred during the nesting season. In addition to the protection given by the wardens, a series of special advertisements were run in the newspapers, most widely read in the coast counties, which called particular attention to the game laws and the penalties for violations of the same; rewards were also offered for evidence that would secure convictions.

Wisconsin.—The progress made by the Audubon Society in this state in enlisting interest among children is remarkable. These good results are probably due to the influence of its magazine 'By the Wayside.' Mrs. Thwaites, the secretary, writes: "We have added 3,651 new names to our membership, mostly children, of course, making a total of 28,288. 'By the Wayside' now has 400 subscribers, but not enough to make it self-supporting. Our slides and lectures have been used at twelve different towns in the state; ten public libraries have joined the Society at fifty cents a year, in order to have our publications and Educational Leaflets."

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REPORT OF TREASURER

For period from November 1, 1904, to October 20, 1905 (inc.)

November 1, 1904. To balance forward		\$258 38
1905. To membership dues and contributions as per preceding list	\$7,989 85	
Contributions to the Mrs. Bradley Fund	392 00	
Contributions to the Bradley Law Fund	161 00	
Contributions from Audubon Societies to the Clerical Fund	627 00	
Special Fund, contributed by "Benefactor" for salary and traveling expenses of Special Agent to secure endowment and members	3,045 50	
Sales of Educational Leaflets and Reports	195 04	
Sales of slides	38 15	
Law expenses in 1904, recovered in 1905	17 50	
New York Audubon Society for circular letters sent to New York Legislature	13 77	
Unknown	10 00	
Interest	8 26	12,498 07
Total		<u>\$12,756 45</u>

DISBURSEMENTS

By postage	\$775 48
Audubon buttons	32 51
Express and cartage	62 80
Traveling expenses, R. W. Williams, Jr., in law suit in Florida	38 05
Traveling expenses, A. H. Norton,—to Maine Legislature	7 36
Traveling expenses, W. Dutcher to Michigan and Massachusetts	40 94
Traveling expenses, Dr. L. O. Dart, examining bird colonies in Lake Superior	27 50
Half-tones and electro plates of Educational Leaflets and special circulars and maps	70 22
Slides, and coloring same	156 28
Telegrams and telephone service	45 12
Wardens' wages	1,912 00
Press clippings	25 89
Printing Reports, Educational and special leaflets and other circulars and advertising matter	1,994 96
Exchange	7 55
Muslin warning notices and advertisements in newspapers	60 25
Office furniture, one typewriter, card cabinets, etc.	102 94
Subscriptions to BIRD-LORE for members	361 40
Lecture	25 00
Safe Deposit rent	5 00
Detective work	12 50
Rent, one month	41 67
Legislation—securing bills introduced	61 88
Carried forward	<u>\$5,867 30</u>

Brought forward	\$5,867 30
Launch supplies in Florida	29 55
Fees paid in Bradley case—two lawyers	275 00
Paper, envelopes, office printing and supplies	197 37
Salaries of two clerks	931 24
Incorporation expenses	43 75
Salary of Special Agent	1,500 00
Traveling expenses, Special Agent	447 10
Transfer to investment account used for purchase of \$2,000—4 per cent Gold Mortgage Trust Bonds issued by U. S. Mortgage and Trust Co.	2,000 00
Total	\$11,291 31
Balance in Farmers' Loan and Trust Co.	1,465 14
	\$12,756 45

FRANK M. CHAPMAN, *Treasurer.*

October 31, 1905. We have this day examined the report of the expert accountants, Messrs. Jameson and Hedge, and we pronounce the books of the Association to be correct.

[Signed] H. C. BUMPUS,
 J. A. ALLEN,
 Auditing Committee.

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- \$5.00 paid annually constitutes a person a Sustaining Member.
- \$100.00 paid at one time constitutes a Life Membership.
- \$1,000.00 paid constitutes a person a Patron.
- \$5,000.00 paid constitutes a person a Founder.
- \$25,000.00 paid constitutes a person a Benefactor.

FORM OF BEQUEST

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