







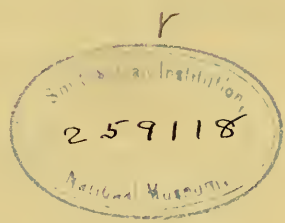
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Bird-Lore's Council Table

BIRD-LORE'S readers are BIRD-LORE'S partners. The magazine, as we have often stated to them, is not a commercial enterprise, but a coöperative undertaking, and is published in their interests. When, some years ago, conditions arose which made it necessary either to increase BIRD LORE'S price or reduce its size, we called a conference of our supporters and laid the case before them. The vote was unanimously in favor of the first-named alternative, and the price was raised from \$1 to \$1.50 a year. This step was taken against our will and with a hope that a decrease in manufacturing costs would in time permit us to return to our former subscription rate.

But, unfortunately, the worst was yet to come! Shortly before publication of our last number we received a bill for paper. A few years ago it would have amounted to \$1,700; as a matter of fact it was for somewhat over \$5,400! In other words, paper for which we formerly paid $5\frac{1}{2}$ cents a pound had risen to $17\frac{3}{4}$ cents a pound; and since the bill for paper amounts to one-third the total cost of publishing BIRD-LORE, it is clear that we are again confronted by a condition which can be met only by a larger subscription price or a smaller magazine. On this occasion, however, we propose merely to lay the case before our readers and to act without awaiting their advice, confident that they will approve our course as, at least for the present, the proper one.

We are opposed to a further increase in the price of BIRD-LORE and believe that if, so to speak, we reef our sails for a time, we can weather the storm. The signs of the times point to decreased manufacturing charges.

Paper has already fallen from $17\frac{3}{4}$ to 15 cents per pound. This is still a long way from $5\frac{1}{2}$ cents, but it is much better than 20 cents!

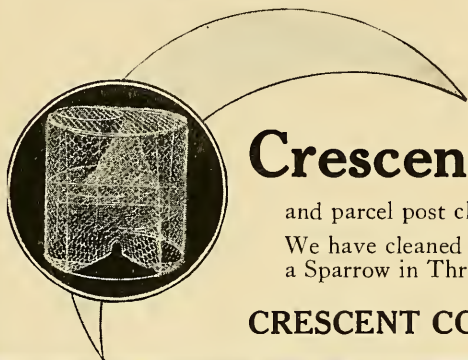
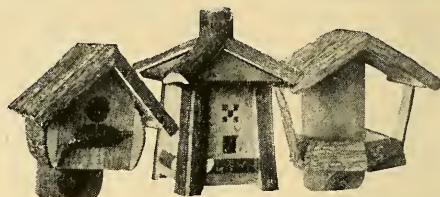
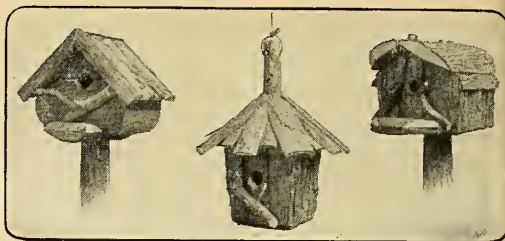
Let us hope, therefore, for a further reduction in price. Meanwhile we are sure our readers will appreciate the need for economy in space and accept a smaller magazine. If the autumn brings no relief we will again lay the case before them and seek their council.

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Bird-Lore

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

Vol. XXIII

JANUARY—FEBRUARY, 1921

No. 1

Bird-Lore's Advisory Council

WITH some slight alterations, we reprint below the names and addresses of the ornithologists forming BIRD-LORE's 'Advisory Council.'

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 twenty-one years that it has been in operation fully equals our expectations. 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 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

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

CANADA

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 NOVA SCOTIA.—Harry Piers, Provincial Museum, Halifax, N. S.
 ONTARIO, Eastern.—James H. Fleming, 267 Rusholme Road, Toronto, Ont.
 ONTARIO, Western.—W. E. Saunders, London, Ont.
 QUEBEC.—W. H. Mousley, Hatley, Quebec.

MEXICO

- E. W. Nelson, Biological Survey, Dept. of Agr., Washington, D. C.

WEST INDIES

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

GREAT BRITAIN

- Clinton G. Abbott, Conservation Commission, Albany, N. Y.

Bird-Lore's Twenty-first Christmas Census

THE highest number of species recorded in this census, in the northern and middle Atlantic States, is 38 at Montauk, Long Island, and Cape May, N. J.; in the south, 58 at Plant City, Fla., and in the Mississippi Valley, 35 at Kansas City; and on the Pacific Coast, Santa Barbara with 96 has no close competitor.

The unusually open season, no doubt, accounts for a number of sporadic records of birds far north of their usual winter range, such as the Phoebe, Catbird, and Palm Warbler.

The early date at which the census goes to press leaves little opportunity for statistical study of it. We may note, however, that the 'comeback' anticipated for the Golden-crowned Kinglet exceeds our expectations. In the 1919 census, 26 of the 138 lists for states east of the Mississippi reported 1 to 11 individuals of this species, with a total of 85. This year (1920), 41 of 134 lists record 1 to 37 individuals with a total of 278.

On the other hand, the scarcity of birds in places is less general than was anticipated. The average total species for Massachusetts is 14, versus 16 in 1919; whereas in New York it is 17, and in New Jersey it is 20, in both 1919 and 1920. In Ohio, however, there has been an increase of from an average of 16 in 1919 to 18 in 1920.—J. T. NICHOLS.

Cambridge, England.—Dec. 12. Snowing; temp. 28°. Moorhen, 3; Lapwing, 25; Great Spotted Woodpecker, 1; Green Woodpecker, 1; Rook, 50; Starling, 75; House Sparrow, 100; Pied Wagtail, 4; Grey Wagtail, 2; Wren, 10; Tree Creeper, 2; Nuthatch 1; Great Titmouse, 4; Blue Titmouse, 1; Redbreast, 10; Hedge Sparrow, 1; Song Thrush, 15; Blackbird, 8. Total, 18 species, 313 individuals.—ALFRED C. REDFIELD.

Camrose, Alberta (to Dried Meat Lake). Dec. 27; 1 to 5 P.M. Clear; 8 in. snow; west wind, light; average temp 32° above. Two miles on foot. Sharp-tailed Grouse, 16 (2 coveys); Ruffed Grouse, 1 (Red tail); Blue Jay, 2; Downy Woodpecker, 1; Snowflake, 20; Redpoll, 30; Black-capped Chickadee, 2. Total, 7 species, about 72 individuals.—FRANK L. FARLEY.

Wolfville, Nova Scotia.—Dec. 27; 9 A.M. to 1 P.M. Clear, ground bare and frozen; no wind; temp. 23°. Eight miles. Area, wooded ridge above town, Greenwich to meadow lands adjacent to the Cornwallis River and return. Herring Gull, 8; Black Duck, 100 (approximately); Canada Ruffed Grouse, 2; Crow, 7; Black-capped Chickadee, 2. Total, 5 species, approximately 119 individuals.—R. W. TUFTS.

Quebec, P. Q. (Bergerville, Ste. Foye, Cap Rouge, Bridge, Sillery).—Dec. 26; 8.30 A.M. to 3.30 P.M. Clear; 18 in. snow; wind west, moderate; temp. —12° at start, —4° at return. Fifteen miles on foot. Canada Ruffed Grouse, 1; Downy Woodpecker, 2; Pine Grosbeak, 1; White-winged Crossbill, 20. Total, 4 species, 24 individuals.—HARRISON F. LEWIS.

Ottawa, Ont. (to Hull, Quebec, Fairy Lake, Tetreauville and return).—Dec. 24; 1.55 P.M. to dark, 5.25 P.M. Clear; 5 in. snow, of which $\frac{3}{4}$ in. was frozen crust; wind west, 15 miles; temp. 17° at start, 13° at return. The heavy crust on the snow made walking difficult and noisy; observing conditions consequently very bad. Street car 3 miles, on foot 5 miles—total 8 miles. Observers together. Downy Woodpecker (?), 1; Purple Finch, 2; Pine Siskin (?), 2; Tree Sparrow, 3; Brown Creeper, 3; Red-breasted

Nuthatch, 2; Chickadee, 4. Total, 8 species, 19 individuals.—HOYES LLOYD and FRANK C. HENNESSEY.

Bowmanville, Ont.—Dec. 27; 1.15 to 6 P.M. Cloudy; 3 in. of snow; wind northeast, very light; temp. 26° to 30°. Twelve miles on foot. (Cooper?) Hawk, 1; Downy Woodpecker, 1; Flicker, 1; Horned Lark (fresh tracks in snow identified as belonging to the Horned Lark by the long hind toe-nail), 6; Crow, 3; Snowflake, 100; Junco, 10; Song Sparrow, 5; Chickadee, 50. Total, 9 species, about 177 individuals. Other species seen in the last ten days: Herring Gull, Bufflehead, Hairy Woodpecker, Blue Jay, Goldfinch, Brown Creeper, Golden-crowned Kinglet.—MAITLAND G. GOULD.

London, Ont. (vicinity of). Dec. 26; 8.30 A.M. to 12.30 P.M. Sky overcast; 2 or 3 in. of snow on ground; brisk east wind; temp. 23° at start, 29° at finish. Combined list of four parties covering adjacent territory. American Merganser, 2; Golden-eye, 1; Red-shouldered Hawk, 1; Great Horned Owl, 1; Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 8; Blue Jay, 8; Crow, 11; Snow Bunting (flock heard flying over, not seen; number unknown); Tree Sparrow, 27; Junco, 72; Song Sparrow, 5; Cardinal, 4 (two pairs); Brown Creeper, 2; White-breasted Nuthatch, 3; Black-capped Chickadee, 26; Golden-crowned Kinglet, 27. Total 18 species, 202 individuals (plus Snow Buntings).—W. E. SAUNDERS, C. G. WATSON, T. D. PATTERSON, J. F. CALVERT and E. M. S. DALE (McIlwraith Ornithological Club).

Leamington to Point Pelee, Ont.—Dec. 24; 9.20 A.M. to 4 P.M. Cloudy; ground bare; wind strong, west; temp. about 25°. Horned Grebe, 4; Herring Gull (about) 90; American Merganser, 10; Ducks (unidentified), 20; Bob-white, 12; Marsh Hawk, 3; Red-shouldered Hawk, 1; Downy Woodpecker, 1; Crow, (about) 44; Bronzed Grackle, 1; Vesper Sparrow, 1; Tree Sparrow, (about) 180; Junco, 12; Song Sparrow, 8; Cardinal, 9; Cedar Waxwing, 23; Brown Creeper, 3; Golden-crowned Kinglet, 34; Robin, 2. Total, 18 species, 471 individuals. The following have also been seen recently: Screech Owl (heard), Bald Eagle, Flicker, Goldfinch, and Chickadee.—EARL W. CALVERT.

Arnprior, Ont.—Dec. 25; 9.20 A.M. to 4.30 P.M. Fine and clear; 4 in. of snow with a hard icy crust; wind northwest, moderate; temp. —5° at start, —2° at return. Twenty-five miles on foot. Observers separate. American Golden-eye, 1; Canadian Ruffed Grouse, 15; Hairy Woodpecker, 3; Downy Woodpecker, 3; American Crow, 23; White-winged Crossbill, 46; American Goldfinch, 1; Snow Bunting, 37; Song Sparrow, 1 (unusual in winter); Brown Creeper, 16; White-breasted Nuthatch, 7; Red-breasted Nuthatch, 5; Black-capped Chickadee, 39; Golden-crowned Kinglet, 5. Total, 14 species, 202 individuals. Seen recently (Dec. 19), Blue Jay, 3.—LIGUORI GORMLEY and CHARLES MACNAMARA.

Waterville, Maine.—Dec. 24; 9 A.M. to 4 P.M. Clear; 2 to 3 in. of snow on ground; wind, northwest, strong to moderate; temp. 26° at 9 A.M., 20° at 4 P.M. American Merganser, 2; Black Duck, 2; American Golden-eye, 3; Canadian Ruffed Grouse, 7; Crow, 1; Redpoll, 8; Northern Shrike, 2; Brown Creeper, 4; White-breasted Nuthatch, 1; Black-capped Chickadee, 22. Total, 10 species, 52 individuals.—EDWARD H. PERKINS.

Kennebunk, Maine (to Parsons Beach and back).—Dec. 24; 9 A.M. to 4 P.M. Clear; thin snow and ice in woods, none in open country; wind west, strong and gusty; temp. 30°. Nine miles on foot. Observers together. Horned Grebe, 3 (probably many more not seen); Loon, 1; Great Black-backed Gull, 12; Herring Gull, 90; Golden-eye, 5 (probably American); Old Squaw, 35; American Scoter, 1; White-winged Scoter, 1; Common Crow, 40; Horned Lark, 1. Observation of the flock of Old Squaws and Scoters was very difficult and unsatisfactory; no doubt more were present than could be positively identified. Total, 10 species, about 189 individuals. Dec. 23, flock of 6 or 7 Robins 17 miles south of here and within sight of the ocean.—STERLING DOW and EDWARD B. HINCKLEY.

Brunswick, Maine (Maquoit Bay, Merrymeeting Park).—Dec. 26; 9 A.M. to 4.30 P.M. Fair; wind, northwest; 1 in. of snow with icy crust; temp. 10° at start, 20° at return.

Fifteen miles on foot. Herring Gull, 158; Canada Ruffed Grouse, 2; Downy Woodpecker, 1; Crow, 20; Chickadee, 4. Total, 5 species, about 185 individuals.—WESTON WALCH.

Goffstown, N. H. (to Summit Uncanoonuc Mts. via Shirley Hill and return).—Dec. 26; 11 A.M. to 4.30 P.M. Cloudy; ground bare in open, crusty snow and ice in woods; wind south, very light; temp. 15° at start, 13° at return. Eight miles on foot. Ruffed Grouse, 4; Downy Woodpecker, 1; Tree Sparrow, 50; Slate-colored Junco, 30; Chickadee, 5; Golden-crowned Kinglet, 6. Total, 6 species, about 96 individuals.—MAURICE E. BLAISDELL.

Wilton, N. H.—Dec. 25; 8 A.M. to 12 M. Clear; no snow; brisk west wind; temp. 22° to 25°. Downy Woodpecker, 3; Starling, 4; Goldfinch, 4 (one flock); Junco, 8 (one flock); Brown Creeper, 1; Northern Shrike, 2; Chickadee, 5 (one flock). Total, 7 species, 27 individuals. Dec. 26, Golden-crowned Kinglet, 1; Hairy Woodpecker, 1; White-breasted Nuthatch, 2; and Tree Sparrows, 12.—GEORGE G. BLANCHARD.

Wells River, Vt. (from Wells River on first range of hills back to the Connecticut River toward Newbury, returning on bank of river).—Dec. 28; 9 A.M. to 3 P.M. Flurries of snow alternated with sunshine; 10 in. snow on ground; light northwest wind; temp. 22° at start, 30° at close. 10 miles on foot. Merganser, 8; Golden-eye, 6; Ruffed Grouse, 1; Downy Woodpecker, 2; Northern Pileated Woodpecker, 1; Blue Jay, 4; Crow, 4; Redpoll, 40 (two flocks); Slate-colored Junco, 3; Chickadee, 10 (two flocks); Golden-crowned Kinglet, 2. Total, 11 species, 81 individuals.—WENDELL P. SMITH.

Bennington, Vt.—Dec. 26; 8 A.M. to 12.30 P.M. Sky covered all over with a thin layer of clouds; ground bare; wind north, light; temp. 8° at start, 18° at return. Six-mile walk. Ruffed Grouse, 9; Downy Woodpecker, 1; Horned Lark, 3; Blue Jay, 6; Crow, 11; Starling, 50+; Pine Siskin, 16; Tree Sparrow, 75+; Northern Shrike, 1; Chickadee, 8. Total, 10 species, 180+ individuals. The absence of Nuthatches is very unusual.—DR. and MRS. LUCRETIVS H. ROSS.

Newbury, Mass.—Dec. 26; 1.45 to 4.15 P.M. Cloudy; ground bare; wind southeast, very light; temp. 20° at start, 18° at return. Herring Gull, 1; Old Squaw, 2; Ruffed Grouse, 1; Flicker, 1; American Crow, (about) 400; Chickadee, 3. Total, 6 species, (about) 408 individuals.—HENRY CURTIS AHL.

Lynn, Mass. (to Marblehead Neck and return).—Dec. 26; 10.30 A.M. to 3 P.M. Clear; ground bare; wind west, light; temp. 13°. Observers together. Partly by trolley car. Holboell's Grebe, 3; Horned Grebe, 6; Loon, 1; Black Guillemot, 2; Black-backed Gull, 1; Herring Gull, 400+ (est.); Cormorant, 3; Red-breasted Merganser, 39; Golden-eye, 61; Old Squaw, 3; Scoter, 5; Ring-necked Pheasant, 2; Flicker, 7; Crow, 6; Snowflake, 10; Northern Shrike, 1; Robin, 1. Total, 17 species, 551+ individuals.—EDMUND and LIDIAN E. BRIDGE.

Lynn, Mass. (Lynn Beach, around Little Nahant and Nahant and back).—Dec. 24; 9.30 A.M. to 2 P.M. Cloudy, clearing toward noon; ground bare; wind southwest; temp. 35° at start, 33° at return. Nine miles on foot. Observers together. Holboell's Grebe, 4; Horned Grebe, 2; Dovekie, 1; Black-backed Gull, 3; Herring Gull, 1,000 or more; Red-breasted Merganser, 1; Golden-eye, 25; Bufflehead, 61; Old Squaw, 10; American Scoter, 11; White-winged Scoter, 8; Horned Lark, 7; Crow, 10; Starling, (about) 100; Total, 14 species, (about) 1,250 individuals. Dovekie seen very near shore; probably driven in by storm or slightly injured.—GRACE K. EARLE and OSBORNE EARLE.

Boston, Mass. (Franklin Park, Arnold Arboretum and vicinity).—Dec. 24; 10 A.M. to 4 P.M. Cloudy; wind west, light; temp. 40° at start, 35° at return. Observers together. Herring Gull, 50; Ring-necked Pheasant, 5; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Northern Flicker, 6; Crow, 65; Starling, 4; Slate-colored Junco, 7; Brown Creeper, 2; Chickadee, 20; Golden-crowned Kinglet, 12. Total, 12 species, 174 individuals.—GEORGE MACDONALD and CHANDLER BROOKS.

Leominster, Mass. (to Lowell and back).—Dec. 25; 8 A.M. to 6.30 P.M. Clear; ground bare; wind northwest, blowing a gale; temp. 18° at start, 5° at return. Herring Gull, 20; Downy Woodpecker, 3; Blue Jay, 5; Crow, 25; Goldfinch, 20; Tree Sparrow, 20; Junco, 25; Myrtle Warbler, 1; White-breasted Nuthatch, 5; Chickadee, 1. Total, 10 species, 105 individuals.—EDWIN RUSSELL DAVIS.

Sharon, Mass.—Dec. 28; 9 A.M. to 2 P.M. Partly cloudy; 3 in. of snow; wind northwest, light; temp. 32° most of the time. Five miles on foot. Bob-white, 6; Ruffed Grouse, 7; Downy Woodpecker, 3; Flicker, 2; Blue Jay, 13; Crow, 12; Starling, 6; Purple Finch, 2; Tree Sparrow, 21; Slate-colored Junco, 45; Northern Shrike, 1; Brown Creeper, 2; Black-capped Chickadee, 23; Golden-crowned Kinglet, 6; Robin, 1. Total, 15 species, 150 individuals.—MRS. HARRIET U. GOODE, HARRY G. HIGBEE and MANLEY B. TOWNSEND.

Weston, Mass.—Dec. 26; 9.45 A.M. to 12 M. and 1 to 4 P.M. Fair; ground bare; no wind; temp. 11° to 23°. Overcast in P.M. All on foot. Ruffed Grouse, 3; Ring-necked Pheasant, 3; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 6; Crow, 488; White-throated Sparrow, 1; Tree Sparrow, 22; Junco, 24; Song Sparrow, 1; Winter Wren, 1; Brown Creeper, 1; White-breasted Nuthatch, 2; Black-capped Chickadee, 17; Golden-crowned Kinglet, 9; Robin, 1. Total, 16 species, 586 individuals.—WARREN F. EATON.

Southampton, Mass.—Dec. 26; 8.30 A.M., 5 hours. Clear; ground bare; in morning no wind, later light west wind; temp. 40° at start. Ruffed Grouse, 3; Downy Woodpecker, 3; Blue Jay, 5; Tree Sparrow, 117+; Slate-colored Junco, 15; Black-capped Chickadee, 18; Robin, 2. Total, 7 species, 163 individuals. Dec. 20: American Crow, 3. Dec. 22: Starling, 25.—BESSIE M. GRAVES.

Holyoke, Mass. (vicinity of Mt. Tom Range).—Dec. 25; 7 A.M. to 1 P.M. Clear; ground entirely free from snow; Connecticut River and large ponds open; wind west-northwest, absent at start but increasing as day wore on, which raised the dust from plowed fields as well as roadways and blew across the valley in clouds; temp. 19° at start, 27° at return. Eight to 10 miles on foot. Two observers together, joined by third at end of trip. Ring-necked Pheasant, 1; Ruffed Grouse, 6; Goshawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Blue Jay, 1; Crow, 8; Starling, 10; Tree Sparrow, 4; Junco, 12; Northern Shrike, 2; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 14; Golden-crowned Kinglet 5. Total, 15 species, 69 individuals. Sparrow Hawk and Great Horned Owl observed Dec. 23, the latter at South Deerfield.—ARTHUR MITCHELL, AARON C. BAGG and JOHN L. BAGG.

Williamstown, Mass.—Dec. 24; 8 to 11 A.M. Partly cloudy with snow flurries; ground bare except on hills; strong northwest wind; temp. 28° at start and end. About 5 miles covered; altitude 600 to 1,200 feet; town, rural and woodland country. Ruffed Grouse, 4; Downy Woodpecker, 1; Crow, 3; Starling, 6; Junco, 14; Brown Creeper, 2; White-breasted Nuthatch, 1; Black-capped Chickadee, 20. Total, 8 species, 51 individuals. A scarcity of birds has been noted here all the month.—WM. J. CARTWRIGHT.

Wareham, Mass.—Dec. 25; 7.45 A.M. to 12.15 P.M., 2.15 to 4.15 P.M. Clear, becoming cloudy; ground bare; wind northwest, at first light, gradually freshening; temp. 10° at start. Approximately 5 miles on foot (between points by automobile). Observers together. Horned Grebe, 8; Black-backed Gull, 1; Herring Gull, 136; Red-breasted Merganser, 8; Black Duck, 85; American Golden-eye, 140; Old Squaw, 2; White-winged Scoter, 7; Canada Goose, 7; Red-tailed Hawk, 1; Belted Kingfisher, 1; Downy Woodpecker 1; Northern Flicker, 6; Horned Lark, 8; Prairie Horned Lark, 2; Blue Jay, 4; Crow, 55; Starling, 85; Meadowlark, 9; Goldfinch, 1; Tree Sparrow, 2; Slate-colored Junco, 17; Song Sparrow, 11; Swamp Sparrow, 3; Myrtle Warbler, 40; Chickadee, 21. Total, 25 species, 633 individuals.—L. T. LITTLE, C. A. ROBBINS and W. L. ROBBINS.

Cohasset, Mass.—Dec. 25; 9 A.M. to 4 P.M. Clear; no snow; brisk north wind; temp. 22° at start, 18° at return. Distance covered 10 miles on foot—seashore, salt marshes,

mixed woods and farming country. Three workers hunted together. Holboell's Grebe, 2; Great Northern Diver, 5; Great Black-backed Gull, 1; Herring Gull, 500+; Red-breasted Merganser, 1; Old Squaw, 2; White-winged Scoter, 6; Hawk (probably Rough-legged), 1; Flicker, 1; Crow, 10; Junco, 64; Tree Sparrow, 1; Song Sparrow, 1; Brown Creeper, 3; White-breasted Nuthatch, 1; Chickadee, 14; Golden-crowned Kinglet, 16. Total, 17 species, 629+ individuals.—L. B. FLETCHER and MR and MRS. CHARLES L. WHITTLE.

Mattapoisett, Mass.—Dec. 25; 10.30 A.M. to 12.30 P.M. Clear; bare ground; wind northwest, heavy; temp. 24° at start, 30° at return. Six miles on foot. Observers together. Horned Grebe, 6; Herring Gull, 5; Old Squaw, 7; Scoter, 50+; Downy Woodpecker, 1; Flicker, 4; Blue Jay, 9; Crow, 8; Starling, 6; Meadowlark, 18; Crossbill, 2; Goldfinch, 6; Pine Siskin, 1; Tree Sparrow, 1; Junco, 6; Song Sparrow, 4; Myrtle Warbler, 44; Chickadee, 7; Golden-crowned Kinglet, 9; Robin, 2. Total, 20 species, 206 individuals. MR and MRS. J. E. NORTON SHAW.

Fairhaven, Mass. (Sciticut Neck region).—Dec. 26; 12 M. to 3 P.M. Clear; ground bare; light wind; temp. 24°. Four miles on foot. Herring Gull, 23; Old Squaw, 11; Blue Jay, 2; American Crow, 8; Starling, 40; Goldfinch, 20; Junco, 10; Song Sparrow, 12; Chickadee, 5; Golden-crowned Kinglet, 2. Total, 11 species, 151 individuals.—MABEL L. POTTER.

New Bedford and Dartmouth, Mass.—Dec. 26; 11 A.M. to 4.45 P.M. Clear until about 1 o'clock then slightly hazy; wind slight, north at start to southeast to south; temp. 12°. About 8 miles on foot. Observers separate. Sharp-shinned Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 1; Blue Jay, 3; Crow, 15; Starling, 400+; Tree Sparrow, 35; Junco, 64; Song Sparrow, 36; Myrtle Warbler, 4; Brown Creeper, 7; Chickadee, 25; Robin, 1. Total, 13 species, 593+ individuals.—ALICE TERRY and EDITH F. WALKER.

Providence, East Providence and Johnson, R. I.—Dec. 25; all day. Clear; ground bare; wind northwest, strong; temp. 30°. Herring Gull, 35; Scaup, 100; Bob-white, 5; Downy Woodpecker, 2; Flicker, 4; Blue Jay, 1; Crow, 10; Starling, 200; Goldfinch, 7; Tree Sparrow, 6; Junco, 50; Song Sparrow, 3; Brown Creeper, 2; Myrtle Warbler, 12; White-breasted Nuthatch, 2; Chickadee, 60. Total, 16 species, 499 individuals.—JOHN W. RUSSELL.

Warwick, R. I.—Dec. 25; 10 A.M. to 3 P.M. Clear; ground bare; wind northwest, strong; temp. 26° at start, 28° at return. Nine miles on foot. Herring Gull, 300; Scaup, 10; Flicker, 2; Blue Jay, 2; Crow, 8; Myrtle Warbler, 16; Chickadee, 9. Total, 7 species, 347 individuals.—HARRY S. HATHAWAY

South Windsor, Conn. (beside Connecticut River and in the swamps and woodland parallel thereto).—Dec. 26; 10 A.M. to 4.30 P.M. Partly cloudy; 5-mile northeast wind; temp. 8° to 19°. Observers together all day. Herring Gull, 1; Merganser, 10; Mallard Duck, 2; Black Duck, 50+; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 5; Blue Jay, 2; Crow, 2,000+; Starling, 10; Tree Sparrow, 150+; Song Sparrow, 8; Swamp Sparrow, 1; Brown Creeper, 7; White-breasted Nuthatch, 5. Total, 18 species, 2,263+ individuals. Pileated Woodpecker, 2 seen earlier in week; Golden-crowned Kinglets, Juncos, Barred Owl seen on Dec. 25; great scarcity of Chickadees in this vicinity.—C. W. VIBERT and GEO. T. GRISWOLD.

Hartford, Conn.—Dec. 25; 10 A.M. to 12.30 P.M. Clear; ground bare; strong northwest wind; temp. 30° at start, 28° at return. Barred Owl, 2; Hairy Woodpecker, 1; Downy Woodpecker, 3; Blue Jay, 14; Crow, 14; Starling, 37; American Goldfinch, 22; Tree Sparrow, 37; Slate-colored Junco, 57; White-breasted Nuthatch, 3; Chickadee, 23. Total, 11 species, 213 individuals.—CLIFFORD M. CASE.

West Hartford, Conn.—Dec. 25; 7.30 A.M. to 5 P.M. Clear; ground bare; very strong northwest wind; temp. 24° at start and finish, only two degrees higher at noon. Sixteen-

mile tramp. Sparrow Hawk, 1; Barred Owl, 1; Screech Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woodpecker, 1; Blue Jay, 5; Crow, 3,000; Starling, 700; Song Sparrow, 2; Brown Creeper, 1; Nuthatch, 13. Total, 12 species, (about) 3,728 individuals. Dec. 26: Pileated Woodpecker, 1; Robin, 1.—EDWIN H. MUNGER.

Bristol, Conn. (northeastern part). 8 A.M. to 2.30 P.M. Nearly clear; ground barely covered by a snow-flurry in the night; wind fresh; temp. 23° at start, 26° at return. Five to 6 miles on foot, then about 10 miles by auto, with R. W. Ford, stopping at various places to look for birds, a northern Shrike being the only additional bird found. The sky remained nearly clear, but the wind became high, nearly a gale by noon. Hairy Woodpecker, 1; Downy Woodpecker, 1; Crow, 8; Starling, (about) 300; Goldfinch, 6; Tree Sparrow, 12; Song Sparrow, 1; Northern Shrike (immature), 1; White-breasted Nuthatch, 3; Chickadee, 2. Total, 10 species, 335 individuals. The day before a Brown Creeper and a Sparrow Hawk had been seen in town, and the writer has seen or heard Blue Jays almost every morning on the way to the office, but, for the first time in our experience, we failed to find them today.—FRANK BRUEN and R. W. FORD.

New London, Conn. (shore road to lighthouse and back by inland road).—Dec. 28; 12.40 to 4.30 P.M. Clear; ground partly covered with snow; wind northwest, light; temp. 40° at start, 36° at return. Seven and one-half miles on foot. Herring Gull, 188; Ring-billed Gull, 7; Great Black-backed Gull, 1; Kittiwake, 1; Scaup Duck, 50 (est.); Crow, 5; Junco, 6; Tree Sparrow, 1; Myrtle Warbler, 5. Total, 9 species, 264 individuals.—FRANCES MINER GRAVES.

Meriden, Conn.—Dec. 25; 9.30 A.M. to 12.30 P.M. and 1.30 to 3 P.M. Clear; no snow; 4 in. of ice on lakes; wind, northwest, very strong; temp. 15°. About 4-mile walk, open country and one small section of woodland and brush. Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Downy Woodpecker, 1; Northern Flicker, 1; Horned Lark, 75; Crow, 10; Starling, 19; Tree Sparrow, 8; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 3; Golden-crowned Kinglet, 2; Robin, 3 (one a partial albino, with white patches on back, wing coverts and tail). Total, 13 species, 127 individuals. Dec. 24: a Rusty Blackbird.—LESTER W. SMITH.

Fairfield, Conn. (Birdcraft Sanctuary and Fairfield Beach).—Dec. 25; sunrise to sunset. Fair; ground bare; temp. 18° to 38°. Herring Gull, 75; Red-breasted Merganser, 3; Black Duck, 9; Lesser Scaup, 32; American Golden-eye, 7; Old Squaw, 20; White-winged Scoter, 40; Surf Scoter, 8; Black-crowned Night Heron, 6; Cooper's Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 3; Horned Lark, 5; Blue Jay, 7; American Crow, 6; Starling, 40; Meadowlark, 2; White-throated Sparrow, 6; Tree Sparrow, 10; Junco, 30; Song Sparrow, 10; Myrtle Warbler, 5; Brown Creeper, 1; White-breasted Nuthatch, 2; Golden-crowned Kinglet, 4. Total, 25 species, 333 individuals.—FRANK NOVAK (Warden).

Fairfield, Conn.—Dec. 24; 9.20 A.M. to 1.10 P.M. and 2.15 to 4.45 P.M. Partly cloudy, ground bare; wind west, heavy; temp. 44° at start, 36° at return. Fourteen miles on foot. Horned Grebe, 1; Great Black-backed Gull, 1; Herring Gull, 400; Scaup Duck, 12; Golden-eye, 4; Old Squaw, 2; White-winged Scoter, 4; Surf Scoter, 11; Sparrow Hawk, 1; Downy Woodpecker, 2; Blue Jay, 11; Crow, 5; Starling, 6; Goldfinch, 2; Tree Sparrow, 23; Slate-colored Junco, 4; Song Sparrow, 3; Myrtle Warbler, 21; White-breasted Nuthatch, 2; Chickadee, 5. Total, 20 species, 520 individuals. A Catbird seen Dec. 19 could not be found today. Most small land-birds are scarce this winter, and Chickadees unusually so.—ARETAS A. SAUNDERS.

Wilton, Conn.—Dec. 24; 7.30 A.M. to 12.30 P.M. Cloudy to fair; ground bare; wind northwest; temp. 35° at start, 40° on return. Five miles on foot. Ruffed Grouse, 1; Kingfisher, 1; Hairy Woodpecker, 1; Crow, 15; Goldfinch, 6; Tree Sparrow, 6; Junco, 37; Myrtle Warbler, 7; Winter Wren, 1; Chickadee, 7; Bluebird, 3. Total, 11 species, 85 individuals. The Kingfisher was seen flying over the open waters of the reservoir at Wilton with 6× glasses.—SYDNEY K. BUNKER.

Waterford, N. Y.—Dec. 28; 9 A.M. to 12 M., 1.30 to 4.30 P.M. Clear; 4 in. of snow; wind northwest to west, strong and cold; temp. 32° (35° at noon), 31° at finish. Herring Gull, 4; Marsh Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 2; Crow, 14; Red-winged Blackbird, 7 (male); Tree Sparrow, 250+; Song Sparrow, 10+; Chickadee, 4. Total, 9 species, 293+ individuals.—EDGAR BEDELL.

Albany, N. Y. (west of city).—Dec. 26; 7.30 A.M. to 1.30 P.M. Clear at start, becoming cloudy later; ground bare; wind west, light; temp. 2° at start, 16° at return. Eight miles on foot. Observers together. Ruffed Grouse, 3; Downy Woodpecker, 5; Blue Jay, 9; Crow, 250; Starling, 175; Tree Sparrow, 50; Brown Creeper, 2; White-breasted Nuthatch, 3; Chickadee, 21. Total, 9 species, 518 individuals. Six Bluebirds seen Dec. 19; 2 Song Sparrows Dec. 25.—DR. JOSEPH S. LAWRENCE and CLARENCE HOUGHTON.

Fort Plain, N. Y.—Dec. 27; 9 A.M. to 12.30 P.M.; 2 to 6 P.M. Cloudy, with intermittent snow-squalls from the southeast; 4 in. snow; wind southeast, light; temp. 20° at start, 30° at return. Route, creek valleys, Oak Hill (large, heavily wooded tract), open fields, fences, Erie Canal towpath and vicinity of Mohawk River. About 12 miles on skis. Observers together; also dog. Ruffed Grouse, 1; Ring-necked Pheasant, 1; Rough-legged Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 5; American Crow, 4; Starling, 1; Rusty Blackbird, 30 (one flock); American Goldfinch, 6; Tree Sparrow, 56; Slate-colored Junco, 25; Song Sparrow, 2; Northern Shrike, 1; Black-capped Chickadee, 5. Total, 14 species, 140 individuals. Blackbirds were recorded within ¼ mile of occurrence in same locality on Dec. 28, 1919.—DOUGLAS AYRES, JR. and ARTHUR SCHULL (age, 12 years).

Canajoharie, N. Y. (to Fort Plain and back by different roads).—Dec. 26; 9 A.M. to 2 P.M. Cloudy; no snow; wind east, light; temp. -4° at start, +8° at return. Seven miles on foot. Through two woods. Observers together. Hairy Woodpecker, 1; Downy Woodpecker, 2; Crow, 15; Junco, 1; Tree Sparrows, (flock of about 25, and scattering pairs and individuals); Brown Creeper, 3; (Chickadee?). Total, 7 species, (about) 48 individuals.—ELLEN VAUGHAN and VILETTA C. KANE.

Marcellus, N. Y.—Dec. 24; 10.30 A.M. to 5.30 P.M. Partly cloudy; no snow except in widely scattered patches; ice on pools and ponds; fairly strong west wind; temp. 32° at start, 34° at finish. Twelve miles on foot through woods, along roads, and in two cedar (*arborvitæ*) swamps. Ruffed Grouse, 3; Ring-necked Pheasant, 1; Long-eared Owl (?), 1; Crow, 15; Tree Sparrow, 4; White-breasted Nuthatch, 2; Chickadee, 10. Total, 7 species, 36 individuals. Song Sparrow was seen on Dec. 23 near a cedar swamp. Few Woodpeckers seen this winter.—NEIL HOTCHKISS.

Syracuse, N. Y.—Dec. 26; 9.30 A.M. to 4.15 P.M. Clear; 2 in. snow on ground; wind northeast, light; temp 6° at start, 19° on return. Seven miles on foot, north of city near Onondaga Lake. Observers together. Horned Grebe, 2; Herring Gull, 25; American Merganser, 8; American Golden-eye, 5; Ring-necked Pheasant, 1; Marsh Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 8; Red-bellied Woodpecker, 1 (male); Crow, 12; Goldfinch, 30; Tree Sparrow, 100; Song Sparrow, 1; Northern Shrike, 1; Brown Creeper, 1; White-breasted Nuthatch, 4; Chickadee, 12. Total, 17 species, 214 individuals.—PROF. T. L. HANKINSON, FRANK FREDRICHs, and NETTIE M. SADLER, (Onondaga County Bird Club).

Geneva, N. Y. (to Junius, Border City swamp and lake shore to Dresden).—Dec. 30; 8 A.M. to 4 P.M. Cloudy; light breezes; temp. 32° to 40°. Observers working in different directions. Holboell's Grebe, 1; Horned Grebe, 8; Herring Gull, 36; Red-breasted Merganser, 3; Black Duck, 6; Redhead, 14,000; Canvasback, 300; Greater Scaup, 2,000; American Golden-eye, 400; Bufflehead, 6; Old Squaw, 7; Great Blue Heron, 1; Ring-necked Pheasant, 17; Marsh (?) Hawk, 1; Sharp-shinned Hawk, 1; Sparrow Hawk, 1; Short-eared Owl, 1; Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 6; Flicker, 1; Crow, 250; Red-winged Blackbird, 1; Meadowlark, 1; Redpoll, 4; American

Goldfinch, 6; Pine Siskin, 4; Snowflake, 1; Tree Sparrow, 77; Junco, 11; Song Sparrow, 4; Brown Creeper, 6; White-breasted Nuthatch, 4; Chickadee, 46; Bluebird, 3. Total, 35 species, (about) 17,217 individuals. On Dec. 29, 1 Ruffed Grouse, 1 Robin, and 30 Mourning Doves were reported.—E. T. EMMONS, MRS. H. H. HENDERSON, E. H. EATON, RICHARD M. CHASE and GILBERT BREWER.

Rochester, N. Y. (Highland Park and vicinity, Port of Rochester to Irondequoit Bay). Dec. 24; 7.30 A.M. to 5 P.M. Fair with snow flurries; no snow on ground except a light sifting here and there; wind, southeast 18 miles per hour; temp. 28° to 34°. Herring Gull, 300; Ring-billed Gull, 200; Merganser, 1; Scaup Duck, 2; Scoter, 2; Pheasant, 8; Downy Woodpecker, 2; Crow, 9; Bronzed Grackle, 1; Tree Sparrow, 20; Slate-colored Junco, 26; Song Sparrow, 2; Cedar Waxwing, 50; Migrant [? Ed.] Shrike, 1; White-breasted Nuthatch, 1; Chickadee, 6; Robin, 1. Total, 17 species, 632 individuals. The Yellow-bellied Sapsucker has been noted by us all fall up to the present and was seen by G. W. Bahringer on Dec. 24.—WM. L. G. EDSON, R. E. HORSEY and F. RITTER SHUMWAY.

Rochester, N. Y. (Sea Breeze, Durand-Eastman Park, Summerville, Highland Park and Cobb's Hill and vicinities).—Dec. 26; 7.30 A.M. to 3 P.M. Cloudy; 3 in. of snow; strong southeast wind; temp. 0° at start, 30° at finish. Ten miles on foot. Observers together. Herring Gull, 400+; Ring-billed Gull, 800+; Bonaparte's Gull, 16; Merganser, 19; Bufflehead, 1; White-winged Scoter, 1; Marsh Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 3; Crow, 14; Bronzed Grackle, 1; Goldfinch, 1; Tree Sparrow, 4; Slate-colored Junco, 11; Cedar Waxwing, 16; Migrant [? Ed.] Shrike, 1; Brown Creeper, 6; White-breasted Nuthatch, 1; Black-capped Chickadee, 6; Ring-necked Pheasant, 16. Total, 20 species, 1,320+ individuals.—GORDON M. MEADE and R. M. CHASE.

Buffalo, N. Y. (Niagara River shores).—Dec. 25; 9.20 A.M. to 2.30 P.M. Sky overcast, with snow-flurries in morning, but clear later on; ground lightly covered with fresh snow; wind light, west in morning and east in afternoon; temp. 22° at start, 23° at return. Observers together. Herring Gull, (about) 150; Ring-billed Gull, (about) 50; Bonaparte's Gull, 70; Red-breasted Merganser, 35; Mallard, 3 (drakes); Black Duck, (about) 145; Golden-eye, (about) 225; Bufflehead, 1; Ring-necked Pheasant, 1; Downy Woodpecker, 1; Crow, 4; Chickadee, 3; Golden-crowned Kinglet, 8. Total, 13 species, (about) 700 individuals. Mr. Savage noted a Glaucous Gull here earlier in the month. Red-headed Woodpeckers are wintering locally near Hamburg.—JAMES SAVAGE and THOMAS L. BOURNE.

Hall, N. Y. (east and south of Hall).—Dec. 26; 8 A.M. to 4 P.M. Very cloudy; 2 in. snow; south wind, brisk; temp. 10° at start, 28° at finish. Distance 12 miles on foot. Herring Gull, 1; Pheasant, 22; Barred Owl, 1; Blue Jay, 2; Crow, 100; Hairy Woodpecker, 4; Downy Woodpecker, 4; Red-headed Woodpecker, 1; Tree Sparrow, 11; Brown Creeper, 2; Nuthatch, 16; Chickadee, 34. Total, 12 species, 198 individuals.—H. A. SOUTHERLAND.

Rhinebeck, Dutchess Co., N. Y.—Dec. 25; 10 A.M. to 4 P.M. Clear; ground bare; wind north, moderate; temp. 26°. Four miles, from Rhinebeck south to cove on Hudson River and back. Herring Gull, 18; American Merganser, 1 (male); Mute Swan, 25 (liberated birds which have been breeding wild for several years); Ring-necked Pheasant, 1; Red-tailed Hawk, 2; Rough-legged Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 4; Downy Woodpecker, 6; Blue Jay, 4; Crow, 55; Starling, 75; Purple Finch, 1; Goldfinch, 12; Tree Sparrow, 5; Junco, 10; Cedar Waxwing, 18; Myrtle Warbler, 4 (in cedar grove on river bank); White-breasted Nuthatch, 3; Black-capped Chickadee, 50 (actual count); Golden-crowned Kinglet, 4. Total, 21 species, 300 individuals.—MAUNSELL S. CROSBY.

Yonkers, N. Y.—10.05 A.M. to 4.15 P.M. Cloudy; ground bare; temp. 21°. Covered valley of small creek about 4 miles in length. Herring Gull, 3; Shark-shinned Hawk, 2; Downy, 5; Blue Jay, 1; Crow, 8; Starling, 40; White-throated Sparrow, 13; Tree Sparrow,

15; Junco, 3; Song Sparrow, 20; Robin, 1; Bluebird, 3. Total, 12 species, 114 individuals.—CHAS. W. MERRITT and WM. MATTHEWS.

New York City (Simpson Street subway station to Clason Point, Castle Hill, and West Farms).—Dec. 25; 2 to 4.45 P.M. Clear; ground bare; wind northwest, brisk; temp. 35° at start, 29° at return. Unidentified diving bird, 1; Herring Gull, 3,000 (estimated); Sharp-shinned Hawk, 1; Starling, 83; Tree Sparrow, 6 (flock); Song Sparrow, 1. Total, 6 species, (about) 3,092 individuals.—GEORGE E. HIX.

New York City (Van Cortlandt Park, Bronx Park, and Clason Point).—Dec. 24; 8.45 A.M. to 5 P.M. Partly cloudy; ground bare; wind west, brisk; temp. 36°. About 14 miles on foot. Herring Gull, 1,200; Scaup Duck (sp. ?), 200; Black-crowned Night Heron, 75 (in the L. Agassiz colony); Red-tailed Hawk, 2; Hairy Woodpecker, 1; Downy Woodpecker, 6; Blue Jay, 3; American Crow, 21; Starling, 456; Red-winged Blackbird, 1 (male); White-throated Sparrow, 48; Tree Sparrow, 114; Field Sparrow, 1; Slate-colored Junco, 88; Song Sparrow, 25; Fox Sparrow, 1; Brown Creeper, 6; Black-capped Chickadee, 2; Golden-crowned Kinglet, flock of 5 in Bronx Park. Total, 19 species, 2,255 individuals.—L. NELSON NICHOLS, EDWARD G. NICHOLS and PHILIP H. NELSON.

New York City (Van Cortlandt Park).—Dec. 26; 9.30 A.M. to 5 P.M. Cloudy; light breeze; temp. 15° to 20°. Herring Gull, 2; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 2; Crow, 5; Starling, 16; Grackle, 1; White-throated Sparrow, 23; Tree Sparrow, 33; Junco, 4; Song Sparrow, 22; White-breasted Nuthatch, 2. Total, 12 species, 112 individuals. On the 20th both Wilson's Snipe and Fox Sparrow were seen by Mr. Eisenmann. This year there seems to be an extreme rarity of Chickadees.—ALVAH C. BESSIE and EUGENE EISENMANN.

New York City (Van Cortlandt Park).—Dec. 24; 1.30 P.M. to 5 P.M. Cloudy; extremely cold; temp. 35° to 20°. Herring Gull, 3; Hawks (unidentified), 4; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 1; Crow, 1; Starling, 2; White-throated Sparrow, 10; Tree Sparrow, 25; Junco, 2; Song Sparrow, 2; Brown Creeper, 1; White-breasted Nuthatch, 2. Total, 13 species, 47 individuals. Parts of the lake were covered with ½ inch of ice.—BIOLOGICAL FIELD CLUB OF DEWITT CLINTON HIGH SCHOOL, ALVAH C. BESSIE, *President*.

Douglaston, L. I., N. Y.—Dec. 26; 9 A.M. to 12 M and 2.30 to 4 P.M. Partly cloudy; ground bare; wind north, light; temp. 19° at start; 28° at return. Seven miles on foot. Observers together. Herring Gull, 125; about 800 wild Ducks on Little Neck Bay, at least 200 of which were Scaups, and at least the same number of which were Golden-eyes; Black-crowned Night Heron, 10 (a small wintering colony); Sparrow Hawk, 2; Belted Kingfisher, 4; Downy Woodpecker, 4; Crow, 30; Fish Crow, 30 (the voices of both species of Crows were heard many times, but the relative numbers of each seen were estimated); Starling, 210; White-throated Sparrow, 22; Tree Sparrow, 15; Slate-colored Junco, 80; Song Sparrow, 34; Swamp Sparrow, 4; Chickadee, 6. Total, 16 species, (about) 1,375 individuals.—MR. and MRS. G. CLYDE FISHER and FARIDA A. WILEY.

Hempstead, N. Y.—Dec. 24; 9 A.M. to 3.30 P.M. Undecided; temp. about 40°. Herring Gull, 11; Sharp-shinned Hawk, 1; Horned Lark, 40+; Crow, 62; Starling, 28; White-throated Sparrow, 5; Tree Sparrow, 30; Slate-colored Junco, 76+; Song Sparrow, 12; Brown Creeper, 9; Chickadee, 5; Robin, 2. Total, 12 species, 300+ individuals.—THEODORE G. ROEHNER.

Long Beach, L. I., N. Y.—Dec. 26; 7 A.M. to 1.30 P.M. Clear to cloudy; wind northeast, moderate; temp. 18° to 25°. Horned Grebe, 9; Great Black-backed Gull, 22; Herring Gull, 1,500+; Ring-billed Gull, 2; Red-breasted Merganser, 2 (+flock of 12?); Scaup Duck (sp.), 18; Old Squaw, 30; American Scoter, 6; Horned Lark, 24; Crow, 70; Starling, 10; Meadowlark, 3; Snow Bunting, 4; Ipswich Sparrow, 2; Tree Sparrow, 1; Song Sparrow, 2; Myrtle Warbler, 3. Total, 17 species, 1,750+ individuals.—EDWARD FLEISHER.

Long Beach, L. I., N. Y.—Dec. 27; 6.40 A.M. to 12.37 P.M. Cloudy, heavy drizzle; strong east wind; ground partly snow- and ice-covered; temp. 30°. Observers together. Black-backed Gull, 100+; Herring Gull, 3,000+; Red-breasted Merganser, 30; Scaup, 5; Bufflehead, 1; Old Squaw, 1; White-winged Scoter, 4; Marsh Hawk, 1; Horned Lark, 3; Crow, 2; Starling, 75+; Meadowlark, 8; Rusty Blackbird, 2; Snowflake, 100+; Song Sparrow, 6. Total, 15 species, 3,338+ individuals.—H. and R. FRIEDMANN.

Long Beach, L. I., N. Y.—Dec. 26; 10 A.M. to 4.15 P.M. Cloudy; ground bare; wind northeast; temp. 30° to 40°; surf calm. Holbøll's Grebe, 4; Horned Grebe, 11; Loon, 2; Red-throated Loon, 1; Black-backed Gull, 25+ (several in large flock of Herring Gulls); Herring Gull, 1,500; Ring-billed Gull, 1 (size, color of legs, and wing pattern clearly noted, by good light, in comparison with Herring Gulls); Red-breasted Merganser, 22; Black Duck, 30; Scaup, 6; Golden-eye, 3; Old Squaw, 60; American Scoter, 27; White-winged, Scoter, 3; Sanderling, 13; Sparrow Hawk, 2; Short-eared Owl, 1; Horned Lark, 19; Crow, 25; Starling, 110; Meadowlark, 7; Ipswich Sparrow, 11; Song Sparrow, 1; Myrtle Warbler, 2. Total, 24 species, 1,900+ individuals.—MAURICE C. BLAKE. JOHN U. HARRIS, WALDEN PELL 2ND, and STUYVESANT M. PELL.

Long Beach, L. I., N. Y.—Dec. 24. Partly cloudy; no snow or ice; fresh to strong northwest wind, rough sea; temp. at daylight 37°, at sunset 34°; many dandelions in bloom. Horned Grebe, 5; Loon, 1; Kittiwake, 1 (adult), on shore pond; Black-backed Gull, many; Herring Gull, innumerable thousands; Bonaparte's Gull, 1 (immature), on ocean shore; Black Duck, many hundreds off shore; Greater Scaup, 1; Old Squaw, fairly common; White-winged Scoter, 1 (two Scoters far out appeared to be Surf Scoters); Bittern, 1, inward meadows nearer East Rockaway than Long Beach; Sanderling, 1; Sparrow Hawk, 3; Horned Lark, 5; Crow, common; Starling, only in the town; Meadowlark, 10; Ipswich Sparrow, 5; Tree Sparrow, 5; Song Sparrow, 2; Myrtle Warblers, 2. Total, 21 species.—E. P. BICKNELL.

Amityville, L. I., N. Y.—Dec. 26; 9.30 A.M. to sunset. Clear, becoming overcast; ground bare; wind light northerly, changing to moderate easterly; temp. about 20°, rising to 30°. Observers together until 2 P.M. Herring Gull, 20; Sparrow Hawk, 3; Downy Woodpecker, 2; American Crow, 50; Starling, 150; White-throated Sparrow, 25; Tree Sparrow, 60; Field Sparrow, 3; Junco, 8; Song Sparrow, 15; Fox Sparrow, 2; Myrtle Warbler, 200; Brown Creeper, 2; Chickadee, 12. Total, 14 species, 552 individuals.—WALTER GRANGER, LUDLOW GRISCOM and J. T. NICHOLS.

Orient, L. I., N. Y.—Dec. 25; all day. Clear; ground bare; fresh to strong northwest wind; temp. 22° at start, 20° at return. Horned Grebe, 1; Loon, 2; Herring Gull, 150; Red-breasted Merganser, 50; Mallard, 1; Black Duck, 10; Green-winged Teal, 1; Greater Scaup Duck, 200; Bufflehead, 20; Old Squaw, 100; White-winged Scoter, 75; Surf Scoter, 10; Great Blue Heron, 4; Black-crowned Night Heron, 2; Sparrow Hawk, 1; Screech Owl, 1; Mourning Dove, 1; Downy Woodpecker, 1; Flicker, 2; Horned Lark, 32; Crow, 40; Starling, 6; Meadowlark, 35; Goldfinch, 1; Snow Bunting, 28; Tree Sparrow, 8; Junco, 6; Song Sparrow, 8; Myrtle Warbler, 40; Catbird, 1; Brown Creeper, 5; Chickadee, 11; Robin, 2. Total, 33 species, 867 individuals. Although a mild and open season, both water- and land-birds, with few exceptions, were rarer than in any census the writer has taken.—ROY LATHAM.

Southold and Peconic, N. Y.—Dec. 28; 11 A.M. to 5 P.M. Clear; ground bare; wind, strong northwest; temp. 33° at start, 30° at return. Herring Gull, 20; Red-breasted Merganser, 1; Black Duck, 3; Old Squaw, 1; White-winged Scoter, 5; Surf Scoter, 3; Red-shouldered Hawk, 1; Downy Woodpecker, 2; Flicker, 1; Blue Jay, 2; Crow, 45; Tree Sparrow, 25; Junco, 4; Song Sparrow, 3; Towhee, 1; Cedarbird, 2; Myrtle Warbler, 6; Chickadee, 8; Golden-crowned Kinglet, 1; Ruby-crowned Kinglet, 1; Robin, 6. Total, 21 species, 132 individuals.—MRS. FRANK D. SMITH and ROY LATHAM.

Montauk to Montauk Point, L. I., N. Y.—Jan. 1; daylight until dark. Clear; ground bare, all ponds and creeks open; wind south, very light; temp. 28° to 36°. Observers together. Holboell's Grebe, 1; Horned Grebe, 4; Loon, 150; Black Guillemot, 2; Dovekie, 2; Great Black-backed Gull, 20; Herring Gull, 500; Bonaparte's Gull, 4; American Merganser, 1 (male); Red-breasted Merganser, 20; Black Duck, 50; Golden-eye, 50; Bufflehead, 1 (hunter's game-bag); Old Squaw, 100; King Eider, 1; American Scoter, 30; White-winged Scoter, 125; Surf Scoter, 15; Ruddy Duck, 2; Brant, 17; Sparrow Hawk, 1; Downy Woodpecker, 1; Arkansas Kingbird, 1; Horned Lark, 18; Crow, 16; Starling, 50; Meadowlark, 9; Snowflake, 7; Ipswich Sparrow, 1; Tree Sparrow, 17; Song Sparrow, 5; Tree Swallow, 12; Myrtle Warbler, 120; Catbird, 2; Brown Thrasher, 1; Brown Creeper, 3; Chickadee, 6; Robin, 2. Total, 38 species, 1,373 individuals. Both Guillemots were seen within 50 yards, diving and flying. Red feet of both seen. King Eider, a female, observed, at leisure, sitting on a rock and asleep on the water within 100 feet. The Kingbird was on the north beach catching insects in the piles of seaweed. It was exceedingly tame, was approached within 50 feet on numerous occasions, and flitted up the beach just ahead of us for nearly a mile, thus under observation for half an hour. Every possible detail of coloration noted, including the outer tail-feathers, thus positively eliminating Cassin's Kingbird. Griscom familiar with the species in life, and all three with the Guillemot. The Catbirds and Thrasher were together in a thick patch of bayberries and briars, well seen by Crosby and Griscom. Jan. 2: Mourning Dove, 1.—**MAUNSELL S. CROSBY, DR. E. R. P. JANVRIN, and LUDLOW GRISCOM.**

Staten Island, N. Y. (Moravian Cemetery, Great Kills and Princess Bay).—Dec. 26; 8 A.M. to 4 P.M. Partly cloudy; wind northerly; temp. 25°. Eleven miles on foot. Observers together. Horned Grebe, 3; Loon, 1; Great Black-backed Gull, 15; Herring Gull, 500; Ring-billed Gull, 6; Bonaparte's Gull, 8; Scaup Duck, 3; Golden-eye, 10; Bufflehead, 5; Old Squaw, 6; Scoter, 6; White-winged Scoter, 1; Sparrow Hawk, 2; Prairie Horned Lark, 3; Blue Jay, 2; Crow, 15; Starling, 400; Goldfinch, 6; White-throated Sparrow, 1; Tree Sparrow, 1; Field Sparrow, 1; Junco, 20; Song Sparrow, 3; Cardinal, 1; Orange-crowned Warbler, 1; (Yellow?) Palm Warbler, 1; Chickadee, 50; Robin, 1. Total, 28 species, 1,072+ individuals. Both Orange-crowned and (Yellow?) Palm Warblers observed at close range, the Orange-crowned studied at leisure; no white eye-ring.—**GEORGE B. WILMOTT and LESTER L. WALSH (Brooklyn Bird-Lovers' Club).**

Hackettstown, N. J. (part of the valley between Hackettstown and Waterloo).—Dec. 24; 8.10 to 10.45 A.M. and 1.30 to 3 P.M. Partly cloudy; ground bare; wind west; temp. 33° at start. Duck (unidentified), 2; Ruffed Grouse, 1; Downy Woodpecker, 1; Crow, 55; Goldfinch, 1; Tree Sparrow, 13; Junco, 4; Song Sparrow, 2; Chickadee, 14. Total, 9 species, 43 individuals. Mourning Doves seen Dec. 11; Sapsucker, Dec. 28.—**MARY PIERSON ALLEN.**

Englewood Region, N. J. (Overpeck Marshes and Phelps estate).—Dec. 26; 8.35 A.M. to 4.10 P.M. Cloudy; wind north, slight; temp. 32°. Herring Gull, 40; Hawks, (sp. ?) 3; Hairy Woodpecker, 3; Downy Woodpecker, 6; Blue Jay, 1; Crow, 13; Starling, 9; Red-winged Blackbird, 1; White-throated Sparrow, 3; Tree Sparrow, 7; Slate-colored Junco, 17; Song Sparrow, 23; Brown Creeper, 4; White-breasted Nuthatch, 1; Black-capped Chickadee, 6; Golden-crowned Kinglet, 3. Total, 16 species, 140 individuals.—**BERNARD FREAD.**

Rutherford, N. J. (to Great Notch).—Dec. 26; 8 A.M. to 2.30 P.M. Generally overcast; no snow; but little wind; temp. 23° at start. About 12 miles by foot. Observers not far apart. Herring Gull, 1; Downy Woodpecker, 2; Blue Jay, 2; Crow, 16; Starling, 2; White-throated Sparrow, 10; Tree Sparrow, 75; Junco, 6; Song Sparrow, 50; Myrtle Warbler (one large flock and several scattered individuals), 35; White-breasted Nuthatch, 1. Total, 11 species, (about) 200 individuals.—**O. DAVIS KEEP and ROGER A. BANTON.**

Richfield, N. J. (Valley Road from Albion Place to Great Notch, thence to Bloomfield Road and Clifton Avenue).—Dec. 25; 9 A.M. to 12 M. Clear; ground bare; wind west, light; temp. 26° at start, 34° at return. Downy Woodpecker, 1; Blue Jay, 2; Crow, 7; Starling, common; Goldfinch, 3; White-throated Sparrow, 5; Tree Sparrow, 3; Junco, 20; Song Sparrow, 2; White-breasted Nuthatch, 1; Chickadee, 4; Robin, 1. Total, 12 species, 49 individuals, excluding the Starlings, of which there was a great flock of probably three to four hundred.—LOUIS S. KOHLER.

Branch Brook Park, Morris Canal, and Third River, N. J.—Dec. 26; 8.30 to 10.30 A.M., and 3 to 5 P.M.; Cloudy; ground bare; raw northeast wind, strong to light; temp. 18° to 22°, Branch Brook Park; temp. 25° to 28°, bank of Morris Canal and along Third River, a wide brook with two large ponds, running through open woods, marshy in places; back across open country. Downy Woodpecker, 2; Flicker, 1; Starling, 23; White-throated Sparrow, 50; Tree Sparrow, 4; Junco, 1; Song Sparrow, 2; Fox Sparrow, 2; Brown Creeper, 5; also the following [? Orange-crowned Warbler—ED.] which I am at a loss to identify: Length about 5 inches or less; crown dark grey; back olive-green, brighter on rump; underparts pale gray, strongly washed with pale yellow on sides and belly; bill small, thin, and pointed, no sign of head-stripes, wing-bars, or eye-ring. Watched at close range (about 15 feet) for about ten minutes with a good glass,—on a medium-sized elm when first seen, but afterwards always on bushes. I saw it Dec. 25 and 26, each day accompanied by 2 Brown Creepers and a Downy Woodpecker. Its movements were very active, taking it quickly from bush to bush. Total, 10 species, 91 individuals.—RAYMOND F. HAULENBEEK.

Morristown, N. J. (Burnham Park, Speedwell Park, along the Whippany River, Evergreen Cemetery).—Dec. 25; 7 to 8.30 A.M., 9 A.M. to 1 P.M. Clear at start, partly overcast later; ground bare; wind west to northwest, light to strong; temp. 25° at start, 30° at return. About 10 miles on foot. Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Blue Jay, 1; Crow, 38; Starling, 6; Goldfinch, 6; White-throated Sparrow, 6; Tree Sparrow, 158; Field Sparrow, 8; Junco, 65; Song Sparrow, 24; Cardinal, 2; Pine Warbler, 1; Brown Creeper, 2; White-breasted Nuthatch, 14; Chickadee, 6; Golden-crowned Kinglet, 20. Total, 18 species, (about) 366 individuals. The Pine Warbler was seen through field glasses, three times at ranges of about 10 yards; the dusky back and yellowish breast were distinctly noted.—R. C. CASKEY.

Elizabeth, N. J. (shore Newark Bay to Milburn).—Dec. 26; 7.45 A.M. to 5.30 P.M. Cloudy; wind variable between northwest and east; temp. 18° at start, 28° at return. About 15 miles on foot. Herring Gulls, 1,200 (conservative); Black Duck, 5; (Golden-eye ?) Duck, 3; Ring-necked Pheasant, 1; Marsh Hawk, 2; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Short-eared Owl (fresh pellets found on ice left from Dec. 25 high tides; species seen same locality Dec. 11 and 18); Hairy Woodpecker, 1; Downy Woodpecker, 5; Horned Lark, 13; Blue Jay, 5; American Crow, 16; Starling, 4; Meadowlark, 6; White-throated Sparrow, 40; Tree Sparrow, 135; Field Sparrow, 1; Slate-colored Junco, 41; Song Sparrow, 37; Fox Sparrow, 1; Cardinal, 2; Titlark, 3; Winter Wren, 1; Brown Creeper, 6; White-breasted Nuthatch, 6; Tufted Titmouse, 1; Black-capped Chickadee, 6; Golden-crowned Kinglet, 1. Total, 29 species, (about) 1,545 individuals. Two large flocks of water-birds, probably chiefly Gulls, but, judging from sound, containing some Canada Geese too far out in Newark Bay for positive identification and not included in count. Titlarks closely approached on salt meadow and seen distinctly through good glass.—CHARLES A. URNER.

Scotch Plains, N. J. (to Washington Valley).—Dec. 26; 11.55 A.M. to 5.15 P.M. Clear; ground bare; partly frozen, little wind; temp. at start, 29°. Ring-necked Pheasant, 1; Long-eared Owl, 1; Downy Woodpecker, 1; Flicker, 1; American Crow, 1; White-throated Sparrow, 2; Tree Sparrow, 3 (flock); Field Sparrow, 1; Junco, 50 (flock); Song Sparrow, 4; Cardinal, 6 (three pairs); Catbird, 1; White-breasted Nuthatch, 2 (together); Black-

capped Chickadee, 4; Golden-crowned Kinglet, 1; Hermit Thrush, 1; Bluebird, 4 (flock, flying over). Total, 17 species, 84 individuals.—W. DEW. MILLER.

Westfield, N. J. (along foot of Watchung Mountains to Scotch Plains and back).—Dec. 25; 7.30 A.M. to 4 P.M. Fair (bright sun); no snow; very gentle breezes; temp., start, 21°, return, 24°. About 8 miles on foot. Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 3; Blue Jay, 4; Crow, 11; Starling, (flock of about 40); American Goldfinch, 6; Tree Sparrow, 2; Slate-colored Junco, 15; Song Sparrow, 2; Brown Creeper, 2; White-breasted Nuthatch, 2; Black-capped Chickadee, 1; American Robin, 7 (apparently passing winter in a swamp); Bluebird 6. Total, 15 species, (about) 103 individuals.—FRANK ALLATT.

New Brunswick, N. J.—Dec. 24; 8.05 A.M. to 1.10 P.M., 1.45 to 3.45 P.M. Partly cloudy; ground bare; wind west, moderate; temp. 34° to 39°. Herring Gull, 1; Ring-billed Gull, 1; Sora Rail, 1; Killdeer, 9; Ring-necked Pheasant, 1; Cooper's Hawk, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 3; Hairy Woodpecker, 1; Downy Woodpecker, 4; Blue Jay, 12; Crow, 67; Fish Crow, 2; Starling, 53; Meadowlark, 12; Goldfinch, 3; White-throated Sparrow, 13; Tree Sparrow, 22; Junco, 123; Song Sparrow, 20; Fox Sparrow, 1; Cardinal, 5; Brown Creeper, 3; White-breasted Nuthatch, 4; Tufted Titmouse, 4; Robin, 1. Total, 26 species, 369 individuals. The Sora took flight from almost under my feet, and flew (apparently feebly) to a nearby bunch of cat-tails. The streaks on the back, size and color identified the bird. Red-winged Blackbirds were noted until Dec. 18, and Purple Grackles until Dec. 20.—STUART T. DANFORTH.

Princeton, N. J. (along Stony Brook from bridge on Lawrenceville road to Diuble Bridges).—Dec. 28; 11 A.M. to 1.30 P.M. Clear; sprinkling of snow; wind westerly; temp. 34° to 38°. Observers within calling distance. Mourning Dove, 5; Broad-winged (?) Hawk, 1 (seen at distance, attacked by Crows from above); Pigeon Hawk, 1; Downy Woodpecker, 1; Northern Flicker, 3; Blue Jay, 2; Crow, 1,500; Starling, 200; Goldfinch, 4; White-throated Sparrow, 8; Tree Sparrow, 10; Slate-colored Junco, 150; Song Sparrow, 3; Cardinal, 10; Migrant Shrike, 1; White-breasted Nuthatch, 1; Tufted Titmouse, 4 (bathing in a spring); Chickadee, 12; Golden-crowned Kinglet, 1; Bluebird, 20 (one with a broken leg). Total, 20 species, (about) 1,937 individuals. (The Shrike was watched for four minutes while eating a piece of a bird at a distance of about 15 feet in the top of a tree that grew below the bank on which I stood. He was in bright sunlight, and I had an entirely unobstructed view though I had no field-glasses with me. I noted particularly that he was well under 10 inches in length and that the upper and under parts were almost uniformly gray.—T. v. D.).—HAMILTON GIBSON and TERTIUS VAN DYKE.

Princeton, N. J. (to Rocky Hill, Dutch Neck, and vicinity).—Dec. 24; 9 A.M. to 4 P.M. Clear; ground bare; wind west to northwest, fresh; temp. 34° at start, 36° at return. Thirty miles by motor and on foot. Mourning Dove, 1; Marsh Hawk, 2; Sharp-shinned Hawk, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Sparrow Hawk, 5; Screech Owl, 1; Downy Woodpecker, 1; Blue Jay, 5; Crow, 203; Starling, 46; Meadowlark, 33 (30 in one flock); Tree Sparrow, 26; Junco, 25; Song Sparrow, 2; Cardinal, 5; Brown Creeper, 1; White-breasted Nuthatch, 2; Robin, 2; Bluebird, 1. Total, 20 species, (about) 364 individuals. White-throated Sparrows, Chickadees, and Red-breasted Nuthatches conspicuous by their unusual absence.—HENRY LANE ENO.

Princeton, N. J. (to Plainsboro and Rocky Hill and back, Millstone River, Carnegie Lake, and a red cedar grove).—Dec. 24; 7.50 A.M. to 5.35 P.M. Partly cloudy; river and lake open, ground bare, little frozen; wind northwest, brisk; temp. about 38° throughout day. Twelve miles on foot, 4 (after dark) by autobus. Herring Gull, 1 (adult); American Merganser, (flock) 4; Hooded Merganser, 1 (male adult); Red-tailed Hawk, 1 (immature); Long-eared Owl, 1; Saw-whet Owl, 1; Great Horned Owl, 2 (hooting at dusk); Hairy Woodpecker, 3; Downy Woodpecker, 6; Red-headed Woodpecker, 1; Flicker, 1; Blue

Jay 2, American Crow, 115; Fish Crow, 2; Starling, 37; Meadowlark, (flock) 4; Goldfinch, 2; White-throated Sparrow, 9; Tree Sparrow, 26; Field Sparrow, 5; Junco, 108; Song Sparrow, 21; Towhee, 1 (male), well seen; Cardinal, 6; Winter Wren, 2; Brown Creeper, 3; White-breasted Nuthatch, 7; Tufted Tit, 15; Carolina Chickadee, 4; Ruby-crowned Kinglet, 2 (together); Hermit Thrush, 1; Robin, (flock) 4. Total, 32 species, (about) 430 individuals. The Ruby-crowns were studied with 8X glasses fairly close; eye-rings of both and crown-patch of one noted.—CHARLES H. ROGERS.

Atlantic City, N. J.—Dec. 22. Rain most of the day; wind southeast; temp. 38° at start, 46° at return. Inland waterway from Little Beach Island (U. S. Coast Guard Station 120) to Atlantic City. Started at Little Beach 6.45 A.M., walked up the beach along the seashore to Great Bay, returned through alder bushes, and meadows. Left Little Beach in boat, and returned to Atlantic City 3.30 P.M. Going through Brigantine Inlet, Inland Waterway, and Absecon Inlet. Horned Grebe, 3; Black-backed Gull, 2; Herring Gull, (about) 200; Bonaparte Gull, 10; Red-breasted Merganser, 1; Black Duck, 15; Scaup Duck, 1; Old Squaw, 5; Scoter (American), 2; White-winged Scoter, Surf Scoter, 500 Scoters in all; Brant, thousands; Clapper Rail, (heard); Sanderling (?), 10; Marsh Hawk, 1; Sharp-shinned Hawk (this was shot by one of our party); Horned Lark (?), 25; Seaside Sparrow, 5; Song Sparrow, 1; Myrtle Warbler, 25. Total, 21 species, (about) 807 individuals not counting Brants. This the first time I have ever seen a Bonaparte Gull, but I am sure that these Gulls were Bonaparte because of their small size, their tern-like flight, and, of course, the markings.—FRANKLIN P. COOK.

Mount Holly, N. J.—Dec. 26; 9 A.M. to 5 P.M. Cloudy; ground bare; wind light; temp 22° at start, 32° at return. About 10 miles on foot. Bob-white, 1; Turkey Vulture, 6; Marsh Hawk, 1; Red-tailed Hawk, 2; Long-eared Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 7; Yellow-bellied Sapsucker, 1; Horned Lark, 10; Blue Jay, 2; Crow, (approximate) 10,000 (roost); Starling, 15; Meadowlark, 12; White-throated Sparrow, 35; Tree Sparrow, 20; Field Sparrow, 2; Junco, 50; Song Sparrow, 8; Cardinal, 5; Brown Creeper, 6; White-breasted Nuthatch, 1; Tufted Titmouse, 2; Carolina Chickadee, 1; Golden-crowned Kinglet, 3; Hermit Thrush, 1; Bluebird, 1. Total, 26 species, (about) 10,193 individuals. Dec. 25: Goldfinch and Screech Owl.—NELSON D. W. PUMYEA.

Cape May, N. J.—Dec. 26; 9.30 A.M. to 5.50 P.M. Cloudy; wind northeast; temp. 32° at start, 45° at return. Observers together most of the time. Horned Grebe, 3; Loon, 15; Red-throated Loon, 1 (Culver and Roland); Herring Gull, 50; Ring-billed Gull, 1; Bonaparte Gull, 12; Merganser, 2; Pintail, 1; Scoter, 14; White-winged Scoter, 2; Great Blue Heron, 4; Killdeer, 2; Turkey Vulture, 15; Marsh Hawk, 2; Red-tailed Hawk, 1; Sparrow Hawk, 1; Short-eared Owl, 1; Kingfisher, 1; Horned Lark, 1; Crow, 200; Starling, 25; Meadowlark, 30; Goldfinch, 1; Savannah Sparrow, 10; Sharp-tailed Sparrow, 1; White-throated Sparrow, 10; Tree Sparrow, 8; Field Sparrow, 6; Junco, 10; Song Sparrow, 2; Myrtle Warbler, 100; Palm Warbler, 3; Long-billed Marsh Wren, 1; Tufted Titmouse, 1; Carolina Chickadee, 8; Golden-crowned Kinglet, 3; Hermit Thrush, 1; Robin, 5. Total, 38 species, 554 individuals.—DELOS E. CULVER, CONRAD K. ROLAND and JULIAN K. POTTER.

Bethayres (Montgomery Co.), Pa.—Dec. 25; 9 A.M. to 1.30 P.M. Clear; ground bare; wind, strong northwest; temp. 28°. Red-shouldered Hawk, 2; Sparrow Hawk, 4; Downy Woodpecker, 3; Crow, 17; Starling, 75; Meadowlark, 14; Goldfinch, 19; White-throated Sparrow, 3; Tree Sparrow, 32; Field Sparrow, 1; Junco, 45; Song Sparrow, 6; Swamp Sparrow, 1; Brown Creeper, 1; Golden crowned Kinglet, 2. Total, 14 species, 225 individuals.—CLIFFORD H. PANGBURN.

Telford, Pa.—Dec. 25; 9.15 A.M. to 1 P.M. Clear; ground bare; wind, northwest; temp. 27° at start, 30° at return. Cooper's Hawk, 1; Red-tailed Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 1; Flicker, 1; Blue Jay, 1; Crow, 29; Starling, 4; Tree Sparrow, 3; Slate-colored Junco, 35; Song Sparrow, 21; Brown Creeper, 1. Total, 12 species, 99

individuals. On Dec. 26, 3 White-breasted Nuthatches and 6 Golden-crowned Kinglets were noted. Beginning of Christmas week Meadowlarks and large flocks of American Pipits were observed.—CLAUDE A. BUTTERWICK.

Chestnut Hill and White Marsh, Pa.—Dec. 26; 10.45 A.M. to 3 P.M. Cloudy; ground uncovered and frozen; wind, east, light; temp. 25°. Five miles on foot. Turkey Vulture, 1; Hawk (not identified), 2; Hairy Woodpecker, 3; Downy Woodpecker, 4; Flicker, 3; Crow, (about) 300; Starling, (about) 200; Goldfinch, 1; Junco, 9; Song Sparrow, (1 in song), 10; Cardinal, 6; Winter Wren, 2; Brown Creeper, 2; White-breasted Nuthatch, 1; Tufted Titmouse, 4. Total, 15 species, (about) 548 individuals.—GEORGE LEAR.

Philadelphia, Pa. (city line to Fort Washington and return, along Cresheim Creek to Fairmount Park).—Dec. 28; 10 A.M. to 5 P.M. Clear; sprinkling of snow; wind northwest; temp. 32° at start, 30° at return. Fifteen miles on foot. Mourning Dove, 1; Red-shouldered Hawk, 1; Hawk, 1 (either Red-tailed or Red-shouldered); Sparrow Hawk, 2; American Crow, 5; Starling, 100; Meadowlark, 25; White-throated Sparrow, 12; Tree Sparrow, 20; Slate-colored Junco, 35; Song Sparrow, 3; Cardinal, 6; White-breasted Nuthatch, 1. Total, 12 species, 212 individuals. Mourning Dove identified at close range. Winter visitant Chickadees late in arriving.—WILLIAM M. HUBER.

Philadelphia, Pa. (Oak Lane and Wissahickon Valley).—Dec. 25; 8.30 A.M. to 2.30 P.M. Clear; no snow; wind northwest; temp. 26° to 34°. Fifteen miles on foot. Rough-legged Hawk (American), 1; Downy Woodpecker, 2; Flicker, 1; Crow, 25; American Goldfinch, 1; Starling, 50; Carolina Wren, 1 (scrutinized with good glass at distance of 10 feet); Tree Sparrow, 55; Song Sparrow, 10; Junco, 150; Golden-crowned Kinglet, 20. Total, 11 species, 261 individuals.—W. A. SQUIRES.

Reading, Pa.—Dec. 25; 7.15 A.M. to 4.30 P.M. Clear; ground bare; wind west, light; temp. 23° at start. Observers together. Sparrow Hawk, 3; Downy Woodpecker, 7; Flicker, 1; Blue Jay, 10; Crow, 30; Starling, 20; Purple Finch, 18; Goldfinch, 7; White-throated Sparrow, 18; Tree Sparrow, 125; Junco, 175; Song Sparrow, 25; Cardinal, 7; Carolina Wren, 1; Winter Wren, 3; Brown Creeper, 1; White-breasted Nuthatch, 6; Chickadee, 6; Golden-crowned Kinglet, 3; Robin, 1; Bluebird, 2. Total, 21 species, 469 individuals.—MR. and MRS. G. HENRY MENGEL.

West Chester, Pa.—Dec. 25; 7.30 A.M. to 2 P.M. Clear; ground bare and frozen; light west wind; temp. at start 23°, on return 32°. Seven miles on foot. Observers together. Mourning Dove, 1; Turkey Vulture, 3; Marsh Hawk, 1; Red-tailed Hawk, 2; Red-shouldered Hawk, 1; Broad-winged Hawk, 3; Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 7; Flicker, 3; Crow, 595; Starling, 101; Tree Sparrow, 26; Slate-colored Junco, 377; Song Sparrow, 14; Cardinal, 8; Winter Wren, 1; Brown Creeper, 7; White-breasted Nuthatch, 5; Golden-crowned Kinglet, 2. Total, 20 species, 1,159 individuals.—C. E. EHINGER and EDWIN S. SMITH.

Lititz, Pa. (northern Lancaster County, upper valley of the Hammer Creek).—Dec. 26; 8 A.M. to 4.45 P.M. Cloudy; ground bare; wind east, light; temp. 22° at start, 26° at return. Total course, 27 miles on foot; observers in two parties over two-thirds of the way. Bob-white, 13; Ruffed Grouse, 1; Turkey Vulture, 3; Marsh Hawk, 1; Cooper's Hawk, 1; Red-tailed Hawk, 4; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 19; Northern Flicker, 5; Blue Jay, 1; Crow, 100; Starling, 25; Meadowlark, 15; Purple Grackle, 7; Goldfinch, 10; Tree Sparrow, 95; Slate-colored Junco, 490; Song Sparrow, 68; Cardinal, 3; Brown Creeper, 2; White-breasted Nuthatch, 11; Chickadee, 7; Golden-crowned Kinglet, 1; Bluebird, 5. Total, 26 species, (about) 890 individuals. A Short-eared Owl on Dec. 24. The unusual species are Bluebird, Grackle, Short-eared Owl, Marsh Hawk and Cooper's Hawk. The last four, common in October and early November, have never before been recorded in a Christmas census in northern Lancaster County.—HERBERT H. BECK. ABRAHAM BECK MILLER and WILLIAM DERR.

Ulster, Bradford Co., Pa.—Dec. 27; 9 to 11 A.M., 1 to 3.30 P.M. Cloudy in forenoon, clear in afternoon; ground covered with snow; wind northwest, shifting to southwest, then to north, brisk; temp. 24° at start, 20° at return. Ten to 12 miles on foot. Observers worked in pairs in forenoon, all together in afternoon. Ruffed Grouse, 2; Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 8; Blue Jay, 1; American Crow, 29; Starling, 1; Goldfinch, 9; Tree Sparrow, 105; Junco, 29; Song Sparrow, 1; Cedar Waxwing, 12; Brown Creeper, 3; White-breasted Nuthatch, 6; Black-capped Chickadee, 52. Total, 15 species, 262 individuals.—MRS. F. E. MATHER, MRS. O. J. VAN WINKLE, MRS. D. C. GILLETTE and MISS MARTHA McMORRAN.

York, Pa. (along the Susquehanna River).—Dec. 28; 8 A.M. to 12 M. Partly cloudy; 1 in. snow; wind north, strong; temp. 19° at start, 29° at return. River entirely free from ice. Four miles on foot. American Merganser, 3; Black Duck, 2; Sparrow Hawk, 2; Downy Woodpecker, 3; American Crow, 1,500; Starling, 8; Meadowlark, 16; Goldfinch, 4; White-throated Sparrow, 2; Tree Sparrow, 35; Slate-colored Junco, 26; Song Sparrow, 11; Cardinal, 2; Carolina Wren, 1; Winter Wren, 1; Brown Creeper, 2; Tufted Titmouse, 1; Black-capped Chickadee, 5; Golden-crowned Kinglet, 3. Total, 19 species, 1,627 individuals.—CHARLES S. WEISER.

Pittsburgh, Pa. (Forest Hills to Deer Creek).—Dec. 26; 8 A.M. to 5 P.M. Cloudy; ground bare; wind southeast, very light; temp. 29° at start, 34° at return. Fifteen miles on foot, 8 miles by trolley. Observers together most of the time. Ruffed Grouse, 2; Screech Owl, 2; Hairy Woodpecker, 3; Downy Woodpecker, 7; Flicker, 3; American Crow, 2; Cowbird, 1; Tree Sparrow, 88; Junco, 10; Song Sparrow, 26; Cardinal, 9; Brown Creeper, 1; White-breasted Nuthatch, 3; Tufted Titmouse, 9; Black-capped Chickadee, 7. Total, 15 species, 173 individuals. A flock of sixteen Prairie Horned Lark is wintering on the Edgewood Golf-Links. They were seen on Dec. 25 and on seven previous dates, but we could not find them today. Several Redwings were reported to be in a swamp adjoining that where the Cowbird was seen, but we could not flush them. A Robin and two Bronzed Grackles were observed also recently.—R. H. STAHL, H. H. ELLIOTT, P. F. SEIBOLD and J. L. JONES.

Grove City, Pa.—Dec. 27; 9.30 A.M. to 2.30 P.M. Very cloudy and dark; slow drizzle; 1 in. of snow on frozen ground, melting rapidly; wind west, light; temp. 40° at start, 36° at return. Eight miles on foot. Ruffed Grouse, 2; Red-shouldered Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 10; Flicker, 2; Blue Jay, 24; Goldfinch, 10; Tree Sparrow, 60; Junco, 20; Song Sparrow, 7; Cardinal, 1; White-breasted Nuthatch, 12; Black-capped Chickadee, 50; Golden-crowned Kinglet, 20; Robin, 1. Total, 15 species, (about) 224 individuals. Dec. 24, Brown Creeper, Chewink, and Tufted Titmouse were listed.—NEVIN NICHOLSON.

Emsworth, Pa.—Dec. 26; 9 to 11 A.M., 1 to 5 P.M. Cloudy; ground clean, light snow lasting 2 hours; wind northeast, light; temp. 28°. Eight miles on foot. Observers together. Hairy Woodpecker, 1; Downy Woodpecker, 5; Flicker, 2 (were stoned out of hollow tree); Crow, 2; Tree Sparrow, 24; Junco, 32; Song Sparrow, 8; Cardinal, 10; Winter Wren, 1; Brown Creeper, 3; White-breasted Nuthatch, 3; Tufted Titmouse, 2. Total, 12 species, 93 individuals.—THOMAS L. McCONNELL, LOUIS McCONNELL and L. F. SAVAGE.

Chesapeake Beach, Md.—Dec. 26; 10 A.M. to 4.30 P.M. Cloudy; ground bare; wind southeast, light; temp. 33°. Five miles on foot. Horned Grebe, 3; Herring Gull, 8; Golden-eye, 1; Bufflehead, 11; Old Squaw, 5; Scoter, 2; White-winged Scoter, 85; Surf Scoter, 29; Killdeer, 2; Turkey Vulture, 32; Belted Kingfisher, 1; Downy Woodpecker, 3; Flicker, 1; Blue Jay, 1; Crow, 25; Fish Crow, 155; Starling, 900; Red-winged Blackbird, 171; Meadowlark, 4; Goldfinch, 6; White-throated Sparrow, 15; Tree Sparrow, 16; Junco, 51; Song Sparrow, 9; Swamp Sparrow, 2; Towhee, 1; Cardinal, 4; Myrtle Warbler, 1; Mockingbird, 1; Carolina Wren, 1; Long-billed Marsh Wren, 1; Brown Creeper, 1;

Tufted Titmouse, 6; Carolina Chickadee, 3; Hermit Thrush, 1; Robin, 10. Total, 36 species, 1,558 individuals.—MR. and MRS. JOSEPH KITTREDGE, JR.

Sewickley, Pa.—Dec. 25; 9 A.M. to 12.30 P.M. Clear; light northwest wind, increasing to fresh; temp. 32°. About 7 miles covered thoroughly. Observers together. Ruffed Grouse, 1; Hairy Woodpecker, 2; Downy Woodpecker, 4; Tree Sparrow, 12; Junco, 64; Song Sparrow, 8; Cardinal, 8; Carolina Wren, 2; Tufted Titmouse, 3; Chickadee, 6; Golden-crowned Kinglet, 1. Total, 11 species, 111 individuals.—BAYARD H. CHRISTY, DENTON BORGER and FRANK A. HEGNER.

Morgantown, W. Va. (State Farms).—Dec. 24; 8.30 A.M. to 12.30 P.M. and 3 to 5 P.M. Slightly cloudy; wind light; temp. 26° at start, 34° at return. Thirteen miles on foot. Cooper's Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Screech Owl, 1; Downy Woodpecker, 7; American Crow, 6; Vesper Sparrow, 1; Chipping Sparrow, 31; Slate-colored Junco, 79; Song Sparrow, 32; Cardinal, 35; Carolina Wren, 2; Tufted Titmouse, 12; Chickadee, 3; Bluebird, 7. Total, 15 species, 220 individuals.—A. J. DADISMAN.

Parkersburg, W. Va.—Dec. 27; 1 to 5 P.M. Cloudy; ground bare; light west wind; temp. 40°. Five miles on foot. Observers together. Sparrow Hawk, 1; Downy Woodpecker, 1; Crow, 15; Song Sparrow, 9; Cardinal, 2; Carolina Wren, 1; Tufted Titmouse, 3; Chickadee, 7. Total, 8 species, 39 individuals.—MISS BERTHA E. WHITE, MISS LAURA B. MOORE, MISS GERTRUDE MEERWEIN and WALTER DONAGHHO.

Charleston, W. Va. (South Side hills and ravines).—Dec. 26; 9.30 A.M. to 2 P.M. Heavy clouds; light south winds; ground bare; snow flurries; temp. 30° at start, 35° at return. Six-mile hike on foot; same territory as covered in previous years. Observers together. Bob-white, 33 (two coveys); Hairy Woodpecker, 1; Downy Woodpecker, 11; Yellow-bellied Sapsucker, 2; Crow, 1; Goldfinch, 1; Tree Sparrow, 10; Field Sparrow, 18; Junco, 107; Song Sparrow, 81; Towhee, 19; Cardinal, 73; Carolina Wren, 45; House Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 24; Black-capped Chickadee, 30; Bluebird, 7. Total, 19 species, 470 individuals.—I. H. JOHNSTON, ELLIS CRAWFORD and MARY BELLE JOHNSTON.

Lewisburg, W. Va.—Dec. 25; 9.30 A.M. to 5 P.M. Clear in evening; ground bare; wind west, light; temp. 14° at start, 21° at return. Ten miles on foot and on horseback. Ruffed Grouse, 1; Turkey Vulture, 15; Red-tailed Hawk, 2; Sparrow Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 5; Red-bellied Woodpecker, 3; Flicker, 5; Blue Jay, 20; Crow, 1,000 (est.); Goldfinch, 9; Tree Sparrow, 168; Slate-colored Junco, 230; Song Sparrow, 12; Cardinal, 16; Mockingbird, 1; Carolina Wren, 1; White-breasted Nuthatch, 13; Tufted Titmouse, 18; Black-capped Chickadee, 1; Bluebird, 19. Total, 21 species, 1,513 individuals.—CHAS. O. HANDLEY.

Mount Vernon to Dyke, Va.—Dec. 29; 8.25 A.M. to 5.25 P.M. Clear; ground bare; wind southwest, light; temp. 22° at start, 38° at finish. Twelve miles on foot. Observers together. Herring Gull, 5; Ring-billed Gull, 1; American Merganser, 15; Hooded Merganser, 13; American Golden-eye, 290; Bufflehead, 1; Killdeer, 6; Mourning Dove, 15; Turkey Vulture, 27; Marsh Hawk, 2; Bald Eagle, 1; Kingfisher, 1; Downy Woodpecker, 5; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 1; Flicker, 2; Horned Lark (subsp. ?), 75; Blue Jay, 8; American Crow, 11; Fish Crow, 3; Starling, 113; Meadowlark, 5; White-throated Sparrow, 32; Tree Sparrow, 4; Field Sparrow, 10; Slate-colored Junco, 175; Song Sparrow, 5; Chewink, 1; Cardinal, 7; Myrtle Warbler, 9; Mockingbird, 5; Carolina Wren, 1; Winter Wren, 3; Brown Creeper, 3; White-breasted Nuthatch, 3; Tufted Titmouse, 3; Carolina Chickadee, 10; Golden-crowned Kinglet, 10; Ruby-crowned Kinglet, 1; Hermit Thrush, 3; Bluebird, 11. Total, 41 species, 897 individuals. In addition, a number of Goldfinches and one or two Wilson's Snipe were heard, but not seen (revised total 43).—W. L. MCATEE, E. A. PREBLE and FRANCIS HARPER.

Pulaski, Va.—Dec. 25; 1 to 6 P.M. Clear; ground bare; light west wind; temp. 38° at start, 32° at return. Seven miles on foot. Woodcock, 1; Killdeer, 11; Bob-white, 14

Mourning Dove, 6; Turkey Vulture, 90; Black Vulture, 3; Red-tailed Hawk, 1; Hairy Woodpecker, 1; Red-headed Woodpecker, 2; Crow, 12; Meadowlark, 1; Slate-colored Junco, 32; Song Sparrow, 8; Cardinal, 4; Mockingbird, 2; White-breasted Nuthatch, 8; Tufted Titmouse, 2; Black-capped Chickadee, 4. Total, 18 species, 202 individuals.—O. C. BREWER.

Spartanburg, S. C. (Ezell Dive).—Dec. 27; 7.30 A.M. to 12.30 P.M. Cloudy; ground very wet; some fog with a misting rain from 11.30; wind north. About 3 miles on foot. Mourning Dove, 1; Marsh Hawk, 1; Southern Downy Woodpecker, 1; Red-headed Woodpecker, 1; Flicker, 1; Blue Jay, 18; American Crow, 1; Meadowlark, 6; Purple Grackle, 2; White-throated Sparrow, 30; Field Sparrow, 23; Slate-colored Junco, 68; Song Sparrow, 8; Towhee, 7; Cardinal, 7; Mockingbird, 1; Carolina Wren, 3; Brown Creeper, 1; Tufted Titmouse, 2; Carolina Chickadee, 7; Golden-crowned Kinglet, 13; Ruby-crowned Kinglet, 15; Hermit Thrush, 5; Bluebird, 3. Total, 24 species, 225 individuals.—GABRIEL CANNON.

Summerton, S. C.—Dec. 25; 10 A.M. to 1 P.M. Clear; temp. 40°. Killdeer, 1; Turkey Vulture, 1; Yellow-bellied Sapsucker, 2; Phoebe, 2; Blue Jay, 2; Meadowlark, 25; Rusty Blackbird, 1; Goldfinch, 6; Vesper Sparrow, 6; Savannah Sparrow, 4; White-throated Sparrow, 15; Chipping Sparrow, 1; Field Sparrow, 6; Junco, 30; Song Sparrow, 5; Red-eyed Towhee, 3; Cardinal, 2; Loggerhead Shrike, 1; Myrtle Warbler, 6; Pine Warbler, 2; Palm Warbler, 1; American Pipit, 20; Mockingbird, 2; Brown Thrasher, 1; Carolina Wren, 2; Brown-headed Nuthatch, 6; Golden-crowned Kinglet, 2; Ruby-crowned Kinglet, 4; Hermit Thrush, 1; Bluebird, 6. Total, 30 species, 166 individuals.—E. S. DINGLE.

Aiken, S. C.—Dec. 21; 10.30 A.M. to 2.30 P.M. Overcast, with occasional light showers; calm; temp. at return 65°. About 3 miles on foot along a wooded creek and adjoining fields. Observers together. Killdeer, 18; Bob-white, 30 (2 coveys); Mourning Dove, 4; Turkey Buzzard, 15; Marsh Hawk, 1; Sharp-shinned Hawk, 2; Red-tailed Hawk, 1; Sparrow Hawk, 2; Southern Hairy Woodpecker, 7; Southern Downy Woodpecker, 2; Red-cockaded Woodpecker, 2; Pileated Woodpecker, 2; Red-headed Woodpecker, 3 (in town); Red-bellied Woodpecker, 1; Flicker, 12; Phoebe, 5; Blue Jay, 19; Crow, 45; Meadowlark, 18; Goldfinch, 10; Vesper Sparrow, 9; Henslow's Sparrow, 2; White-throated Sparrow, 250; Chipping Sparrow, 43; Field Sparrow, 59; Carolina Junco, 300; Song Sparrow, 156; Swamp Sparrow, 32; Fox Sparrow, 5; Towhee (both Red, and White-eyed), 15; Cardinal, 18; Cedar Waxwing, 60; Loggerhead Shrike, 7; Myrtle Warbler, 45; Pine Warbler, 5; Yellow Palm Warbler, 2; Mockingbird, 6; Brown Thrasher, 7; Carolina Wren, 7; Winter Wren, 2; Brown Creeper, 2; White-breasted Nuthatch, 1; Brown-headed Nuthatch, 22; Tufted Titmouse, 8; Carolina Chickadee, 19; Golden-crowned Kinglet, 11; Ruby-crowned Kinglet, 38; Hermit Thrush, 80; Robin, 300; Bluebird, 33. Total, 50 species, (about) 1,736 individuals.—MARION J. PELLEW and LOUISE P. FORD.

Plant City, Fla.—Dec. 25; 5 A.M. to 6 P.M. Bright and clear; light northeast wind; temp. 40° to 60°. Trip made by auto from Plant City to Hillsboro River, 1 mile north of Crystal Springs, Fla., about seven hours spent looking for birds along the bank of the Hillsboro River, and return by auto. Total distance one way, 14 miles. Anhinga, 1; American Bittern, 1; Ward's Heron, 6; American Egret, 3; Snowy Heron, 3; Louisiana Heron, 5; Little Blue Heron, 50; Green Heron, 1; Black-crowned Night Heron, 5; Yellow-crowned Night Heron, 2; King Rail, 1; Woodcock, 4; Killdeer, 7; Florida Bob-white, 9; Mourning Dove, 11; Ground Dove, 4; Turkey Vulture, 11; Black Vulture, 20; Marsh Hawk, 1; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 2; Sparrow Hawk, 1; Osprey, 1; Florida Barred Owl, 4; Florida Screech Owl, 1; Belted Kingfisher, 6; Southern Downy Woodpecker, 2; Pileated Woodpecker, 3; Red-bellied Woodpecker, 2; Flicker, 1; Phoebe, 13; Florida Blue Jay, 10; Fish Crow, 4; Florida Red-winged Blackbird, 73; Florida Meadowlark, 16; American Goldfinch, 33 (approx.); Vesper Sparrow, 13; Field Sparrow, 1; White-eyed Towhee, 2; Florida Cardinal, 10; Loggerhead Shrike, 15;

Blue-headed Vireo, 1; Black and white Warbler, 9; Myrtle Warbler, 3; Yellow-throated Warbler, 6; Palm Warbler, 22; Yellow Palm Warbler, 18; Oven-bird, 1; Florida Yellow-throat, 1; Mockingbird, 19; Brown Thrasher, 1; Florida Wren, 4; House Wren, 7; Tufted Titmouse, 8; Ruby-crowned Kinglet, 14; Blue-gray Gnatcatcher, 50; Robin, 1; Bluebird, 33. Total, 58 species, 557 individuals.—BERYL T., LEWIS H., and EUGENE MOUNTS and OSCAR E. BAYNARD.

Pensacola, Fla.—Dec. 25; 9 A.M. to 12.30 P.M. Weather clear and cool; ground clear of snow and ice; wind 20 miles, from northeast. Walk along shores of bay and through partly cleared scrub pine growth. Pied-billed Grebe, 3; Loon, 3; Herring Gull, 60; Ring-billed Gull, 1; Laughing Gull, 1; Bonaparte Gull, 2; Florida Cormorant, 1; Red-breasted Merganser, 14; Killdeer, 4; Mourning Dove, 2; Turkey Vulture, 2; Kingfisher, 2; Red-bellied Woodpecker, 1; Flicker, 5; Whip-poor-will, 1; Phoebe, 4; Blue Jay, 10; Fish Crow, 5; White-throated Sparrow, 10; Swamp Sparrow, 1; Cardinal, 2; Towhee, 12; Loggerhead Shrike, 1; Myrtle Warbler, (about) 125; Pine Warbler, 6; Palm Warbler, 3; Maryland Yellow-throat, 2; Titlark, 6; Mockingbird, 6; Catbird, 1; Carolina Wren, 1; House Wren, 4; Tufted Titmouse, 1; Brown-headed Nuthatch, 4; Ruby-crowned Kinglet, 8; Hermit Thrush, 1; Bluebird, 9. Total, 37 species, 324 individuals.—FRANCIS M. WESTON, JR.

Miami, Fla.—Dec. 22; 9 A.M. to 12 M. (in city limits), 2 to 6 P.M. (at Miami beach). Partly cloudy; wind southeast; temp. 76° at start, 78° at return. Herring Gull, 50; Ring-billed Gull, 30; Bonaparte Gull, 20; Royal Tern, 15; Florida Cormorant, 1; Brown Pelican, 100; Sea Duck (?), 300+; Black-crowned Night Heron, 20; Semipalmated Sandpiper, 5; Spotted Sandpiper, 4; Sanderling, 50; Killdeer, 100+; Florida Bob-white, 65 (4 coveys); Mourning Doves, 150; Ground Dove, 45; Turkey Vulture, 50; Black Vulture, 12; Red-shouldered Hawk, 4; Sparrow Hawk, 20; Osprey, 4; Kingfisher, 3; Southern Hairy Woodpecker, 3; Downy Woodpecker, 1; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 12; Flicker, 11; Whip-poor-will, 5 (heard several); Ruby-throated Hummingbird, 3; Crested Flycatcher, 1; Phoebe, 25; Florida Blue Jay, 10; Meadowlark, 13; Florida Grackle, 250+; Red-eyed Towhee, 3; Florida Cardinal, 15; Tree Swallow, 25; Loggerhead Shrike, 29; Blue-headed Vireo, 8; Worm-eating Warbler, 1 (was within 4 feet of it); Yellow-throated Warbler, 3; Pine Warbler, 50+; Palm and Yellow Palm Warblers, 300+; Prairie Warbler, 10; Florida Yellow-throat, 20; Mockingbird, 100; Catbird, 150; House Wren, 150; Blue-gray Gnatcatcher, 48. Total, 49 species, 2,535+ individuals. Dec. 21, Florida Wren, 3; Brown Thrasher, 1; Brown-headed Nuthatch, 10; Winter Wren, 1; Ruby-crowned Kinglet, 5; Oven-bird, 3; Red-cockaded Woodpecker, 7.—EDGAR BEDELL.

Detroit, Mich. (eastern suburbs and Belle Isle Park).—Dec. 24; 8 A.M. to 3 P.M. Cloudy; trace of snow; wind west, brisk; temp. 24°. Herring Gull, 75; Greater Scaup, 14; Ring-necked Duck, 4; Hairy Woodpecker, 8; Downy Woodpecker, 4; Prairie Horned Lark, 1; Crow, 7; Tree Sparrow, 125 (flock); Slate-colored Junco, 12; Song Sparrow, 2; Brown Creeper, 1; White-breasted Nuthatch, 8; Golden-crowned Kinglet, 15. Total, 13 species, 276 individuals.—RALPH BEEBE.

Detroit, Mich. (Belle Isle and river front).—Dec. 27; 8 to 12 A.M., 2 to 4 P.M. Clear; no wind; 4 in. of new-fallen snow; temp. 30° to 38°. Herring Gull, 22; Ring-billed Gull, 12; Merganser, 8; Red-breasted Merganser, 4; Bufflehead, 12; Golden-eye, 50; Barrow's Golden-eye, 10; Cooper's Hawk, 1; Screech Owl, 2; Horned Owl, 1; Hairy Woodpecker, 1; Downy Woodpecker, 8; Crow, 1; Brown Creeper, 2; White-breasted Nuthatch, 12; Golden-crowned Kinglet, 2. Total, 16 species, 148 individuals.—ETTA S. WILSON.

Ann Arbor, Mich.—Dec. 26; 9 A.M. to 4.30 P.M. Cloudy; snowing all day; 2 in. of snow; wind east, light; temp. 26° to 30°. Observers together. Bob-white, 2; Marsh Hawk, 1 (male); Long-eared Owl, 1 (two have been seen repeatedly in the same evergreen thicket for several weeks); Hairy Woodpecker, 4; Downy Woodpecker, 5; Flicker, 1;

Blue Jay, 4; Crow, 2; Tree Sparrow, 32; Junco, 45; Song Sparrow, 1; Cardinal, 8; Brown Creeper, 1; White-breasted Nuthatch, 5; Chickadee, 27. Total, 15 species, 139 individuals.—JOSSELYN VAN TYNE and CLAUDE VAN TYNE.

Madison, Wis.—Dec. 27; 8 A.M. to 5.45 P.M. Sunshine and partly cloudy; 6 in. of snow; brisk west wind; temp. 8° to -2°. Eighteen miles on foot; marshes, fields and woods along three lakes. Belted Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Blue Jay, 8; Crow, 14; Goldfinch, 1; Tree Sparrow, 53; Slate-colored Junco, 33; Brown Creeper, 8; White-breasted Nuthatch, 4; Chickadee, 20. Total, 11 species, 150 individuals. The Belted Kingfisher was seen along an unfrozen spring run at a distance of 30 feet.—S. PAUL JONES.

Hartland, Wis.—Dec. 27; 8 A.M. to 4 P.M. Clear; 7 in. of snow; strong northwest wind; temp. 4° at start and at return 0°. Pedometer registered 11 miles. Along wooded lake-shores and country roads. Hairy Woodpecker, 3; Downy Woodpecker, 5; Blue Jay, 5; Crow, 7; Purple Finch, 1; Pine Siskin, 150+ (1 flock); Tree Sparrow, 8; Slate-colored Junco, 18; Brown Creeper, 3; White-breasted Nuthatch, 5; Chickadee, 8; Golden-crowned Kinglet, 4. Total, 12 species, 217 individuals. Kinglets have been rather common in this locality for several weeks.—SUSIE L. SIMONDS.

Lauderdale Lakes near Elkhorn, Wis.—Dec. 26; 9.20 to 11.20 A.M., 1.20 to 3.20 P.M. Cloudy; 4 in. of snow; wind southeast, light; temp. 26° at start, 30° at return. About 8 miles on foot. Observers together. Wilson's Snipe, 1; Marsh Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; American Crow, 20; Tree Sparrow, 100 (approx.); Slate-colored Junco, 20; Song Sparrow, 1; Brown Creeper, 1; White-breasted Nuthatch, 5; Black-capped Chickadee, 5. Total, 11 species, 160 individuals. A Northern Shrike was observed Dec. 24 and two Goldfinches Dec. 22.—LULA DUNBAR and ROBERT DUNBAR, JR.

Minneapolis, Minn.—Dec. 22; 8 A.M. to 12.30 P.M. Cloudy; snowing lightly; 6 in. snow; wind northwest, moderate; temp. 21° at start, 25° at return. About 8 miles on foot along the east bank of the Mississippi River and nearby fields and woods. Screech Owl (seen at 5 P.M.), 1; Hairy Woodpecker, 8; Downy Woodpecker, 4; Blue Jay, 6; Redpoll, 1; White-breasted Nuthatch, 10; Black-capped Chickadee, 2; Bluebird, 1. Total, 8 species, 33 individuals. The Bluebird is an unusual winter record for Minnesota. As this bird has been seen every day for about two weeks, there is no doubt as to its identification.—LAWRENCE ZELENY.

Minneapolis, Minn. (Minnehaha Falls and Lake Nokomis).—Dec. 27; 9.30 A.M. to 1 P.M. Fair; 8 in. of snow; wind west, medium; temp. -8° to 0°. Distance covered, 5 miles; observers together. Hairy Woodpecker, 1; Blue Jay, 2; Tree Sparrow, 5; Brown Creeper, 3; White-breasted Nuthatch, 4; Chickadee, 2. Total, 6 species, 17 individuals.—BURTON THAYER and CHARLES PHILLIPS.

Youngstown, Ohio.—Dec. 25; 8 A.M. to 5 P.M. Partly cloudy; ground bare; temp. 12° to 22°; light southwest wind. Distance walked, about 15 miles. Bob-white, 15; Red-tailed Hawk, 2; Sparrow Hawk, 1; Barred Owl, 2; Screech Owl, 1; Belted Kingfisher, 1; Hairy Woodpecker, 14; Downy Woodpecker, 52; Red-bellied Woodpecker, 4; Flicker, 2; Blue Jay, 24; Crow, 3; Meadowlark, 9; Goldfinch, 1; Tree Sparrow, 205; Slate-colored Junco, 98; Song Sparrow, 18; Cardinal, 34; Winter Wren, 5; Brown Creeper, 12; White-breasted Nuthatch, 72; Tufted Titmouse, 55; Black-capped Chickadee, 124; Golden-crowned Kinglet, 37; Robin, 1. Total, 25 species, 882 individuals.—GEO. L. FORDYCE, C. A. LEEDY, EVAN C. DRESSEL, H. W. WEISGERBER, and WILLIS H. WARNER.

Painesville, Ohio.—Dec. 26; 4 hours. Cloudy; snow flurries; brisk southwest wind; temp. 28° to 32°. Birds very scarce and difficult to locate. Six-mile walk and return. Herring Gull, 25; Bonaparte Gull, 300+; Merganser, 2; Black Duck, 2; Kingfisher, 1; Red-shouldered Hawk, 1; Downy Woodpecker, 2; Blue Jay, 4; Red-winged Blackbird (*fortis?*), 1; Bronzed Grackle, 1; Snow Bunting, 1; Tree Sparrow, 15; Slate-colored

Junco, 5; Cardinal, 2; White-breasted Nuthatch, 2; Chickadee, 4. Total, 16 species, 368+ individuals.—E. A. DOOLITTLE.

Lakewood (Cleveland) Ohio.—Dec. 25; 8.15 A.M. to 4.30 P.M. Cloudy till 10 o'clock, then clear; no snow except in timber and shaded parts of river valley; southwest wind, 8-mile velocity at start, 3-mile velocity at return; temp. 15° at start, 22° at return. About 14 miles on foot along shore of Lake Erie west of Rocky River, also up Rocky River Valley. Herring Gull, 29; Bonaparte (?) Gull [accompanying sketch of wing pattern is diagnostic of this species.—Ed.], 205; Pintail, 6; Red-head, 3; Canvasback (?) 25 (2 flocks flying low over lake); American Golden-eye, 3; Bob-white, 1; Red-shouldered Hawk, 1; Sparrow Hawk, 1; Downy Woodpecker, 5; Blue Jay, 10; Pine Grosbeak, 1; Goldfinch, 6; Tree Sparrow, 23; Slate-colored Junco, 13; Song Sparrow, 1; Cardinal, 2; Brown Creeper, 3; White-breasted Nuthatch, 7; Tufted Titmouse, 2; Chickadee, 1. Total, 22 species, 348 individuals. The Pine Grosbeak was studied with 6× glasses at 40 feet: Robin size, stocky build, slightly forked or Finch-like tail, rose-colored head, breast and rump, slate-colored belly and large, strong bill. Golden-crowned Kinglet, 2 (Dec. 21).—H. E. DUER.

Oberlin and vicinity, Ohio.—Dec. 27; 8 A.M. to 3.45 P.M. Cloudy; 2 in. snow; wind west; slight, increasing to strong; temp. 36° at start, 30° at return. The area included 7 miles north, 5 miles east, 2 miles south, and 2½ miles west. Observers separate. Bob-white, 18; Sparrow Hawk, 4; Screech Owl, 1; Belted Kingfisher, 1; Hairy Woodpecker, 6; Downy Woodpecker, 12; Red-bellied Woodpecker, 1; Flicker, 2; Blue Jay, 10; Crow, 1; Meadowlark, 4; Goldfinch, 1; Tree Sparrow, 96; Junco, 6; Song Sparrow, 4; Cardinal, 15; White-breasted Nuthatch, 17; Tufted Tit, 16; Chickadee, 8. Total, 19 species, 223 individuals.—HAROLD C. JONES, ROLAND WALKER and S. CHARLES KENDEIGH (Cardinal Ornithological Club).

Akron, Ohio.—Dec. 25; 9.30 A.M. to 2 P.M. Clear; wind west, very light; temp. 12°, rising to 21°. Northwest 6 miles and return. Kingfisher, 1; Downy Woodpecker, 3; American Crow, 7; Tree Sparrow, 74; Song Sparrow, 6; Junco, 40; Cardinal, 4; Brown Creeper, 1; White-breasted Nuthatch, 4; Tufted Titmouse, 5; Chickadee, 12. Total, 11 species, 157 individuals.—PAUL A. WELLS.

Huron, Ohio.—Dec. 26; 10 A.M. to 5 P.M. Cloudy and snowing lightly; wind south, light; temp. at start 31°. Observers together in P.M., H. G. Morse alone in A.M. Along Lake Erie beach and through woods. Horned Grebe, 1; Herring Gull, 5; Bonaparte Gull, 5; Merganser, 1; Old Squaw, 2; Sparrow Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Northern Flicker, 1; Phoebe, 1; Blue Jay, 1; Crow, 1; Bronzed Grackle, 7; Tree Sparrow, 67; Song Sparrow, 2; Cardinal, 4; White-breasted Nuthatch, 1; Tufted Titmouse, 6; Chickadee, 4; Golden-crowned Kinglet, 1. Total, 20 species, 117 individuals. The Phoebe was watched from a few feet away with good glasses and had the flight and pumping tail characteristic of the species. Both rear and front view were had. Seemed to be feeding on the wave wash of the beach.—H. G. MORSE, H. GRACE MORSE and W. E. LEONHISER.

Canton, Ohio.—Dec. 27; 8 A.M. to 4.30 P.M. Cloudy; ground lightly covered with snow; wind, very light; temp. 31° to 46°. Ten miles on foot. Observers together. Sparrow Hawk, 1; Downy Woodpecker, 5; Blue Jay, 2; Red-winged Blackbird, 2; Tree Sparrow, 150; Slate-colored Junco, 100; Song Sparrow, 7; Cardinal, 17; White-breasted Nuthatch, 3; Tufted Titmouse, 6. Total, 10 species, 293 individuals.—MAY S. DANNER and MARY KING.

Canton, Ohio.—Dec. 25; 8 A.M. to 4.30 P.M. Clear; ground bare; wind west, light; temp. 16° to 24°. Eleven-mile walk. Red-shouldered Hawk, 2; Sparrow Hawk, 1; Hawk, 1 (upper parts slate-colored; species undetermined); Hairy Woodpecker, 2; Downy Woodpecker, 8; Goldfinch, 1; Tree Sparrow, 160; Slate-colored Junco, 18; Song Sparrow, 34; Cardinal, 12; White-breasted Nuthatch, 5; Tufted Titmouse, 6;

Black-capped Chickadee, 5. Total, 13 species, 255 individuals.—EDWARD D. KIMES.

Cadiz, Ohio.—Dec. 25; 9 A.M. to 1 P.M. Part cloudy; ground bare; wind west, light; temp. at start 18°, on return 24°. Ten miles by auto and 9 miles on foot. Observers together most of the time. Bob-white, 36; Ring-necked Pheasant, 3; Red-tailed Hawk, 2; Red-shouldered Hawk (?), 1; Sparrow Hawk, 4; Hairy Woodpecker, 2; Downy Woodpecker, 8; Red-headed Woodpecker, 1; Red-bellied Woodpecker, 6; Flicker, 11; Blue Jay, 3; Crow, 11; English Starling, 25; Meadowlark, 5; Tree Sparrow, 40; Junco, 75; Song Sparrow, 20; Cardinal, 16; Cedar Waxwing, 5; White-breasted Nuthatch, 6; Tufted Titmouse, 10; Chickadee, 5; Robin, 1; Bluebird, 30. Total, 24 species, 326 individuals. The Starlings were found in a thicket where there was an abundance of dogwood berries and gum-berries. They flew to the top of nearby trees at our approach, and their peculiar notes led us to make as thorough an investigation of their identity as possible. We used a pair of Zeiss high-powered Austrian army binoculars on them, and Mr. Worley had previously made their acquaintance while attending Princeton University.—HARRY B. MCCONNELL, JOHN WORLEY and MILTON RONSHEIM.

Scio, Ohio.—Dec. 25; 8.30 A.M. to 12.30 P.M. Part cloudy; ground bare and frozen; wind from the west and very light; temp. 14° morning, 25° noon, and 22° evening. Distance traveled, 5 miles. Country hilly, overgrown with second growth sapling and hazel brush and briers. Sparrow Hawk, 2; Screech Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 5; Red-bellied Woodpecker, 5; Flicker, 10; Crow, 3; Tree Sparrow, 30; Junco, 25; Song Sparrow, 1; Cardinal, 4; White-breasted Nuthatch, 5; Tufted Titmouse, 15; Chickadee, 15; Bluebird, 6. Total, 15 species, 130 individuals.—E. E. SMITH.

Freeport, Ohio.—Dec. 25; 1.10 to 5.20 P.M. Hazy sky; ground bare; moderate breeze from south and southwest; temp. 31° at start, 33° at finish. Walked about 5 miles (radius of 2 miles east, south, and west of town). Birds more numerous on east slopes. Red-tailed Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Red-bellied Woodpecker, 1; Crow, 4; Tree Sparrow, 49; Song Sparrow, 12; Junco, 16; Cardinal, 3 males, 6 females; Carolina Wren, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 6; Chickadee, 5; Bluebird, 2, (gave *cheery-cheery* flight call). Total, 14 species, 114 individuals.—LORENZO S. GREEN.

Hamilton, Ohio.—Dec. 25; 8.30 A.M. to 12.30 P.M., 2.30 to 4.30 P.M. Partly cloudy; ground bare; wind southeast, light; temp. 14° at start, 26° at return. Fourteen miles on foot through open fields and wood patches and 3 miles along river. Mallard Duck, 14; Bob-white, 9 (1 covey); Kingfisher, 2; Hairy Woodpecker, 6; Downy Woodpecker, 10; Red-bellied Woodpecker, 7; Flicker, 12; Crow, 14; Tree Sparrow, 310+; Field Sparrow, 6; Junco, 172; Song Sparrow, 9; Swamp Sparrow, 32; Cardinal, 11; Brown Creeper, 7; White-breasted Nuthatch, 20; Red-breasted Nuthatch, 3; Tufted Titmouse, 40; Chickadee, 62; Ruby-crowned Kinglet, 2. Total, 20 species, 950 individuals.—FRANK HARBAUM.

Xenia, Ohio.—Dec. 24; 8 A.M. to 3.30 P.M. Clear; ground bare; wind southwest, fresh; temp. 22° to 30°. Nine miles on foot. Merganser, 1; Mallard, 12; Ring-necked Pheasant, 3; Sparrow Hawk, 1; Belted Kingfisher, 1; Hairy Woodpecker, 1; Downy Woodpecker, 9; Red-bellied Woodpecker, 3; Flicker, 7; Crow, 23; Tree Sparrow, 8; Song Sparrow, 18; Cardinal, 11; Brown Creeper, 3; White-breasted Nuthatch, 3; Tufted Titmouse, 12; Chickadee, 6; Golden-crowned Kinglet, 1. Total, 18 species, 123 individuals.—HELEN ANKENY.

Columbus, Ohio.—Dec. 26; 8 to 11.30 A.M., 12.30 to 4.30 P.M. Steady snowfall all day, no snow on ground up to 6 A.M., 2½ in. by evening; moderate wind, south, shifting to southeast; temp. 28°, 7 A.M.; 33°, 4.30 P.M. Distance covered, 6 miles on foot, 25 miles by automobile. Bob-white, 9; Mourning Dove, 33; Marsh Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 12; Flicker, 13; Horned Lark, 1; Prairie

Horned Lark, 200 (est.); Blue Jay, 4; Crow, 4; Meadowlark, 8; Goldfinch, 1; Tree Sparrow, 1; Junco, 68; Song Sparrow, 19; Cardinal 5; Brown Creeper, 10; White-breasted Nuthatch, 11; Tufted Titmouse, 20; Black-capped Chickadee, 2; Golden-crowned Kinglet, 7. Total, 22 species, 434 individuals.—EDWARD S. THOMAS, accompanied by FRANK RIEBEL, BOB BLACK, EDGAR BLACK, and WARREN PORTER, in A.M., FRANK RIEBEL and JOHN THOMAS, in P.M.

Fort Wayne, Ind.—Dec. 26; 8 A.M. to 1 P.M. Cloudy; 1 in. of snow; snow-flurries at intervals; wind light, southeast; temp. 26°. Four miles along river bank and vicinity. Observers together. Mourning Dove, 1; Marsh Hawk, 2; Hairy Woodpecker, 2; Downy Woodpecker, 5; Flicker, 1; Blue Jay, 8; Crow, 4; Rusty Blackbird, 1; Bronzed Grackle, 1; Goldfinch, 1; Tree Sparrow, 128; Slate-colored Junco, 59; Song Sparrow, 10; Cardinal, 26; Brown Creeper, 1; White-breasted Nuthatch, 11; Tufted Titmouse, 8; Black-capped Chickadee, 12; Robin, 1. Total, 19 species, 281 individuals.—CHARLES A. STOCKBRIDGE, A. A. RINGWALT, A. K. MEHL, HENRY W. SEPPER and WM. SIHLER.

Lafayette, Ind.—Dec. 25; 9 A.M. to 1 P.M. Partly cloudy; ground bare; wind southeast, raw, light; temp. 16° at start, 19° at finish. Seven miles on foot, through Happy Hollow and along Tecumseh Trail north. Observers together. Sparrow Hawk, 1; Downy Woodpecker, 11; Blue Jay, 4; American Crow, 9; American Goldfinch, 9; Tree Sparrow, 55; Junco, 80; Song Sparrow, 4; Cardinal, 14; Brown Creeper, 3; Tufted Titmouse, 12; Chickadee, 1. Total, 12 species, 203 individuals.—M. L. FISHER and PAUL AITKENHEAD.

Roachdale, Ind.—Dec. 25; 9 A.M. to 1 P.M. Partly cloudy; ground practically bare; wind southeast, light; temp. 14° to 18°. Eight miles on foot. Duck (sp. ?), 1; Mourning Dove, 10; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Downy Woodpecker, 6; Red-bellied Woodpecker, 3; Flicker, 6; Blue Jay, 3; American Crow, 30; Meadowlark, 1; Tree Sparrow, 40; Slate-colored Junco, 1; Song Sparrow, 5; Cardinal, 3; Brown Creeper, 3; White-breasted Nuthatch, 3; Tufted Titmouse, 8; Black-capped Chickadee, 20. Total, 18 species, 145 individuals.—WARD J. RICE.

St. Meinrad, Ind.—8 A.M. to 4.30 P.M. Cloudy; no snow; not windy; temp. about 32°. Six miles horseback, 3 miles on foot; another trip 3 miles on foot. Country covered, through creek-bottoms, through large woods, and across high meadows. Killdeer, 3; Bob-white, 4; Mourning Dove, 2; Red-tailed Hawk, (?) 1; Sparrow Hawk, 2; Barred Owl, 1; Hairy Woodpecker, 6; Downy Woodpecker, 3; Flicker, 24; Blue Jay, 3; Crow, 6; Meadowlark, 46 (1 flock); Goldfinch, 8; Tree Sparrow, 11; Slate-colored Junco, 126; Song Sparrow, 2; Towhee, 2; Cardinal, 7; Carolina Wren, 1; Winter Wren, 1; Brown Creeper, 3; Tufted Titmouse, 4; Chickadee, 8; Bluebird, 5. Total, 24 species, 284 individuals.—CLAUDE LOMAX, M. D.

Kokomo, Ind.—Dec. 26; 8.45 A.M. to 3.15 P.M. Cloudy; snowed all day; 3 in. of snow; south wind, light; temp. 29° at start, 33° at return. Two miles of river bank and vicinity; to and from woods on bicycle. Bob-white, 9 (1 covey); Sparrow Hawk, 1; Barred Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Flicker, 4; Prairie Horned Lark, 3; Blue Jay, 4; Crow, 5; Tree Sparrow, 45; Junco, 40; Song Sparrow, 14; Cardinal, 2; Brown Creeper, 5; White-breasted Nuthatch, 3; Tufted Titmouse, 12. Total, 16 species, (about) 153 individuals.—RUSSELL HUBRICHT.

Chicago, Ill.—Dec. 26; 10 A.M. to 3 P.M. Three in. of snow; snowed slightly all day; temp. about 30°. North along the Deslaines River from Oak Park to Irving Park Boulevard, then east to city. Ring-necked Pheasant, 50; Marsh Hawk, 1; Hairy Woodpecker, 5; Downy Woodpecker, 9; American Crow, 3; American Goldfinch, 8; Tree Sparrow, 100; Slate-colored Junco, 95; Song Sparrow, 5; Fox Sparrow, 1; Cardinal, 5; Brown Creeper, 1; White-breasted Nuthatch, 1; Black-capped Chickadee, 12. Total, 14 species, 296 individuals.—GARDNER BATES.

Waukegan, Ill.—10.15 A.M. to 3.15 P.M. Cloudy; 3 in. of snow; wind southwest, very light; temp. 30° at start, 32° at return. Ten miles on foot. Observers together. Herring

Gull, 27; American Merganser, 22; Hairy Woodpecker, 1; Downy Woodpecker, 2; Crow, 100; American Goldfinch, 25; Tree Sparrow, 30; Slate-colored Junco, 40; Lincoln's Sparrow, 1; Northern Shrike, 1; Chickadee, 2. Total, 11 species, 251 individuals. The Lincoln's Sparrow was collected.—PARKER BLAIR and STEPHEN S. GREGORY, JR.

Port Byron, Ill.—Dec. 26; 8.30 to 11.30 A.M., 12.15 to 3.30 P.M. Cloudy and hazy; 3 in. of snow; calm in A.M., light north wind in P.M.; temp. 30° to 35°. Twelve miles on foot. American Merganser, Red-breasted Merganser, and American Golden-eye, 500; Bob-white, 12 (1 covey); Rough-legged Hawk, 1; Great Horned Owl, 2; Hairy Woodpecker, 7; Downy Woodpecker, 23; Red-bellied Woodpecker, 9; Prairie Horned Lark, 12; Blue Jay, 6; Crow, 15; Tree Sparrow, 45; Slate-colored Junco, 75; Brown Creeper, 2; White-breasted Nuthatch, 9; Tufted Titmouse, 2; Black-capped Chickadee, 30. Total, 18 species, (about) 750 individuals.—JOHN J. SCHAFER.

Winthrop, Iowa (Pierce farm and vicinity, along Buffalo Creek to Speese Pond and return).—Dec. 23; 12 M. to 4 P.M. Clear; ground covered with 2 to 4 inches of ice-encrusted snow, making walking hard and very noisy; trees and bushes covered with frozen sleet; creek frozen quite solidly with occasional open places; wind northwest, strong; temp. 10° at start and also at return. About 3 miles on foot. Bob-white, 3; Mourning Dove, 2 (these birds, which I have never before seen here in winter, are staying near a corn-fodder stack back of our barn); American Rough-legged Hawk, 1; Belted Kingfisher, 1 (this bird is staying in this vicinity, for it has been heard 'rattling' at intervals for several months); Hairy Woodpecker, 1; American Crow, a mammoth flock, which I estimated at 300, was seen in a cornfield—I counted 181 Crows at other points in my tramp; Tree Sparrow, 14; Slate-colored Junco, 1; Brown Creeper, 1; White-breasted Nuthatch, 6; Tufted Titmouse, 1; Black-capped Chickadee, 8. Total, 12 species, (about) 520 individuals. A Barred Owl was seen here Dec. 13.—FRED J. PIERCE.

Bettendorf, Iowa. (Credit Island Park, Davenport, and along Mississippi River and Duck Creek).—Dec. 26; 9 A.M. to 12.50 P.M., 2.15 to 4.30 P.M. Cloudy, rather hazy most of morning; 4 in. of snow; ice in creek and river almost frozen over; wind light, northwest, increasing during day; temp. 26° at start, 22° at return. Eight miles on foot. Loon, 1; Herring Gull, 23; American and Red-breasted Mergansers, 50+; American Golden-eye, 1; Cooper's (?) Hawk, 1; Rough-legged (?) Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 26; Red-bellied Woodpecker, 5; Northern Flicker, 1; Blue Jay, 9; Crow, 26; Red-winged Blackbird, 14; White-throated Sparrow, 1 (with flock of Tree Sparrows); Tree Sparrows, 325+; Junco, 23; Song Sparrow, 4; Cardinal, 8; Brown Creeper, 11; White-breasted Nuthatch, 12; Tufted Titmouse, 15; Chickadee, 20. Total, 23 species, 581+ individuals. Saw a flock of 16 birds flying over which I took to be Prairie Horned Larks.—HUGO H. SCHRODER.

Sioux City, Iowa.—Dec. 26; Riverside Park and return; 9 A.M. to 3 P.M.; six miles on foot; one observer. Perry Creek Road and return; 2 to 5 P.M.; five miles on foot; two observers. Morningside; 9 A.M. to 3 P.M.; one observer. Clear; deep snow; strong northwest wind; temp., 9 A.M., 15°, 3 P.M., 8°. Cooper's Hawk, 1; Screech Owl, 2; Hairy Woodpecker, 3; Downy Woodpecker, 6; Northern Flicker, 1; Blue Jay, 6; American Crow, 5; Purple Finch, 3 (1 in mature male plumage); Tree Sparrow, 37; Slate-colored Junco, 2; Song Sparrow, 1; Cardinal, 6; Brown Creeper, 1; White-breasted Nuthatch, 3; Black-capped Chickadee, 33. Total, 15 species, 110 individuals.—A. F. ALLEN, W. J. HAYWARD, V. C. BONESTEEL and MRS. FRANK MARSHALL.

Bardstown, Ky. (west, south, and southeast of town).—Dec. 24; 8.15 A.M. to 3.30 P.M. Cloudy at start, after 11 o'clock partly clear; ground bare, hard at start, thawing about noon; wind southwest, light; temp. 20° at start, 26° at return. About 12 miles on foot. Ducks, 25 (1 flock, flying high); Wilson's Snipe, 1; Killdeer, 10; Sparrow Hawk, 1; Belted Kingfisher, 1; Hairy Woodpecker, 3; Downy Woodpecker, 17; Red-bellied Woodpecker, 8; Flicker, 5; Prairie Horned Lark, 9; Crow, 56; Tree Sparrow, 20; Field Sparrow,

10; Slate-colored Junco, 435; Song Sparrow, 49; Towhee, 11; Cardinal, 51; Cedar Waxwing, 55; Myrtle Warbler, 9; Palm Warbler, 1; Mockingbird, 4; Carolina Wren, 8; Bewick's Wren, 2; Winter Wren, 2; White-breasted Nuthatch, 2; Tufted Titmouse, 72; Carolina Chickadee, 71; Golden-crowned Kinglet, 3; Bluebird, 29. Total, 29 species, (about) 970 individuals. The Palm Warbler seen at close range as it took wing; greenish yellow rump and white tips to outer tail feathers plainly seen. On Dec. 23, three of these Warblers were seen at the same place, and were studied at a distance of about 10 feet for a period of ten minutes. Besides the characteristic markings, the continual tilting of the tail and a distinguishable *chip*, identified these birds.—BEN. J. BLINCOE.

Bowling Green, Ky. (Smith's Woods, and along Big Barren River and Jennings Creek).—Dec. 24; 7 A.M. to 4 P.M. Thick, cloudy until noon, broken clouds after noon; ground bare; light northwest wind; temp. 25° to 35°. About 15 miles on foot. Observers together. Mallard, 4; Mourning Dove, 10; Black Vulture, 20 (all seen near the slaughterhouse on Jennings Creek); Marsh Hawk, 1; Sharp-shinned Hawk, 1; Hairy Woodpecker, 5; Southern Downy Woodpecker, 25; Red-bellied Woodpecker, 11; Flicker, 16; Blue Jay, 17; American Crow, 450 (a good-sized flock at a roost near town); Meadowlark, 115 (100 in one flock); Purple Finch, 13 (rare this winter); American Goldfinch, 25; White-crowned Sparrow, 75; White-throated Sparrow, 36; Tree Sparrow, 63; Chipping Sparrow, 3; Slate-colored Junco, 255; Song Sparrow, 57; Lincoln's Sparrow, 5; Towhee, 24; Cardinal, 60; Cedar Waxwing, 5; Myrtle Warbler, 23; Mockingbird, 14; Carolina Wren, 1; Bewick's Wren, 3; Brown Creeper, 4; White-breasted Nuthatch, 1; Tufted Titmouse, 97; Carolina Chickadee, 68; Bluebird, 35. Total, 33 species, 1,552 individuals. Species wintering here seen Dec. 18: Broad-winged Hawk, 1; Sparrow Hawk, 1; Prairie Horned Lark, flock of 25 to 30. Dec. 25: Killdeer, 1.—L. Y. LANCASTER and GORDON WILSON.

St. Louis, Mo. (Creve Cœur Lake).—Dec. 26; 9.45 A.M. to 3 P.M. Heavy snowstorm; light wind in the north; temp. 30° to 38°. Hairy Woodpecker, 10; Downy Woodpecker, 10; Red-bellied Woodpecker, 3; Flicker, 18; Blue Jay, 2; Crow, 2; Slate-colored Junco, 2; Song Sparrow, 3; Cardinal, 12; Carolina Wren, 2; White-breasted Nuthatch, 4; Tufted Titmouse, 15; Chickadee, 3; Bluebird, 8. Total, 14 species, 94 individuals (in an area of 1 square mile).—R. J. TERRY and E. H. CHRISTIE (St. Louis Bird Club).

Kansas City, Mo. (heights north of Independence, mouth of Blue River region, Country Club district, Marlborough region, Upper Blue Valley, 63rd Street and state line region, Shilo Hollow and Swope Park, Upper Brush Creek Valley).—Dec. 19; Cloudy; sharp north wind; temp. from 23° to 28°. Seven parties in as many different regions from three to eight hours. Bob-white, 17; Marsh Hawk, 1; Cooper's Hawk, 2; Red-tailed Hawk, 3; Sparrow Hawk, 2; Short-eared Owl, 3; Screech Owl, 2; Belted Kingfisher, 1; Hairy Woodpecker, 28; Downy Woodpecker, 95; Red-bellied Woodpecker, 12; Flicker, 11; Prairie Horned Lark, 5; Blue Jay, 31; Crow, 92; Red-winged Blackbird, 5; Bronzed Grackle, 1; Purple Finch, 2; Goldfinch, 154; Pine Siskin, 2; Harris's Sparrow, 3; Tree Sparrow, 675; Field Sparrow, 2; Slate-colored Junco, 534; Song Sparrow, 59; Fox Sparrow, 5; Cardinal, 141; Carolina Wren, 12; Winter Wren, 2; Brown Creeper, 10; White-breasted Nuthatch, 6; Tufted Titmouse, 120; Chickadee, 246; Robin, 2; Bluebird, 2. Total, 35 species, 2,288 individuals.—B. F. BOLT, ISABELLA CLARK, WALTER CUNNINGHAM, MRS. T. F. ENGLISH, KATHERINE HINES, WM. C. MICHAELS, ELDON MICHAELS, MARY ROBINSON, MRS. T. C. SHERWOOD, PROF. A. E. SHIRLING, DIX TEACHENOR, CHARLES W. TINDALL, DONALD TINDALL and HARRY HARRIS (Burroughs Nature Club).

Marionville, Mo.—Dec. 27; 8 A.M. to 1 P.M., and 1.30 to 5.30 P.M. Clear, 1 or 2 in. of snow; slow northwest wind; temp. 10° to 20°. Distance covered, approximately 18 miles on foot (in diameter 6 miles). Bob-white, 25; Mourning Dove, 2; Cooper's Hawk, 1; Screech Owl, 2; Kingfisher, 3; Hairy Woodpecker, 3; Downy Woodpecker, 20; Red-bellied Woodpecker, 1; Flicker, 3; Prairie Horned Lark, 100; Blue Jay, 35; Crow, 2,000+; Meadowlark, 4; American Goldfinch, 50; Tree Sparrow, 175; Field Sparrow, 20; Slate-

colored Junco, easily 500; Song Sparrow, 100; Cardinal, 25; Loggerhead Shrike, 1; Mockingbird, 1; White-breasted Nuthatch, 5; Tufted Titmouse, 45; Chickadee, 60; Bluebird, 10. Total, 25 species, 3,190+ individuals.—JOHNSON NEFF.

Conway, Mo.—Dec. 26; 1.15 to 4.30 P.M. Snowing; wind light; temp. 32° at start, 27° at return. A 6-mile loop on foot. Observers together. Bob-white, 30; American Rough-legged Hawk (black phase), 1; Hairy Woodpecker, 3; Downy Woodpecker, 4; Red-headed Woodpecker, 2; Red-bellied Woodpecker, 4; Prairie Horned Lark, 18; Blue Jay, 10; American Crow, 8; Meadowlark, 75; Purple Finch, 8; American Goldfinch, 50; Tree Sparrow, 300; Slate-colored Junco, 65; Song Sparrow, 4; Cardinal, 7; Migrant Shrike, 1; White-breasted Nuthatch, 2; Tufted Titmouse, 8; Carolina Chickadee, 12. Total, 20 species, 579 individuals. Dec. 27: Mourning Dove, 3; Mockingbird, 2.—WM. SPENCER LOGAN and PREWITT ROBERTS.

Fayetteville, Ark. (south to White River, also city park north of town).—Dec. 29; 12.30 to 4.30 P.M. Clear; ground bare and unfrozen; wind southwest, strong; temp; 55°. Covered 7 miles of pasture, wood and brush lands. Wilson's Snipe, 1; Bob-white, 25; Red-tailed Hawk, 6; American Sparrow Hawk, 2; Downy Woodpecker, 2; Red-bellied Woodpecker, 3; Blue Jay, 1; Crow, 20; Red-winged Blackbird, 1; Meadowlark, 56; Purple Finch, 1; Vesper Sparrow, 10; Junco, 50; Song Sparrow, 3; Fox Sparrow, 1; Towhee, 5; Cardinal, 30; Migrant Shrike, 2; Mockingbird, 2; Carolina Wren, 2; Tufted Titmouse, 2; Carolina Chickadee, 8; Bluebird, 14. Total, 23 species, 247 individuals.—T. L. BATES, RAYMOND DAVIS, ROSS ASHCRAFT and ALBERT LANO.

Bismarck, N. D. (Hay Creek to Burnt Creek).—Dec. 25; 1 to 5 P.M. Cloudy; 3 in. of snow; wind northwest, light. About 12 miles on foot. Prairie Sharp-tailed Grouse, 4; Northern Hairy Woodpecker, 5; Downy Woodpecker, 1; Northern Flicker, 1; Hoyt's Horned Lark, 20; Magpie, 35; Brown Creeper, 3; Chickadee, 12. Total, 8 species, 81 individuals.—RUSSELL REID.

Charlson, N. D.—Dec. 25; 8.30 A.M. to 3 P.M. Partly cloudy; ground snow-covered; northwest wind, blizzardy; temp. at start -1°. Prairie Sharp-tailed Grouse, 10; Horned Lark, 40; Magpie, 4; Long-tailed Chickadee, 2. Total, 4 species, 56 individuals.—ADRIAN LARSON.

Yankton, S. D.—Dec. 28; 7.30 A.M. to 4 P.M. Fair; about 1 ft. of snow; light south wind; temp. 25°. In the field from 10.30 A.M. to 2.30 P.M.; remainder of time around home. Distance covered during walk about 5 miles. Observers together. Screech Owl, 1; Hairy Woodpecker, 2; Downy Woodpecker, 12; Flicker, 4; Blue Jay, 8; Crow, 10; Tree Sparrow, 20; Cardinal, 2; Chickadee, 35. Total, 9 species, 94 individuals.—A. P. LARRABEE, P. J. LARRABEE, D. STUELPNAGEL and R. GILREATH.

Lennox, S. D. (and vicinity).—Dec. 25; 10.30 A.M. to 1 P.M. Partly cloudy; 12 in. of snow on level; wind south, light; temp. about 30°. About 6 miles on foot. Downy Woodpecker, 2; Crow, 28; Tree Sparrow, 2; White-breasted Nuthatch, 2; Chickadee, 5; Screech Owl, 1. Total, 6 species, 40 individuals. Most of these seen at feeding-station. Practically all ground-feeding species driven out by snow covering ground.—W. B. MALLORY.

Fremont, Neb. (cemetery, Hormel's Island, and surrounding country).—Dec. 25; 8.30 A.M. to 2 P.M. Cloudy; 4 in. of snow (light flurry of snow); scarcely any wind; temp. 35° at start, 42° at return. Ten miles on foot. Screech Owl, 1; Hairy Woodpecker, 7; Downy Woodpecker, 9; Northern Flicker, 3; Red-shafted Flicker, 1; Blue Jay, 3; Crow, 19; Pine Siskin, 6; Tree Sparrow, 22; Slate-colored Junco, 12; Cardinal, 3; Brown Creeper, 3; White-breasted Nuthatch, 5; Chickadee, 28; Golden-crowned Kinglet, 4; Robin, 1. Total, 16 species, 126 individuals.—LILY RUEGG BUTTON.

Coolidge, Kans. (Riverside Farm).—Dec. 26; 11 A.M. to 4 P.M. Overcast; light skift of snow; wind north, medium; temp. about 10°. Ring-billed Gull, 1; Mallard, 1,200; Green-winged Teal, 5; Pintail, 1; Bob-white, 12; Prairie Chicken, 6; Mourning Dove, 1;

Marsh Hawk, 1; Goshawk, 1; Golden Eagle, 1; Sparrow Hawk, 1; Screech Owl, 1; Great Horned Owl, 2; Hairy Woodpecker, 2; Red-shafted Flicker, 8; Horned Lark, 150; Magpie, 16; Red-winged Blackbird, 17; Meadowlark, 6; Redpoll, 5; Pine Siskin, 2; Tree Sparrow, 185; Slate-colored Junco, 95; Song Sparrow, 64; Loggerhead Shrike, 1. Total, 25 species, (about) 2,484 individuals.—R. T. SHANSTROM.

Topeka, Kans.—Dec. 24; 10 A.M. to 12.30 P.M., 2 to 3.30 P.M. Clear; ground bare; light south wind; temp. 9° to 23°. Seven miles. Observers together. Downy Woodpecker, 5; Yellow-bellied Sapsucker, 1; Red-bellied Woodpecker, 1; Northern Flicker, 1; Blue Jay, 2; Crow, 5; Goldfinch, 7; Longspur (sp. ?), 1; Harris's Sparrow, 4; Tree Sparrow, 150; Junco, 125; Song Sparrow, 4; Cardinal, 12; Carolina Wren, 1; Brown Creeper, 3; Tufted Titmouse, 2; Chickadee, 16. Total, 17 species, 340 individuals. Dec. 23: Screech Owl.—RUSSELL HOWARD and SIDNEY HYDE.

Wichita, Kans.—Dec. 24; 9 A.M. to 5 P.M. Clear; no snow; strong southeast breeze; temp. 6° to 22°. Five miles along Gypsum Creek south of Wichita and some of intervening country. Observers not together. Sharp-shinned Hawk, 2; (unidentified) Hawks, 2; Downy Woodpecker, 3; Red-bellied Woodpecker, 1; Flicker, 2; American Crow, 20; Goldfinch, 1; Harris's Sparrow, 1; Tree Sparrow, 200; Slate-colored Junco, 68; Cardinal, 13; Brown Creeper, 1; Black-capped Chickadee, 13. Total, 13 species, (about) 331 individuals.—LEROY SNYDER and FRANCIS MILLER.

Norman, Okla.—Dec. 26; 8.30 A.M. to 4 P.M. Cloudy; ground bare; wind north, moderate; temp. 30° at start, 37° at return. Eleven miles on foot. Canada Goose, 12; Marsh Hawk, 1; Western Red-tail, 1; American Rough-legged Hawk, 1; Sparrow Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 3; Yellow-bellied Sapsucker, 2; Red-bellied Woodpecker, 6; Flicker, 20; Red-shafted Flicker, 2; Blue Jay, 3; Crow, 11; Red-winged Blackbird, 90; Western Meadowlark, 52; Brewer Blackbird, 10; Goldfinch, 40; Harris's Sparrow, 245; Tree Sparrow, 45; Field Sparrow, 52; Junco, 25; Song Sparrow, 30; Fox Sparrow, 2; Arctic Towhee, 4; Cardinal, 62; White-rumped Shrike, 1; Mockingbird, 1; Carolina Wren, 2; Texas Wren, 3; Tufted Titmouse, 20; Plumbeous Chickadee, 37; Bluebird, 18. Total, 32 species and (about) 800 individuals.—MARGARET M. NICE.

Yellowstone Park, Wyo.—Dec. 23; 8.30 A.M. to 4.45 P.M. Clear; snow at north boundary 1 in., at Undine 5 ins.; wind, none; temp. 0° at start, 18° at noon, 12° at end. Twenty-two miles on horseback. From north boundary of the park, altitude 5,300 feet, up the Gardiner, south and east, to Undine Falls, altitude 6,500 feet and return. American Merganser, 1; Mallard, 85; Green-winged Teal, 5; American Golden-eye, 8; Wilson's Snipe, 1; Kingfisher, 1; Black-billed Magpie, 21; Raven, 2; Clark's Nutcracker, 4; Gray-crowned Rosy Finch, 351; Hepburn's Rosy Finch, 501; Black Rosy Finch, 151; Mountain Song Sparrow, 3; Dipper (Water Ousel), 59; Townsend's Solitaire, 3. Total, 15 species, 1,196 individuals. The unusual features of this list, such as large number of Ducks and Dippers, and the presence of Wilson's Snipe and Kingfisher, and probably also the Townsend's Solitaires and Song Sparrows, are due to the fact that the Gardiner River receives a large quantity of warm water from Mammoth Hot Springs, about 5 miles above the north boundary, and that from this point down the water never freezes and water vegetation grows all winter long.—M. P. SKINNER, Park Naturalist.

Boulder, Colo.—Dec. 19; 7.45 A.M. to 5.20 P.M. Partly cloudy; snow in patches; light south winds; temp. 17° to 23°. Observers together. Nineteen miles on foot, south to Bear Cañon; east to Base Line Lake, and return by North Boulder Creek. Lakes frozen over. American Coot, 2 (dead); Dusky Grouse, 6; Ring-necked Pheasant, 10; American Rough-legged Hawk, 1; Rocky Mountain Hairy Woodpecker, 3; Red-shafted Flicker, 10; Desert Horned Lark, 1; Black-billed Magpie, 100; Long-crested Jay, 6; Rocky Mountain Jay, 2; Nutcracker, 1; Brewer's Blackbird, 66; (identified by the solid black coat and small size at a distance of 30 feet); Gambel's Sparrow, 1; Western Tree Sparrow, 1; Pink-sided Junco, 8; Mountain Song Sparrow, 12; Plumbeous Vireo, 3

(identified by the gray upperparts, white throat and orbital ring and wing bars, and olive-gray flanks); Long-tailed Chickadee, 1; Western Robin, 116. Total, 19 species 351 individuals.—LESLIE DANIELS and THEODORE F. BEARD.

Boulder, Colo.—Dec. 22; 9.30 A.M. to 4.30 P.M. Cloudy; 8 in. of snow; wind southeast in A.M., west in P.M., very light; temp. 18° at start, 10° at return. Ten miles on foot along foothills, mesas, mouths of cañons and plains. Observers together. Dusky Grouse, 2; Ring-necked Pheasant, 6; Rocky Mountain Hairy Woodpecker, 1; Red-shafted Woodpecker, 19; Magpie, 68; Long-crested Jay, 88; Western Meadowlark, 3; Slate-colored Junco, 10; Shufeldt's Junco, 30; Pink-sided Junco, 40; Gray-headed Junco, 10; Arctic Towhee, 1; Mountain Chickadee, 5; Townsend's Solitaire, 10; Western Robin, flock of about 150. Total, 15 species, (about) 443 individuals.—BESS R. GREEN and EDNA JOHNSON.

Denver, Colo.—Dec. 25; 9.30 to 11.30 A.M., 2.30 to 5 P.M. Partly cloudy; 4 in. snow; wind southwest in A.M., east in P.M.; temp. 12° at 8 A.M., 25° at 5 P.M. Two hours afoot, and two and one-half hours by motor. Ring-necked Pheasant, 28; American Rough-legged Hawk, 1; Lewis's Woodpecker, 1; Orange-shafted Flicker, 5; Horned Lark, 36; Magpie, 123; Red-winged Blackbird, 160; House Finch, 3; Tree Sparrow, 1; Song Sparrow, 3; Montana Junco, 1; Great Northern Shrike, 1. Total, 12 species, 363 individuals.—W. H. BERGTOLD.

Paonia, Colo.—Dec. 25; 12.30 to 4 P.M. Cloudy; snowing a little; 8 in. of snow; wind southwest, light; temp. 24° at start, 20° at return. Five miles on foot. California Quail, 11; Harris's Woodpecker, 1; Gilded Flicker, 8; American Raven, 2; Piñon Jay, 6; Willow Goldfinch, 21; Gray-headed Junco, 46; Shumagin Fox Sparrow, 5; Oregon Towhee, 3; Northern Shrike, 1; Oregon Chickadee, 2; Townsend's Solitaire, 2; Western Robin, 68. Total, 13 species, (about) 176 individuals.—BARNARD VAN DEREN

Seattle, Wash.—Dec. 20; 9 A.M. to 4 P.M. Misty and overcast, rain in morning; ground bare; slight wind, southeast and east; average temp. 44°. Parties hunting in groups as indicated; southwest shore Lake Washington, Mrs. C. C. Crickmore and Dr. J. D. Terry; Lake Forest Park, Mrs. T. T. Leman; Burroughs Landing, Misses L. McMonagle and K. Bryan; Lake Union and Union Bay Shores, C. Richie and G. W. Parker; Interbay and Queen Anne Hill, L. DeLong; Renton Slough, F. W. Cook; University Campus, Mrs. S. M. Kane and Mrs. M. Schuler; Kirkland, M. I. and C. N. Compton. Western Grebe, 17; Horned Grebe, 12; Heibell's Grebe, 3; Pied-billed Grebe, 4; Glaucous-winged Gull, 1,143; California Gull, 32; Herring Gull, 42; Western Gull, 70; Red-breasted Merganser, 3; Mallard, 60; Green-winged Teal, 224; Shoveler, 99; Pintail, 22; Canvasback, 5; Scaup Duck, 254; Bufflehead, 95; Old Squaw, 8; Ruddy Duck, 19; Northwest Coast Heron, 4; Coot, 649; Wilson's Snipe, 28; Ruffed Grouse, 12; California Quail, 225; Ring-necked Pheasant, 7; Cooper's Hawk, 1; Sharp-shinned Hawk, 3; Owl (?), 3; Northwest Kingfisher, 5; Gairdner's Woodpecker, 1; Harris's Woodpecker, 1; Northwest Flicker, 53; Steller Jay, 39; Western Crow, 211; Northwest Redwing, 1; Brewer's Blackbird, 52; Western Meadowlark, 4; Western Evening Grosbeak, 1; California Purple Finch, 46; Willow Goldfinch, 1,314; Pine Siskin, 1,453; Shufeldt's Junco, 387; Rusty Song Sparrow, 159; Fox Sparrow, 51; Oregon Towhee, 66; Cedar Waxwing, 196; Anthony's Vireo, 4; Audubon Warbler, 2; Seattle Wren, 29; Western Winter Wren, 35; Tule Wren, 7; Tawny Creeper, 5; Oregon Chickadee, 106; Chestnut-backed Chickadee, 11; Western Golden-crowned Kinglet, 79; Ruby-crowned Kinglet, 9; Western Robin, 868; Varied Thrush, 46. Total, 57 species, 8,285 individuals. A notable feature of this trip was that the birds were found congregated in small areas with a large part of the field practically deserted.—SEATTLE AUDUBON SOCIETY, M. I. COMPTON, *President*.

Portland, Ore. (Portland Heights, Reed College, Mt. Tabor, and Columbia Slough).
—Dec. 26; 9.30 A.M. to 4.30 P.M. Heavy rain and fog all day; light southeasterly wind;

temp. about 42°. Holbøll's Grebe, 4; Pied-billed Grebe, 3; Herring Gull, 7; California Gull, 50; Ring-billed Gull, 4; Hooded Merganser, 1; Baldpate, 3; Bufflehead, 15; Shoveler, 4; Lesser Scaup, 25; Great Blue Heron, 1; Coot, 12; Ring-necked Pheasant, 5; Desert Sparrow Hawk, 1; Belted Kingfisher, 2; Red-shafted Flicker, 2; Steller's Jay, 3; Crow, 15; California Purple Finch, 12; Pine Siskin, small flock; White-crowned Sparrow, 1; Golden-crowned Sparrow, 3; Oregon Junco, 50; Rusty Song Sparrow, 7; Townsend's Fox Sparrow, 1; Oregon Towhee, 9; Oregon Chickadee, 4; Chestnut-backed Chickadee, 10; Varied Thrush, 5. Total, 29 species, 250 individuals.—W. A. ELIOT, W. S. RAKER, YVONNE JARRETT and MARY E. RAKER.

Netarts, Tillamook Co., Ore.—Dec. 25; 8.30 A.M. to 4 P.M. Cold and rainy; wind north; temp. 48° to 50°. Horned Grebe, 6; Loon, 3; Cassin's Auklet, 1; Ancient Murrelet, 1; Glaucous-winged Gull, 60; Western Gull, 40; Pacific Kittiwake, 1; Brandt's Cormorant, 10; Baird's Cormorant, 2; Scaup Duck, 1; Golden-eye, 18; Bufflehead, 10; White-winged Scoter, 25; Coot, 5; Black Oyster-catcher, 2; Western Red-tail, 1; Bald Eagle, 1; Belted Kingfisher, 1; Northwest Flicker, 3; Coast Jay, 2; Raven, 1; Pine Siskin 75; Junco (Shufeldt's and Oregon), 50; Rusty Song Sparrow, 4; Sooty Fox Sparrow, 6; Oregon Towhee, 2; Western Winter Wren, 2; California Creeper, 1; Oregon Chickadee, 4; Coast Wren-tit, 2; Western Golden-crowned Kinglet, 8; Sitka Kinglet, 1; Alaska Hermit Thrush, 2; Varied Thrush, 2; Western Bluebird, 4. Total 35 species, 357 individuals.—ALEX. WALKER.

Santa Barbara, Calif. (wharf, Estero, foothills, Hope Lake (fresh water), tide flats at Goleta).—Dec. 24; 6.30 A.M. to 5 P.M. Cloudy with low fog till 3.30 P.M., after that clear; calm; temp. 40° to 60°. Distance of course 30 miles, largely in automobile. Western Grebe, 5; Horned Grebe, 1; Eared Grebe, 4; Pied-billed Grebe, 4; Loon, 2; Parasitic Jaeger, 1; Glaucous-winged Gull, 1; Western Gull, 600; Herring Gull, 1; California Gull, 130; Ring-billed Gull, 25; Short-billed Gull, 8; Heermann's Gull, 7; Bonaparte Gull, 50; Royal Tern, 10; Farallone Cormorant, 50; Brandt Cormorant, 12; Baird's Cormorant, 2; California Brown Pelican, 15; Green-winged Teal, 1; Cinnamon Teal, 3; Shoveller, 40; Pintail, 50; Canvasback, 150; Lesser Scaup, 50; Bufflehead, 2; White-winged Scoter, 100; Surf Scoter, 75; Ruddy Duck, 50; Great Blue Heron, 5; Anthony's Green Heron, 1; Sora Rail, 1; American Coot, 215; Wilson's Snipe, 4; Least Sandpiper, 10; Sanderling, 25; Western Willet, 1; Black-bellied Plover, 2; Killdeer, 5; Snowy Plover, 1; Spotted Sandpiper, 2; California Valley Quail, 225; Mourning Dove, 3; Turkey Vulture, 9; Sharp-shinned Hawk, 1; Western Red-tail, 2; Duck Hawk, 4; Pigeon Hawk, 1; Desert Sparrow Hawk, 8; California Pygmy Owl, 1 (W. L. D.); Kingfisher, 2; Californian Woodpecker, 8; Red-shafted Flicker, 20; Anna's Hummer, 15; Say's Phoebe, 10; Black Phoebe, 14; California Horned Lark, 2; California Jay, 20; San Diego Redwing, 2,400; Western Meadowlark, 3; Brewer's Blackbird, 300; California Purple Finch, 1; House Finch, 140; Green-backed Goldfinch, 4; Belding's Sparrow, 5; Gambel's Sparrow, 200; Golden-crowned Sparrow, 10; Large-billed Sparrow, 3; Thurber's Junco, 50; Rufous-crowned Sparrow, 5; San Diego Song Sparrow, 40; Mountain Song Sparrow, 2 (W. L. D.); Lincoln's Sparrow, 1; Valdaz's Fox Sparrow, 12; San Diego Towhee, 12; California Towhee, 20; California Shrike, 12; Dusky Warbler, 6; Townsend's Warbler, 3; Audubon Warbler, 200; Pacific Yellow-throat, 5; Pipit, 20; Western Mockingbird, 4; California Thrasher, 2; Dotted Cañon Wren, 1; Western Bewick's Wren, 4; Western House Wren, 3; Tule Wren, 3; Sierra Creeper, 1 (H. E. P.); Plain Titmouse, 8; Pallid Wren-tit, 2; California Bush-tit, 12; Ruby-crowned Kinglet, 40; Western Gnatcatcher, 4; Hermit Thrush, 12; Western Bluebird, 6. Total, 96 species, 5,596 individuals. Three Egrets were seen daily from Dec. 1 to Dec. 15.—H. C. HENDERSON, H. E. PARMENTER and W. M. L. DAWSON.

THE SEASON

XXIII. October 15 to December 15, 1920

BOSTON REGION.—The weather during the last two months has been mild, with an abundant precipitation in the form of rain and transient, wet snow. At present, December 15, the ground is bare and the grass on Lexington Common is green.

So far this season, the scarcity of country birds has been remarkable; only a dozen species were found during two careful searches over excellent bird-country in November and December, a condition indicating that the bird-population has been reduced to its lowest winter terms. The migration of Canada Geese was prominent for a few days about the middle of November; during the night of November 23-24 especially, the birds were heard 'honking' as they pushed southward in a high, blustering wind.

Dr. C. W. Townsend and Mr. C. A. Robbins have kindly sent me the results of their observations in localities more favorable for meeting winter birds than the *country* about Boston—from Ipswich and Wareham respectively. Dr. Townsend reports as common the two Loons, Horned Grebe, Golden-eye, and Black-backed Gull, and as abundant the Herring Gull, Black Duck, and the three Scoters. Gannets and Double-crested Cormorants, abundant migrants, were seen last on November 21. He lists *no* wintering Song Sparrows.

Mr. Robbins, referring to the scarcity of landbirds, remarks that he "never saw just such conditions," but reports the arrival in good numbers of Tree Sparrows and an increase of Goldfinches and Juncos during the second week of December.

A comparison of these two reports from stations 60 miles apart brings out the interesting inference that Myrtle Warblers moved from the northern to the southern shore of Cape Cod in mid-November. Dr. Townsend, at Ipswich, noted a sudden diminution in their numbers at this time, while Mr. Robbins observed a marked

influx of the birds to the shores of Buzzard's Bay.

About our homes, one bird's voice breaks the silence of early morning. The Starlings sit on high—on the roofs of our houses, on church steeples, even on the gilded ball at the tip of the flag-pole on Lexington Common—and at dawn squeak, hiss, and whistle. But by imitating the Cowbird's whistle, they sometimes give us a hint of spring.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—The weather was unusually mild during this period, and up to the middle of December there were few nights when the temperature fell below freezing. There are some reports of birds lingering beyond the dates on which they ordinarily depart for the South, but these are not numerous.

On November 25, a Catbird and a Yellow Palm Warbler were observed at Long Beach (Griscom, Janvrin, and Crosby), and, on December 12, a Bittern at the same locality (Janvrin and L. Williams). The writer noted a Catbird at Garden City, November 7, and a Bittern was picked up in the streets of Brooklyn and brought to the Brooklyn Museum alive, December 13 (R. C. Murphy). Six Wilson's Snipes are reported from a small marsh near Poughkeepsie, December 5 (M. S. Crosby).

Some birds which one finds lingering late in the fall after other members of their species have moved on to the South seem to be of purely casual occurrence at such a late date. The occurrence of the Catbird in November, however, we hesitate to attribute merely to chance, although the last Catbirds are ordinarily not seen after the middle of the preceding month. Probably in this species, after the main migration wave has passed there are other lesser waves representing so few individuals that these are ordinarily overlooked. When, this year, a Catbird was seen on

November 7, the writer thought the bird likely his latest for the species on Long Island. Reference to records, however, showed that he had noted a Catbird on November 7 some twenty odd years previous, and, strangely enough, there is a record for some years' standing for November 25 also, considered a straggler of migration. The species very rarely winters.

On the whole, the late fall was marked by an unusual scarcity of bird-life, both as regards land birds and Ducks, coastwise and up the Hudson. There have been few instances of those northern species which are of uncertain occurrence, few or no Siskins, almost no Red-breasted Nuthatches (a single one of the latter, December 2, Forest Park, Long Island—L. N. Nichols). Exceptions are a flock of undetermined Crossbills in Brooklyn (R. C. Murphy), a Northern Shrike balancing on a telegraph wire, Long Beach, November 26 (J. T. N.), and one at West Nyack, December 11 (R. B. Potter). The Purple Finch, usually regular in small numbers, has been practically absent. Pipits, and later Horned Larks, were apparently more numerous than usual. A Rough-legged Hawk at Rhinebeck, December 5, and two at Cruger's Island, December 12 (M. S. Crosby) are worth noting, as this Hawk is much rarer up the Hudson than over the coastwise marshes near New York City, where it seems to have been absent this year.—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—It is seldom that this region experiences a milder fall than the one just passed: October 31, woods still green; evening primrose, aster, knotwood and white snakeroot still in bloom. November 20, a bat flying about. November 21, at Cape May, N. J., dragonflies and mosquitos present. December 4, a thunderstorm of summer-like proportions. December 12, Seaside Park, N. J., a butterfly flying about. Winter has registered only one characteristic cold snap—November 13 and 14—when skim-ice was formed on the ponds.

While the common winter birds are present in their normal numbers there is

an entire absence of such birds as Crossbills, Siskins, and Redpolls. The Chickadee and Red-breasted Nuthatch seem to be among the missing also. On the other hand, the Golden-crowned Kinglet, which has been comparatively uncommon the past two years, is again here in numbers (14 November 28). Tree Sparrows were first noted December 4, rather late.

Probably the most interesting feature of the fall has been the great flights of wild-fowl. Ducks and Geese have been reported to be unusually abundant on Barnegat and Delaware Bays and also along the coast. At Cape May, November 7, long lines of Ducks were observed streaming down the coast and out into the bay. There were hundreds, if not thousands, of Ducks on the wing and they appeared to be mostly Scoters. At inland points, Black Ducks are said to be more abundant than last year. Two Wood Ducks were noted at Fish House, N. J., October 31; one at Mt. Holly, N. J. (Mr. N. D. W. Pumyea, October 24.) A few Canada Geese were seen November 7 (13 at Cape May). But the great flight occurred the third week of the month, November 21 (400 at Cape May); the same day 200 at Atlantic City, N. J. (C. K. Roland). In all probability this was only a small portion of the birds on the wing and no doubt the flight was on at least all along the Jersey coast.

On November 11, here at Camden, a Barn Owl which flew in one of the windows of the Temple Building (a moderate-sized office-building in the center of the city), was captured by the janitor. As usual in such instances, the local paper came out with an elaborate description of the bird: "This 'Jersey Devilbird' has a forked tongue, like a snake; a face like a monkey; feet like a chicken; feathers like a Pheasant; wings like an Eagle. It hisses like a steam radiator." Wonderful to relate, the janitor, after keeping the Owl about a week, let the bird go through fear of a fine. It is quite probable that a local game warden warned him about keeping the Owl a captive.

Other observations that might be

mentioned are: Great-horned Owl (found dead), White-crowned Sparrow, and two Gannets (?), large birds some distance out flying about with a lot of Gulls and plunging into the sea from a distance of 10 to 12 feet with considerable splash (at Cape May, November 7); at the same point, November 14, Short-eared Owl and two Barn Swallows; Laughing Gull near Ferry at Philadelphia, November 4; 3 Long-eared Owls, first noted in winter roost November 28.

Through an oversight, a remarkable flight of Hawks observed at Cape May October 3 was omitted from last season's report. During a period of about an hour the following Raptores were noted: Marsh Hawk, 1; Sharp-shinned Hawk, 10; Cooper's Hawk, 5; Red-tailed Hawk, 1; Broad-winged Hawk, 60; Sparrow Hawk, 2; Duck Hawk, 1; Fish Hawk, 6; Bald Eagle, 1 and in addition about 40 Turkey Vultures.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—The warm weather of September, 1920, about Washington extended its influence well into October, and even November was mild. On some of the warmer days in the latter month the birds were active, and therefore conspicuous in the outskirts of town as well as in the country, but in neither October nor November did birds seem to be unusually numerous, either in species or individuals.

The warm weather, while it produced thus no marked influence on the bird-life, apparently induced a few birds to linger beyond their ordinary time of departure. This was evident in the case of the Scarlet Tanager, which ordinarily leaves us about October 3, but which this year was seen as late as the 15th of that month; the Black-poll Warbler, the average date of departure of which is October 12, and the very latest record October 26, seen this year on October 20, 21, and 25; and the Yellow Palm Warbler, the average date of departure of which is October 19, which remained at least until November 8.

Three birds were observed later in the

autumn than ever before: The Pied-billed Grebe, by Ludlow Griscom, near Dyke, Va., on November 8, the latest previous record of which is November 3, 1884; the Louisiana Water-Thrush, seen near Washington, by Miss M. J. Pellew on October 4, the latest previous record of which is September 30, 1919; and the Rough-winged Swallow, observed along the canal near Cabin John Bridge on September 11, as against a previous latest date of September 5, 1916. The Rough-winged Swallow record should have been included in our previous report.

Perhaps the rather unusually warm weather of October was also the cause of the singing of a Robin on October 16, heard by E. A. Preble near Cleveland Park, although the inducement to sing did not seem to extend to other species. The Mockingbird, so far as its song was concerned, seemed to be entirely silent, although its calls were heard almost daily in the suburbs of Washington.

Comparatively few rare birds were noted during these two months, the most interesting species being the White-winged Scoter, a single adult male of which was seen by Ludlow Griscom near Dyke, Va., on November 8. This record is the sixth of this species for the vicinity of Washington, and as a matter of interest the dates of the previous records are here given: December, 1842; November, 1880; October, 14, 1882; April 18, 1892; and October 28, 1894.

The Herring Gulls have appeared in their usual numbers in the Potomac River, prepared for their winter sojourn. The Ducks, that for a few years past have been so conspicuous a feature of the winter bird-life along the river have begun to gather below Washington, particularly from Dyke southward. The species thus far reported are the Red-breasted Merganser, Black Duck, Pintail, Greater Scaup, Lesser Scaup, and White-winged Scoter, though doubtless other species have been present as well. There seems to be no reason to suppose that Ducks will not be as numerous during the present winter as they have in recent years been at

this season.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN (OHIO) REGION.—The outstanding feature of the autumn was the almost uninterrupted mild weather. There were two light frosts in early October, and some six inches of snow in the second week of November, which melted in three days and was followed by mild weather until the opening of December. At the present writing (December 15) the ground is not frozen and the grass is still green.

This mild weather seemed to have no effect in holding the mass of the birds in this region. Of course, many of the water-birds did remain—are still with us. By the middle of October, while the trees still retained most of their leaves, the woods and fields had assumed nearly their winter aspect as far as the bird-life is concerned. Such birds as the Warblers, Sparrows, Swallows, Thrushes, and the like, had betaken themselves southward at their accustomed times, at best leaving only casual stragglers behind. One may still find an occasional Towhee, Robin, Grackle, Hermit Thrush, and even Catbird by diligent search; but this is not unusual.

Perhaps the most significant fact is that there are none of the birds from the north which visit us during the more snowy winters. The only winter visitants which are in their usual numbers are the Tree Sparrows and Junco.

Among the resident birds the Cardinal seems to have considerably decreased in numbers, for some unknown reason. Carolina Wrens have not been found in six years. The Northern Pileated Woodpecker seems to have finally entirely disappeared from the region. The same is true of the Ruffed Grouse. Under the protection of the state law the Bob-white seems to be increasing slowly. The long continued snow and severe weather of last winter did not seem to lessen its numbers.—LYNDS JONES, *Oberlin, Ohio.*

KANSAS CITY REGION.—The lesser migrants, especially the Sparrows, passed through this region with a rush during

early autumn and have not tarried in numbers as is usual when food is abundant and the season mild and open. A few waves were noted during the last half of October, notably on the 23d when Sparrows, Warblers, Kinglets, and other small species were everywhere, but thirty days later there was a most unusual dearth of life in the woods and thickets.

Conflicting reports were received during the early weeks of the current period regarding the numbers of passing Ducks and Geese. Lake- and marsh-hunters maintained with enthusiasm that the old-time abundance had been noted, and a few have been honest enough to praise the law that has made this possible, thereby admitting their error in opposing it so stoutly. Contrary to this good news there comes a report from my most trustworthy source of information on the Missouri River (Wm. Andrews) that with the exception of almost unprecedented numbers of Green-winged Teal during late October the flight has been subnormal. Conditions not easy of analysis have operated a few times in the past to cause a like desertion of the big river during the fall migration. Andrews' notes show encouraging numbers of Geese of all species during late October and early November, but this conservative observer will not admit that there has been the least indication of any increase in numbers over recent years.

Chief among the species noted late in October were 15 Lesser Snow Geese on the 24th, and 21 Horned Grebes, 11 White-fronted Geese, 26 Franklin's Gulls, 30 Hutchins's Geese, 75 Ring-billed Gulls, 300 White Pelicans (very late), great numbers of large Hawks (sp. ?), and six species of the commoner Ducks on the 25th.

November opened with every upland lake and pond black with Mallards, Pintails, Red-heads (few), Ring-necks, Scaup, Lesser Scaup and Shovellers, while on the river were some Gadwall and immense numbers of Green-winged Teal. On the 7th a party of 5 Golden-eyes were seen, and on the 10th a flock of 14 Buffle-heads, with a few Mergansers and Hooded

Mergansers, were noted. Between these dates, 3 Willets, a few Killdeers, and a small flock of belated Yellow-legs were present. During this period also immense numbers of Rusty Blackbirds and Red-wings were passing. It is presumed from their noticeably different notes that the Red-wings were of the large Thick-billed race. Between the 11th and 19th the weather was freezing cold with some snow, and many flocks of migrating water-fowl were noticed daily. Prior to the 21st a flock of perhaps a thousand Pintails rested for three days on a sand-bar not far below the city. This sight was reminiscent of other days.

Evidence gathered from all quarters in this immediate region and from eastern and central Kansas indicates that the Ducks came south this fall in greatly augmented numbers. Needless to say a heavy toll was taken by an ever-increasing horde of pump-gunners.—HARRY HARRIS, *Kansas City, Mo.*

MINNEAPOLIS (MINN.) REGION.—The month of October, this year, was the mildest ever recorded here—more like September weather. The average temperature for the month was 56.4 degrees, 7 degrees above the normal for the month. On the night of the 20th a heavy rainstorm was accompanied by thunder and lightning, a most unusual phenomenon in mid-fall. It is not uncommon to have two or three inches of snow in October, and the average date of the first 'killing' frost is the 5th. This year there has been no snow that lay on the ground, and after the 'cold snap' on the 1st, no temperatures below freezing except on the mornings of the 27th and 28th, when the mercury fell to + 27 degrees for a few hours and a little thin ice formed on shallow water. Roses were in bloom here and there until well after the middle of the month. On the 29th, tamarack swamps were only just beginning to show yellow and many willows, apple trees, prickly ash, and an occasional oak were almost as green as summertime.

November was a dull, gray month with raw, cold winds, mostly from the north and northwest. There were only two cloudless

days and nineteen days were wholly dark and gloomy. The lowest temperature was +9 degrees on the 11th and the highest +53 degrees on the 5th. The average was +33.1, about normal. Only one inch of snow fell and this did not last. On the 10th and 11th all the small lakes froze over but the larger and deeper ones remained open and free of ice to December 15th. The first two weeks of December continued very mild for the time of year. The lowest temperature was +21 degrees on the 7th, and there was practically no snow on the ground in this vicinity. It will thus be seen that the whole fall and the first two weeks of December have been exceptionally 'open' with no settled winter weather as yet.

As stated, the first destructive frost did not occur until the night of October 27-28, and to show how mild it had been up to that time, it may be of interest to note that the following flowers were in bloom in the garden of Mrs. F. W. Commons at Lake Minnetonka on the 27th: Cosmos, calendula, petunia, stock, pansies, zinnia, scabiosa, delphinium, verbena, dahlia, Dutchman's pipe, and several other varieties.

On October 21 the writer witnessed a great flight of Purple Martins through the Minnesota River Valley, ten miles south of the city. For an hour before sunset the air from near the ground to a great height was literally filled with the birds, circling and fluttering about in all directions, but maintaining a steady onward course. On the 22nd a small movement of White-bellied Swallows was seen in the same locality, and many large flocks of Crows were passing southward. A single Green Heron was seen on this date. On the 26th, F. W. Commons saw a Hermit Thrush and reported many Golden-crowned Kinglets in migration.

October 28 and 29 there were many Pied-billed Grebes in Lake Minnetonka. They were in little parties of two or three to a dozen or more, feeding along the icy shore, while out in the open lake they rode the waves like flocks of Ducks. On the 30th, a White-winged Scoter was shot from

a flock of five at the Long Meadow Gun Club. One or two had been killed there earlier in the season. This is an uncommon Duck in the eastern part of Minnesota. About twenty-five Ring-billed Gulls were seen on the 31st. This Gull has been rather more common than usual this fall. Three or four were seen at Lake Minnetonka as late as December 12. A single Turkey Buzzard was seen on October 31.

With the freezing of the sloughs and small lakes on November 10-11, the surface-feeding Ducks practically all left this vicinity. Up to this time the usual flight of Ring-necks and Scaups had not occurred, only occasional small flocks appearing now and then. But it was reported that on the 10th a great southward movement of Ducks took place, passing along the Minnesota River Valley, mostly high in the air, flock succeeding flock for hours. Apparently this mid-November flight largely passed by this locality in spite of the open large lakes, and it was not until the first week of December that large flocks of diving Ducks appeared in Lake Minnetonka and elsewhere. On December 12 the writer made a trip to Lake Minnetonka to investigate conditions, and in a limited survey saw many Golden-eyes, a considerable number of large Mergansers (probably both species), a small flock of Buffleheads, a single male Mallard, and many hundreds, perhaps thousands, of Ring-necks. But while it is safe to say that there were thousands and thousands of Ducks in this great lake, the number present by no means equaled the vast concourse that assembled there last year—in the first half of November, as the lake froze over much earlier last year.

Down at Heron Lake in the southwestern part of the state, the lake, which is shallow, froze over in November and the great body of Ducks left. It then opened again with the milder weather and great numbers of Mallards gathered there and continued to afford good shooting until the middle of December. All this sounds as though Ducks were plentiful, and so they were at times and in certain places, but the general consensus of opinions

among hunters and other observers has been that, on the whole, Ducks have not been nearly as abundant this fall as they were last. Various supposed causes have been offered in explanation—chiefly the unusual weather conditions. But it is probable that last year was an accidentally exceptional season of plenty due to circumstances farther west that forced eastward large numbers of birds that did not belong to this area, thus causing an abnormal abundance in this state and adjacent territory. If this assumption is correct the two years are not fairly comparable.

The open season for Ruffed Grouse this year found the birds wonderfully abundant, and they were killed throughout the northern part of the state in great numbers. The long preceding close season had resulted in their being surprisingly tame in many places, and this made the slaughtering of them an easy matter. One hunter told me, with some embarrassment, that of twenty-five Grouse killed he had been forced to shoot all but three on the ground, as they would not take wing! It remains to be seen whether the present plan of alternating open and closed seasons will suffice to preserve this grand bird.

Reports from all over the state seem to indicate that the Prairie Chicken, or Pinnated Grouse, is decidedly on the increase. If so, it is a pity that it cannot be given a long period of protection in the hope that it might become reestablished again in numbers really worth while. Even in the southeastern part of the state, where Prairie Chickens have been practically extinct for some years past, word has come of their presence in one or two localities under conditions indicating that they bred there last year and will probably breed the coming year. This is encouraging but nothing short of the most rigid and continued protection can save a bird that is so easily killed under modern hunting conditions.

There have been no reports of winter visitant birds from this locality as yet.—
THOMAS S. ROBERTS, *Zoölogical Museum, University of Minnesota, Minneapolis, Minn.*

DENVER REGION.—When the writer reviews his notes and impressions concerning bird-life in this region during the last two months, he feels as though he had played the lottery and had drawn a blank. With the exception of three slight snowstorms and a spell when the temperature stayed around eight above for a day or so, there has been hereabouts an almost unbroken procession of sunny days. And this seemed to have meant no bird movement; the absence of snow in our neighboring foot-hills, along the nearby creeks, and on the prairies leaves uncovered an abundant food-supply for the birds. Consequently they have not been massed into restricted feeding areas to be found in the city and its parks. A large influx of Horned Larks is an invariable aftermath of a widespread and heavy snowstorm in this region; they are then to be seen feeding in the streets and park areas where many places have bare ground after the storm. After each of the storms since October 15 last, there has been a slight but temporary increase of Juncos in Denver, mostly Pink-sided, and Gray-headed, though Shufeldt's and Montana were also detected, and also a single Slate-colored (November 23).

There have been rather more Great Northern Shrikes in and about Denver in the period now reported upon, taking toll of English Sparrows, and, alas, also of House Finches. A single Sparrow Hawk was seen near the State Capitol on December 1, it being the only Hawk that the writer has noticed here for the past eight weeks. Usually by this time there are still a few American Rough-legs and a few Red-tails, and Swainson's. At this season one is justified in expecting to see Long-crested and Woodhouse Jays, and, too, large flocks of Pifon Jays are to be noticed working their way eastward; up to the present writing not a single Jay of any sort has been detected by the writer in this vicinity. While he suspects that the Tree Sparrow has been here some time, yet he believes that it is not present now in its accustomed numbers. If this region has no more snow or cold weather between

this date and Christmas, the census for that day will make a meager list indeed.—W. H. BERGTOLD, *Denver, Colo.*

SAN FRANCISCO REGION.—Four summer residents of the San Francisco region were seen after the last report was sent in, namely the Allen Hummer on October 13, and the Western Flycatcher, Pileolated Warbler, and Yellow Warbler on October 16. An accidental occurrence of the Tolmie Warbler on November 26 is the second record for the state during the winter months. This Warbler was seen several times by a party of six who were scouting for birds at the Claremont Country Club.

Winter residents have been, perhaps, more abundant than usual during the early part of the winter. Continuous rain has softened the ground so that birds of all categories are provided with an abundance of food. The fruit of Toyon berries planted on the Berkeley hills has probably furnished an added attraction. Western Robins and Varied Thrushes were noted October 14 and Cedar Waxwings November 15; Western Bluebirds have also been reported from different parts of the city and their calls are often heard as they fly over the hills in flocks of from six to twenty. Of the winter birds that come to my feeding table three are now banded. One of these, a Fox Sparrow, has returned for the second season; while two Golden-crowned Sparrows, banded last spring, are noted daily among the eight or ten regular boarders of this species.

A flock of twenty-five Band-tailed Pigeons seen by Mr. H. S. Swarth is the most interesting record of transients noted during the period covered by this report.—AMELIA S. ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—The Alaska Hermit Thrush was a fortnight late in reaching our region, and up to date fewer individuals have been recorded than in former seasons, one or two only being seen on a day's walk where they have formerly been abundant. He made his first appearance about the 18th, as did also the Ruby-crowned Kinglet. On this date,



A LITTLE BROTHER OF THE AIR
Photographed at Blackinton, Mass.

also, many Warblers were noted passing through. The Pileolated, the Yellow, the Lutescent, the Black-throated Gray, and the Townsend, were recorded. Another flight was noted on the 27th and 28th in which Black-throated Grays predominated. October 21 a Water Ouzel was seen in the Arroyo Seco. Thurber's Junco was first reported October 27. The 28th, Parkman Wrens were reported passing through, and the first Robins, Western Bluebirds, and Cedar Waxwings arrived in Sycamore Grove Park. Bluebirds were fairly common in the large valleys all summer. The first Golden-crowned Sparrow record for the season was made on the above date, also White Pelicans flying southward. October 31, Mountain Bluebirds were seen near Culver City, and in the same locality Meadowlarks were abundant. November 2, the Black-throated Gray Warbler was noticed. This date was notable for an extraordinary gathering of White-throated Swifts at Point Firmin. Their swift flight and kaleidoscopic changes of formation as they wheeled in lofty evolutions, their white throats illuminated by the level rays of the descending sun, made a spectacle of wonder and great beauty, long to be remembered. Another group of people went down on the 5th and found them still there. No estimate of the numbers could well be made. November 9, a flock of 25 to 30 Pipits was seen in a dry field near Silver Lake, where one lone bird gleaned along the margin of the water. Who can say why Pipits are solitary when on a shore and gregarious in fields? Six Western Gnatcatchers were also seen along the brushy border of the field. November 10, and on later dates, the Townsend Warbler was seen in Echo Park, where a number of them wintered last year. On this date a Gray-headed Junco was found in Eagle Rock Park with a large flock of Thurber's that annually winter there. It is, very probably, the same bird that was there last year, as it is of rare occurrence here.

November 17, two Varied Thrushes were seen in Mocahuenga Cañon, and one of the Blue-fronted Jays that have been there throughout the year. November 27, a

Common Loon was observed at the reservoir in Franklin Cañon. November 29, Red-breasted Sapsuckers were observed at Eagle Rock and at Echo Park. At the latter place there was a Common Loon. Trips made to San Diego and interior points November 20 to 30, by two different parties showed Say's Phoebe regularly distributed throughout the region. Horned Larks and Meadowlarks abundant. Hawks and Crows in large numbers. The Ferruginous Rough-leg has several times been noted. White Pelicans were at San Jacinto Lake.

December 7, an afternoon of clearing weather following a rainy morning, a very large flock of Cedar Waxwings, estimated at several hundred, alighted on the wires over a Hollywood street, descending to drink from the puddles.

The shore-bird migration increased in interest as the season advanced, several species that were poorly represented in the earlier part of the season becoming abundant in November. Semi-palmated Plover, Red-backed Sandpipers, Long-billed Curlews, and Marbled Godwits were very numerous. One Black Turnstone was seen November 2 on a rocky point. Northern Phalaropes were again observed on November 9 on a slough near Wilmington, estimated about thirty birds. November 17, three Red-throated Loons and very large flocks of Bonaparte and Heermann Gulls were observed. November 11, near White's Point, five American Mergansers were noted and several White-winged and Surf Scoters. The beautiful Western Grebe is seen frequently upon the ocean and at Silver Lake. Among the rarer Ducks to visit this Lake were one male and three female Buffleheads. The American Golden-eye was seen on Franklin Reservoir November 27.

Twelve American Egrets have been about the Harbor district all the fall. They seem fearless and prosecute their search for food undisturbed by passing trolley cars and automobiles. December 3 and 5, in the broad open valley some forty miles east of Los Angeles, on freshly plowed fields, Mountain Plover were

found by the hundreds. In some instances they were closely following the plow. While listed as common some years ago, they are of infrequent occurrence now.

On December 9, Mrs. F. T. Bicknell and two other members of the local Audubon Society went out in an automobile to search for Mountain Plover on the plains to the south and west of the city, where they were seen last year. No Plover was found there, but a very large flock of Mountain Bluebirds was seen in a field which was being seeded, some hovering on the wing, others taking their insect food from the air or from the ground. The number was estimated at from 100 to 200 birds. Pipits also were in the fields in equally large numbers. In a weedy place were

many Sparrows, including Western Chipping, Western Savanna, Western Lark, as well as the more common Gambel and Golden-crown.

Extending their trip by way of San Pedro Harbor, where ten Egrets were seen, to Point Firmin and White's Point, they found White-throated Swifts (about 200), a flock of 32 Black Turnstones, about the same number of Killdeer, group after group of Sanderling (totaling, perhaps, 250), Snowy Plover and Spotted Sandpipers in small numbers, White-winged and Surf Scoters, and the dead bodies of a Shearwater and a Fulmar. In Inglewood Cemetery were gathered hundreds of Killdeer scattered about in groups of 25 to 50.

FRANCES B. SCHNEIDER, *Los Angeles, Calif.*



A JUNCO PORTRAIT

Book News and Reviews

BIRDS OF LA PLATA. By W. H. HUDSON, with 22 colored illustrations by H. GRONVOLD. J. M. Dent & Sons Ltd. London and Toronto. E. P. Dutton & Co., New York, 1920. Roy. 8vo. Two volumes. Vol. I, pp. xviii + 244, 12 ills. Vol. II, pp. xi + 240.

Some thirty-two years ago, as the senior author of a work on Argentine birds,* Dr. P. L. Scater introduced to the world an Argentine ornithologist who has since won an enviable reputation as a literary naturalist. To this work the junior author contributed observations on the 230-odd species of birds known to him, while Scater, in addition to supplying the scientific framework of the book (descriptions, synonymy, etc.), added notes on about an equal number from the recorded writings of other ornithologists, the whole making a complete treatise on the avifauna of the Argentine.

Acting on the frankly expressed belief that the "only interest" the original work "still retains for the reader is the account of birds' habits contributed by me" Hudson has "thrown out" all the matter contributed by Scater leaving only his own observation on the birds of the La Plata region.

Although the reference value of the book is thereby materially decreased, Hudson's share of the joint work constituted so large a part of it and contained so much original matter that it well deserves publication alone. Furthermore, the fact that the volumes of 1888-89 have long been out of print is an additional reason for making Hudson's admirable bird biographies accessible to a larger audience.

The text of the original appears to have been practically unchanged, only such modifications having been made as the different character of the book necessitated, or, in some few instances (e. g. Eskimo

Curlew; here called 'Eskimo Whimbrel') the changed status of the species demanded.

The two volumes are beautiful examples of bookmaking, and Gronvold's plates are artistically pleasing as well as ornithologically illustrative.—F. M. C.

REPORT OF E. W. NELSON, Chief of Bureau of Biological Survey, for the year ending June 30, 1920, pp. 1-36.

From the first to the last paragraph this report is solid meat. No one can read it without being impressed by the wide scope of the Bureau's activities and the value of the service it is rendering.

Man cannot depart far from a purely savage state without coming into conflict with other forms of life which share his environment, and when he reaches that stage in his development which we are pleased to term civilization, his relations to organic nature have become so complicated that it is of supreme importance to his welfare to understand them. It is primarily the function of the Biological Survey to promote this end by investigating our relations to other mammals and to birds, and, after having determined the economic status of a species, the Survey is entrusted with the task of protecting harmless and useful species and of destroying noxious ones.

A large part of the present report deals with these phases of the Survey's work, wherein it is clearly shown that during the past year millions of dollars have been saved stock-growers and agriculturists by the destruction of animals injurious to their interests. There is also a summary of the work of the Scientific Staff of the Survey, that court which gathers and weighs the evidence before deciding whether a species is beneficial and to be conserved, or injurious and to be condemned.

The Survey is further entrusted with the administration of the Migratory Bird

*Argentine Ornithology, a descriptive catalogue of the birds of the Argentine Republic; by P. L. Scater, with notes on their habits by W. H. Hudson. London. R. H. Porter, 1888.

Law, with the care of our seventy bird reservations, and with so many other responsibilities that it is difficult to understand why similar Bureaus have not been established in countries having economic problems essentially like our own.—F. M. C.

CASSINIA: A BIRD ANNUAL. Proceedings of the Delaware Valley Ornithological Club, No. XXIII, 1919, pp. 1-55; 2 half-tones, ills., 1 chart.

During the year 1919, the D. V. O. C. held sixteen meetings with an average attendance of twenty-five members, or

joint meeting of these two clubs. Doubtless other common interests of both societies might be served by such reunions which could be held annually, and alternate between the two cities. Held in May, these meetings might lead to coöperation in the study of bird migration.

In this issue of 'Cassinia,' Wm. L. Baily presents a review of the ornithological achievements of the uncle after whom he was named, which makes it clear from whom the reviewer inherited his love of birds, and Samuel Scoville, Jr., con-



PILEATED WOODPECKER

Photographed by A. D. McGrew and reproduced by the courtesy of the Delaware Valley Ornithological Club

about 20 per cent of its resident membership. Just why the Philadelphia organization should have over 120 resident members on its roll, while the New York Society musters but seventy-odd, is a problem in ornithological sociology which might well form a subject of debate at a

tributes a lively account of a hunt in May, 1919, in Centre County, Pennsylvania, for nests of the Pileated Woodpecker. Several were found and the photograph of one of these fine birds at the entrance to its home, which is here reproduced, was secured by A. D. McGrew.

The usual yearly report on the spring migration, local bird-notes, an abstract of the proceedings of the club at its sixteen meetings, club notes, a bibliography, and list of members conclude this well-edited publication.—F. M. C.

ABSTRACT [No. 32] OF THE PROCEEDINGS OF THE LINNÆAN SOCIETY OF NEW YORK. For the year ending March 9, 1920, pp. 1-39.

During the year covered by this Abstract, the Linnæan Society has held nineteen meetings with an average attendance of eleven members, or about 14 per cent of its resident membership. With the exception of several addresses, the matter presented before these meetings relates to local bird-life, and the data here printed doubtless will in time be incorporated in a list of the birds of the New York region which it is announced (p. 5) will be prepared by a committee of the Society.

Pages 18-30 are devoted to 'A Revision of the Seaside Sparrows,' by Ludlow Griscom and J. T. Nichols, whose intensive studies of this group, indoors and out, have resulted in the description of two new races (*Passerherbulus maritimus howelli*, Alabama, and *P. m. juncicola*, northwest Florida) and more definite knowledge of the range and relations of those which were previously known.

It is announced that this annual 'Abstract' will be succeeded by a 'Proceedings' issued as occasion requires. Pages 1-8 of the Proceedings, indeed, appeared July 15, 1920. We note that it bears the serial volume number of the Abstract and is consequently Volume XXXIII. It is devoted to descriptions of reptiles and amphibians, from the West Indies, in the American Museum. May we venture to suggest that this material should have appeared in an American Museum publication, while the funds of the Linnæan Society might be employed more advantageously in the publication of matter relating to the fauna in which most of its members are interested.—F. M. C.

FAMILIAR STUDIES OF WILD BIRDS THEIR HAUNTS AND HABITS. By F. N. WHITMAN, with many photographs by the author. Boston, Richard G. Badger. 8vo. pp. 1-85; numerous half-tones.

Over seventy beautifully reproduced photographs bear witness to Mr. Whitman's skill as a photographer, while the accompanying text bespeaks his keen sympathy with birds. In addition to pictures illustrating the home-life of birds, there are several of rather unusual character, notably one of a Bronzed Grackle in flight, and spirited portraits of the Brown Thrasher, Catbird, and Magpie.—F. M. C.



Bird-Lore

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE exhibit of paintings and photographs of birds which, thanks to the local committee of arrangements, was held in conjunction with the annual Congress of the American Ornithologists' Union, which convened in Washington November last, aroused so much interest that we hope future congresses may be made the occasion for similar exhibitions. They serve not only to introduce artists to the public, but personally, or through the medium of their work, they introduce artists to one another. Furthermore, they have a distinct value which should react favorably on the study of birds and incidentally on the A. O. U. itself. Philadelphia Committee please take notice!

Unfortunately the distance between the Congressional Library, where the pictures were placed, and the National Museum, where the A. O. U. was in session, was great enough to prevent many, the writer included, from returning to the exhibition after the opening night. At the best, one visit would not have warranted anything like a critical review of the work of the fifty or more artists and photographers shown, while the crowd on A. O. U. night prevented one from making a satisfactory examination of the many subjects displayed. We brought away, therefore, only impressions of an enthusiastic and appreciative audience and of a surprising lot of good bird portraits, including numbers by artists practically unknown in the ornithological world.

Most of the artists represented, however, are primarily painters of birds, the larger part of whose work has appeared as illustrations in ornithological publications, where, with identification as the chief end in view, the figures have been made as large and as detailed as possible. It was, therefore, doubtless to be expected that paintings of this nature would form the larger part of the exhibition; and the number and excellence of those shown is an assurance that we shall not lack for ornithological illustrators.

On the other hand, paintings which satisfactorily depicted the birds' haunts as well as the bird were few in number, and an artist without an interest in birds would doubtless have examined the collection with controlled enthusiasm. The need for bird portraits will exist as long as there are books and articles on birds to illustrate, but beyond and above this field there is another and even larger one occupied in the Old World by such men as Thorburn, Lodge, and Liljefors, a study of whose works we commend to American bird artists.

To one who recalls the very beginning of bird photography, and who remembers the first photographs of living birds shown before an A. O. U. Congress (secured with much difficulty by a committee appointed at the preceding Congress), the exhibit of bird photographs was astounding evidence of the part the camera has come to play in bird-study during the past twenty-five years. Nor could this exhibit adequately mark the advance which has been made since the motion-picture camera has been added to the bird-photographer's outfit.

This type of bird photography was, however, duly represented at the regular meetings of the Congress where Major Allan Brooks showed motion pictures of a surprising number of wild Trumpeter Swans, Norman McClintock, intimate studies of Egrets, White Ibises, Least Bitterns and Gallinules on the reservation of the National Association of Audubon Societies on Orange Lake, Florida, and Robert Cushman Murphy exhibited films depicting the bird-life of the guano islands off the Peruvian coast.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

A BIRD IN THE SCHOOLROOM

Readers of BIRD-LORE and bird-lovers in general are always much more interested in wild free birds than they are in captive specimens, and naturally so. A bird in a cage, unless it be a Canary or some semi-domesticated species, is not happy, is not itself, and spends most of its time in an effort to escape. Even if it eventually becomes contented, observations made on its habits in captivity do not make the appeal that would the same observations if made in the field. The tendency, therefore, when a wild bird comes into one's possession, in one way or another, is to release it immediately without any attempt to learn from it. This is highly commendable unless one has a satisfactory place to confine it, but because of this feeling many a splendid opportunity has slipped through the fingers of teachers who would like to interest their children in the study of birds. For the captive bird offers opportunities for observation quite different but quite as valuable as those of the bird in the open. The wonderful adaptation of the bird to the life which it is designed to lead can scarcely be appreciated until it is observed at close range and even handled. In no better way can the parts of the bird and the arrangement of the feathers be learned and the lessons be given which lead to careful and accurate observation in the field.

Objection is sometimes raised to the keeping of a bird in the schoolroom on the grounds that it will distract the attention of the children from their lessons, but those who have tried it tell us that it works the other way. It often proves the best source of discipline for unruly children who can be bribed to pay attention to their studies in no better way than by being told that they will be allowed to watch the bird for a few minutes when the lesson is completed. The chief objection comes from the lack of a suitable place in which to keep the bird, but this is easily overcome when the schoolroom has what it ought to have, a 'terrarium,' a cage in which any sort of animal or plant may be kept. The ordinary bird-cage is not satisfactory because the large spaces between the bars permit the bird to get its bill and usually part of its head through and encourage it to try to escape. Thus it wears the feathers from the base of its bill and frays the feathers of its wings and tail and becomes a distressing sight, in addition to being a continual distraction to the children. The terrarium, on the other hand, which is a cage made of fly-screening, does not permit the bird to injure itself and discourages the bird at the outset from trying to escape.



THE BEST PLACE TO KEEP A BIRD IN THE SCHOOLROOM—A 'TERRARIUM.'
THE TERRARIUM CAN BE PUT TO A GREAT VARIETY OF OTHER USES
(Courtesy of the Cornell Rural School Leaflet)

Anything from a Hummingbird to a hen can be kept in it to advantage, and, at other times, it can be put to a great variety of uses. Anyone can build a terrarium, for if he has no skill whatsoever as a carpenter, he can purchase five adjustable window-screens and nail or hook four of them together for the sides and use one for the cover. The best type of terrarium, however, will have a strong frame covered with screening, a hinged top, and one side covered with glass through which one can watch more easily. A shallow metal tray or pan will form the bottom which will hold sand or soil. Such a terrarium will prove one of the most valuable pieces of equipment in the school.

These paragraphs, however, are not intended for a discourse on terraria, but on what may be learned from a captive bird. One need not wait for some wild bird to be brought into the school before giving a lesson, for a Canary or a domestic hen will serve the purpose equally well and can, therefore, be fitted in during the winter months when other opportunities for bird-work are scarce. —A. A. A.

THE BIRD AS A FLYING-MACHINE

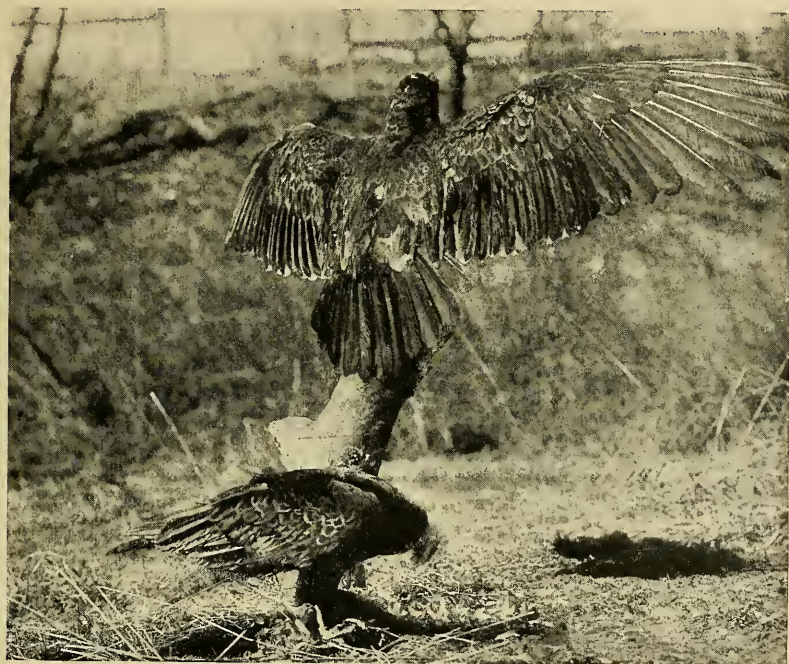
With Photographs by the Author

There can be no doubt that one of the most wonderful cases of adaptation to be found in all nature is that of the flying bird. The modifications which the entire structure of the bird has undergone in its development from the ancient lowly reptile have been controlled primarily by the requisites of an efficient flying-machine. Other needs have been sacrificed or made subservient to the requirements of flight, so that today, except for degenerate forms, the bird stands as the ideal heavier-than-air flight mechanism. It is little wonder that man, in his endeavor to learn to fly, went to the bird and tried to invent wings that would lift him from the ground. But wings, alone, do not make the bird nor account for its ability to defy the action of gravity. A man with wings is no more a bird and capable of flight than is a hat because it has feathers. It is not alone the fact that birds have wings that makes them capable of flight but it is the hundreds of little and big adaptations of their bodies, their legs, their tails, their heads, their very bones that lift them from the ground and drive them successfully through the air. It was not until these principles were thoroughly understood and applied that a real successful aëroplane was invented.

One cannot, of course, study the mechanism of flight with a captive bird in a terrarium or hope to explain in detail to children all the principles involved, but if one bears in mind a few of the principles that governed Mother Nature in moulding the bird so that it could fly, it will make the study of the structure of a bird fascinating rather than dry and uninteresting. When one visits a museum or a large aviary where birds from all parts of the world are assembled together, one is at first led to believe by their various sizes and shapes that they have little in common except wings and feathers. But when one examines them at all critically, he discovers that the apparent diversity of form is quite superficial, and that down underneath they are all fundamentally alike. Their different methods of securing food have given rise to different bills and feet, which we may consider at another time, but aside from these conspicuous parts, their structure is very similar. Let us see, therefore, what are the main requirements of an aëroplane and how these are met by the bird.

1. **LIGHTNESS:** Above all else, a flying-machine must be light. The materials used must be as light as compatible with strength and there must be no unnecessary materials or parts. So, in a bird, we find, developed from the crude

reptilian scales, those structures called feathers, which are as delicate as they are beautiful, but which, withal, are the strongest structures for their weight known. We cannot take space here for a discussion of their wonderful variety of form and color; we can merely call attention to their lightness, their strength, their durability, the beautifully accurate way in which they grow on the bird's wings and body, so that each one has a particular place and a particular manner in which to lay; overlapping certain other feathers and in turn being overlapped, producing the intricate color patterns of some birds and yet at all times, giving the greatest protection to the bird and involving no unnecessary weight.



A TURKEY VULTURE SUNNING ITSELF, ILLUSTRATING THE BROAD, ROUNDED WING BEST ADAPTED FOR SOARING

We cannot take space to discuss the arrangement of the flight quills which give the greatest possible resistance to the air on the downward stroke of the wing and the least resistance on the upward or non-effective stroke. We can merely suggest running one's fingers or a pencil through the flight quills of a fowl to show how easily it passes one way and with what resistance the other.

But there are other ways in which a bird is made light. Let some child bring to school the cleaned bones from a fowl that has served its purpose at Sunday dinner, not one of the bones, but all of them, for there are many lessons to be learned from them. One of the things that impresses us first is their unusual lightness. If we break one of them we see the reason: the marrow that

fills the bones of mammals is absent, the bones are hollow, and their walls, moreover, are thin. Here is another great saving in weight. They are, likewise, connected by air-sacs with the lungs and filled with air. These air-sacs fill every available space within the body of the bird that is not occupied by some organ and when they are all filled with air the bird becomes much lighter for its size.



A BLACK TERN AT ITS NEST, ILLUSTRATING THE LONG, NARROW WING ADAPTED TO GLIDING

Examine a bird's mouth and one finds not the slightest vestige of a tooth. The first birds had them but they all disappeared ages ago because they were heavy and required heavy jaws to support them and heavy muscles to manipulate them. A real, efficient flying bird could not have all this extra weight, so Mother Nature devised another method of grinding the bird's food and today it is done in the stomach, which is called the gizzard, and the bird's head weighs but little.

The first bird, likewise, had a long lizard-like tail with feathers along the sides but this, too, was heavy and so gradually it became shortened until today

all of the feathers are borne on one bone and the skeleton of the tail is very short. And so we might go on considering each and every part of the bird and we would discover how it has been made as light as its required strength would permit.

2. **STRENGTH:** If lightness were the only requirement of the flying-machine, it would be a simple matter to construct one, but, unfortunately, great strength is likewise required, and it is the combination of the two that is so difficult to achieve. The framework of the machine must be extremely strong to withstand the tremendous strains, and so we find, with the bird, that its framework or skeleton is the most rigid of all animal's. Bones fuse together to get greater strength and are reinforced by the development of new bones from mere bumps or processes to act as props. One cannot fully understand the many beautiful ways in which the bird's skeleton is strengthened unless he has some knowledge of the skeletons of other animals with which to compare it, and so here we can



A VIRGINIA RAIL, BALANCING ON A FENCE OF FLY-SCREENING,
ILLUSTRATING THE SHORT, ROUNDED WING

merely call attention to the rigidity of the bird's backbone and pelvis, the box-like form of the thorax with the ribs firmly fastened both to the backbone and to the breast bone, and further strengthened by overlapping processes. The familiar 'wishbone' is nothing more nor less than the two collar-bones fused together to give greater strength to the attachment of the wings, and so on.

If one examines the breast-bone of a bird, he discovers that it is not flat as in man, but has a relatively enormous ridge down the middle for the attach-

ment of muscles, the familiar breast muscles or white meat of the fowl. These are the powerful muscles that manipulate the wings, relatively hundreds of times more powerful than the similar muscles in man.

3. **COMPACTNESS:** A third requisite of a flying-machine is compactness, the heavier parts must all lie close to the center of gravity. There must be no



A BLUEBIRD IN FLIGHT, ILLUSTRATING THE WING OF AVERAGE PROPORTIONS
ADAPTED TO THE NORMAL METHOD OF FLIGHT

great weight on the wings or the tail or it will not be steady. This is most strikingly accomplished in the bird. We have already spoken of the shortening of the tail, the loss of teeth and heavy parts of the head, and the location of the flight muscles on the breast-bone instead of on the wings. These are all adaptations, not only to make the bird lighter, but also to bring the weight close to the center of gravity. What is true of the wings is likewise true of the legs. Birds do not have fat calves. Most of the muscles are on the upper leg close to the body, and, when necessary, they are prolonged to the tips of the toes as very light tendons, just as is done in the wings. The body itself is short and deep for the same reason of bringing the heavy liver, gizzard, and intestines as close to the center of gravity as possible.

4. **POWER:** A fourth requisite of a machine that will fly is power. Until gasoline was discovered and the gasoline engine, flight was impossible because the known engines and fuels were all too heavy. Great advance has been made in recent years in improving the engines, making them lighter and more powerful for the amount of fuel used, but still the great problem and the greatest drawback to long-continued flights is the weight of the fuel. An aëroplane can carry

sufficient gasoline to drive it only a relatively few hundred miles before it has to descend. But what of the birds? Think of the Golden Plover that starts on a non-stop trip from Nova Scotia to northern South America or from Alaska to the Hawaiian Islands, distances of over 2,500 miles, with only the fat stored up on their bodies to serve as fuel. Surely gasoline is not the last word in fuel for aëroplanes.

If one watches the captive bird closely, he can see the feathers of its breast and elsewhere pulsating in accord with the throbbing of the heart. If one counts the pulsations, he will learn how rapidly the heart of a bird beats compared with that of man, and that means how much more rapidly all of its processes work. The bird's temperature is normally nearly ten degrees higher than that of man, and that means that its tissues are burned up and replaced much more rapidly.



A DUCK HAWK PURSUING A SWALLOW, ILLUSTRATING WITH BOTH BIRDS THE MODERATELY LONG, POINTED WINGS BEST ADAPTED FOR SPEED OF LONG DURATION.

Photographed by H. H. Knight

and it means that energy in the form of muscular power is liberated much more rapidly. What a strange misshapen creature man would be if he had relatively the muscular power of a bird.

And so in these four respects, in their modifications for lightness, strength, compactness, and power, birds are all much alike in spite of their many apparent differences. But birds do not all fly alike or in equal amounts, nor are their modifications all carried to the same extreme. As is well known, some birds, like the Ostrich, the Penguins, and certain birds of New Zealand have lost entirely the power of flight; and birds like the domestic fowl are far inferior to the Hawk or the Eagle. It is interesting to note the differences in the flight of different groups of birds and to try to find differences in the structure of the birds or the shapes of their wings correlated with the differences. Thus, if we consider the wings of a Bluebird or a Crow as of normal or average proportions and their

method of flight by continuous beating of the wings, that normal to most birds, we find four general modifications correlated with specialized methods of flying. The first of these is that found among terrestrial birds like the domestic fowl, or the Ruffed Grouse that seldom fly except to escape their enemies when it is necessary that they should be able to rise quickly and fly very rapidly for short distances. They ordinarily do not fly very far. The type of wing developed among this class of birds is one that is much shorter than the average and rounder, and it is moved much more rapidly. It would be a distinct disadvantage for a bird that has to fly long distances to have this type of wing as it would soon tire, but it is approximated in many of the Flycatchers and Hawks, like the Sharp-shinned and Cooper's, that ordinarily lie in wait for their prey and dart out after it. With this type of wing they are able to develop full speed almost immediately. The wings of Rails are likewise of this type though, because of lack of use, their breast muscles have been reduced and their flight is weak.

The second type is very different being a large, broad, rounded wing, such as is found in the Eagles, Buzzards, and larger Hawks. It is adapted for soaring, and birds having this type of wing can maintain themselves in the air sometimes for hours without flapping their wings, merely by taking advantage of the upward currents of air and adjusting their wings accordingly. A third type of wing found among birds, that likewise enables them to take advantage of the air-currents, is the long, narrow wing, found best developed among the Albatrosses but also among the Gulls and Terns and other sea-birds that are on the wing a large part of the time. Among the Hawks, the Marsh Hawk and the Fish Hawk have longer and narrower wings than the others and they seldom soar and never lie in wait for their prey but spend their time sailing back and forth over the water or over the fields, for the long, narrow wing is best adapted for what may be called gliding. The fourth type is that of the pointed wing, usually broad at the base and moderately long. This wing is best adapted for speed of long duration and is that found among the Swallows and among the Falcons, birds that pursue their prey on the wing and strike it at full speed. They need to have full control of their flight at all times and to develop great speed, and the moderately long, pointed wing seems best adapted for this. Thus one might go on analyzing the differences among the wings of birds and perhaps find a reason for even the minor differences that are known to occur, but the differences that have been mentioned will suffice to make the wing of the bird in the schoolroom have some meaning and perhaps start some child delving for the reasons for that which he sees.—A. A. A.

QUESTIONS

1. What is the best way to keep a bird in the schoolroom?
2. Why is the ordinary bird-cage unsatisfactory?
3. What is meant by a 'terrarium'? Describe one.
4. What are four requisites of a flying-machine?
5. Name ten ways in which the weight of a bird is reduced.

6. Why do birds not have teeth?
7. Where is the bird's food ground up and why?
8. What is meant by the 'center of gravity'?
9. Describe five ways in which the weight of a bird is brought close to the center of gravity.
10. What is the framework of a bird called and how is it made strong?
11. In what form is energy stored up on the bird's body?
12. Why are birds able to fly long distances without stopping?
13. How far do some of them fly?
14. Do all birds fly alike?
15. Describe four different types of birds' wings and explain the kind of flight for which each is adapted.

FOR OR FROM YOUNG OBSERVERS

BIRD-STUDY AT HOME

Many people are discouraged in starting a bird-list because it seems such an undertaking. They have to walk two or three miles and then only see a few birds, but if you keep your eyes open and use your ears you need not go out of your own yard to see such birds as will start you well on your list. My yard is such a yard as you would find in the residence section quite near the heart of any large city. It is about 50 feet long by 25 feet wide. It is surrounded by a cherry, an elm and plum trees, together with a clump of large lilac bushes on one side, a poplar tree, lilac bushes and a flowering quince and shrubbery on the other. I try to protect the birds from their enemies and I have two baths to which have come Robins, English and Song Sparrows, Flickers, and Goldfinches. I also have four feeding-devices which have been patronized by Robins, Slate-colored Juncos, House Wrens, Ruby-crowned Kinglets, English, Song, Chipping, White-throated, and White-crowned Sparrows.

I had many interesting experiences in observing some of the birds. In the morning of May 18 I saw a Brown Creeper on a telegraph pole in another yard and went nearer to be sure of its identification. Coming back I scared up an Oven-bird. When I came home from school it was raining but that did not prevent me from seeing a Black-throated Blue Warbler, House Wren, and Wood Thrush. In the afternoon it stopped raining and I saw four Canada Geese. I had an interesting time with a Nashville Warbler in the quince bush. He would always keep on the other side from me and it was rather hard to identify him. When I saw some Pine Siskins eating the dandelion seeds I ran back for my camera, but while I was adjusting it they flew away. When I was dressing one morning I heard a Wood Pewee and looking out of the window found him perched on a telegraph wire.

Forty different kinds of birds were seen in the garden between March and August.—RICHARD M. CHASE (age 12 years), *Rochester, N. Y.*

[This is an excellent record for a city garden. Who can do better?—A. A. A.]

BIRD-NOTES FROM MISSISSIPPI

Not having seen any notes in BIRD-LORE from Mississippi I thought some of BIRD-LORE readers would like to know of my experience in bird-study.

I have had good success with feeding-boards and bird-baths. The Cardinals, Bob-Whites, and White-throated Sparrows were numerous though the latter only during the winter, going north when spring came.

During the nesting season I found many bird-nests. They are as follows: 10 Mockingbird's, 6 Blue Jay's, 8 Purple Martin's, 6 Brown Thrasher's, 2 Cardinal's, 1 Towhee's, 1 Orchard Oriole's, 2 Bob-White's, 2 Nighthawk's, 4 Loggerhead Shrike's, 2 Red-headed Woodpecker's, 1 Brown-headed Nuthatch's, 1 Blue-Gray Gnatcatcher's, 1 Mourning Dove's, 1 Meadowlark's, and 1 Chimney Swift's.

The Mourning Dove's nest was built on the ground and when the eggs hatched the ants ate the young. Both Cardinal's nests contained but three eggs while last year there were four eggs in all the Cardinal's nests I found. There were twenty eggs in one of the Bob-White's nests and fifteen in the other.

Some of the above nests we photographed, one of which contained a Cowbird's egg. When the figs got ripe I put some on my feeding-boards and the Mockingbird ate them.

I am the editor of a bird-study column in the county newspaper which is published once a week. I was the president of a Junior Audubon Bird Club last year and hope to establish one this year.

One of my friends and I have made a bird sanctuary of about ten acres. We have five feeding-boards, many bird-houses, one bird-bath, and right through the center of the woods is a small stream. I have made five more bird-houses already for next year.—LEONARD DANIEL HARDY (age, 13 years), *Gulfport, Miss.*

[BIRD-LORE readers will congratulate Leonard Hardy upon his activity and success in discovering birds' nests and will quite envy him his opportunities for watching them. Ants constitute a form of bird enemy that our northern birds are seldom troubled with. Will some of our other southern friends tell us their experiences.—A. A. A.]

A BLUE JAY STORY

Nellie Small and her mother were spending the winter in Colorado and while there Nellie made the acquaintance of 'Sammy', the Blue Jay.

Sammy is generally considered a naughty bird but Nellie grew to like him very much before she had known him long. He proved by his actions that he could be a gallant fellow and a friend to the weaker and more timid members of his band.

Nellie and her mother lived near the mountains in a cabin which was surrounded by large pine trees and at a short distance flowed a clear mountain stream.

Every morning Nellie went to the little stream for a pail of water. At first Sammy and his companions, who spent a great deal of their time in the tree tops above the brook, kept very quiet when she appeared, watching her carefully. Knowing Jays to be curious she placed a small dish of cornbread, broken in pieces, on the fence some distance from the house.

It was not long before Sammy flew down to investigate. His squawk to the others was answered and a half dozen Jays were soon enjoying a fine breakfast. Several mornings of such feeding convinced the birds that she was their friend and soon her appearance was greeted by a chorus of squawks from the tops of the trees.

As she passed along the trail to the brook the birds flew from tree to tree, calling down to her not to forget that cornbread. If, on entering the cabin she did not immediately reappear, Sammy, larger and bolder than his friends, would fly to the ground where he could be seen from the window. Stalking back and forth he would cast anxious glances toward the door, his bravery seconded from the tree top. His friends could 'root' for him if they couldn't help him.

When Nellie came out he would fly to a safe distance among the branches above until she returned to the house. Then, darting down several times, he would carry pieces of bread to the timid ones in the tree. He must have portioned out the bread, for the other birds rarely came so near the house.

As the days grew colder and the snow deeper, they were driven by hunger to come nearer and soon learned the exact spot on the fence where she kept their dish. To avoid going out so early in the morning she would fill the dish late the evening before, then, jumping out of bed as soon as she awakened, would watch them from the window. Each bird would shovel away the snow with his bill, seize a piece of bread, and fly to the tree where he ate it at his leisure.

Nellie grew very fond of Sammy, who seemed to be the captain of this Blue Jay company, and tried various ways of enticing him nearer the house. One day, when she knew the Jays were aloft, she went to the fence in front of the house, much nearer than where she had been in the habit of placing the food. Placing several bits of bread on the gate-post she ran into the house and waited for Sammy to appear.

Soon he began flying about overhead, darting and squawking, afraid to venture so near. Finally, almost on the wing, he seized a piece. Having settled his plumage after such a daring act, he flew down again, less cautiously, and took another piece. After a few days he would often perch on the post and send friendly glances toward the window.

By this time Nellie believed that he knew she was his friend, but she wanted to try him still further. She scattered some grains of corn, nice, large, yellow grains, from the fence to the porch.

Sammy watched her from a safe distance. He was 'game' but very much frightened. He flew down and ate the first few grains, looked cautiously about, crept nearer, flattened his topnot, spread his wings and fairly crawled to the

step to secure the last grain. Then with an air of bravery which was funny to see he flew to the fence, settled his plumage and jeered at the timid ones in the tree.

From that time Nellie placed his bread on the porch railing. For a day or two he was afraid to venture so near, as the rail was just below the window, then began to come very early in the morning, gobbled the crumbs and fled.

One evening Nellie forgot her pet until morning. During the night about two inches of snow had fallen. When she looked out and thought of Sammy she decided to wait and see what he would do. Soon he flew down and began tossing away the snow with his bill. Faster and faster he flirted but no crumbs appeared. When the bare railing showed and Sammy knew that he was forgotten, he was angry. He began to scold. The more he scolded the more angry he became. He fairly quivered as he sat and squawked.

Nellie laughed but resolved that he should soon have his breakfast.

Nellie thought Sammy a very wise bird, don't you?—ESTHER L. ROSENBERGER, *San Carlos, Ariz.*

[Nellie's experience in enticing the timid Blue Jays to the window shows how even the variet birds will finally respond to kindness and lose a large measure of their fear.—A. A. A.]

A ROBIN'S NEST AND FAMILY

This Robin's nest, we observed, was in the fork of a white oak tree about 40 feet from the ground and was made of grass and mud. We began our observations when the young were about six or seven days old, on August 3, and kept a one-hour's feeding record for three days. The first day, August 3, they were fed eight times in the hour that we watched, the male feeding five times and the female three. Owing to the extreme height of the nest we were never able to see very well the kind of food but the few times that we did see, it was usually grubs. On August 5, when the young were eight days old, we made our next observation. This time, also, they were fed eight times in the hour, only the male and female each fed an equal number of times. On August 6, we made our last observation. Only seven feedings were made, five by the male and two by the female. Feedings usually lasted about one or one and a half minutes and often came immediately following each other but sometimes five or even ten minutes elapsed between feedings. In chilly weather one would feed and then remain on the nest until the other came in order to keep the young birds warm. Only once did we see any nest-cleaning, then the female went to the nest to feed and then went away with some small white thing in her bill. We did not see her drop it. Perhaps nest-cleaning was done later in the day. Two days later the young had flown and we were denied the especial pleasure of seeing them leave the nest.—CORNELIA DOZIER (age, 15 years).

[This is the way to become really familiar with a bird by watching it at its nest and making careful notes of all that transpires.—A. A. A.]



WOOD PEWEE AT HOME
Photographed by Herbert K. Job

BROWN CREEPER

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 104

Few birds are more modest and retiring in their habits than the Brown Creeper. Its life is passed creeping about the trunks of trees, and when alarmed by the approach of an intruder will often remain stationary and thus avoid detection. Its notes are few and the song of the male so low that it is rarely heard. The bird is altogether so difficult to see and to hear, and blends so perfectly with its wild surroundings, that even a trained observer will often pass near one without learning of its presence.

The Brown Creeper is from 5 to $5\frac{3}{4}$ inches long. Nearly one-half of this length is taken up by the long tail which is stiff and bristly at the end, not unlike the tail of a Woodpecker. The bill is about $\frac{3}{4}$ inch in length, slender, rounded, and slightly curved. It serves the bird well, for it is of the greatest use in exploring the small, deep crevices of the bark in quest of food. In color the Creeper is brown above and streaked lengthwise with white. Two wide whitish bars cross each wing. The rump is light rusty red. Beneath, from bill to tail, the bird is white. The brown-streaked back of a Creeper, clinging motionless to the bark of a forest tree, presents a mark not easily seen by one who is unaware that a bird is hiding there in open view.

In the greater part of its range in the United States, people see this little tree, mouse-like, bird only during the colder portions of the year, for its summer home is farther north. It is often found in companies of three or four—family groups, possibly—and very frequently associated with a band of Chickadees, Nuthatches, and Downy Woodpeckers.

In feeding, the Brown Creeper climbs along the bark of trees by means of little jumps or hitches. Generally it begins about 2 feet from the ground, and, as it moves upward, it examines critically the cracks and crevices of the rough bark. Usually it also moves slightly sidewise, so that by the time it is among the limbs, often 20 feet or more from the ground, it has circled the tree two or three times. Rarely it will creep along some large limb, but more generally, when reaching the region of the tree trunk from which the limbs grow, it will fly to another tree close by. Alighting near the base, it again begins its upward climb.

While the bird is well known to be an eater of insects and their eggs and larvæ, but little has been learned regarding just what insect food it most prefers. It is known, however, to eat ants, sawflies, spiders, and, to some extent, the seeds of the scrub pine.

Its usual cry is a fine *chip* or *screeep*, the sound of which has often been likened to the call-notes of the Golden-crowned Kinglet. Its song has been heard in the spring and summer by some naturalists who have penetrated the forests

to its nesting-haunts. Forbush describes this as "a sweet, wild, indescribable song." William Brewster, who studied the bird much in the nesting-season, has left on record his impressions of its singing. In a bulletin of the Nuttall Ornithological Club, published in 1879, he wrote: "Though one of the sweetest that ever rises in the thickets of the northern forests, it is never a very conspicuous song. This is due to the fact that the song is short and by no means powerful, but its tones are so exquisitely pure and tender that I have never heard it without a desire to linger in the vicinity until it has been many times repeated. It consists of a bar of four notes, the first of moderate pitch, the second lower and less emphatic, the third rising again, and the last abruptly falling, but dying away in an indescribable plaintive cadence like the soft sigh of the wind among the pine boughs. I can compare it to no other bird-voice that I have ever heard."

The nest of the Brown Creeper is made of sticks, strips of bark, cobwebs, plant down, and other materials. It is sometimes placed in hollow trees, but much more often the birds hide it between a strip of loose bark and the body of the tree or stump to which it still clings.

In the *Auk* magazine for April, 1905, appears this interesting account of a search made by Frederic H. Kennard for a Creeper's nest in Massachusetts:

"On May 12, 1904, at about dusk, while Mr. Kennard was in the top of a red maple on the edge of a swamp in Canton, inspecting a Hairy Woodpecker's nest, he heard the call-notes of a pair of Brown Creepers as they flitted through the woods behind him. He did not see the birds, much less follow them, but only was able to note the direction in which they apparently flew.

"Two days later, however, on May 14, after finding one nest in a swamp 2 miles away, we determined to have a look for this pair, which we guessed were probably breeding in a certain cedar swamp. The quest seemed nearly hopeless, but we had an afternoon to spare, and waded in accordingly.

"The water was deep, the trees were thick, and the swamp particularly dark, as it was cloudy, while the leaves that were then bursting forth added very materially to our difficulties. However, after an hour, we at last thought we heard one of the call-notes of the Creeper, a note that closely resembles that soft call which Chickadees often utter when feeding and which differs somewhat from the Creeper's ordinary Kinglet-like call. After considerable search we finally discovered the Creeper, and the discovery seemed to be mutual, for he allowed us to light our pipes and sit down and watch him for about fifteen minutes, during which he never stirred until, apparently making up his mind that we were harmless, he moved on. The trees and bushes were so thick, and his movements so rapid, that it was impossible to keep an eye on him all the time, and we often had to content ourselves with merely a general idea of his whereabouts. When all at once we realized that two birds had come upon the scene, our difficulties were doubled, each of us trying to watch one bird, and often finding that we were watching the other's, particularly after the male had

mixed things up by feeding the female, which he did at intervals. However, one of them finally flew to a hard pine stub, some 10 feet from where one of us was standing, and disappeared beneath a long strip of bark about 6 feet above the water.

"One of us climbed on the other's shoulders and peeking in, found that the nest contained six fresh eggs. This nest could never have been discovered had it not been for the bird's kindness in leading us to it, as it was absolutely hidden behind a very large strip of bark, while the stub stood in the middle of a very thick tangle, so thick in fact that we were unable to photograph it, as we could not do so without cutting away a lot of trees, shrubs, etc., and we had no hatchet."

P. B. Philipp, who has made much study of the habits of the Brown Creeper, in a recent letter to the writer, made the following statement regarding some of his observations.

"For anyone who is not afraid of wetting his feet in the ice-water freshets of early spring, a more or less intimate acquaintance with the Brown Creeper is not difficult.

"At this season this little feathered gleamer frequents wet woodland or bottom lands, which overflow and in which there are dead trees with loose-hanging bark. Such places are usually remote from human habitation and visited only by wandering muskrat hunters and hardy bird observers.

"Here, in mid-April, when the maples are putting on their spring dress of red blossoms, and the skunk-cabbage is pushing its nose out of the muck, you will hear a thin, plaintive song of three or four notes, different from any other bird in these solitudes. Careful watch will disclose the source of the strange song, and you will see a small brown bird closely hugging the rough bark of some tree. A good way to find the bird is to watch the bases of the trees near where the song appears to come, for the Creeper usually begins low down when it starts to climb.

"On account of the character of its haunts it is often passed by, and it is much commoner than it would appear to be from published records. Most of the birds we see in the vicinity of New York City are migrants on their way to the spruce and fir bogs of Canada. Some, however, stay with us to breed in favored places. Such a locality is a certain swamp near Newton, N. J. Here the bird is a regular breeder. The swamp is timbered with ash, elm, and maple, and has a heavy undergrowth. Many of the trees have been killed by repeated flooding, and the loosened bark has cracked and sprung outward from the trunks, making the nesting-places which this bird most frequently selects. A nest there found is typical. It was placed behind a piece of bark which had separated from the trunk sufficiently to permit the passage of the bird, and quite a bit of engineering skill was employed in its construction. First there was built a foundation of dead twigs criss-crossed and interlaced with bits of dead wood and bark secured together with cobwebs and fine strips of plant-down, some

six inches deep and filling the space between the bark and the tree trunk. The lowermost twigs were stretched across the space and acted as braces for the material placed above them. On this foundation was built a tiny cup of fine dried grass, well matted together, lined with very fine fibers, and fine strips of inner bark as the shreds from dead cedars. This nest was placed in a dead maple tree three feet above the water in a very wet part of the swamp, and on May 3, 1913, contained five eggs, white, sparsely specked with light brown and amber. Sometimes the bird will lay six or seven in a nest.

"The female of those pairs that I have watched, does the nest-building and is accompanied by the male while gathering and arranging material. Both birds feed the young and are very tame and unsuspicious. One pair I found in northern New Brunswick unconcernedly visited the nest while observed from a distance of ten or twelve feet.

"Nesting in the latitude of New York City is early and the young hatch in late May. When newly out of the egg they are tiny creatures with a covering of blackish natal down. When grown and out of the nest they appear to stay with the old birds for a time, and I have seen whole families in late June creeping about the tree trunks in their characteristic way."

The Brown Creeper breeds chiefly in Canada as far West as Manitoba and in United States as far South as Nebraska and New Jersey; also along the Alleghany Mountains southward into North Carolina. This bird belongs to the family *Certhiidae* or Creepers, of which about twelve distinct species are known. They are all confined to the Old World with the exception of the Brown Creeper, which is found in North America. It is divided into five subspecies or climatic varieties. It is migratory. At Washington, D. C., for example, it is known only as a winter visitant, arriving about September 21 and leaving about May 1.



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
Telephone, Columbus 7327

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

OUR NATIONAL PARKS IN GREAT DANGER

Few people in the United States today realize that commercial interests which for years have sought to gain access to the National Parks have at last broken through the strong cordon of protection hitherto thrown around the parks by Congressional action and public sentiment. These raiders must be repelled and our nineteen great National Parks held intact.

Listen to this! At the last session of Congress a provision was inserted in the Water Power Bill, which turned over to three members of the President's Cabinet the authority to grant water-power concessions in National Parks. *This bill is now a law!* Only two votes, therefore, are now required to admit the enemies of the wild parks to an orgy of destruction and desolation.

THE REPEAL BILL OF SENATOR JONES

Very naturally this Cabinet Committee is being besieged by requests for permission to enter the National Parks for the purpose of building dams, power-houses, and other constructions for the utilization of the water for power development purposes. Two of these requests have come from Los Angeles where commercial inter-

ests are seeking to gain access into the beautiful Yosemite National Park. This portion of the Water Power Bill must, of course, be repealed and it should be stated here that on December 7, 1920, Senator Jones of the state of Washington introduced into the United States Senate a bill for the purpose. At the time of going to press this bill had not been advanced. It goes without saying that it will meet with strong opposition by those moneyed interests who would exploit the parks.

THE DESTRUCTIVE SMITH BILL

On February 11, 1920, Mr. Smith, of Idaho, introduced a bill to permit the building of a dam in the Falls River basin in the southwestern part of the Yellowstone National Park, with a view of making a reservoir covering 8,000 acres and then use the water for irrigation purposes across the park line in the state of Idaho. This measure was passed by the United States Senate, after a Committee hearing at which A. P. Davis, Chief of the Bureau of the United States Reclamation Service, stated that this little-known region was largely swamp land and therefore of little or no interest to tourists. Continuing on

its course, this bill has been reported favorably by the House Committee to which it was referred, and it is at this time waiting in the House for final action.

During the past summer, William C. Gregg, a life member of this Association, fitted out and headed an expedition into the Falls River region. His findings are set forth in an article which appeared in the *Saturday Evening Post* for November 20, 1920. He states that he found this was not a territory of swamps but a beautiful upland meadow traversed by streams filled with fish, a territory in which game is abundant, and a region that would afford beautiful camping sites for at least 10,000 tourists. A few miles of dirt road from the upper geyser basin would open this new territory to motor parties. He found along the edges of the basin no less than forty waterfalls, cascades, and hot springs, some of which would be destroyed and the most of the others rendered inaccessible should this unsightly reservoir be created. This Smith Bill *must be killed!*

THE NEW WALSH BILL

Already other commercial interests are looking forward to repeating the benefit from the precedent they expect to be set by Congress in passing this measure.

Senator Walsh, of Montana, has introduced in the Senate a bill to dam the Yellowstone River where it flows out of the Yellowstone Lake. The idea is to accumulate water here during the flood season and let it off later for irrigation purposes in Montana. Of course, dams could be built on this river outside the Park, but this would mean the flooding of private lands that would have to be paid for. If the dam can be built inside the park no private expense would be attached to the flooded lands, hence from the standpoint of that class of our citizens who are willing to destroy anything of interest or esthetic beauty if money can be made thereby, all these propositions appear eminently worth while, and their consummation is, by them, to be devoutly hoped for.

The National Association of Audubon

Societies, the National Parks Association, the National Civic Association, and some other public-spirited institutions, as well as many thousands of unorganized individuals, do not see the subject in this monetary light. This Association is fighting these park propositions as hard as it can. We have recently made a call among our members and others for funds to use in arousing the public to the imminent danger that threatens our National Parks. About \$4,000 have been collected to date, and this money is being used in circulars, publicity, traveling expenses of speakers, and such other items as incidentally arise in connection with the campaign.

I have referred above to three distinct bills pending in our United States Congress. It will help matters very materially if our members write to their Senators and Congressmen and express their hope, first, that the bill of Senator Jones, intended to take out of the Water Power Bill, the words "National Parks and National Monuments" will become a law. Second, that the bill by Congressman Smith of Idaho, intending to build a reservoir in the southwestern part of the Yellowstone Park, and which bill is now pending in the House of Representatives, shall be repealed; and third, that the Walsh Senate bill, to dam Yellowstone River, shall be defeated. We are told, on what we believe to be competent authority, that there are no less than a dozen splendid dam-sites in the Yellowstone Park, and, if commercial interests are allowed to use one of these, a precedent will be set for a vast disfiguration and despoilation of America's greatest natural beauty area.

Anyone interested in the preservation of the wild natural beauties of America's choicest spots included in National Parks, or who cares for the preservation of the wild life within their boundaries, should by all means communicate their views to their Senators and Congressmen. This Association has no means of fighting such detrimental matters except by the weapon of public sentiment, and public sentiment freely expressed in Washington always has its effect.

MOVING PICTURES NOW AVAILABLE FOR FLORIDA AUDIENCES

Norman McClintock, the well-known nature photographer, of Pittsburgh, will be available for moving-picture lectures in Florida during the months of February and March. His addresses will be fully illustrated with remarkably beautiful and interesting moving pictures of Florida bird-life. His collection of these subjects was very much enriched by his studies at the Association's protected Heron and Egret

colony in Orange Lake during the past summer. Any members or friends of the Association who are spending the winter in Florida and who would like to make local arrangements for having the pictures shown are invited to communicate with the home office of the Association at 1974 Broadway, New York, or directly with Norman McClintock, 504 Amberson Ave., Pittsburgh.

ILLEGAL TO GIVE CHILDREN AIR-GUNS

We so often see air-guns in the hands of children that it is thought wise to bring before the attention of our readers the fact that there is a provision in the Penal Code of the State of New York, that makes it illegal to give an air-gun to any person under the age of sixteen years. It is also illegal for any person under the age of sixteen to carry or have in possession such air-gun.

"SECTION 1896—L. 1913 ch. 608.

"A person who manufactures, or causes to be manufactured, or sells or keeps for sale, or offers, or gives, or disposes of any instrument or weapon of the kind usually known as a black-jack, slungshot, billy, sandclub, sandbag, bludgeon, or metal

knuckles, to any person; or a person who offers, sells, loans, leases, or GIVES any gun, revolver, pistol or other fire-arm or any air-gun, spring-gun or other instrument or weapon in which the propelling force is a spring or air or any instrument or weapon commonly known as a toy pistol or in or upon which any loaded or blank cartridges are used, or may be used, or any loaded or blank cartridges or ammunition therefor to any person under the age of sixteen years, is guilty of a misdemeanor.

"SECTION 1897—L. 1913, ch. 608.

"Any person under the age of sixteen years, who shall have in his possession, any of the articles named or described in the last section, which is forbidden therein to offer, sell, loan, lease or give to him, shall be guilty of juvenile delinquency."

FOR A UNITED STATES DEPARTMENT OF CONSERVATION

On December 8, 1920, Congressman McDuffy, of Alabama, introduced in the House of Representatives a bill intended to create a new Cabinet officer to be known as 'Secretary of Conservation.' The bill arranges for the usual machinery for the creating of a new department of Government, and provides that this department shall have jurisdiction over the Forest Service, and Bureau of Biological Survey, now under the jurisdiction of the Department of Agriculture; also the Geological Survey and the National Parks Service, now under the jurisdiction of the Department of Interior; and the Bureau of

Fisheries, now under the jurisdiction of the Department of Commerce.

The bill also provides for the creation of a new bureau to be known as the 'Bureau of Birds and Game.' The Department is to be supplied with a legal office in charge of a solicitor. The duties and authorities of the proposed Department of Conservation are also set forth in detail.

Prominent among the sponsors for the bill is Hon. John H. Wallace, Jr., of Alabama who for many years has been active and energetic as State Game Warden of that Commonwealth.

KILLING DUCKS BY AËROPLANE

A few weeks ago, the Pathe weekly news film, in moving-picture houses all over the country, showed a Duck-hunt by aëroplane. In the picture two or three planes swooped over the marshes and when the Ducks arose in clouds the planes dashed among them. It was easy to see that many were killed by striking against the wires or other parts of the machines. The picture closed with a statement that it is estimated 2,000 Ducks were killed that day in this manner.

Upon hearing of this the President of the Association secured a copy of the film and it was shown to a number of interested people in the lecture hall of the American Museum of Natural History, New York City. We at once took up the matter with the Biological Survey, for to take Ducks from aëroplanes is illegal under the Federal Law. Dr. E. W. Nelson, the Survey's Chief, replied that the subject was already under investigation, and that agents were on the ground seeking to apprehend these violators of the law. Complaint at the same time was made to

the California State Board of Fish and Game Commissioners, and the Executive Officer of the Commissioner, Charles A. Vogelsang, replied that he sent a warden to investigate but was unable to get evidence that any Ducks were killed by gun-fire from the planes, therefore no action was brought by the state authorities. We are still hoping for action by the Federal Government.

In the January number of *Popular Mechanics* there appeared an extended article, with many illustrations, telling of this and similar big hunts carried on in the rice-fields in the Sacramento Valley, by aviators who it seems are employed by rice-growers to keep the Ducks frightened from the fields. The writer tells of going on one of these trips and how he was constantly spattered with the blood of Ducks killed by the propellers of aëroplanes. It is a gruesome story and among other things well illustrates the point that there is still vast need for Audubon Society work in this beloved country of ours.

INDIANA AUDUBON SOCIETY

We have had a very excellent year and note a marked increase in public interest for bird-protection. Our Society has been instrumental in having established a number of private bird sanctuaries throughout the state, and, in coöperation with the State Conservation Commission, has had every public park and state reservation converted into a bird sanctuary where bird-food is supplied in winter and nesting-sites erected in spring.

The annual meeting at Martinsville, Ind., May 20-22, was one of the best ever held by the Society. The program consisted of a very interesting illustrated lecture by Hon. Amos W. Butler, a series of dinner conferences, at which matters of vital interest were thoroughly discussed and many helpful suggestions made, addresses in the schools, a bird-walk, and a public

meeting addressed by Richard Leiber, Director of the Conservation Commission of the state of Indiana, on 'Bird Conservation,' and Miss Roussou McClelland on 'Bird Work in the Schools.'

Our Society desires to acknowledge its indebtedness to our new State Conservation Commission, whose activities in enforcing the laws has done much to call attention to the importance and economic necessity of conserving our bird-life. We coöperate with the Commission in every way possible, and we are encouraged to hope that before long the Commission will secure the services of a trained ornithologist to supervise bird-conservation work in the state. Our Society was never more enthusiastic or active and we are looking forward to a most successful year.—FRANK C. EVANS, *Secretary*.

REPORT OF THE FOREST HILLS GARDENS (N. Y.) AUDUBON SOCIETY

The two outstanding things accomplished by our local Audubon Society the last year are: First, a change in the form of government, and second more emphasis upon the junior activities. The work is now done through committees appointed by the president instead of by a board of trustees. The main advantage is that the different committees meet as often as is necessary in small groups and there is a quicker and more efficient transaction of business. The names of the committees are: Publicity, Field and Educational Work, School and Junior Work, and Bird Enemies. The officers of the Society are: President, Mrs. George Smart; Vice-President, Mrs. I. A. Washburne; Secretary and Treasurer, Miss M. E. Knevels.

A contest held in the schools to determine how much the children knew about local birds showed more need of education,

and the Society had H. C. Button of the New York State School of Applied Agriculture at Farmingdale, Long Island, come to the Gardens and give talks on birds to groups of children from each grade, showing pictures and adapting his instruction to the age and comprehension of each group. This same instruction was also given in the Kew-Forest School. It is planned to keep on with this kind of instruction. Fifty pounds of mixed grain were distributed in the early spring when late storms do much harm to the migratory birds. Our future work would seem to lie in the unification of all the bird-protective activities on Long Island so that the parks, cemeteries and golf-links might form a chain of natural preserves extending the length of the Island.—MARY EASTWOOD KNEVELS, *Secretary*.

THE BURROUGH'S AUDUBON NATURE CLUB OF ROCHESTER, NEW YORK

The past year has been the most prosperous in the history of the Club. During the winter indoor meetings were held in Reynolds Library, and considerable interest was manifested in the illustrated bird-talks given by our president, William B. Hoot. The climax of interest and attendance was reached when the bird-hikes began in May. The last one was attended by nearly one hundred members and friends. During past years no hikes were held in July and August. This year by unanimous request of members two were held each month from May to October inclusive. About 120 species of birds were seen and identified.

Complying with the request from the National Association, copies of a protest against the measure known as the Smith Bill, intended to turn over a large tract of Yellowstone National Park for a reservoir, were circulated and signed by everyone present. The copies were then sent to

our Senator and Representatives in Congress.

Membership day was celebrated October 23. It was for members only and all who attended had to have their membership card. This resulted in bringing in quite a large number of new members, and the payment of dues by old ones. A car was chartered and about seventy-five members went to Canandaigua and enjoyed a most delightful walk through the spacious and interesting grounds at Sonnenberg. This fall, Audubon bird-charts were donated to several of the rural schools, and it was very gratifying to see with what interest and enthusiasm the pupils and teachers accepted them. In each school nearly every child manifested a desire to become a member of the Junior Audubon Society. In one school the pupils are saving their pennies to buy a bird-fountain next spring.—HARRIET GANUNG, *Secretary*.

**New Life Members Enrolled from
October 20, 1920 to January 1, 1921**

August, Harmon S.
Barlow, Dr. W. Jarvis
Barney, D. Newton
Bibb, William G.
Blodgett, Mrs. William T.
Brady, James C.
Carlisle, Geo. L., Jr.
Church, Charles T.
Church, F. E.
Douglass, Mrs. Charles
DuBois, Miss Katharine
Dunbar, Miss L. H.
Erlanger, Sidney C.
Evans, Dr. Evan M.
Farr, Miss Shirley
Field, Mrs. Isaac N.
Foot, Sandford D.
Goodwin, Mrs. James J.
Gosline, W. A., Jr.
Gregg, Wm. C.
Harkness, Mrs. W. L.
Haynes, William DeF
Hill, Clarence H.
Hitchcock, Francis R.
Hobbs, Jasper J.
Hosmer, Mrs. Estelle de Peyster
Jennings, Mrs. Walter
Law, Mrs. Robert, Jr.
Lee, Charles N.
Lincoln, E. K.
McLane, Miss Catharine M.
McLean, Mrs. James
Mattlage, Charles Henry
Miller, Mrs. Galbraith, Jr.
Otis, William A.
Prentice, Ellsworth
Winslow, Miss Maria L. C.
Woolman, Henry, N., Jr.

**New Sustaining Members Enrolled from
October 20, 1920 to January 1, 1921**

Adams, Miss Marian H.
Akeley, Carl E.
Amory, John J.
Bacot, John V., Jr.
Bailey, Edward P.
Baily, Henry P.
Baker, Mrs. Arthur N.
Bascom, Chas. E.
Beck, L. H.
Beckman, H. C.
Begg, Mrs. W. R.
Bell, C. Edward
Benjamin, Wm. M.
Bennett, Rosanne D.
Bennett, Winchester
Bensel, J. A.
Benziger, Miss Lulu
Biggs, Hermann M.
Bishop, H. R.

Blaine, George Bassett
Blair, Parker
Blattner, D. D.
Blayney, W. N. W.
Bliss, Arthur E.
Boit, Mrs. John E.
Bonfils, F. G.
Bonties, Mrs. H. P.
Borden, Norman E., Jr.
Bortell, Mrs. G. C.
Brackett, Mrs. W. R.
Bradley, Mrs. E. C.
Brooks, Fred E.
Brown, Ernest B.
Buckley, B. Lord
Burdett, Mrs. W. W.
Burhorn, Edwin
Burr & Burton Seminary
Butler, Mr. and Mrs. Edward H
Cady, John D.
Caldwell, C. A.
Callaway, Fuller E.
Candlin, Asa G.
Capen, Wallace C.
Capron, C. Day
Card, W. H.
Carden, George A.
Carlebach, Walter M.
Carroll, Mrs. John F.
Catchings, Master Waddill, Jr.
Chadsey, Miss Edith W.
Chambers, W. L.
Chapin, S. B.
Chapman, Miss Nancy
Chase, Arthur Taft
Chouteau, Auguste, Jr.
Christophersen, Louis P.
Chubb, S. Harmsted
Church, Austin
Clark, F. Ambrose
Clarke, James King
Cleveland, Dr. Clement
Cobb, Edward F.
Coffin, Francis A.
Cone, Mrs. Jeanette
Conover, H. B.
Cook, Amsel G.
Cordier, Dr. A. H.
Corson, H. C.
Crawford, Mrs. J. A.
Crimmins, Mrs. Thomas
Cushman, B. A.
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Doane, Merritt Howard
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Drosten, Mrs. F. W.
Duer, H. E.
Earle, Samuel L.
Eddy, Bartlett
Ellsworth, John S.
Faust, Clarence

- Field, W. L. W.
 Fisher, Robert J.
 Gale, Mrs. John E.
 Garel, Mrs. Anna R.
 Glare, Francis J.
 Glisan, R. L.
 Goddard, Mrs. Morrill
 Gonzales, Mrs. J. C.
 Grant, Mrs. Marion K.
 Gray, Mathews
 Griffin, William V.
 Gude, A. V., Jr.
 Hall, Henry B.
 Hartwell, Arthur S.
 Hatch, Boyd
 Hatch, Edward, Jr.
 Hatch, Livingston
 Hatch, Van Note
 Hawly, Mrs. Charles H.
 Hayward, J. B.
 Hershey, Andrew H.
 Heydt, Charles E.
 Howard, Frederick T.
 Hoyt, Alfred O.
 Hoyt, S. B.
 Hubbard, Miss Anna Weir
 Hughes, R. S.
 Hutcheson, C. L.
 Irwin, Mrs. Robert
 Jameson, Miss Marjorie Ruth
 Jamieson, Small
 Kuhn, Arthur K.
 Laughlin, Mrs. Alexander
 Le Duc, Mrs. Alphonse
 Lucker, Lawrence H.
 McLellan, A. H.
 McManamy, Mrs. A. M.
 Maxon, Donald C.
 Merritt, L. Eveline
 Minnesota Audubon Society (The)
 Montaut, Mrs. A.
 Montclair Bird Club
 Myers, Mrs. Florence B.
 Myers, Louis G.
 Nicholson, Nevin G.
 Penson, Mrs. E.
 Perkins, Cleveland
 Powers, Walter C.
 Prescote, Mrs. Henry D.
 Rea, Mrs. Samuel
 Remick, Mrs. Mary H.
 Robb, Mrs. Alexander
 Roth, Mrs. Joseph
 Saunders, W. L., 2d
 Savage, Mrs. D. Fitzhugh
 Sellers, William F.
 Sessions, Miss Elizabeth
 Shepard, Miss Emily R.
 Shepherd, Thomas Munroe
 Shoemaker, Ernest
 Simpson, Mrs. Mark L.
 Sleeper, Henry D.
 Smith, Miss Fayette
 Smith, Mrs. G. Edwin
 Smith, Mrs. Hiram A.
 Smith, N. G.
 Snow, Miss C. L.
 Solberg, Thorvald
 Southwick, Mrs. Joseph
 Speck, Reinhard S.
 Spiegel, Arthur and Marjorie
 Sprague, Dr. Francis P.
 Stewart, James B.
 Strubing, P. H.
 Taylor, Mrs. J. Hall
 Thompson, Ethan W.
 Thorne, G. Wisner
 Todd, Mrs. Margaret Ross
 Towle, W. J.
 Trammell, Thomas
 Turner, Mrs. W. R.
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 Underwood, Mabel W.
 Van Cleef, Miss Eugenia
 Vinal, Mrs. Amelia B.
 Vinal, Mrs. W. H.
 Warber, Miss Mary
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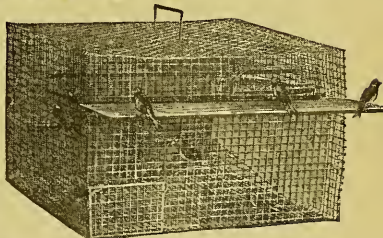
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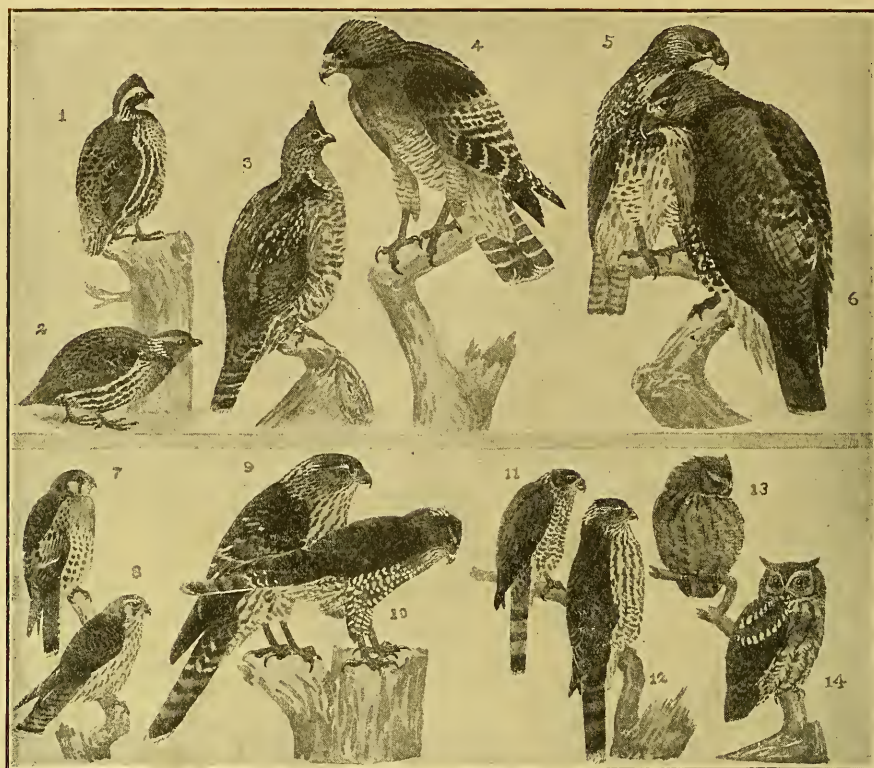
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***Manuscripts intended for publication, books, etc., for review and exchanges, should be sent to the Editor, at the American Museum of Natural History, 77th St. and 8th Ave., New York City.*

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Louis Agassiz Peck

1. MEADOWLARK, ADULT, SPRING
2. WESTERN MEADOWLARK, ADULT, SPRING
3. YELLOW-HEADED BLACKBIRD, ADULT MALE
4. YELLOW-HEADED BLACKBIRD, FEMALE

Bird-Lore

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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XXIII

MARCH—APRIL, 1921

No. 2

Winter Bird Life in Los Angeles

By HARRIETT WILLIAMS MYERS

Secretary California Audubon Society; Chairman Birds, G. F. W. C.

With Photographs by the Author

NEVER in my twenty-one years' residence in Los Angeles have I had so many birds in my garden so early in the fall as in the year 1919.

We are in the habit of having the Gambel Sparrows (a subspecies of the White-crowned) arrive not later than September 26, to have Ruby-crowned Kinglets, Audubon Warblers, Alaska Hermit Thrushes follow soon after, but 1919 brought a series of delightful surprises for the bird-lover.

Our winter rains came earlier than usual, and during November the Sierra Madre Mountain range was covered with snow, an almost unheard-of condition at this time of year. In September a most disastrous fire raged for several weeks on portions of this same range, driving into the valley many of the small animals and birds. But whether or not this fire, or the early cold, or the fact that there were fewer pine cones and acorns in the mountains than usual had anything to do with the unusual visitors that seemed fairly common, I would not venture to say. Suffice it that a more delightful fall and winter for the bird-lover could scarcely be imagined.

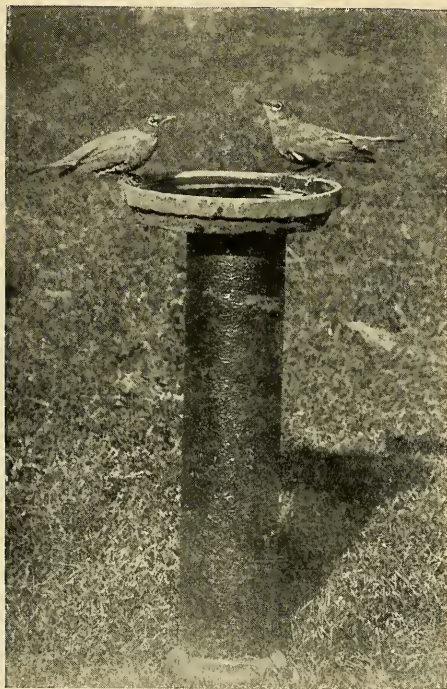
I usually have Cedar Waxwings in my garden during the winter and early spring months, when they come to eat the berries from the big pepper trees, six of which grow in our garden. These charming birds go about in flocks, which are usually large, flying together in a compact form, their long-drawn-out notes, which always remind me of sighing wind, announcing their presence as, still in close formation, they light in the trees. They are extremely fond of pepper berries and have an interesting habit in connection with the eating of them. These berries have hard centers which the birds cannot digest, so when they have eaten their fill of them and, I suppose, the digestible outer portion has been assimilated, they fly into some other tree, the eucalyptus being a favorite, and there disgorge these inner pellets, which fall onto the ground below like falling rain. In my own yard, beneath these eucalyptus trees, large patches of pepper trees have sprung up and the uninformed might wonder how they got

there. When these eucalyptus trees grow along a roadway, or beside a cement walk, the remains of the red berries are most abundant and a cause of surprise to one who cannot "read a roadside as he reads a book."

This year I was amazed to find my yard full of Waxwings the first of October, and they were reported to have been seen in September, a most unusual occurrence. On October 24 a Robin called in the yard. I thought that I had heard one earlier in the month, but by the end of October the yard was

full of these big, jolly birds, and some of them were singing their 'really, truly,' song as well as the familiar 'wheat-wheat,' 'tut-tut-tut' call-notes. Last year was the first time that I had heard, commonly, that wonderfully clear, liquid song which, so far as my recollection goes, is just like that of the eastern bird, and brings fond memories of a childhood when Robins nested familiarly in the garden and dug worms from the lawn.

These birds are also fond of pepper berries, gathering them from the trees and from those fallen on the ground. They also disgorge the hard inner pellet as, I doubt not, all birds do that eat them. These spicy little berries seem to create in the Robins a great thirst, so that my bird drinking-plates are freely patronized and often the pellets are deposited there. Some-



WESTERN ROBINS

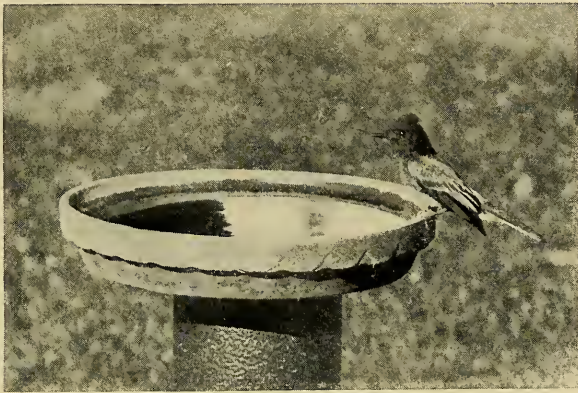
times four big Robins are on one small dish at once, and one day I saw a Cedar Waxwing circle dangerously near the head of a Robin as it tried to find a resting-place. The larger bird resented the Waxwing's presence and made faces at it in a most undignified way, but nevertheless the Waxwing disregarded the Robin's protest and, lighting on the dish, helped himself to water. I regretted that my camera was not set up in time to catch this attractive picture.

On November 9 a busy little Mountain Chickadee was seen foraging in a fruit tree in the garden. Some days before I had heard a call which I thought might be that of this little stranger, but as it came from high up in the tree-tops and I felt might be that of the Plain Titmouse, I gave it little heed. Only once before have I had these mountain-loving birds in my yard and that was

about two years ago, in January or February, when one of them stayed about for two or three weeks; so one may imagine my delight on seeing this little visitor.

On November 12, a Crested Jay, dweller of the mountains, was seen in the valley not far from my home. California Jays we have in abundance, but these beautiful, high-crested birds ordinarily prefer the high mountains.

Wren-Tits, those distinctively western birds that usually live on the brush-covered hillsides or wooded cañons, are constant visitors this winter and their peculiar clear whistles are often heard. Plain Titmice, those dainty crested midgets; California Bush-Tits, a tiny western species; Alaska Hermit Thrushes, Ruby-crowned Kinglets, Audubon Warblers, Dusky Warblers, White-crowned Sparrows, Spurred Towhees, such common birds as Black Phœbes, Linnets,



BLACK PHOEBE

Song Sparrows, Towhees, Anna's Hummingbirds, Blackbirds and Green-backed Goldfinches are about in abundance.

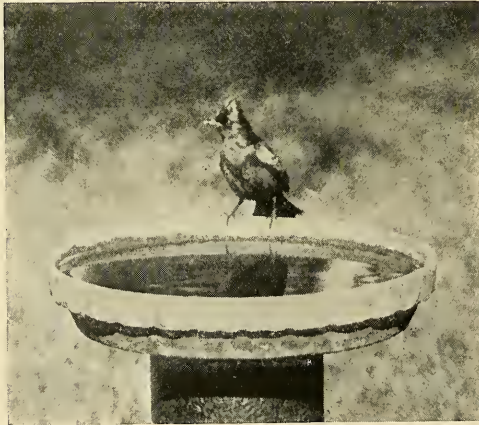
One surprise of November 25 was the appearance in my elderberry of a male Phainopepla. These beautiful black-crested birds are summer visitors that, for the most part, are gone by August, although occasionally a stray one is reported in the winter time. On December 5 a gray female of this species also visited the yard and drank from a bird-bath. My camera was in position but the light was not strong enough for a good picture. On December 9 the male was about again, and all through December he has been here. As I write this (December 23) he is still with me and I am hoping to get a photograph of him at my bath. These birds are also fond of pepper berries.

Perhaps the greatest surprise of the season was on November 19 when, on casually glancing out of the window, I saw a small dark bird whose big white collar stood out against the dark background and made him conspicuous where otherwise he blended into the tree. He was resting, head downward, as immovable as though dead, and in this position he remained for fully five minutes

without stirring. When I opened the porch door and stepped out he only hitched a few inches away. Quite evidently he did not mind mankind. A loud 'yank, yank, yank' from a neighboring tree proclaimed that he was not alone and confirmed my belief that I was looking at a Slender-billed Nuthatch, western representative of the White-breasted Nuthatch. He finally climbed about on the tree, inspecting crevices before he flew away. His cousin, the Red-breasted Nuthatch, has also been reported in the valley.

California Purple Finches are in my yard earlier than usual this year. They forage mostly on the ground, also eating the pepper berries fallen there. Later in the season they are fond of fruit buds and some complaint has come because of this habit. I notice, however, in my own yard, that I have plenty of fruit after they have feasted in my blossoming trees. Perhaps it is only insects that they molest. At any rate, I always welcome them in my garden.

Varied Thrushes, large cousins of the Robins, have been seen this winter in the valley, as has also that gorgeous creature, the Red-breasted Sapsucker. As yet, these two birds have not visited my garden when I have been at home to receive them, but as about eighty species of California birds have done so at some time of the year, I shall live in hopes that they will not pass me by when they are making their southern calls, but will show my garden the same consideration that so many other birds have shown.



MALE PHAINOPEPLA
Courtesy of *The Condor*

The Bird-House for Purple Martins

By THOMAS L. McCONNELL, McKeesport, Pa.

THE problem of designing a good house for a colony of Purple Martins is simply a matter of attending to many little details. When a Martin-box is deserted after two or three years the cause is apt to be one of the following: Improperly designed house, uninviting situation, such as too near or under trees, or too close to a fence or building, a poorly selected pole, the Sparrows may have been allowed to take possession of the quarters, the small boys may be persecuting the birds, or the place may not be cheerful.

The bird-house should have at least ten separate rooms, for the sociable Martins love to live in colonies and small colonies suffer much from the English Sparrow. Make the rooms about 6 inches wide by 8 inches deep by 8 inches high. There is really no exact size necessary. For instance, one authority suggests 5 or 6 inches wide and of similar height and 8 or 9 inches deep, the long rooms being favored so that the Screech Owl cannot reach the nests. Another writer recommends rooms 8 inches wide by 8 inches deep by 6 inches high.

The doors may be $2\frac{1}{4}$ inches wide by 3 inches high, including a $1\frac{1}{8}$ inch radius arch at the top, or round holes $2\frac{3}{4}$ inches in diameter. A round hole or arched hole should be made 'bulging' or become wider towards the center of the box. "Even so small a change as boring a bulging hole in a box, instead of a straight one, and beveling the lower edge of the entrance hole, increased the occupancy of the boxes in the Berlepsch woods from 50 to 90 per cent." It is better never to use a square hole and when one is cut, by all means round off the top into an arch. Birds seem really to prefer a round hole.

Two of the large, successful Martin colonies in McKeesport dwell in houses with each room having two circular entrances about $2\frac{1}{2}$ inches in diameter placed about 1 inch apart. This seems an excellent idea and the writer has noticed that the old birds, when feeding their young, use both holes and dart in and out with less confusion and interference than when only one opening is provided. These entrances should be on the same side of the room and never on different sides, as this leads to fighting among the old birds and spells disaster to their eggs and young.

Porches, about 2 to $2\frac{1}{2}$ inches wide must be provided in front of the doors for the convenience of the old birds when feeding their nestlings and for the young when they are ready to learn to fly. If there are no porches many young birds fall to the ground and are lost. When a nestling unable to fly drops to the ground it must be replaced on the box because the parents never feed their young on the ground and, moreover, cats are usually on the lookout for such accidents. By a suitable and artistic selection of porches the house may be made a structure of beauty and grace.

No ventilation is necessary besides the entrance holes and all rooms should

be separate and draft-proof. Usually the door-sill is the floor line, although many authorities advocate raising the sill about $\frac{1}{2}$ inch above the floor and porch levels, which prevents rain water from flooding the rooms. No wind-wheels, flagpoles, lightning-rods or other fantastic appliances should be fastened to the house. This point is often raised by beginners. A blind chimney or two may be built on to the roof for the sake of beauty and symmetry, and besides a chimney makes the house more cozy and homelike.

The house should be substantially built of $\frac{3}{4}$ - to 1-inch pine or other wood so as to withstand the weather. It should be painted white because white is the coolest color. During the hot weather the young birds suffer much from the intense heat of the sun. The writer usually paints the roof a darker color, often some shade of green, never red. Avoid a red color because all birds instinctively shun a red bird-box.

The height of the box above the ground should be from 13 to 16 feet, never less, although the author knew of one old established colony living in a house only 7 feet from the ground. The box should not be fastened to the pole with brackets, but with angle irons, and vines should not be grown around the pole, for the birds are afraid of cats climbing the pole—a cat-proof pole is absolutely essential.

To curb the English Sparrow, take down the house or close all the openings after the Martins are gone. Either method is effective. In BIRD-LORE, January, 1914, the author covered many other points in his article, 'Notes on How To Start a Colony of Purple Martins.'

A few years ago the writer studied a handsome ten-room bird-house which the Martins would not inhabit after four or five years of trial and believed that the box may have been improperly designed. He bought this box and found the openings to measure 2 inches square. This is rather too small for the Martins to enter easily and carry in nesting material. The entrances were enlarged by cutting a semi-circular arch over the doorways, making the new height 3 inches. Last year this box was erected at the Youghiogheny Country Club near McKeesport and about three pairs of Martins immediately occupied the pretty residence.

Few people realize how permanent a Martin colony may be. McKeesport has one colony over thirty years old and still as thriving as ever and there had been one within 100 feet of this one for over forty years previous, which carries us back well before the advent of the English Sparrow. The writer put up his first Martin-box about twenty five years ago at Kittanning and the successful colony still flourishes. Since then he has started many colonies at other places. His last effort at his present home in McKeesport has been unsuccessful and every scheme and device was used in vain. The birds seemed to come and stay a few days and then leave. The house was the identical one that the Martins loved at his former residence only six or eight blocks distant. Finally one spring day, upon coming home, he caught one of the neighbor's boys stoning a Martin

off the box. This solved the mystery and illustrates one reason why a Martin-house may not be inhabited.

Referring to the selection of a cheerful spot for the prospective Martin-home, one can say nothing better than to quote the words of Mr. C. W. Parker (*In the Open*, April, 1918): "Place your Martin-house in the most cheerful and prominent place to be found, in the brightest sun, away from all trees, and where people pass most. . . . The main requisite is that you have a cheerful location, which is perhaps best described by the two words, 'pleasantly situated.'"



GREEN HERON AND NEST
Photographed by A. A. Allen, Ithaca, N. Y.

The Migration of North American Birds

SECOND SERIES

XV. YELLOW-HEADED BLACKBIRD AND MEADOWLARKS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

YELLOW-HEADED BLACKBIRD

This beautiful bird is distinctly an inhabitant of the West, for it occurs but casually in eastern North America. The breeding range of the Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) reaches north to northern Manitoba, northern Saskatchewan, southwestern Mackenzie, and central British Columbia; west to southwestern British Columbia and western California; south to southern California, southern Arizona, the States of Jalisco, Michoacan, and Mexico, in Mexico; and east to the valley of Mexico, western Texas, eastern Kansas, central Missouri, eastern Illinois, northwestern Indiana, eastern Wisconsin, and central Manitoba. It winters north to southern California, southern Arizona, southern Texas, and southwestern Louisiana; south to the States of Puebla, Michoacan, and Jalisco, Mexico. It is of casual occurrence east to Maine, Connecticut, New Jersey, South Carolina, and Florida; and accidental in Alaska, Greenland, Quebec, as well as in the islands of Cuba and Barbados in the West Indies.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Chillicothe, Mo.....	2	March 16	March 14, 1914
Chicago, Ill.....	7	May 2	April 10, 1892
Sioux City, Iowa.....	12	April 20	April 3, 1887
Wall Lake, Iowa.....	7	April 19	April 14, 1907
Madison, Wis.....	12	April 25	March 23, 1902
Heron Lake, Minn.....	10	April 19	April 10, 1887
Minneapolis, Minn.....	13	May 1	April 21, 1917
St. Vincent, Minn.....	2	May 2	April 25, 1896
San Antonio, Texas.....	6	April 16	April 13, 1885
Gainesville, Texas.....	4	April 21	April 11, 1876
Wichita, Kans.....	6	April 17	April 5, 1917
Onaga, Kans.....	23	April 24	April 13, 1898
Syracuse, Neb.....	17	April 19	April 3, 1904
Sioux Falls, S. D.....	4	April 27	April 17, 1910
Rapid City, S. D.....	6	May 8	April 26, 1905
Argusville, N. D.....	12	May 2	April 19, 1884
Aweme, Manitoba.....	18	April 30	April 13, 1897
Reaburn, Manitoba.....	11	May 2	April 24, 1897
Qu'Appelle, Sask.....	16	April 30	April 6, 1913
Ft. Chipewyan, Alberta.....			May 24, 1901
Durango, Colo.....	4	April 27	April 10, 1917
Denver, Colo.....	8	April 14	March 30, 1907
Rupert, Idaho.....	3	April 16	April 6, 1912
Terry, Montana.....	5	May 9	May 5, 1899
Great Falls, Mont.....	4	May 8	May 6, 1912
Flagstaff, Alberta.....	7	April 28	April 16, 1915
Modesto, Calif.....	3	April 11	April 1, 1908
Malheur Lake, Oreg.....	4	April 21	April 1, 1915
Okanagan Landing, B. C.....	3	May 16	May 14, 1914

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
San Antonio, Texas.....	4	May 21	May 25, 1885
Onaga, Kans.....	14	May 19	June 3, 1893
Syracuse, Neb.....	10	May 10	May 16, 1895

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Chicago, Ill.....	3	October 26	October 30, 1891
Sioux City, Iowa.....			October 1, 1910
St. Vincent, Minn.....			October 25, 1897
Sioux Falls, S. D.....	2	September 18	September 20, 1908
Aweme, Manitoba.....	11	September 14	October 20, 1911
Boulder, Colo.....	4	September 28	October 30, 1910
Rupert, Idaho.....			September 16, 1911
Great Falls, Mont.....			September 12, 1891

CASUAL RECORDS.

Florida.....	No date.
Augusta, Ga.....	September 23, 1893.
Chester, S. C.....	April 18, 1884.
Buckhannon, W. Va.....	Spring, 1888.
Washington, D. C.....	August 29, 1892.
Baltimore, Md. (near).....	September 10, 1891; September 18, 1893, October 1, 1894.
Erie, Pa. (near).....	August 22, 1896.
Allegheny Co., Pa.....	April 26, 1895.
Chester Co., Pa.....	May 3, 1880; September 15, 1885.
Fish House, N. J. (near).....	No date.
New Haven, Conn.....	June, 1878.
Hartford, Conn.....	July, 1884.
Stamford, Conn.....	July, 1888.
Watertown, Mass.....	October 15, 1869.
Eastham, Mass.....	September 10, 1877.
Monomoy Island, Mass.....	September 8, 1897.
Spruce Head, Maine.....	August 17, 1882.
Godbout, Quebec.....	September 4, 1878.

MEADOWLARK

The well-known Meadowlark (*Sturnella magna*) has a wide geographic distribution, occurring from southern Canada through the United States, Mexico, and Central America, to Venezuela. Of its eight recognized subspecies, only three occur in North America. These with their geographic ranges are as follows:

The **Eastern Meadowlark** (*Sturnella magna magna*) breeds in eastern North America north to New Brunswick, southern Quebec, southern Ontario, and northeastern Minnesota; west to central and southwestern Minnesota, western Nebraska, central Kansas, and northwestern Texas; south to central Texas, southwestern Missouri, central Illinois, central western Tennessee,

western North Carolina, and southern Virginia; and east to the Atlantic Coast from Virginia to New Brunswick. In winter it retires from the northernmost part of its range, but remains at this season north, at least irregularly, to southern Maine, southern Ontario, and Michigan, and passing at least as far south as southern South Carolina, Alabama, Louisiana, and southeastern Texas. It is of casual occurrence northeast to Nova Scotia and Prince Edward Island.

The **Florida Meadowlark** (*Sturnella magna argutula*) is resident and breeds in the southeastern United States north to North Carolina, northern Alabama, northern Mississippi, southwestern Indiana, southern Illinois, southeastern Missouri, northeastern Arkansas, and northeastern Texas; west to eastern Texas; south to southeastern Texas, with the Gulf Coast of Louisiana, Mississippi, Alabama, and southern Florida; and east to eastern Florida, eastern South Carolina, and eastern North Carolina.

The **Rio Grande Meadowlark** (*Sturnella magna hoopesi*) is resident in the southwestern United States north to south central Texas, central New Mexico, and central Arizona; west to central Arizona and central Sonora; south to Sonora, central Chihuahua, southern Coahuila, and southern Tamaulipas; and east to eastern Tamaulipas and central southern Texas.

All the migration dates given below refer to the common Eastern Meadowlark, and may be more or less misleading because, at all except the northernmost localities, some individuals of this species usually pass the winter. The spring dates represent, however, the normal appearance when the bird is not wintering, or the dates when it becomes more conspicuous from its winter seclusion; while those for the autumn show its normal disappearance from ordinary observation or from the localities given when not actually wintering.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Beaver, Pa.....	13	March 8	February 11, 1888
Renovo, Pa.....	18	March 26	March 13, 1913
Morristown, N. J.....	16	March 10	Rare, winter
Alfred, N. Y.....	29	March 22	March 9, 1913
Syracuse, N. Y.....	19	March 21	February 6, 1902
Jewett City, Conn.....	24	March 7	Rare, winter
Providence, R. I.....	9	March 5	Rare, winter
Amherst, Mass.....	8	March 17	February 3, 1886
Boston, Mass.....	21	March 19	Rare, winter
Rutland, Vt.....	9	March 18	Rare, winter
Tilton, N. H.....	6	April 6	March 26, 1915
Portland, Maine.....	11	April 9	March 20, 1908
Montreal, Quebec.....	6	March 31	March 21, 1913
Scotch Lake, N. B.....			April 6, 1907
St. Louis, Mo.....	11	March 2	Rare, winter
Chicago, Ill.....	34	March 12	February 28, 1890
Fort Wayne, Ind.....	17	March 1	February 10, 1890
Columbus, Ohio.....	9	February 27	February 5, 1915
Oberlin, Ohio.....	24	March 3	Rare, winter

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Vicksburg, Mich.....	13	March 9	February 6, 1910
London, Ontario.....	12	March 16	March 2, 1885
Ottawa, Ontario.....	34	April 2	January 10, 1909
Keokuk, Iowa.....	12	March 5	Rare, winter
Sioux City, Iowa.....	11	March 12	March 7, 1910
Madison, Wis.....	21	March 14	March 5, 1894
Lanesboro, Minn.....	10	March 30	March 21, 1889
Minneapolis, Minn.....	15	March 29	March 18, 1903
Onaga, Kans.....	8	March 5	Few, winter
Red Cloud, Neb.....	5	March 4	February 18, 1916

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Beaver, Pa.....	4	November 11	December 10, 1887
Renovo, Pa.....	17	October 24	November 23, 1911
Morristown, N. J.....	12	November 6	Rare, winter
Hartford, Conn.....	5	October 26	Rare, winter
Providence, R. I.....	6	November 2	Rare, winter
Amherst, Mass.....	4	November 7	December 9, 1892
Boston, Mass.....	8	November 24	Rare, winter
Portland, Maine.....			December 24, 1908
Montreal, Quebec.....	6	October 11	November 7, 1909
Scotch Lake, N. B.....			December 27, 1907
Concordia, Mo.....	7	November 4	Rare, winter
Chicago, Ill.....	13	October 28	December 4, 1915
Fort Wayne, Ind.....	9	November 4	December 1, 1912
Richmond, Ind.....	8	November 14	Rare, winter
Wauseon, Ohio.....	10	November 12	Rare, winter
Oberlin, Ohio.....	10	October 25	Rare, winter
Vicksburg, Mich.....	10	November 2	December 12, 1913
Newberry, Mich.....	3	October 15	October 23, 1910
London, Ontario.....	4	October 29	November 20, 1901
Ottawa, Ontario.....	22	October 15	November 13, 1915
Keokuk, Iowa.....	12	November 4	Rare, winter
Madison, Wis.....	7	October 24	November 8, 1913
Lanesboro, Minn.....	4	October 14	October 19, 1892
St. Vincent, Minn.....	3	October 20	October 31, 1897
Onaga, Kans.....	19	November 13	Few, winter

WESTERN MEADOWLARK

The rich, melodious song of the Western Meadowlark (*Sturnella neglecta*), so different from that of its eastern relative, is a familiar feature of western bird life. The geographic range of the species extends from southwestern Canada through the United States to central Mexico. Two subspecies are now recognizable, of which the distribution is as follows:

The **Western Meadowlark** (*Sturnella neglecta neglecta*) breeds in western North America north to southern Manitoba, central Saskatchewan, central Alberta, and south central British Columbia; west to south central British

Columbia, central Washington, central Oregon, and western California; south to southern California, northern Sonora, northern Durango, southern Coahuila, and southern Tamaulipas; and east to central Tamaulipas, central Texas, central Oklahoma, eastern Kansas, eastern Missouri, eastern Iowa, and Wisconsin; occasionally to eastern Illinois and northern Michigan. It winters from southern British Columbia, Colorado, and Nebraska, south to Louisiana, southern Texas, southern Tamaulipas, Michoacan, Jalisco, and southern Lower California. It is of accidental occurrence at Fort Simpson in southwestern Mackenzie.

The **Northwestern Meadowlark** (*Sturnella neglecta confluenta*)* is resident and breeds in the Pacific Coast region of North America north to southwestern British Columbia, south through western Washington to northwestern Oregon, and east to the Cascade Mountains.

Records in the subjoined migration tables all pertain to the Western Meadowlark.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Sioux Falls, S. D.....	4	March 18	March 11, 1908
Rapid City, S. D.....	11	March 26	March 7, 1910
Argusville, N. D.....	11	March 31	March 17, 1894
Marstonmoor, N. D.....	5	March 21	March 11, 1910
Bathgate, N. D.....	7	April 3	March 24, 1894
Pilot Mound, Manitoba.....	14	March 31	March 20, 1910
Aweme, Manitoba.....	18	April 1	March 21, 1911
Reaburn, Manitoba.....	12	April 5	March 26, 1902
Qu'Appelle, Sask.....	16	April 2	March 14, 1909
Ft. Simpson, Mack.....			May 20, 1904
Beulah, Colo.....	12	March 10	Rare, winter
Denver, Colo.....	10	March 16	Rare, winter
Cheyenne, Wyo.....	3	April 1	March 27, 1889
Rathdrum, Idaho.....	10	February 22	February 4, 1906
Terry, Mont.....	12	March 30	March 22, 1894
Bozeman, Mont.....	4	March 23	March 20, 1903
Big Sandy, Mont.....	5	March 30	March 24, 1907
Columbia Falls, Mont.....	5	March 27	March 19, 1896
Flagstaff, Alberta.....	10	April 7	March 23, 1915
Spokane, Wash.....	3	February 25	February 11, 1907
Mirror Lake, B. C.....	4	March 28	March 18, 1911

FALL MIGRATION

LOCALITY	Number of years' record	Average date of last one observed	Latest date of last one observed
Sioux Falls, S. D.....	5	November 2	November 7, 1915
Rapid City, S. D.....	9	November 9	November 26, 1915
Marstonmoor, N. D.....	4	October 27	November 27, 1909
Aweme, Manitoba.....	19	October 25	November 8, 1907
Beulah, Colo.....	10	October 27	Rare, winter
Bozeman, Mont.....	4	October 22	November 5, 1912
Big Sandy, Mont.....	3	October 15	October 27, 1906

*This proposed form has not as yet been acted upon by the Committee on Nomenclature and Classification of the American Ornithologists' Union. [Ed.]

Notes on the Plumage of North American Birds

FIFTY-NINTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Meadowlark (*Sturnella magna*). In the Meadowlarks the sexes are much alike; the nestlings resemble their parents; there is but one molt a year, and seasonal variations in plumage are due chiefly to wear which is exceptionally pronounced in these birds.

When it leaves the nest a young Meadowlark wears a necklace of black instead of the solid breast-crescent of its parents; it is dull buffy yellow below, its sides practically unstreaked, but the plumage of the upper parts is much like that of the adult and the bird is unmistakably a Meadowlark.

The first fall (post-juvenal) molt is complete and the young bird then acquires a costume not distinguishable from that of the winter adult. This differs from the summer plumage by its generally browner tone due chiefly to the presence of brownish margins to the body-feathers, the black breast-crescent being much obscured by them.

As the season advances, these margins largely wear off and what remains of them becomes much faded, and the result being the darker, yellower bird of the nesting season. In some instances, particularly in arid regions, at the end of the nesting season, this wearing and fading of the plumage is carried to an extreme which almost obliterates the bird's markings.

The geographical variations in the color and pattern of the Meadowlark's plumage are as complex as its seasonal variations are simple. From the southern border of its range, in northern Brazil, to its northern limits in Canada, nine different forms are currently recognized, of which four are known from north of Mexico as follows:

1. Eastern Meadowlark (*Sturnella magna magna*, Fig. 1). The race of the eastern United States.*
2. Southern Meadowlark (*Sturnella magna argutula*). A smaller, darker form from the southern states.
3. Western Meadowlark (*Sturnella magna neglecta*). The paler form of the western states in which the yellow of the throat extends to the sides of the neck, and the bars on the rump and tail are more clearly defined than in the eastern bird.

The relationships of the Eastern and Western Meadowlarks have never been satisfactorily determined. In the Mississippi Valley typical examples of each form may be found in the nesting season at the same time—evidence of their specific distinctness in that region, where the few intermediate specimens found may with reason be called hybrids.

But in the Rio Grande Valley a form (*hoopesi*) occurs which so obviously

*The ranges of the several forms are given by Dr. Oberholser in the preceding paper.

combines the characteristics of both *magna* and *neglecta* that it is difficult not to consider it a connectant between the two.

In life the two birds may readily be distinguished by the marked difference in the call-notes and songs; but I recall no study of the song of *hoopesi* by one thoroughly familiar with those of *magna* and *neglecta*. In my notes made at Corpus Christi, Texas (where *hoopesi* breeds), long before this bird was described, I record the Meadowlark songs heard as resembling those of *magna*, but at that time I had never heard the song of *neglecta*. A study of the songs of Meadowlarks on our Mexican border by a well-equipped observer would be sure to yield interesting results.

4. Rio Grande Meadowlark (*Sturnella magna hoopesi*). In general coloration this bird more nearly resembles *neglecta* than it does *magna*, but the yellow of the throat does not spread to the sides of the neck, as it does in the first-named form.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*, Figs. 3, 4). The nestling Yellow-head is quite unlike its parents. The whole head and breast are warm buff, giving the effect of a brown-headed bird; the abdominal region whitish; the back blackish, both more or less fringed with buff; the tail and wings black, the wing-coverts tipped with white. At the post-juvenal molt the tail and wing-quills and primary coverts are retained, while the rest of the plumage is exchanged for a costume which resembles that of the female, but is usually without streaks on the breast, or if streaks are present, they are yellow. This plumage is worn at least until the following May, when there are evidences of molt about the head, and it may not be entirely replaced until the second fall molt, but I have seen no specimens after May 24 which were not in fully adult plumage (Fig. 3).

All of the thirteen May birds in immature (first winter) plumage in our collections are from Texas and northern Mexico. It does not seem possible that they could have molted into adult plumage in time to nest in it, and the absence from our large collections of more northern breeding birds in immature dress suggests the possibility of such birds remaining in their winter quarters.

The adult male winter plumage resembles that of the summer, but the crown and nape are more or less obscured with brown. The primary coverts, as in summer, are conspicuously white with black tips. There is also more or less white on the outer greater coverts.

The female is much alike throughout the year, but in winter plumage all the yellow areas are deeper and the plumage generally is darker.

Notes from Field and Study

A Yellow Rail in a Street

On September 14, 1920, when reading on the porch, my neighbor called to me to ask what the queer bird was that was walking in the middle of the street. What was my surprise to see a Yellow Rail coming toward the curb!

It took refuge among some petunias that formed a border along the curb, and it did not move as I got down to within two feet of it to study it.

That so shy a bird should land on a much traveled street in the heart of Chicago seemed strange indeed. It was a disappointment that I could not watch it till it moved on.—GLADYS FOWLER, *Chicago, Ills.*



SAW-WHET OWL

Photographed by Lawrence Zeleny, at
Minneapolis, Minn., March 13, 1920

A Flicker's Food

In a poem by the writer, "Mr. Flicker Writes a Letter", printed in *BIRD-LORE* for August, 1899, are these lines in connection with his food habits:

"But my delicacy is ants,
Stump or hill inhabitants;
Thrusting in my sticky tongue,
So I take them, old and young."

Running back from our house in Pasadena is a walk made of the natural clay, packed down to nearly the hardness of a brick. For years I have seen occasionally upon that walk one of our beautiful California Flickers. But he seemed to be always on the watch. A slightest movement at the near-by window, or on the screened porch, would send him flying with his brilliant under-wing display of old gold. It will be remembered that his coin is of a darker yellow than that of his eastern cousin. I had supposed that my 'Golden Wings' came occasionally, like the California Thrasher, for crumbs that are put out daily for the smaller birds. But today I glimpsed him first and learned what he was after. Going through the porch very slowly I escaped his vision till I could get my head fixed at the edge of a curtain for observation: and he was very busy. Just beneath that brick-like surface the small brown ants have burrows. Leading to these are openings in which a small lead pencil might be inserted. Mr. Flicker was pegging away first at one hole then another, enlarging and tracing them out. Then he would insert his bill far as possible and one could imagine the catch on his tongue, and detect the quick movement of swallowing. But not five seconds elapsed without his lifting his head high to take a sweeping observation. After watching him for several moments I retraced my steps carefully hoping to leave him undisturbed in his enjoyment. I was well within the house door when he took the alarm and

went off. I then went out to see just what he had done. There were several places where he had exposed the tunnels from one to two and a half inches. At the place where one went deeper he had enlarged it with his bill and the ants were again coming out in what he would, I suppose, consider paying numbers.—GARRETT NEWKIRK, *Pasadena, Calif.*

A Friendly Blue Jay

This is a true story of a Blue Jay. About the middle of September a wounded Blue Jay appeared at my farm at Bedford Hills, New York. One leg was broken, a wing was bruised, and its condition was altogether forlorn. John, a member of the household, took pity on him, bound up the broken leg with adhesive plaster and gave the bird comfort in many ways. The Blue Jay rewarded these friendly ministrations with the most extravagant evidences of gratitude and affection. It followed John about his work, remained with him nearly all day and spent the night in John's room. If John took a walk, the bird kept him in sight, flying from tree to tree, and would come home perched on John's shoulder or his cap. Although demonstrating its attachment to its friend, it did not like to be touched and reluctantly allowed itself to be caught by the object of its affections.

When John was laid up for some days with a slight ailment, the bird became more assiduous in its attentions to its benefactor. It hardly left the sick chamber, spending the night perched on John's toes or near his head picking off any stray fly that presented itself. If John gave it some food, the bird would hide it after the way of its kind, perhaps placing it in a corner of the room under a newspaper or other object and from time to time lifting the edge of the cover to see if its treasure was safe. The strangest part of this strange love-making was the Blue Jay's call to John in the morning. It would insert its beak between John's lips and waken him by tapping gently upon his teeth. For weeks this curious affair went on. The bird

was perfectly free. The windows were open and it came and went at will. Occasionally the bird betrayed the marauding instincts of its race by snatching some glittering object and hiding it, but commonly its behavior was most domestic.

After the bird had been a guest of our house for six or seven weeks, the time came for the family to move to the city. Fearing that the wild bird would injure itself against the wires if confined in a cage, a band box was prepared with slits for ventilation, and in that the bird made the journey. John kept his visitor shut up for a week or ten days until it should be accustomed to its new surroundings. But the time came when humanity demanded freedom for the bird and the top of the box was removed. The emancipated Blue Jay made for the open window and has never been seen since. Whether it became bewildered and lost its way, or came to grief, or felt it had paid its debt to civilization we never shall know. John, who never had a bird friend before, is heart-broken and 'Pou-i Pou-i' has left a household of mourners.—HENRY MARQUAND, *Washington, D. C.*

Evening Grosbeak Nesting in Wisconsin

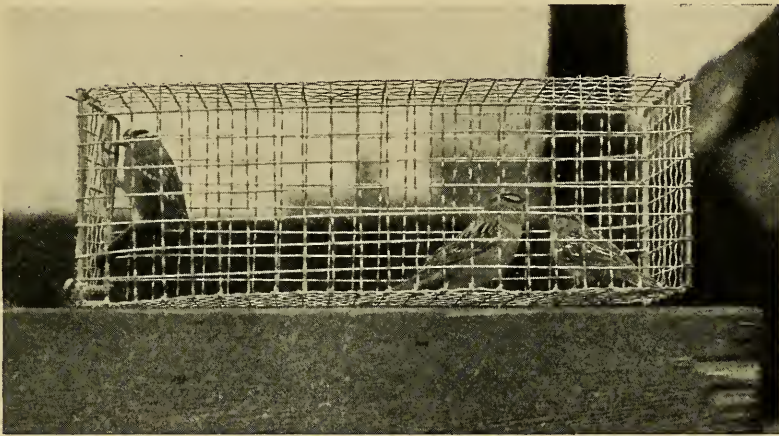
This past summer while at my cottage on the shores of Lake Superior, between Washburn and Bayfield, Wis., one cold day the middle of August my attention was attracted by a peculiar metallic bird-note, "like the creaking of a rusty barn-door hinge," which I at once took for the call-note of a Rose-breasted Grosbeak. Imagine my astonishment when I discovered a whole family of Evening Grosbeaks, a male, female and three young birds, feeding on the half-ripe fruit of an elderberry which grew close to our living-room window. There could be no mistake about their identity, for we were within ten feet of them and had ample time to observe their actions. Though the young were well able to feed themselves, and did, now and then one of the parent birds would pluck a berry and thrust it into the open beak of a young one; then the whole

family would go on feeding as before. The young birds could fly for short distances but were very awkward upon the wing, much preferring to sit and ruminate. They were undoubtedly only a short time out of the nest. For three days the family were about the cottage, or until they had cleaned the elderberry of fruit, and then disappeared. Later I think I discovered the nest in which the young were hatched, in a low shrub close down by the edge of a purling trout stream just below the cottage. The nest was loosely built of dead grass and small twigs, and contained the remains of greenish-blue eggs, lightly flecked with

we hastened to photograph them, also to release them immediately thereafter with profuse apologies.

On the eleventh of November the trap was moved from its barnyard home to the vicinity of our feeding box, in an effort to reduce the number of English Sparrows who daily feasted there.

Two English Sparrows were left in the trap as decoys. A casual glance a little later revealed, not a trap full of English Sparrows, but a Loggerhead Shrike, the first one we have seen in this vicinity, frantically endeavoring to make a meal of our imprisoned Sparrows. He was not



WHITE-CROWNED SPARROWS AWAITING THEIR RELEASE

Photographed by W. B. Perley, Jr.

brownish spots. Of course I could not be sure of the identity of the nest, though there was not a shadow of doubt about the birds.—O. W. SMITH, *Evansville, Wis.*

shy about it either, as he stayed for half an hour before finally deciding that those Sparrows were making him ridiculous.—W. B. PERLEY, JR., *Ojibway, Ontario.*

The Adventures of a Sparrow Trap

Imagine our feelings when we found thirty English Sparrows in a patented Sparrow trap that we had scoffed at for six months. One might think that our trap, having vindicated itself, would rest on its laurels, but no! Several weeks later we found three White-crowned Sparrows in its capacious interior.

As this member of the Sparrow family is rarely seen under such circumstances,

Sparrow Meets Sparrow

The first part of July, 1920 (unfortunately, I did not record the exact date), I discovered a pair of Chipping Sparrows building a nest in a Baltimore Oriole's nest, which has hung for several seasons about fifteen feet up in an old apple-tree in our yard. In this nest within a nest there were to be strange happenings.

I was away from home much of the time and so paid little attention to the

birds after the nest was built until the early evening of July 24. Then I noticed that there were at least three, good-sized young in the nest, though the high edge of the Oriole's nest made it difficult to see the contents well. I also detected some kind of a commotion about the nest, in which an English Sparrow was undoubtedly concerned.

The next afternoon trouble in the apple-tree was still present in the form of the English Sparrow. I watched with field-glasses from the porch about twenty-five feet away and on the lawn under the tree for the greater part of the afternoon. I do not attempt to explain my observations, but the following is what I saw:

On the edge of the nest was a female English Sparrow making vicious stabs at a Chipping Sparrow that was trying to go to the nest with a worm. Six or seven times (I did not think to begin to count at first), did that Chippy make the attempt before it succeeded. Almost constantly the intruding Sparrow continued on the watch. Sometimes she would sit motionless on the edge of the nest only moving her head to watch the Chipping Sparrows when they approached, and then peck at them when they were within reaching distance. At other times she would perch in the branches and dash to the attack when the parents came with food. No male English Sparrow came near. Also I several times saw her drive away another female English Sparrow as fiercely as she did the Chipping Sparrow. Once I saw her snatch a sizable green worm from the beak of a parent Chippy and fly away with it. Frequently she came to the nest and went through the motions of feeding the young herself, but I could not see that she had anything in her beak. Several times she did this immediately after a Chipping Sparrow had fed, and, although I could not prove it, because her motions were so rapid, it looked to me as though she snatched something from a young bird's beak. The parent birds did manage to feed the young occasionally by working quickly. A little later I distinctly saw the English Sparrow remove excreta from the nest and carry

it away. She continued at intervals her apparent process of feeding the young, and once I saw her give one a worm. Occasionally she left the tree and went hunting down in the grass, usually going through the feeding process upon her return.

What could have been the reason for such exceptional conduct? One might say that by some chance the English Sparrow also had young in the nest, but all the young I saw were decidedly Chipping Sparrows, and called like them.

The next day I was unable to make observations, and in another day all the young had left the nest.—MABEL R. WIGGINS, *East Marion, L. I., N. Y.*

A Catbird Foundation

While looking after my bird nests last May I discovered that the Catbirds had built their nest in the lilac bushes and by June 10 four young ones had left the nest. A pair of Robins looking for a nesting-site for their second brood, now built a second story to the deserted nest and by July 1 they had four eggs which, in due time hatched and the brood was reared in safety.—R. J. MIDDLETON, *Jeffersonville, Pa.*

Mockingbird Winters in Iowa

On December 15, 1920, at noon, I was surprised by a visit from a strange bird. The feeding-shelf is just outside the kitchen window and while we noted the bird's markings it very leisurely inspected all the arrangements and foods displayed, ate of sunflower and wild rose seeds, and finally, after five or ten minutes, flew away.

On the 16th I saw it four times, twice on the shelf. On the 18th it visited the shelf and on the 19th was in the yard.

I find in 'Birds of Ohio,' p. 196, that "C. H. Morris, on Jan. 25, 1903, in company with E. J. Arrick, found and captured a Mockingbird near McConnellsville, Ohio." Also, Blanchan, in 'Bird Neighbors,' p. 82, records that "even in midwinter the Mockingbird is not unknown in Central Park, New York City."

With this evidence added to my own

conclusions, based on identification and elimination, I feel confident that my visitor was a Mockingbird.—MRS. F. L. BATTELL, Ames, Iowa.

A Tufted Titmouse Story

Reading of the Tufted Titmouse in BIRD-LORE prompts me to describe my experience with this to me entirely new bird. I hear its beautiful call of three notes while I am writing; in fact, it is this call which started me doing what has been on my mind for some time.

It was in May last year when I distinctly heard one of my chicks call in a rather distressed and persistent manner. I sent a boy to the chicken yard to see what the trouble was. He reported that there was nothing wrong with the chicks, and that the calling came from the woods near by. We stopped work to investigate, as is our custom when the song of a strange bird is heard, and soon discovered two beautiful mouse-colored birds, lighter grey on the under side and with crest, a mark which enabled us to locate them on the chart—and we do not often feel so sure that we get the correct name.

In the woods, and in fact all about our place, are many bird-houses, and the Tits showed a lively interest in an old, obsolete Bluebird-house.

In summer we eat our meals in a tent the whole north side of which is wire-screened. Just outside of this, and within six feet of our table we have a feeding platform. In summer this is mostly visited by Catbirds. We cater to them by soaking bread in milk which they seem to relish, and sometimes we add boiled rice.

It was not long before our new friends discovered this feeding shelf to which they came often, and there was a new interest in life for us. In due time they brought their four young, and amidst a good deal of 'scrapping' they all got their fill. Two of the young would often cling to the pole underneath the shelf, but they would never all eat at the same time.

We saw much of them all the autumn, but as seeds ripened they came less and less

to feed. In November and December we often did not see them at all for days, but I believe that they were never absent for more than a week.—ALBERT P. GREIM, Toms River, N. J.

Notes from Collins, N. Y.

I was much interested in the notes in BIRD-LORE, May-June, 1920, on Robins' nests and regret that I did not have photographs of several I have observed.



A MUCH-USED ROBIN NEST

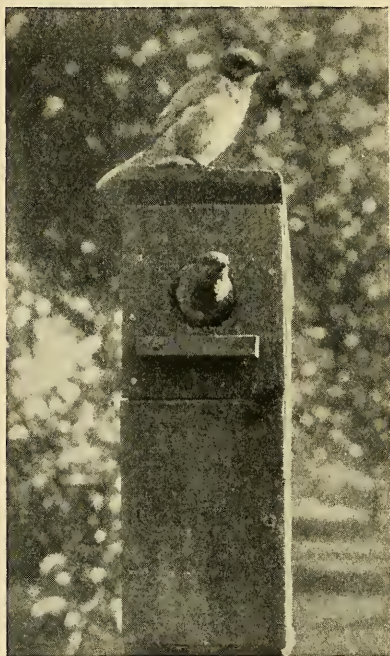
One built under a wagon, several have built on the fire-escape starting as many as four to eight nests, at the same end of the stairs, one above the other. One Robin used the same nest (see photograph) on top of a window of a cottage for at least four years, adding to it annually until it nearly toppled over. The nest was removed in painting the cottage, but another was built this year. Robins build just outside the noisiest wards. Several have built in low spruce trees in the hedge and one in a hollow in the trunk of a tree.

The House Wrens certainly do destroy eggs and nests of Bluebirds, as well as those of English Sparrows. They will break the eggs and drag out the nests.

An abundance of cotton put out for birds has been used by Yellow Warblers, Goldfinches (which began to nest May 30)

and Cedar Waxwings. A Brown Creeper and Red-breasted Nuthatch fed at my stations, with Chickadees, White-breasted Nuthatches, and Downies. The Chickadees and Nuthatches fed from my hands and several more confiding ones took nuts from my lips.

A dead tree so full of holes that we call it the 'apartment stub' held at once in its many openings a Flicker, Downy, and a Bluebird, but the latter was driven off by an English Sparrow. The Chickadees made many holes in a fickle manner, half finishing them and then taking others.—(DR.) ANNE E. PERKINS, *Collins, N. Y.*



BLUEBIRDS AT HOME

Photographed by Lester Morlock, Plymouth, Ind.

Hanging the Bird-House

Like other bird-lovers I have found the annual putting up and taking down of bird-houses to be a good deal of a nuisance, and the means of attaching them to trees or other supports by means of nails or screws a very unsatisfactory method. Recently I hit upon a plan which I have

tried out for a season and found very useful.

Instead of fastening the house up with nails I make a small hole on each side of the box, near the roof and near the back. Through these holes, and extending about a foot on each side, I slip a piece of strong but flexible wire. The wire must be strong enough to support the box, but not so heavy that it may not be easily bent. I then drive two nails into the tree or other support on which the box is to be hung, and a little higher up than the place for the box to rest. The nails should be about a foot further apart than the width of the box. The wire I then twist about these nails, making sure that the box hangs straight down and is level. It will be found that this supports the box firmly against the tree, and that the wire is practically invisible. A few seconds' time is sufficient in which to untwist the wire and take the box down, or place it in position. The nails may remain in place for use again. Heavy wire, with hooks formed at each end for attaching to the nails, is a satisfactory arrangement, but requires more careful work in accurately measuring distances, etc., the first time the box is hung.—EMILY A. CORNING, *St. Paul, Minn.*

Birds and Salt

I was much interested in what Esther Reeks, Boulder, Colo., said about 'House Finches Eating Salt' in September-October BIRD-LORE, 1920 (page 286). It was the first published note on salt-eating by birds I have ever seen. From some casual observations I have made, I have been led to believe that some birds like salt nearly as well as cattle, horses and other animals, and if they had access to it at all times, a general liking for it would soon be developed.

Across the road from our house, in a pasture, there is a trough where barrel salt is kept most of the time. English Sparrows can be seen on and around this trough nearly every day, and if one looks closely, they can be seen industriously picking away at the salt. While they are

the chief visitors to the trough, I have also Mourning Doves, Crows and some other common birds there apparently eating fragments of salt. I have given salt to chickens and find that they eat it greedily.

The above notes are not by any means

conclusive, and if the fact that birds like salt has not already been established, it should offer some opportunities for interesting experimental work at feeding stations, etc.—FRED J. PIERCE, *Winthrop, Iowa*.

THE SEASON

XXIV. December 15, 1920 to February 15, 1921

BOSTON REGION.—The winter in Massachusetts has been mild, so far, with very few cold days. About Boston the ground has been bare, or covered by only two or three inches of snow. These conditions are in marked contrast to those of last winter when periods of intense cold were protracted and the snow-fall was over ten times as great.

The scarcity of birds reported two months ago has been no less noticeable during January and February. Not only is there a total absence of the irregular winter visitors, the Grosbeaks, Redpolls, and the Crossbills, but in this region there are very few of the usual winter visitors, such as Tree Sparrows, Juncos, and Golden-crowned Kinglets. Permanent residents also—Chickadees and White-bellied Nuthatches for example—are present in numbers far below normal. During midwinter excursions into the country, although the sun shone brightly and the air was soft and spring-like, we found the woods and thickets deserted, and for mile after mile as silent as midnight.

This absence of birds set us thinking, wondering where the birds are which usually spend the winter with us, and why they did not move southward this season. Observers who visited northern localities last autumn reported a good crop of pinecones there, and hence predicted that there would be no invasion of Crossbills into New England; perhaps the successful fruiting of birches, alders and other trees similarly accounts for the absence of Redpolls and Pine Grosbeaks.

Mr. Edward H. Forbush advances the ingenious explanation of the rarity of the smaller passerine birds which usually

winter here. He says in Bulletin XXXVII, Division of Ornithology (Mass.), Jan. 31, 1921: "Perhaps this [scarcity] may be accounted for in part by the fact that many individuals that were accustomed to stay here were killed off by the severe weather of last winter." This suggestion becomes very significant when considered in the light of Mr. S. Prentiss Baldwin's discovery that many individual birds pass the winter in definite localities.

The Evening Grosbeak has become, of late years, such a regular winter visitor in eastern Massachusetts that some explanation other than the abundance of food in the North seems necessary to account for its non-appearance this year. The favorite food of this Grosbeak while wintering here is the seed of the box elder (*Acer negundo*) and it has been suggested that extensive planting of these trees between New England and the Great Lakes has resulted in inducing the birds to extend their winter range toward the southeast. Examination of the fruit of the box elder trees in Lexington, Mass., shows that, although the trees appear to have ripened seeds this winter, a large proportion of the embryos are so withered that they would be worthless as food for the Evening Grosbeak. The failure of this crop of seeds, if at all general, may be responsible for the absence of this bird from New England.

If observers who live on the Grosbeak's line of travel to the Atlantic Coast will examine the seeds of the box elder in their respective localities and report the results to me, I shall be glad to summarize them for publication.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—Mid-December to the first of February the season was remarkably mild and open. A short cold snap in each of the last two weeks of January, and a snowstorm which whitened the ground for the first time, the very end of the month, provided but a taste of winter.

Response to these conditions by bird-life is found in records of various species north of their ordinary winter range, for which see the Christmas Census in the preceding number of *BIRD-LORE*. Of other such records which have come to hand the most noteworthy is that of a small flock of Tree Swallows wintering at Long Beach, L. I. They were observed on New Year's Day by E. P. Bicknell and Charles Johnston. Another observer (W. C. Starck) reports "six of the Tree Swallows still left of the original ten," Long Beach, February 13. At Mastic, L. I., a Catbird and flock of 20 Mourning Doves were noted January 1, and a Savannah Sparrow on January 2 (J. T. N.). At this same locality several Wilson's Snipe were present, December 18 (R. Floyd, Jr.). The bay marsh where they occurred is suitable for migrating rather than wintering individuals and they were likely moving south late. That this species did winter on the island, however, is evidenced by two in the hands of gunners, and one or two more heard at Elmhurst, January 8 (H. S. Boyle).

There appears to have been a small flight of Bluebirds the first week in January. Six or eight are reported from the vicinity of Yonkers, January 2 (Gladden), and on the same date a flock of upwards of 50 at Oyster Bay (W. B. Nichols). January 9, a number, Oyster Bay—Purple Finches with them; and Bluebirds observed in the vicinity through the rest of the month (W. B. N.). The Purple Finch has been unusually scarce this fall and winter. Its presence with these Bluebirds is in line with the opinion that they had just come in from further north, and form the rear of the southward movement, composed of birds which, under ordinary circumstances, would have passed in late

fall. A male Chewink is reported from Bronx Park, January 15 (L. S. Crandall).

From up the Hudson (M. S. Crosby, Dutchess County) five Wilson's Snipe are reported on January 16 from "Brick-yard Swamp" where they were observed in early December; a Rusty Blackbird and a Sapsucker, January 16; a Red-winged Blackbird and 24 Grackles, January 22; a Mourning Dove, February 13; and a Coot at Constitution Island, January 7.

It is interesting to enumerate these unusual instances, but they stand out against an apparent scarcity of passerine bird-life, as compared with an ordinary winter. This scarcity can be explained by the effect of the very severe winter preceding on the personnel of birds which might ordinarily winter in the region, and the absence, also, of individuals driven south or coastwise by severe weather. In the interior of western Long Island (near Garden City) Meadowlarks were noticed, apparently in migration, from December 15 to 23, after which date they seemed to have gone; but on January 15 there was a flock of 8 or 10 at Garden City, already in song, and a few, perhaps members of this same flock, have been continually present since. No Horned Owls were heard the first of the year at Mastic, a favorite resident locality for them where they were unusually plentiful the winter of 1919 to 1920. They likely had wandered because of an observed scarcity of rabbits, and one or more Horned Owls, reported from the outskirts of New York City this fall, and winter, may have been such wanderers.—J. T. NICHOLS, *New York City*.

WASHINGTON REGION.—Notwithstanding the mild winter weather about Washington during December, 1920, and January, 1921, birds have been neither unusually numerous nor conspicuous. Perhaps the lack of snow, cold and high winds has induced the birds to remain more on the uplands and has less concentrated them in the valleys and other sheltered places. Be that as it may, the open winter of the northern United States has at least had an influence on the

numbers of northern winter visitors here, as we have had no reports of such birds as the Pine Siskin, Red-breasted Nuthatch, White-winged Crossbill, Snowflake, American Pipit, Northern Shrike and Swamp Sparrow. It is, of course, possible that the lack of information regarding the occurrence of these species is due in part to lack of observation in favorable places, but it is nevertheless true that northern birds, such as the Winter Wren, have been of less frequent appearance than usual, and the same remark will apply to most species of Hawks.

On the contrary, some common winter visitors, such as the Junco, White-throated Sparrow and Fox Sparrow, have been as numerous as ever. The Myrtle Warbler apparently has been more often seen than is the rule during the winter, for we have records in December and January from various localities in this region. The Robin, which is nearly always a rare winter bird about Washington, was seen on January 4, 1921, and also later in the month. Purple Grackles were noted on January 25 by Miss M. T. Cooke, and doubtless were present during the entire winter, although we have no other reports. A Catbird was seen by Mr. and Mrs. L. D. Miner near Rosslyn, Virginia, close to Georgetown, on January 1, and was kept under observation for nearly ten minutes. This is apparently the only District of Columbia record for the month of January, although the species was noted on December 31, 1883. The occurrences just mentioned may well have been due to the mild winter weather, as was possibly also that of the American Coot, seen near Washington by Mr. J. Kittredge, Jr., on December 19, 1920, which date is nearly a month beyond the previous latest record of the species in this vicinity, November 26, 1916.

As possibly worthy of mention, a Pileated Woodpecker was observed at its roosting hole by Mr. E. A. Preble on Bullneck Run, near the old Leesburg turnpike, on January 23, 1921. This species is of considerable rarity about Washington and is confined to the wilder and more heavily timbered parts of the country. The only Crossbills reported are eight

individuals of the American Crossbill, seen by Mr. F. C. Lincoln on the lower part of Difficult Run, December 16, 1920. It may also be worthy of note that an adult Bald Eagle was noticed on December 3 soaring over the northern part of the city of Washington, for, though the species is of common occurrence along the Potomac River, both below and above Washington, it seems not frequently to visit the city itself.

It is of perhaps more than passing interest that even the relatively mild weather of this winter has not roused the song birds to song, for even such common winter singers as the Carolina Wren, the Cardinal and the Mockingbird have been heard singing very little during either December or January.

While the various species of Ducks that regularly resort to the Potomac River in considerable numbers during the winter months have been present during December and January, they have been for the most part apparently not nearly so numerous in total numbers of individuals as during last winter, evidently a direct result of the milder weather which has enabled them to remain on good feeding grounds farther north. The list of the twelve species so far observed this winter is as follows: Mallard, Black Duck, Pintail, Shoveller, Greater Scaup, Lesser Scaup, Bufflehead, American Golden-eye, White-winged Scoter, American Merganser, Red-breasted Merganser, Hooded Merganser. Of these the most numerous have been the Greater Scaup, Lesser Scaup, Black Duck and American Golden-eye. Three Shovellers, noted by Mr. F. C. Lincoln, on December 16, near the Potomac River at Difficult Run, form the latest local record that we have, since no one has previously reported the species beyond October 28 (1887). The Bufflehead, noted by Mr. E. A. Preble near Dyke, Virginia, on December 29, is also an interesting occurrence as the species is not very common in this vicinity.

The Whistling Swan, which for several years past has regularly visited the Potomac River below Washington, returned to Widewater, Virginia, about October 20, so we are informed by Miss

Pickett Waller, whose previous observations on this Swan at the same place have been recorded in these columns. In December of this winter there were several hundred individuals about Widewater, although they did not feed so near the shore as has ordinarily been the case. The majority of these birds disappeared about December 25, and Miss Waller has seen only an occasional individual since that time. The increase in the numbers of the Whistling Swan as indicated by its reappearance on the Potomac River during the past few years is one of the most interesting developments of the protection afforded waterfowl by recent protective legislation.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

MINNESOTA REGION.—The weather during the past two months has been abnormally mild for the time of year. There have been no considerable falls of snow and none that has remained on the ground in the southern part of the state, and only six to twelve inches in the northern counties where it is usual to have three or four feet at this time of the year. At the present writing the ground is practically bare in the southern half of the state and the ice on the lakes is only fifteen to eighteen inches thick compared with nearly three feet last year. Not for many years has there been such a mild, snowless winter. The Mississippi River below the Falls of St. Anthony has not been frozen and only rarely has it been cold enough to make the rapids 'steam.'

Generally speaking, there has apparently been a more than usual scarcity of bird-life thus far this winter, only one or two observers reporting any considerable number of birds. This applies not only to winter visitants but also to the familiar resident species. Thus the now large number of bird-lovers who maintain feeding stations have, with few exceptions, been disappointed in the number of their callers. May it not be that, in the case of the resident birds, they are really here in normal numbers but that the mild weather and absence of snow make it

possible for them to take care of themselves without resorting to the proffered larders? A correspondent from far-away Pennsylvania, where conditions seem to be about the same, takes this view for granted: "It has been so mild here this winter that the birds haven't needed us and with the exception of the ever-present 'Downies,' a few Juncos and Tree Sparrows, we see none of our usual goodly company. What is their gain is our loss and I suppose we should be glad they are not forced to come to us for help—but we do so love to have them."

Reports indicate that more individuals of the half-hardy species—birds that largely desert us during severe winters—have remained in the North this year. Word has been received of the presence at various places in southern Minnesota of numbers of Tree Sparrows, Juncos, Brown Creepers, Red-winged Blackbirds, Horned Larks, Crows and less numerous of Rusty Blackbirds, Grackles, Golden-crowned Kinglets, Red-headed Woodpeckers, Wilson's Snipe and still more rarely of an occasional Meadowlark, Flicker, Robin, Bluebird, Mourning Dove, Kingfisher and Marsh Hawk. A few Mallards have remained in open water in some of the streams and this Duck was present at Heron Lake "in immense numbers" until a few days after the middle of December. Lake Superior has remained unfrozen and there are present there many Golden-eye Ducks, Old Squaws, Mergansers and Herring Gulls. Crows, which usually leave the state during the winter, have been common and widely distributed.

Of special interest are reports from Pipestone County (Mr. Alfred Peterson) and Lincoln County (Mrs. J. S. Campbell), in the extreme southwestern corner of the state, that the Horned Lark is wintering there in large numbers. Mr. Peterson writes from Pipestone under date of February 14: "On Sunday, January 30, I heard and saw many Horned Larks scattered in many places on plowed ground, such places being preferred to pastures during colder weather or time of snow. In a field three miles east of town I found

about 150 of them, as near as I could estimate, and about 300 Longspurs in one flock." And on the following day they "were to be heard and seen almost everywhere, particularly in pastures, being more numerous on the whole than heretofore. They seemed to be in full song, many standing on stones or clods of earth while singing, and I noticed one soaring to a height of 200 feet, just as they do in the spring (thermometer 54° plus at 2 P.M.)." The particular interest in this is that this bird has of late years been very scarce in many places where it was formerly abundant.

Winter visitants have thus far not been numerous. Snowy Owls have appeared in limited numbers, only seven reports to February 15, the most southern being from St. Peter, well down toward the Iowa line. Only five reports of Evening Grosbeaks, three of Pine Grosbeaks, six of Bohemian Waxwings, five of Snow Buntings and three or four of the Northern Shrike. Redpolls have been nowhere abundant and reported from only three localities. Lapland Longspurs have been noted at two places in the western part of the state, Mr. Peterson stating that they are wintering in large numbers in the vicinity of Pipestone, Pipestone County.

Several correspondents continue to report seeing unusual numbers of Prairie Chickens. Mr. H. J. Jaeger writes that he saw, not long since, a flock of at least 150 in each of three southwestern counties and many additional scattered birds.—THOMAS S. ROBERTS, *Zoological Museum, University of Minnesota, Minneapolis, Minn.*

CHICAGO REGION.—This region has enjoyed the mildest January since 1906 and this weather still prevails. The coldest time during the recent period was the last week in December when the mercury dropped to around zero. Since then the temperature has averaged about thirty degrees.

This weather seems to have kept away the usual winter birds from the North as

no Redpolls, Siskins or Crossbills have been reported. The only one here is the Northern Shrike. One seen at Beach by Mr. Gregory, December 26 and one at Willow Springs, January 8 by Mr. Abbott. However, a number of birds that generally go south are staying here for the winter. Mr. Gregory reports a Lincoln's Sparrow at Beach, December 26 and Mr. Sanborn, a Flicker, February 6. Meadowlarks and Bronzed Grackles have also been reported from here. On January 4 a hunter was arrested here with a young Black-crowned Night Heron which he had just shot. The specimen came into the possession of Dr. C. W. G. Eifrig, who preserved it.

West of the city, about at La Grange, Song Sparrows and Meadowlarks are reported and at Oak Park on February 6, Dr. Eifrig reported a Fox Sparrow and a Robin. In the sand dunes of northern Indiana a Rusty Blackbird and Bonaparte's Gulls were seen by Dr. Lewy on December 15. Messrs. Coffin and McBride report two Bluebirds here January 22.

Other birds of interest for this time of the year are Saw-whet Owl, Rough-legged Hawk, Red-headed Woodpecker and Brown Creeper, seen by Mr. G. A. Abbott about Willow Springs, January 8.

The common winter birds are here in their usual numbers, including Cardinals, Prairie Horned Larks and the winter Ducks, Mergansers, Golden-eye, Old Squaw and Scoter.—COLIN CAMPBELL SANBORN, *Chicago Ornithological Society, Chicago, Ill.*

KANSAS CITY REGION.—Midwinter has been marked by most unusual warmth. During the entire current period there have been scarcely ten days of cold, but comparatively few birds have been present to enjoy the fine open weather. Unusual numbers of Doves in large flocks and scattered over a wide area have been found wherever there are suitable feeding places, and at least one flock of Grackles, containing about two dozen birds, has wintered within the southern city limits. This bird does not stay here in winter in numbers except under the most favorable circum-

stances. Two other species not commonly found here at this season, the Kingfisher and Catbird, have both been noted, the former in some numbers. A lone Catbird wintering in the neighborhood of the Country Club constitutes the only known local winter record for this species. Crossbills, Waxwings and Siskins, so common during recent winters, have been noted this season only as stragglers, and not a single Purple Finch has been recorded.

Ducks stayed late and returned early. The last large flocks of south-bound Mallards were seen late in December, and by the middle of January impatient hordes of Pintails were noted congregating in restless rafts on the Missouri River. William Andrews writes from the Courtney region that on January 25, at 5 P.M., the river near his cabin was filled with immense flocks of resting Pintails with a few Mallards mixed in. By actual count there were in sight at one time 43 flocks containing from 50 to 500 individuals each, and by dark these were being increased by the continual arrival of fresh hundreds. Canada Geese were noted in some numbers in late December and early January, birds that were doubtless wintering in this immediate neighborhood.

Migrating Bluebirds and Robins, impelled by the balmy winter weather, moved into the city in numbers, and were singing early in January, perhaps a month in advance of their normal time of arrival.

Notes of interest received from Mr. A. Sidney Hyde, of Topeka, Kansas, indicate that a few Meadowlarks and Grackles wintered in that region, and that an early movement of north-bound Geese was noted.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—This report will be of value only because of its negative characteristics, since it shows that this region has shared in the actual or relative paucity of bird-life which has been so frequently reported from the eastern states during the past winter. The writer cannot recall any other winter in Colorado during the past twenty-five years, with so little bird-life about Denver, all of which is

substantiated by his notes. This cannot all be due to his inability to be in the field as much as he wishes, for during other winters he has been equally busy in his vocation, without noticing so few birds. There have been, for example, no Chickadees or Long-eared Owls in the city, and very few Juncos (of the latter), principally the Montana form. Usually the Pink-sided and the Grey-headed Juncos are abundant hereabout all winter, yet during the past eight weeks they have been very rare about Denver.

A twenty-mile motor ride in and about Denver any time between November and April should disclose hundreds and hundreds of Tree Sparrows and a goodly number of Song Sparrows, yet such a ride on December 25 uncovered but one Tree Sparrow and three Song Sparrows. It seems undeniable, from the writer's experience, that there have been both fewer species and fewer individuals in the bird population of this region all this winter. It is his belief that an ordinary day to day survey of the neighboring foot-hills and adjacent streams would show that our urban winter bird population had this year remained suburban.

The two months embraced in this report have been mild, sunny, and with but two light snowstorms, all of which may in part account for this suburban drift. Robins returning during the past week (February 13) may indicate the approach of the northward advancing Robin army. Two resident outposts of this army were seen in Denver on December 29, which, however, is not an extraordinary record. The species which delights the writer most by its return in numbers in the early spring is the Meadowlark, ten of which were noticed at the eastern edge of the city on February 9. He believes that our spring migrants will appear earlier than usual this year.—W. H. BERGTOLD, *Denver, Colo.*

SAN FRANCISCO REGION.—After three dry winters, the northern part of the state is rejoicing in an abundant rainfall. It is difficult to estimate to just what extent

this condition has affected bird distribution without reports from all sections of the state. In the Bay Region, there is an apparent reduction in the number of Ducks on Lake Merritt and on the lakes in Golden Gate Park. This affects particularly the fresh-water species, as Canvasbacks on Lake Merritt show no decrease, while Pintails, according to Mr. Dixon, are about two-thirds as numerous as heretofore. The very abundance of fresh water in inland lakes and flooded areas might very well account for this diminution as it increases the territory affording appropriate feeding ground.

The land birds which show the effect of increased rainfall are the Bluebirds, Western Robins and Varied Thrushes. They are not conspicuously more abundant but they certainly are more scattered, since they can dig worms anywhere regardless of lawn sprinklers or irrigation systems. The western Robin, this winter, is a duplicate in behavior of its eastern cousin, as it hops about the lawns in the residence section instead of being limited to the neighborhood of berry-bearing trees or shrubs.

One wonders whether Golden-crowned Kinglets and Red-breasted Nuthatches are mutually exclusive. Last winter Nuthatches were abundant but Golden-crowned Kinglets were very scarce. This year the tables are turned as the Kinglets are abundant but Nuthatches are missing. Perhaps the cones provide nothing but worms this year. Crossbills are also lacking so far. Flocks of Cedar Waxwings have been small and those of Bush-Tits very large. One is at a loss to account for the apparent shortage of Hermit Thrushes and Pipits. The latter are probably congregated somewhere in the Bay Region but have been few and far between in Berkeley. Perhaps they prefer dry slopes where the seeds have not all sprouted.

Among the rarer land birds are the Orange-crowned Warblers, reported by several observers, Say's Phoebe (December 3), Western Gnatcatchers, again confined to a Claremont hillside, a White-throated Sparrow, on the campus of the University

of California, and a Western Mockingbird, observed in Oakland repeatedly between December 19 and January 16, by Miss Margaret Wythe.

Among water birds one might mention the Green-winged Teal and European Widgeon on Lake Merritt, the abundance of Western Grebes on San Francisco Bay, and the frequency with which Gulls are seen in the parks of San Francisco and about the school grounds and University campus in Oakland and Berkeley.

On the whole, the midwinter visitants (which always exceed in number the midsummer residents) seem to me to be somewhat below the average both as to number of species and of individuals.—AMELIA S. ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—December was characterized by fine, mild weather with very little light rain, the storms that were so frequent on the northern coast not reaching this region until January.

The Mountain Plover, reported in the last issue, remained in the locality where they were first seen throughout December, and were still there in very large numbers January 12. December 10, a Golden-crowned Kinglet was seen near the Arroyo Seco. This is the only record we have of a resident of the higher altitudes seen in lower regions this season. Townsend's Warblers have been several times reported from the Arroyo region, Echo Park, and in Pasadena gardens. A Pileolated Warbler has remained in Sycamore Grove throughout December and January. On December 24, a female Phainopepla appeared in a garden where it has lived for two winters past. The pair of Blue-fronted Jays that nested in Griffith Park are still there with their two full grown young, and are tame enough to come down to share the luncheon of some of the park men.

The Chinese Spotted Pigeon introduced some years ago seems to have become established in certain foothill localities where it is seen and heard at all seasons of the year. In December a Golden-winged Flicker came in company with several of the Red-shafted, to the Museum Building

in Exposition Park to eat the berries of the Virginia creeper on the walls, near the office windows, from which it was observed and fully identified by the Curator of Ornithology. In the open country many large flocks of Pipits, Horned Larks, Meadowlarks, are seen, as well as Western Larks, Chipping, Vesper, and Savannah Sparrows, and the usual Gambel's and Golden-crowns. A Cassin's Kingbird was seen December 12, and a flock of Willow Goldfinches in the olive-brown winter plumage. Large colonies of Crows have been reported from three different localities, and the Ferruginous Rough-legged Hawk several times.

Mountain and Western Bluebirds, Cedar Waxwings and Western Robins are occasionally seen, and California Purple Finches are abundant since the storm of January.

On January 12, Mrs. F. T. Bicknell and two other observers found on the Franklyn Cañon Reservoir a Holboell's Grebe and a European Widgeon, both of which are very rare visitants to this region. Many Ducks were on the lake, Green-winged Teal being most largely represented, their number being estimated at two hundred. Another party, of which the writer was a member, had a good observation of the Grebe a few days later and also examined specimens in the Museum. They all believe the identification was correct. January 23 was a day of partially clearing weather, following the severest

storm of the winter, which blanketed the mountains with snow, and, as in past seasons under similar conditions, Tree Swallows flocked into Echo Park in hundreds, circling about above the lake. Flocks of White-throated Swifts were noticed January 26 and 31. Nuptial flights of Anna's Hummingbird were very frequently noticed during December and January, and the females were seen gathering nesting material. February 2 a half-constructed nest was found and the bird observed at her work.

Very heavy gales along the coast the first week in February resulted in an unusual assemblage of birds in Santa Monica Bay. On February 7 our party of observers found there about fifty Western Grebes, about twenty Red-throated Loons, three or four Common Loons, with a few of the smaller Grebes, and one Royal Tern. Surf and White-winged Scoters, American Mergansers, Cormorants and Brown Pelicans were represented by small numbers. Out-numbering all other species combined were the Gulls. Californias were most numerous, and after them the Ring-billed. About ten Herring, five Glaucous-winged, a few Western, Heermann's and Short-billed Gulls completed the list. It was truly a scene of 'Wild Wings,' when all the Gulls were in the air above a sea of glorious color and life, the wind whipping off the spume from the flying surf.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*



Book News and Reviews

SUPPLEMENT TO THE BIRDS OF ESSEX COUNTY, MASSACHUSETTS. By CHARLES WENDELL TOWNSEND, M.D. Memoirs of the Nuttall Ornithological Club, No. V. Cambridge, Mass., Aug., 1920. 196 pages; one plate and one map.

It is significant of the ever-increasing interest taken in ornithology that nearly 200 pages are required to cover the information acquired in the fifteen years which have elapsed since the publication of Dr. Townsend's 'Birds of Essex County.' With a large number of junior amateurs as competitors, Dr. Townsend has continued active field work and is still the leading authority of his locality, able to judge and weigh the value of the numerous sight records. The result is one of the most convincing and valuable reports on a local area which has appeared since sight records have enormously outnumbered those based on specimens taken. There is a most interesting preliminary chapter on 'Changes in the Bird-Life of Essex County since 1905,' a second, containing censuses of nesting birds and migrating Warblers in various restricted areas, and the bird-life of several ponds; while the third chapter presents the more noteworthy migration dates, records of occurrence of the rarer species, etc., of the past fifteen years. An excellent feature of the book is a brief recapitulation of the status of every species, even when no additional information has been obtained. The author's wide field experience is evidenced by many pertinent and interesting comments on life-history and field characteristics written in his usual easy and simple style. With all sight records of rare species, even unusual or extreme dates, the observation is given with as much detail as necessary and full credit is given to the observer. Many amateurs would do well to note that no observations are given in greater detail than those of Dr. Townsend himself, in spite of the fact that in years, knowledge, and experience, he outranks every other student in the county, and

that his mere word would carry much more weight than theirs.—L. G.

BULLETIN OF THE ESSEX COUNTY ORNITHOLOGICAL CLUB, VOL II, No 1, Dec., 1920. Salem, Mass. 54 pages; two plates.

This second number of the Bulletin shows that the Essex County Ornithological Club has fully lived up to the promise of its first year. The record of its regular meetings shows an average attendance of over twenty, an example which far older organizations might well envy. 'Notes on the Lincoln Sparrow,' by E. H. Forbush; 'At a Food-Shelf,' by Albert P. Morse; 'Variations in the Song of the Whip-poor-will,' by Rodman A. Nichols; 'Notes on the Ipswich Sparrow,' by C. J. Maynard; 'Imitative Construction of Birds' Nests,' by Edmund S. Morse; 'Notes on Bird Nests,' by Walter E. Bates; 'On the Nesting, Song and Play of the Tree Swallow and Barn Swallow,' by C. W. Townsend, M.D.; 'The White Gulls at Swampscott,' by Arthur P. Stubbs, are all pleasantly written, informative, or interesting papers.—L.G.

The Ornithological Magazines

THE AUK.—A leading article in the January *Auk* is 'The Dickcissel (*Spiza americana*) of the Illinois Prairies,' by Alfred O. Gross. We have here the first part of a detailed study of this interesting bird which has completely disappeared from eastern localities where it formerly bred, but is abundant farther west, apparently increasingly so in places. The Dickcissel is "preëminently a bird of the meadows, where, for the state (of Illinois) as a whole, its concentration is 81.2 birds to the square mile." The dense low vegetation of this type of land provides it with congenial nesting-sites. Fence-posts, telephone wires, etc., adjacent to the nest are favorite singing stations for the male bird. From here he delivers his short unmusical

song, which gives the species its name, with remarkable persistence through the day, despite the midday heat, averaging seven or eight times per minute. The male takes no part in construction of the nest or care of the young. In fact, in one case when his mate was killed by a Sharp-shinned Hawk, a male continued regular singing while the near-by young starved to death. This article is illustrated with four full-page plates, photographs of habitat, and nests with eggs and young.

Harrison F. Lewis (in a paper which is to be continued) gives a detailed narrative of the behavior of a nesting pair of the Philadelphia Vireo near the city of Quebec, beginning with the nest under construction. There is a careful summary of the known occurrences of the Bohemian Waxwing in New England by Horace W. Wright, who met with this species in Massachusetts in the late winter of 1918-19.

More technical are 'Notes on *Ortalis vetula* and Its Allies,' Miller and Griscom, reviewing this genus of Guans which are game-birds replacing the Grouse, to which they are unrelated, in the tropics of the New World. Oberholser finds that the Holboell's Grebe is not a distinct species but a race of an Eurasian bird, as the Wilson's Snipe is of the Old World Snipe. Little Brown and Sandhill Cranes are races of the same species; but the American Bittern, though that bird's representative in America, is distinct from the European Bittern. He also separates a northern from a southern race of Blue Jay. There is an account of the 38th meeting of the American Ornithologists' Union held in Washington, by T. S. Palmer, its Secretary.

Under the general heading of faunal papers may be classed one on the birds of Hatley, Quebec, in 1919, by Mousley, as also some of the general notes. Among numerous records of unusual occurrences in 'General Notes' are three of the Arkansas Kingbird in Atlantic states—Massachusetts (September and November) and New Jersey (November). These corroborate a record from Montauk, New York, in the BIRD-LORE Christmas Census, which see. Judging from dates of migration of our

eastern Kingbird it would seem that these stragglers far from their regular migration route are at a loss to find their way south. Charles L. Whittle describes a nest of the Water Ousel placed on a horizontal timber under the eaves of a lean-to directly over and some eight feet above the water of a small stream flowing through Fort Bidwell, California.—J. T. N.

THE WILSON BULLETIN.—The September, 1920, number contains 'Some Interesting Records of Nebraska Birds for the Year 1919,' by Clarence E. Mickel and Ralph W. Dawson, in which four species are added to the state, based on specimens secured. David C. Hilton gives some 'Notes on the Birds of the Fort Leavenworth Reservation, Kansas,' based on very fragmentary observation during the spring of 1919. Only eighty-two species were noted, but some interesting local information about several was secured, showing that lack of opportunity is often more apparent than real. Dayton Stoner discusses the frequency of Whip-poor-will calls, and Wetmore publishes an addition to his list of birds observed near Minco, Central Oklahoma.

In the December issue Alvin R. Cahn lists 108 species observed in Itasca County, northern Minnesota, from mid-July to mid-August, a useful record in a region where civilization will inevitably work much havoc. Howard Clark Brown presents interesting evidence to show a northward movement of the Cardinal in north-central Iowa, and W. G. Ericksen gives some breeding habits of three birds of Chatham County, Georgia. We note that the Ground Dove has decreased nearly to the point of disappearance without any obvious explanation, just as has been recorded in northwest Florida. P. B. Peabody contributes a long review of the 'Migration Records for Kansas Birds' by Bessie Price Douthitt, published in previous numbers of the Wilson Bulletin. The improbability of many of the statements, and the fact that the data given did not support other statements was noted by the present reviewer in a previous issue of this magazine.—L. G.

Bird-Lore

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE nature lover who would live in complete harmony with his environment must find no small difficulty in explaining satisfactorily the warfare which exists between man and his fellow-creatures. So far as birds are concerned, wholly aside from direct destruction for sport, food, or feathers, the advance of what we call civilization is inevitably marked by the gradual retreat or entire disappearance of those species which for one reason or another cannot endure contact with man.

The mere presence of man is often sufficient to drive away the wilder birds and the motor car, motor boat and airplane have so increased man's ubiquity that one must now travel far to get beyond the sound of exploding gasoline. Marshes are drained, forests are felled and even the trees that remain have their nesting-cavities filled with cement and their foliage sprayed with poison.

Returning to an oft-frequented winter resort in Florida we went to call on a Screech Owl and Flicker which, the year before, we had left peacefully occupying homes in opposite sides of a cabbage palm stub, only to find that the Village 'Improvement' Society had replaced the dead tree with a living one. The general effect for the casual observer was no doubt 'improved,' but heedless improvements of this kind only sacrifice superficial appearances to the things that are really worth while. The little Owl sitting in grim quaintness at his door had made a host of

friends during the preceding winter and his place could not be taken by another palm tree exactly like a hundred others in its row. Fortunately, in this instance, those responsible for the birds' eviction were more than ready to repair an unwitting error and homes hollowed from palm logs were placed near the site of the stub. Within a week one was occupied by a Screech Owl and the other by a Flicker; possibly *the* Owl and *the* Flicker that had been dispossessed. Incidentally there is a lesson here, for the case admirably illustrates how improvements and regard for the rights of other creatures may go hand in hand.

From the Owl's home one may look out over the waters of the Atlantic where daily are being enacted countless tragedies in bird-life which are perhaps the saddest of any for which man is unintentionally responsible.

We have all heard of the gradual substitution of oil for coal as fuel on steamers and have learned with satisfaction that this step in human progress would make unnecessary the killing work of stokers at flaring furnace doors in the bowels of a ship. But we did not realize that oil-burning or oil-bearing vessels in cleaning their tanks at sea spread a death-trap over the waters in which thousands of birds meet their fate.

Today (February 25) the east coast of Florida is strewn with dead or dying Loons, Horned Grebes, Brown Pelicans, Gannets, Gulls and Terns whose plumage has become so clogged with crude oil as to be functionless. A Brown Pelican, that looked as though it had been dipped in a tar-barrel, was a subject for the kodaks of thoughtless tourists at Daytona Beach who seemed not to realize the bird's hopeless plight, for birds thus affected must die by starvation.

We understand that an appeal has been made to the Department of Commerce to instruct the captains of steamers not to clean their oil-tanks within twenty miles of land, but even should they comply, the birds of the high seas will still fall victims to the onward march of civilization.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

STRUCTURE AND HABIT

With Photographs by the Author

Discussing the bird as a flying machine, we endeavored, in the last number of BIRD-LORE, to point out how all birds are intrinsically alike in their general structure because of the physical requirements of flight. It remains for us, now, to call attention to the differences in the structure of birds arising from their varied habits, especially those of procuring their food. Whether the differences in the form of bills and feet that are found among birds are due to their different methods of securing their food, or whether it is the other way around, and their method of feeding is due to the differences in the structure of these parts, is a disputed point which we will not try to settle here. Suffice it to say that the majority of scientists today believe that modifications of the individual bird which are the direct result of its environment are not inherited but that the process of 'Natural Selection' or the 'Survival of the Fittest' serves to weed out those birds which do not show adaptations to their mode of living, and the result is the same. That is to say, the differences in the form of bill, and feet, and wings that we are familiar with today are the sum total of a great many little and big variations that have been preserved through the course of evolution because they were adapted or well suited to the mode of life of the bird. That a beautiful adaptation between a bird's structure and its mode of life does exist, there can be no doubt, and one of the most interesting studies in ornithology is the endeavor to learn the reason for each little peculiarity of structure that we find in our familiar birds.

The changes or adaptations that have occurred in the evolution of birds have been for the most part gradual. This is evidenced by the fact that today the birds that have arisen from common ancestors are still, for the most part, more like each other than they are like other birds, in spite of their diversity of habits. Were it not so it would be impossible to group birds into orders and families. The fact that some birds have been more plastic than others in their adaptations and have developed parallel with unrelated birds of similar habits, causes many of the difficulties in our present scheme of classification. Thus the Hawks and Owls are really very distantly related, the Owls probably belonging with the Nighthawks and Whip-poor-wills, but because of the Owls' carnivorous habits, they look superficially like the Hawks and are still put with them for the sake of convenience by many American ornithologists. Herons, Kingfishers, and Terns, likewise, have bills that are much

alike, adapted to spearing fish, but in other respects they are very different and no one would think of calling them closely related.

A good example of divergent evolution, on the other hand, occurs among the Gulls, Terns, and Skimmers, which are really closely related as shown by their anatomical structure, forming the order *Longipennes*, but which have bills which are extremely different in form, probably because of their different feeding habits. Shrikes, Grosbeaks, and Warblers, of the order *Passeres*, likewise, are similar in all their structures except their bills, and it is natural to suppose that they had a common ancestor and that their variously shaped bills have arisen as adaptations to particular feeding habits. But, as before intimated, it may be that the history of these birds was the other way around,



BLACK TERN

KINGFISHER

GREEN HERON

Similar feeding habits have produced similar bills in these birds, which are but distantly related

and that these diverse bills have persisted from the thousands of possible variations of their ancestors because the individuals were able to adapt their habits to fit their modified structures. Indeed there is much evidence to support the belief that both factors have been important in the course of evolution.

Irrespective of how the changes have come about, let us consider some of the structures or implements of birds in relation to the birds' methods of life. Let us suggest in a few paragraphs a field that promises rich rewards to the careful observer.—A. A. A.

THE IMPLEMENTS OF BIRDS

With Photograph by the Author

When one passes through the halls of any of our large museums and inspects the collections of mounted birds from all over the world, one is impressed by the great variety of form and color. Almost every imaginable combination of colors is found represented in the plumage of some bird, and the many modifications of size and shape are such as to leave one confused by the heterogeneous assemblage. One is almost led to believe that Nature has given loose rein to her imagination and allowed her most fantastic dreams to take the form of birds. Yet we are constrained to believe that there is a reason for everything, that no structure exists unless perfectly adapted to the function which it has to

perform. The varied colors of birds we may consider at another time; in these paragraphs we wish to consider some of the modifications of bill and feet, the implements of birds.

The long legs, slender neck, and the great humped bill of the Flamingo, we are told, are eminently adapted to its peculiar method of feeding on the minute mollusc life of the tropical mud-flats where it lives. The tremendous bills of the



BLACK AND WHITE
WARBLER

WHITE-WINGED
CROSSBILL

EVENING GROSBEEK

Diverse feeding-habits have brought about the very dissimilar bills in these closely related birds. Note also the differences in their eyes

South American Toucans and African Hornbills serve as arms for reaching far out to the smaller branches for the fruits upon which these ungainly creatures feed. But let us consider the commoner of our North American birds with reference to their food and see if there are similar reasons for their variety of form.

The Hawks, with their strong, hooked bills, sharp talons, and powerful wings fitted for the pursuit of small birds and mammals, we have already mentioned, and have noted that the type of bill and foot are so necessary to birds having a carnivorous diet, that the Owls, though unrelated, have developed similar structures. One group of the common perching birds, the Shrikes, have taken up a carnivorous diet and have likewise developed hawklike bills, although their feet are of the ordinary perching type and are not used to assist them in securing their prey. The Vultures, on the other hand, which have degenerated from a strictly carnivorous diet to one of carrion, while retaining the hooked bill for rending flesh, have lost the powerful talons and the accompanying strength of limb through disuse, so that now they even spring from the ground with difficulty.

But, if one examines more closely such a group of birds as the Hawks, all having the same type of food, one discovers differences of form of body and wings according to their method of securing their prey, as was pointed out in the last number of BIRD-LORE. There are, for example, those like the Red-shouldered and Red-tailed species, which find their quarry while soaring high in the air with their keen eyes fixed upon the ground. These have broad,

rounded wings, fanlike tails, and rather heavy bodies. Others, like the Marsh Hawk, beat back and forth close to the ground, seldom if ever soaring, and these have long narrow wings and slender bodies. Still others like the Cooper's and Sharp-shinned species, remain perched on some outpost awaiting the approach of their quarry and then dart out after it, and these have short, rounded wings for sudden bursts of speed.

Another group of animal feeders are those which feed upon fish, frogs, and crayfish. Practically all have long, pointed, javelin-like bills for spearing their prey, but their various methods of catching the fish have brought about modifications of their other structures. The Herons and Cranes, which catch their fish by stalking them in shallow water, have long, slender legs for wading and long toes for distributing their weight and keeping them from sinking into the soft mud. The Kingfishers, on the other hand, which secure their fish by plunging from above, have little use for their legs and these, following nature's economy, have degenerated. The Terns, likewise, with similar habits, have weak legs, although the toes are webbed for swimming. The Gulls, which have become scavengers and seldom plunge for their food, have developed somewhat hooked bills for rending the flesh of the larger dead fish upon which they feed.

Another fish-eating bird, and one that plunges for its quarry, is the Osprey or Fish Hawk. This bird still retains the sharp, hooked bill characteristic of its family and so, instead of spearing its fish as does the Kingfisher, it catches them in its strong, sharp talons, and the soles of its feet are armed with sharp horny tubercles to cut through the slime covering the fish and keep it from slipping from its grasp. When the Osprey rises from the water with its prey and flies to some high tree to devour it, it has merely to continue holding it in its talons in order to tear it to pieces with its strong bill. But when the Tern or the Kingfisher rises from the water, the small fish is transfixed by the partially opened bill of the bird. (All of the fish which I have examined that have been speared by Terns or Kingfishers have shown the two holes made by both mandibles as in the



PINTAIL (CAPTIVE). A DABBLING DUCK
Note the relatively long, slender neck and small feet
placed well forward

photograph of the Kingfisher with the small sucker on page 109.) Just how the bill is extricated is a mystery to me unless it is done under the water before the bird rises. Perhaps some observer, who has been more fortunate than I, can explain it.

Others of the fish-eating birds, such as the Loons and Grebes, are expert divers and pursue the fish beneath the water. They have powerful legs with strong webbed or lobed toes, the legs being situated far back like the propeller of a boat so that, although most graceful on the water, they are extremely awkward and almost helpless on land.



CANVASBACK (CAPTIVE). A DIVING DUCK
Note the relatively short, thick neck and large feet
placed far back

The group of insect-eating birds is large and varied, for there are many kinds of insects and many ways of securing them. Some insects live in the soft mud about shores and marshes, and for these the birds must probe; some live among the leaves and harder soil of the forest floor, and for these the birds must scratch. Others live within the trunks and branches of trees, and to secure these the birds must be proficient carpenters supplied with chisels for gouging. Still other insects spend most of their time darting hither and thither in the sunlight and these must be caught on the wing. Lastly, there are those insects that hide

in the grass or among the leaves of shrubs and trees, and these must be searched out with keen eyes. And so, among birds, we have probers in the Snipe and Woodcock, scratchers in the Grouse and Quail, borers in the Woodpeckers, flight-feeders in the Swallows, Swifts, and Nighthawks, and gleaners in the Blackbirds, Thrushes, Vireos, and Warblers. In each group of birds we find those modifications of bill, feet, wings, tail, tongue, and eyes which best fit the birds for securing the insects in their particular way.

Among the vegetable feeders the largest number live upon seeds and are of rather generalized structure except for their bills which are heavy and conical like those of the well-known Sparrows and carried to the extreme in the Grosbeaks. There are a few birds like our Hummingbirds, the tropical Honey Creepers, and the African Sunbirds which take a large part of their sustenance from the nectar of flowers. These birds have slender, probe-like bills and more

or less tubular tongues modified so as to be best suited for sucking the nectar from the various-shaped corollas of the flowers. Among the five-hundred-odd species of Hummingbirds we find almost every conceivable variation in the shape of the bill, from those like *Docimastes*, with probes nearly three inches long for sucking the nectar from large tubular flowers, to those of the tiny *Rhamphomícron*, with a bill scarcely half an inch in length, so short that the Hummer alights on the base of the flower and pierces the nectary in an unlawful way. A few Hummingbirds have curved bills, one almost sickle-shaped, and others slightly upturned, and all are adapted for feeding on particular flowers.

Other vegetable feeders are found among the water-fowl, a considerable part of the food of many species consisting of the leaves, stems, or roots of aquatic plants. Their broad, flat, fluted bills and their curiously fringed tongues are excellently adapted for sifting their food from the silt and water, and their bills are so sensitive that they can locate their food no matter how roily the water or how dark the night. One group of Ducks called the Diving Ducks find their food in deep water and it is

interesting to observe that in those species like the Canvasback and Scaup Ducks which dive without using their wings, the feet are placed far back toward the tail and are relatively very large. In the species like the Old Squaw that use their wings under the water and in all of the Dabbling Ducks, like the Mallard, Pintail and Teal, the feet are very much smaller. The Diving Ducks, likewise, have much shorter necks and stockier bodies than the Dabbling Ducks, another adaptation to their mode of life.

Finally, there are birds which feed almost entirely upon fruits, and a few, the Sapsuckers, which derive most of their nourishment from the sap of trees. This they secure by drilling series of small holes through the bark and establish-



YELLOW-BELLIED SAPSUCKER, A DEGENERATE
WOODPECKER

The Sapsucker's tongue is no longer barbed and spear-like nor greatly protusible, but has become short and brush-like at the tip to assist in gathering the sap which forms a large part of the bird's food.

ing regular 'sugar bushes,' visiting the different trees as often as the sap collects. Occasionally, it is reported, the sap ferments and the unsophisticated Sapsuckers are treated to a beverage which rapidly causes them to act in a questionable manner. Indeed one has been reported to have become so confused that it mistook a man's leg for the limb of a tree, and very often they fly into windows, or dash themselves against the sides of houses, or fly erratically through the trees as though they did not see very distinctly. Whether this is due to fermented sap or to some other cause, has never been definitely settled, and there is still plenty of opportunity for experiment and observation to establish the truth. The Sapsuckers are degenerate Woodpeckers, and although they still retain the characteristic bill, feet, and stiff tails, their tongues, instead of being greatly protrusible, spearlike, and armed with barbs as in the true Woodpeckers, have become split and brushlike for better gathering the sap.

Were we to consider fully the food of all species of birds, we would discover that there is scarcely an animal or vegetable substance that does not furnish the food of some group of birds. Between the Loons and Grebes that find their food at the bottom of the lakes, and the Swallows that dart over the trees, there are birds, probing in the soil, scratching its surface, turning over fallen leaves, gleaning through the grass and herbage, searching the leaves and twigs of shrubs, chiselling in the trunks of trees, and climbing about the branches; and each bird has some adaptations, some modifications, some implements that are fitted to its own peculiar food and method of securing it.—A. A. A.

FROM YOUNG OBSERVERS

BLACKCAPS IN OKLAHOMA

I am ten years old, and in the 4th-A grade at school, and since last February, a year ago, when Daddy brought home a copy of 'Bird-Life,' I have been very much interested in wild birds. Some time before that date, Daddy borrowed several copies of BIRD-LORE, and then subscribed for the dear little magazine.

Our home is in Illinois, on a farm, with plenty of trees, underbrush, shrubbery, and a big orchard, where the birds can build their nests, and we also have nest boxes for the Wrens and Martins, and window-boxes and feeding-shelves for the birds in winter. When we return home, we are going to plant bushes for seeds and berries, and a boulder bath-and-drinking place is to be placed on the lawn.

We have been living in this city since last October, and have only a small back yard, with just a few young trees, but we think that if we had put up the right kinds of bird-houses, and had put them up early enough, we would have had Martins and Bluebirds, and maybe Wrens, as well as the Chickadees.

Many of the birds here are quite different from those we have at home, while others look almost the same, and really belong to the same families. The

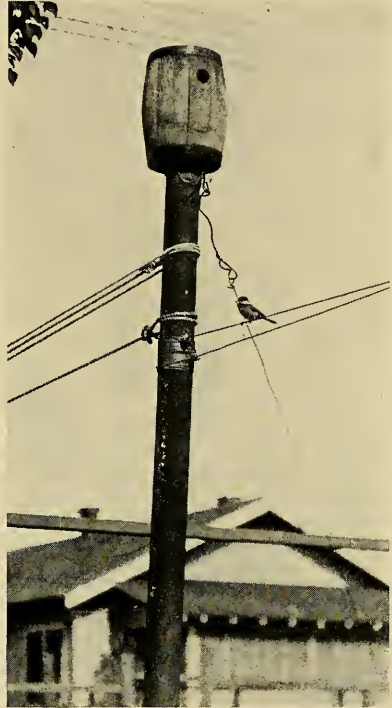
strangest bird here, is the Scissor-tailed Flycatcher, which is very often seen, even flying around in town, and sitting on the telephone wires. But they don't always "utter their loud, harsh, chattering notes, on the wing," for about two weeks ago, three of them sat in a row on a wire behind our house for quite a while and they all took 'turn-about' with their 'singing,' acting just like they were crowing. Among other new birds are: the Yellow-headed Blackbird, a much larger bird than the others of his family, and a better singer, though it sounds like he would choke in getting some parts of his song out; the Blue-gray Gnatcatcher, a neat, trim, sweet little bird, but too active to watch very long; the Lark, Sparrow and the Red-bellied Woodpecker.

Early one morning near the last days of March, Mother saw a pair of Black-capped Chickadees searching around our house for a suitable place for a home, one even going down in the top of a piece of pipe, used for a clothes-line post, and she said, "Now if there was a box on top of that pipe, I believe they would use it." Daddy went down town and brought home a small water keg, about a gallon-and-a-half size. After taking off the handle, and driving a cork in the small water hole, he bored a larger hole, just the right size for Chickadees, in the side of the keg near the top, and fastened it on top of the clothes-line post.

Daddy says the only 'fad' we have is birds, and you may be sure we were all watching, the next morning, hoping that the Chickadees would come back.

Sure enough they returned, looked the keg over very carefully, and then flew away, after staying about twenty minutes. The second morning they came again, and began at once to carry bits of damp grass into their new home, packing it down very firmly, and both kept at it until the keg was filled with short grass, almost up to the hole. Then they made a small hollow in the grass, at the back of the keg, opposite the hole, and lined it with bits of moss, string, dog hair, and cotton. They were having trouble to find lining for their nest, and Mother put out some little pieces of cotton, which the lady Chickadee seemed thankful for, and began to use at once.

Five tiny eggs were laid in this nest, and while Mrs. Dee-dee was sitting on them, we often saw Mr. Dee-dee bring a little green worm, or a bug and feed her,



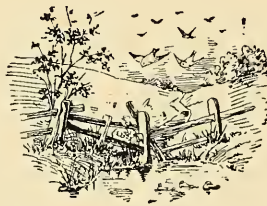
THE CHICKADEE AND HIS KEG HOME

and they would then both fly away to a small park, near our house. Almost before we knew it, the little Dee-dees were out of the eggs, and making their 'sizzing' little calls for food, and the work of worm-bringing began in earnest, both Dee-dees being kept busy from early to late, trying to fill little yellow-edged pink mouths, that were always open, and always hungry.

After about two weeks the baby Dee-dees had been climbing up the inside of the keg, to look out of the hole, and each trying to be the first to get the worm, when it was brought, so Daddy wired a little perch across the keg, just below the hole, to see if it would help them to come out. In a few minutes the bravest little Dee-dee scrambled (or was pushed) out on the perch, shook himself, and at once flew to a near-by plum tree, where he began hopping from limb to limb, flirting his funny little tail, and looking so important. All four of the other Dee-dees followed the first one out of the keg, about one or two minutes apart, and all began to take little short flying trips, as fast as their little wings would rest up a bit, and seeming to worry their mama nearly crazy. They came out of the keg in the morning, and by the next morning, we saw no more of them, and we think the babies were guided to the little park, and there taught to hunt for the little green worms and white 'millers' that they like so well.

They were all such clean-looking birdies, just the image of their parents, but with short, cute little tails. Mrs. Dee-dee was a clean housekeeper, for we found no mites about their home, after the young birds left the nest. Daddy put up a larger keg, with a larger opening in it, for Bluebirds, and two smaller Wren houses, but although a Jimmy Wren came and looked them over, and a pair of dear Bluebirds have been here several times, the houses are all empty, and we fear that the closely-built-up part of a city is not the best place to have bird friends.—MARGARET PHILLIPPE, *Okmulgee, Okla.*

[One often wishes when he is compelled to move from one town to another that he could take his friends with him. In this story Margaret shows very delightfully how one who has bird friends does not have to move them for one finds them wherever he goes and it is easy to make new friends when he has good books to introduce them.—A. A. A.]



The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City. Telephone, Columbus 7327

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\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
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REPORT ON THE NATIONAL PARKS SITUATION

In the last issue of BIRD-LORE an account was given regarding the attacks being made in Congress on the Yellowstone National Park. Bills had been introduced for the purpose of legalizing two projects whereby private parties could use the waters of the Park for commercial developments.

First, H. R. 12,644, introduced by Congressman Smith of Idaho, sought authority to build a reservoir covering 8,000 acres in the southwestern part of the Park. Another bill, introduced by Senator Walsh of Montana, known as S. B. 3,554, sought to secure in Congress authorization to dam the Yellowstone River and make a reservoir of the beautiful Yellowstone Lake. Smith wants water for irrigating lands in Idaho, and Walsh wants to use the waters of the Yellowstone River for irrigation north of the Park in Montana.

There would appear to be no reason why the waters of the Fall River Basin and the waters of the Yellowstone River could not be dammed up outside of the Park, but this is not what is wanted, for to do this the waters of the reservoir would cover lands, some of which would have to be paid for, whereas if the waters can be dammed up in the Park, no payment would have to be made, as the lands of the Park

belong to the public. What these men are after is free storage base for the water that they want to use for private commercial purposes outside the Park.

The plans which these men sought to carry out by means of Federal legislation would not only be detrimental to the Yellowstone Park, but the success of either would mean the setting of a precedent which would undoubtedly result in the eventual destruction of a large amount of the scenic beauty and interest of this territory, which nearly fifty years ago was set aside by Congress as an area in which the natural beauties of the region were to be forever preserved.

When through the publicity of this and other organizations the general public became advised as to just what was taking place, protests in the form of letters, telegrams and petitions by the thousands were sent to senators and congressmen, with the result that it was found impossible to further advance either bill.

That publicity killed the Fall River Basin project was admitted by Congressman Smith of Idaho at a memorable hearing before the Select Committee on Water Power of the House of Representatives on January 6, 1921, when many of us were present. Mr. Smith denounced the

Audubon Association and others for giving out, what he called misleading statements, and stated:

"That sort of information has been disseminated throughout this country, and has scared the members of Congress. Many members of Congress have come to me within the last two or three weeks, who were in favor of the Fall River Basin project last session, who now say: 'Now, Smith, we are in favor of this proposition—we were in favor of it before—but my people at home are so aroused that it would be political suicide for me to vote for it and I, of course, will not be able to vote for it.'"

To which Secretary of the Interior Payne, a little later replied:

"Let me say, first, about the timidity of Congress: Congress is accustomed to propaganda. I do not know of anybody in the world so capable of measuring the value of propaganda as the Congress. So that I do not think the members of Congress are terrified because of some propaganda."

To which Smith retorted:

"You ask any one of them, and they will tell you they are terrified and would be afraid to go home, almost, if they should vote for this bill."

In addition to the National Association of Audubon Societies, many other organizations and numerous individuals immediately took up the cudgel in defense of the Park. Chief among the other organized groups may be mentioned, the American Civic Association, which under the leadership of J. Horace McFarland, has been fighting battles for the Parks for many years; the National Parks Association, New England Conference for Protection of National Parks, American Game Protective Association, Mazamas, Sierra Clubs, and a committee of active men headed by Dr. George Bird Grinnell, of New York City. This Association sent out 25,000 circulars calling the attention of the public to the dangers that threatened the Park, and asking those who received the circular to file their protests with their senators and congressmen. Contributions were also asked for, the money to be used as a National Parks Defense Fund. The responses were immediate and effective,

and the thousands of protests of outraged citizens that poured into the Capitol resulted in stopping further progress of both of these bills and they died with the adjournment of Congress on March 3. On February 28, there was a Committee hearing on the Walsh Bill, on which occasion both sides of the controversy were heard. The Association was represented ably by our First Vice-President, Dr. T. S. Palmer. However, it never came to a vote in either House, but the Smith bill did pass the Senate and was more than once up for passage on the Unanimous Consent Calendar in the House.

Another measure in which we were greatly interested was a bill for amending the Water Power Act, whereby three members of the President's Cabinet had been authorized to grant water power concessions in National Parks. The amendment which we favored proposed to put this authority back in the hands of Congress. The move was bitterly fought by our opponents, but was carried in both Houses and the bill signed by the President. The sum total of the campaign to date is that the friends of the Parks were able to kill both the Smith and the Walsh bill, and had sufficient strength left to amend the Water Power Act as described above.

Action by the organizations interested in the preservation of the Parks and the wild life within their boundaries was not taken a minute too soon.

The contributions sent in to the Association have been sufficient to meet our immediate needs and have also enabled us to contribute financially to the expenses of two of the organizations with which we have been so intimately associated in this endeavor. It should be borne in mind, however, that while we have won the first battle, the opposition is gathering its forces for a new attack at the next session of Congress, and we shall have to make the fight all over again. Mr. Smith has already served notice that he is going to make another attempt to get possession of the Fall River section of the Yellowstone Park; in fact he is

reported to have stated he is going to introduce a bill to take this entire territory out of the Park, and should he succeed in this undertaking, it would, of course, then be easy to use the waters.

The following statement shows the income and expenditures of the Association's fund for National Parks Defense from December 9, 1920 to February 28, 1921.

INCOME—		FUND FOR NATIONAL PARKS DEFENSE	
Contributions.....		\$5,977	50
EXPENSES—			
Printing and mailing 25,000 Circulars.....	\$1,503	53	
Postage on Circulars and Correspondence.....	501	50	
Expenses of Agent in Washington.....	82	70	
Slides illustrating National Parks.....	110	10	
Contribution to National Parks Association.....	690	00	
Contribution to American Civic Association.....	250	00	
Miscellaneous.....	3	52	3,141 35
Balance unexpended, March 1, 1921.....			\$2,836 15

FEDERAL GAME LEGISLATION

Federal legislation in reference to birds and game has of late been confined almost entirely to the subject of appropriations for enforcing the existing laws.

The President of this Association, in company with representatives of various other organizations interested in wild life protection, appeared before the Appropriations Committee of Congress and asked for \$10,000 with which to protect the Mt. McKinley National Park in Alaska. This is a territory as large as the Yellowstone Park and although it contains an abundance of game animals, it does not have one warden to protect it. A railroad from the coast has been pushed up into the Mt. McKinley country and its completion next summer will mean that numbers of big-game hunters will visit the territory, hence the urgency for immediate action in the way of providing warden service. The Committee gave kindly attention to the proposition and in the end provided \$8,000 for the purpose.

The President of the Association and Mr. Holland of the American Game Protective Association appeared before one of the subcommittees and urged that the request of the Secretary of Agriculture for \$200,000 to enforce the provisions of the

Federal Migratory Bird Treaty Act should be granted. The Committee exhibited a charming indifference to the arguments of the speakers and in the end granted the same appropriation as last year—about \$145,000.

Scattered throughout Alaska are a few wardens that work under the direction of the Government. For years this department has been kept up by an annual appropriation of \$25,000. The House Appropriations Committee provided that sum for the present year, but the Senate cut away the entire appropriation.

The President of the Association happened to be in Washington at the time and at once visited various members of the Conference Committee of the two Houses of Congress to which the bill would be referred and strongly urged that the appropriation be retained. He also wired to New York for further help and representatives of the American Game Protective Association and the Camp-Fire Club immediately appeared in Washington on the same mission. It is pleasant to report that in the end the appropriation was put back so that we should still have some game protection in Alaska.

TO PROVIDE FOR A DUTY ON IMPORTED CAGED BIRDS

The following is a copy of the brief submitted by T. Gilbert Pearson for the National Association of Audubon Societies to the Ways and Means Committee of Congress on February 20, 1921, relative to paragraph 416 in the tariff act, pertaining to and suggesting the advisability of a duty on imported wild birds.

The United States imported under normal conditions (prior to the war) nearly 500,000 live birds annually. These birds may be divided roughly into three groups, viz., Canaries, 360,000; game birds, 40,000; and miscellaneous cage birds, 60,000.

The Canaries were imported chiefly

from Germany. Other cage birds, the game birds, comprising mainly Quail and Pheasant, came chiefly from Europe, Canada, Mexico and the Orient. These game birds were imported for restocking game areas. The miscellaneous cage birds, included parrots, finches, weaver birds and a great variety of species of brightly colored small birds. These latter birds arrived from Europe, Africa, Australia, the Orient and a few from tropical America.

The following table shows the number imported for eleven years, 1908-18, including six years prior to the passage of the present laws and five years since the enactment of the law (see report of Biological Survey, Department of Agriculture.)

IMPORTATION OF BIRDS DURING THE YEARS 1908-1918, INCLUSIVE

Year	Canaries	Pheasants	Partridges	Quail	Other Game Birds	Miscellaneous	Total
1908	325,265	4,415	7,781	724	9,533	47,467	393,562
1909	338,256	2,996	29,895	868	2,009	41,414	427,777
1910	361,054	7,200	18,931	1,933	2,481	48,478	451,749
1911	354,858	13,399	39,986	3,753	2,340	64,338	475,264
1912	362,604	15,412	23,181	7,751	3,742	44,387	457,077
1913	392,422	9,417	10,283	2,936	2,829	59,477	476,364
1914	368,676	4,146	36,760		2,940	62,868	464,790
1915	216,037	15,841	7,080	3,341	5,345	25,747	266,587
1916	127,706			8,000	11,547	44,827	185,028
1917	16,471	832		32,814	42,514	46,015	93,519
1918	10,000	150		5,205	6,232	51,302	66,000

The figures for 1919 and 1920 are not at present available, but it is known that the importations have not yet reached the normal condition that obtained prior to the war.

VALUE OF THE BIRDS IN QUESTION

Figures as to the value of the birds vary widely, depending on the species and the source of the shipments. The lowest appraisals are those of miscellaneous shipments from the Orient. The records of the Custom House in San Francisco show, among other consignments received during the quarter ending December 31, 1920, the following:

146 Parakeets, \$22; 15 cents each.

130 Chestnut Finches, \$13; 10 cents each.

400 Strawberry Finches, \$32; 8 cents each.

150 Sociable Finches, \$5; 3 cents each.

205 Strawberry Finches, \$4; 2 cents each.

These birds are imported free of duty and when sold by retailers bring from \$1 to several dollars each, leaving a wide margin of profit between the value at point of shipment and the retail price. In bringing these birds into the country the importer needs only to secure a permit from the Secretary of Agriculture. Other than this there is no means of controlling the industry, and there is evidence to show that there is a large waste of bird-life through lack of proper care while in transit, or after arrival, or due to the fact that few foreign species are able to become acclimated in this country.

In order to more properly regulate traffic and also to produce an income to the Government from a source wholly untaxed and perfectly capable of sustaining a tax, the National Association of Audubon Societies for the Protection of Wild Birds and Animals recommends the following change in Paragraph 416, so as to read:

"Live wild birds, including land and water fowl, but not including game birds, domesticated food fowl or birds imported by public Zoological Gardens, \$1 each." (Or 50 cents plus 20 cents *advalorem*.)

By way of illustration, a Canary appraised at \$2 would pay \$1 duty under the flat dollar rate or 90 cents under the graduated rate. The same bird would retail at \$5 or more at present prices. A five dollar parrot would pay \$1 under the flat rate or \$1.50 under the graduated rate and would retail at from \$10 to \$25. It is believed that this rate of duty would produce a revenue of anywhere from \$200,000

to \$300,000 annually from a source which heretofore has yielded no revenue. This is more than Congress at the present time appropriates to the Agricultural Department for the enforcement of the Migratory Bird Treaty Act.

The charge of the flat dollar rate is to effect the low appraised value of birds in the Orient and from some European countries where currency at present is greatly depleted. Naturally it will be prohibitive in cases of birds less than a dollar in value, but the losses on the traffic will probably not be serious. A bird that is not worth a dollar is given little attention by dealers and the losses on these miscellaneous birds, from the time the birds were captured until they reach the retail store are numerous, and would probably reach 75 per cent in the first few months. Comparatively few of these birds thrive in captivity, and many thousands have lost their lives through experiments.

STATE LEGISLATIVE MATTERS

This year the legislatures in forty-one of the states assembled. As usual this means much legislation that affects the wild bird life, and Audubon workers have much to do and to think about. Among the propositions that are up for consideration was a bill drafted by the Audubon Society of the State of North Carolina intended to establish a State Game Commission. Such efforts have been made by the Audubon Society for ten years past, but all attempts have failed for the reason that in North Carolina it has been an almost iron-clad, though unwritten law, that any representative in the legislature can ask for any kind of a game law or change in the existing game laws for his county that he desires, and through courtesy the legislature always lets him have it. The result has been that there has grown up a hodgepodge of game laws in that state which is marvelous and wonderful to behold. People often ask this office when the season for shooting Quail in North Carolina is. There is no way to answer this except to tell them to buy

copies of all the laws that have been enacted in the past ten years in North Carolina, go through these books and hunt out the latest law for the particular county in which they are interested. At the present time there is a county measure pending in the North Carolina Legislature that is being fought strongly, but this is because there is a division among the people themselves as to what they want. Such a situation is almost unheard of in that state, for as a rule people there take little interest in the game laws, one way or another.

If the Audubon Society can succeed in establishing a Game Commission with state-wide authority, it will undoubtedly be the most notable piece of state bird and game protective legislation that will be enacted in the year 1921. Just as this is going to press we learn that the Game Commission bill was defeated in the Senate.

In Florida a bill has been prepared for introduction in the Legislature by the Florida Wild Life Protective League, a

newly formed organization at Fort Myers. The moving spirit is Dr. George H. Stone, who with good judgment and knowledge is going about his task with full realization of the opposition he will have to meet. This bill is for the establishment of a State Game Commission and State Warden Force. Some years ago the writer coöperated with the Florida Audubon Society in working personally with the members of the Legislature in Tallahassee and succeeded in getting a State Game Warden Force established. Two years later, however, the law was repealed. Still later, with the splendid aid of Dr. Williams S. Blackman, then President of the Florida Audubon Society, we were able to induce the Legislature to again provide for a Game Commission, but the Governor vetoed the bill. So at the present time, with the exception of some county wardens who are practically worthless, so far as enforcing the law is concerned, there are no wardens in the state but those employed by this Association and a few provided by the Federal Government. In the meantime the game of Florida is fast disappearing.

In New York State a bill is pending which if passed will practically wipe out the splendid force of more than a hundred experienced game protectors, and turn the protection of game over to the State Police. It is inconceivable that the New York Legislature should adopt such a measure or if adopted that the Governor would sign it.

We have had much correspondence with people in Missouri where those supposed to be interested in the protection of wild life appear to be having royal battles, one group wanting to change the game laws and the other group wanting them to remain as they are.

The Association has maintained a lobbyist at the Massachusetts Legislature. At this writing nothing of a specially detrimental character has occurred there. On the other hand, it is pleasing to note that the prospects are good for getting an appropriation of \$4,000 to allow Mr. Forbush to go ahead with having drawings made for his monumental book on the birds

of Massachusetts. Another important game and bird bill in which we were actively interested was successfully conducted through the New Mexico Legislature of the New Mexico Game Protective Association under the able leadership of our friend Mr. Leopold.

In Virginia, North Carolina, Pennsylvania, Arkansas, Kansas and some other states, the subject of encouraging the killing of Crows, Hawks, and Owls by offering bounties has been up for consideration. These measures in some places are being backed up by the organized sportsmen's Associations, and it is regrettable to note that in some instances they appear not to recognize the fact that some species of Hawks and Owls are beneficial to man's interests, and on the other hand rarely if ever destroy game birds or game animals.

The subject of cat legislation is, of course, again under consideration in many parts of the country, just as it is every year when legislatures are in session.

To keep track of these various measures or even to handle the correspondence that reaches the office of the National Association in reference to state legislation is enough to keep one man busy.

Good Work in Baltimore

The Maryland Audubon Society, under the energetic leadership of its President, Mrs. Baker Hull, is very active in bird work. Under the auspices of the Society, Chalmers Brumbaugh has given a course of public lectures on bird study and numerous field trips have been taken. Recently the Society secured from the office of the National Association a field glass and a series of fourteen bird books which will be offered as prizes in a bird-box contest that will be held among the young people of Baltimore. By an arrangement with the State Conservation Commission of Maryland, the boxes will be placed in the Loch Raven watershed territory where they will be of practical use in supplying homes and roosting places for the hole-loving birds of that interesting region.

Audubon Exhibit in Tennessee

The Middle Tennessee Audubon Society recently held an interesting exhibit in the Tennessee Hermitage National Bank of Nashville. It included a large number of skins, nests and eggs of birds, also many mounted birds, pictures, charts, and original drawings. Prizes were offered for the best drawings of birds submitted and every measure was taken to insure an active interest in the exhibit by the general public. That the methods employed were wise is indicated by the very large attendance of people who visited the exhibit.

The officers of the Middle Tennessee Audubon Society are: A. C. Webb, President; Mrs. Katherine P. Wright, Secretary; Mrs. G. R. Mayfield, First Vice-President; Jesse M. Shaver, Second Vice-President; and Mrs. Sanford Duncan, Treasurer.

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Bowman, John McE.
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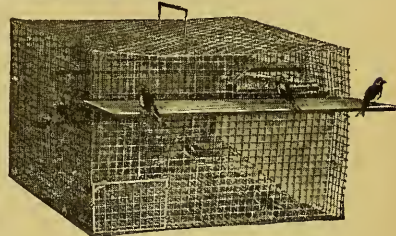
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Genus—Bubo

Family—STRIGIDÆ
Species—VIRGINIANUS VIRGINIANUS

National Association of Audubon Societies

Bird-Lore

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



Vol. XXIII

MAY—JUNE, 1921

No. 3

John Burroughs

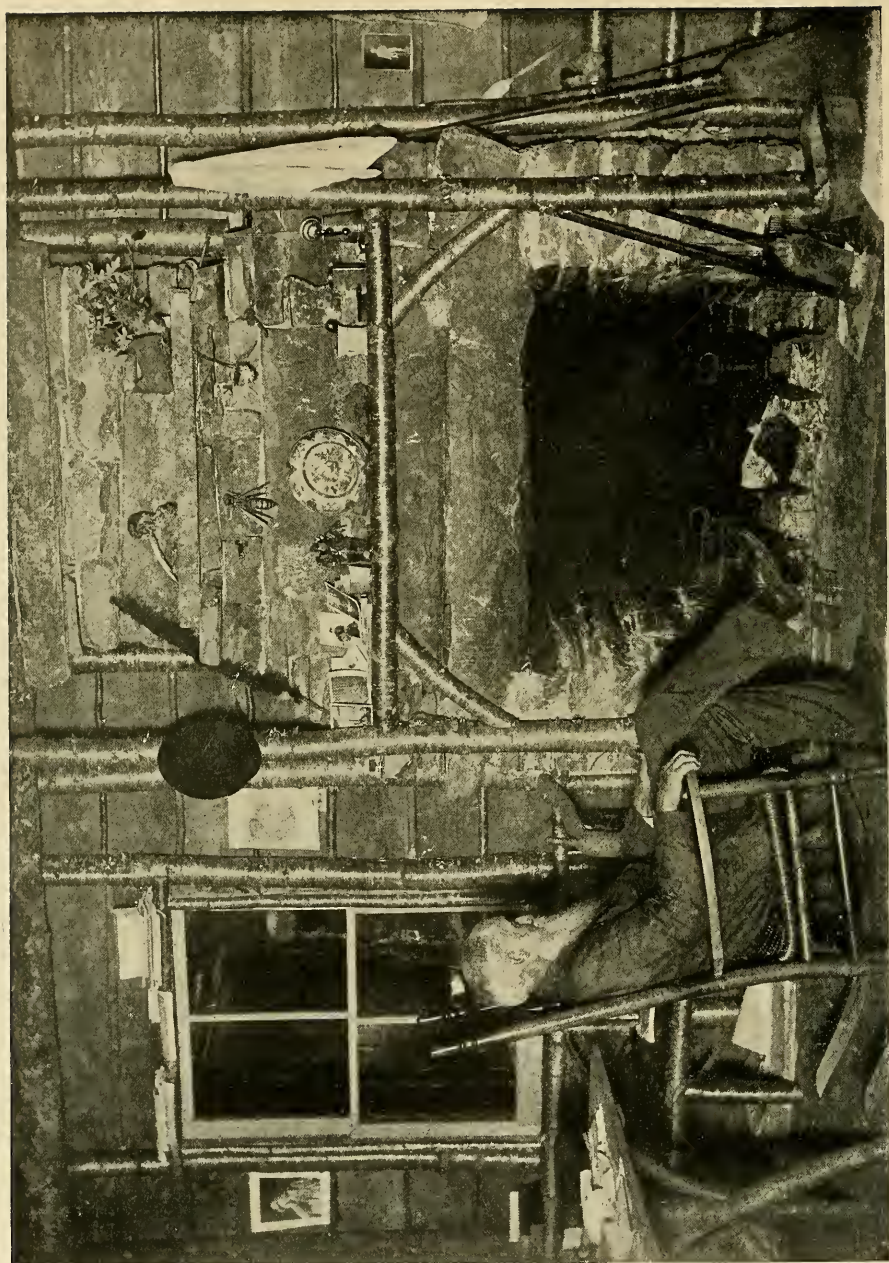
1837-1921

MORE than a quarter of a century has passed since first I met John Burroughs, and when, less than a year ago, I saw him last he seemed no older. His joy in life was ever so fresh and keen that he seemed to embody the spirit of everlasting youth. There are but few people living who can remember a world without him.

Mentally he was no older in 1920 than in 1895; indeed, if increasing age is marked by waning interest in one's surroundings, he was younger. And if the John Burroughs of 1920 was the John Burroughs of 1895, I believe that we may go back another quarter of a century and with equal truth say that he was the John Burroughs of 1870.

Certain it is that he was as much the author of 'Wake Robin' on the day of his death as on the day of its publication, and in this fact lies the incontrovertible evidence of the absolute sincerity which formed the dominant characteristic of John Burroughs' nature. Simple, direct, genuine, unself-conscious, he not only sought to discover the truth but to express it. He posed no more in print than in person. He did nothing for effect; there was no 'playing to the gallery' and he avoided any situation where he could not be his own natural, everyday self. It is this fundamental characteristic of truthfulness in the man and in his works that have won for him an enduring place among the great teachers. What he wrote had the unmistakable ring of honest conviction. He won the confidence of his readers who found in his printed page a reflection of the eternal verity of nature itself.

It was this uncompromising love of truth that accentuated Burroughs' hatred of falsehood. What contempt and loathing he had for the so-called nature writer who, playing upon the credulity of the public, presented fiction as fact! How he scourged these nature fakers! With what righteous indignation he protested against this wanton defilement of the temple of nature! All estimates of Burroughs' achievements must accept this inherent honesty as



JOHN BURROUGHS AT 'SLABSIDES'

Photographed by F. M. Chapman, October, 1896. Republished from BIRD-LORE No. 1, Vol.

their cornerstone. It is not open to discussion. For the rest, so far as his place as a naturalist is concerned, annotators will continue to compare him with Gilbert White and Thoreau, Muir or even Darwin, and the comparison will show that with each he possessed certain attributes in common.

Like White, he had a strong and abiding love of the everyday life about his home. Both found an endless source of interest and pleasure in the miracle of the changing seasons, the unfolding leaf and opening blossom, in the return of the birds. But to Burroughs in much greater measure was given the poet's temperament, the power of interpretation, and the gift of expression. His was the more subjective mind.

Thoreau, on the other hand, had no lack of temperament, or of power to interpret and express, but his nature was far more complex than Burroughs'.

Even in his journals there is frequent suggestion of pose wholly lacking in Burroughs' books. He wrote as though someone were looking over his shoulder. Nor in Burroughs' sane, sweet, companionable, lovable nature do we find much resemblance to the disposition we commonly think of as Thoreau's. It is difficult to picture Thoreau welcoming the thousands of pilgrims who have received so cordial and kindly a greeting at 'Riverby,' 'Slabsides,' and 'Woodchuck Lodge' and who, knowing John Burroughs, loved him. There was no guest-book at Walden Pond.

Between Burroughs and Darwin, in spite of the wholly different places they occupied in the world of naturalists, I have long felt there were many strong points of resemblance; and the likeness, I believe, would have been greatly increased if they had both had similar training. Burroughs' was the more emotional, Darwin's the more material nature, but, given Darwin's education, Burroughs would have made a great philosophic naturalist. He had Darwin's love of truth for truth's sake; he was fair-minded, unprejudiced, patient, and possessed of a keen desire to discover the relation between cause and effect.

But the lesson of Darwin's later years makes us grateful that Burroughs was never subjected to the atrophying influences of long-continued, intensive research. Primarily he was a lover, perhaps one should say a worshipper of nature, rather than an investigator of nature. A technical education would doubtless have made him a research zoölogist, but schooled only by nature herself, it was the poet rather than the naturalist in him that grew; the emotional, rather than the scientific side of his character which was developed. He traveled far and wide, but no lure of new species ever made him contented far from home. The riot of tropical life repelled rather than fascinated him. The Longspur of Alaska was not a voice of the tundra, but a reminder of the Bobolinks singing in the meadows of his boyhood. He had no collection of specimens; he made no definite, objective, continuous studies of animal life; he recorded but few notes. Indeed, he had small patience with those who, notebook in hand, 'interviewed' nature. "I go to the woods," he wrote, "to



'SLABSIDES' FROM JULIAN'S ROCK
Photographed by F. M. Chapman. June, 1897

enjoy myself, not to report them." And again: "For my part, I can never interview nature in the reporter fashion. I must camp and tramp with her to get any good, and what I get I absorb through my emotions rather than consciously gather through my intellect. Hence the act of composition with me is a kind of self-exploration to see what hidden stores my mind holds. . . . I come gradually to have a feeling that I want to write upon a given theme. . . ." How the expression "*I want to write*" explains the potent charm of Burroughs' writings. No editor ever prevailed upon him to write unless he had something he wanted to say. The written word with him was merely the visible results of the reaction of an exquisitely sensitive, sympathetic nature to the spirit of the forest, the peace of the sunset hour, or the heaven-born melody of the Hermit Thrush.

"I have loved nature no more than thousands upon thousands of others have" he said, but how many among these thousands have understood the manifold voices of woods and fields until Burroughs acted as their interpreter?

I clearly recall the delighted surprise, when as a boy, I first read Burroughs and found expressed on page after page some vague, half-formed thought of the possession of which I had been barely conscious. His books helped to acquaint me not only with nature, but with myself. This discovery I attempted to describe to him in a letter sent ten years or more before we met. Promptly came the reply expressing his pleasure that anything he had written should possess this potency. How many such letters he must have written as the succeeding third of a century rapidly widened his audience! How immeasurable was the influence they exerted upon the lives of those who received them! And if we are saddened by the thought that Burroughs' last letter is written, we must remember that his published works have that direct, intimate, personal quality which make them letters to the nature-lovers of all time. They are his legacy to the world.

If from this wealth of human documents I were asked to select one passage which more than any other revealed John Burroughs' attitude toward Nature at the end, as well as at the age of twenty-eight, when he wrote it, I should take these lines from 'In the Hemlocks,' published in 'Wake Robin.'

"Mounting toward the upland again, I pause reverently as the hush and stillness of twilight come upon the woods. It is the sweetest, ripest hour of day. And as the hermit's evening hymn goes up from the deep solitude below me; I experience that serene exaltation of sentiment of which music, literature, and religion are but the faint types and symbols."

This is John Burroughs' 'Angelus.'—FRANK M. CHAPMAN.

WHY DO BIRDS BATHE? II

By ERNEST THOMPSON SETON

MY ARTICLE on this subject in the November-December BIRD-LORE has resulted in some valuable information contributed by Dr. A. A. Allen, Ithaca, N. Y.; S. W. Hopper, East Orange, N. J.; Mrs. H. H. Dunshee, Cedar Rapids, Iowa; Mrs. F. A. Snow, Aiken, S. C.; Mrs. Bruce Ford, Philadelphia, Pa.; E. J. Sawyer, Watertown, N. Y.; Edith H. Whitaker, Toledo, Ohio; Dr. J. O. Tilton, Lexington, Mass.; R. Owen Merriman, Hamilton, Ontario, Canada; Mrs. T. T. Munger, New London, N. H.; Miss Mary T. Barrell, Portland, Maine, and others. To utilize their notes I submit a second summary.

My attention is called also to an article in the October *Auk* for 1915, pages 465-468 on 'The Birds' Bath' by Heyward Scudder. He points out four variants of the common or wet bath.

(a) The typical plunge, with ruffled feathers, spread wings, head ducked, splashing with wings and tail, the body shaken for 2 to 100 seconds. (b) A short bath of 2 to 50 seconds, flight to a drying perch, then one or more up to six or seven similar baths. (c) A number of short dips, without soaking. (d) A dip with wings tight shut.

To this he adds the '*air-bath*' described later.

THE VARIOUS BATHS

1. *The Dip*. That is, one or more dips with fluttering wings and tail, wetting, however, only the surface of the body feathers. There are at least three variations of this as above. The dipping of the Kingbird is a good illustration, but another kind of dip is the one that Swallows take while on the wing.

2. *The Soak or Plunge*. This is a thorough and elaborate wetting of the whole plumage, making it all as wet as it can be—wet to the skin. Of this the Robin is the great exponent; although, as will be seen later, the Screech Owl also claims honors as a Knight of the Bath.

3. *The Shower-Bath*, taken usually in the rain or under the garden hose, though E. J. Sawyer tells of an Indigo Bunting that improvised a shower-bath by repeatedly shaking the heavy dew down on himself. Some birds enjoy this so much that they sing while it rains. The Robin and Wren especially do so.

4. *The Sun-Bath*. The sun-bath is not always easy to determine. We may, however, consider a bird to be taking a sun-bath when it remains posed in a sunny place, with wings raised so the sun strikes parts of the body not otherwise exposed, especially when the bird at the same time gasps with open bill. E. J. Sawyer, however, sends a photograph of a Robin taking a sun-bath all spread out flat on the grass; also refers to the elaborate sunning of the Pied-billed Grebe. The sun-bath of the Turkey-buzzard is well known. Dr. Arthur A. Allen writes: "You do not credit Sparrows with sun-bathing and so am

enclosing a photograph of a White-throated Sparrow that was so indulging near a feeding-station."

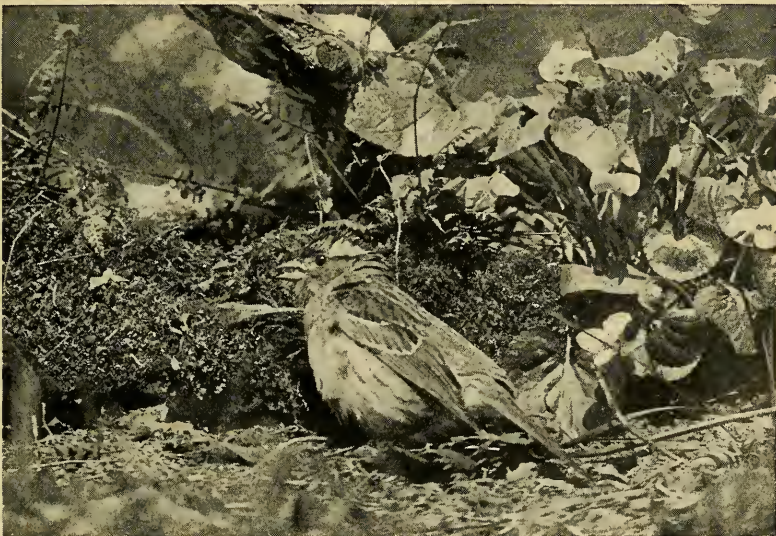
5. *The Air-Bath*, a uniform fluffing and opening of the feathers to the air only—a dry-cleaning.

6. *The Dust-Bath*, commonly taken by all birds of the gallinaceous group, but never by birds of greasy plumage. The following from my own journal has a bearing on this: Claremont, N. H., 20 Jan., 1903. Yesterday it was 22° below zero, today is a thaw, 6° above freezing, with heavy rain. Some English Sparrows flew on the piazza by my window, two were drenching wet, soaked and shivering. I thought, "You are not long for this world, my little friends." However, a flower-box under shelter afforded just what they wanted—a dust-bath; in this they set to work to dust themselves vigorously and in fifteen minutes all were dry and warm and in sleek feathers.

The *Snow-bath* is probably a mere winter substitute for the Dust-Bath. Only the Downy Woodpecker and the Shorelark are known to take it.

WHY THEY BATHE

The question is not yet answered but Dr. A. A. Allen sends the following: "My idea is that dust-baths kill vermin, but I have as yet found no biological reason for sun-baths or water-baths except as it seems to bring a pleasurable sensation to the birds. My observation has been that water-baths often follow dust-baths, and sun-baths often follow water-baths, for obvious reasons, but I know that that sequence is not always followed, and when a perfectly dry bird



IMMATURE WHITE-THROATED SPARROW TAKING A SUN-BATH

Photographed by A. A. Allen

indulges in a sun-bath it seems to do so for the pleasure it derives from it. (The only effect the sun could have on the vermin would be to drive them over to the shady side.) My efforts to drown bird-lice have been so unsuccessful that I can scarcely believe that the little soaking that the feathers get could have much effect upon them. A little dust in their spiracles, however, seems to put them out of business promptly."

GENERAL NOTES

The following is from Cedar Rapids, Iowa: "I can assert positively having seen bathing, Blackbird, Bluebird, Robin, Catbird, Blue Jay, Cardinal, Rose-breasted Grosbeak, Oriole, Brown Thrasher, Goldfinch, Woodthrush, some other Warblers, and, of course, Sparrows.

"When I brush out the bath every day I thought it must surely be primarily for cleanliness—there is so much sediment in the bottom of the bath. However, as you say, the Robins are in, I think, for fun. I have seen as many as seven young Robins in at once scrambling for place. The old birds won't let the young ones bathe till they have finished.

"Once I was fortunate enough to be near when a Thrasher, Grosbeak, and Oriole alighted on the bath at the same time. I do not remember now which gave way to the other. Several times Hummingbirds have flown through the spray from the hose, but this fall when it was very dry one could not be satisfied with that but lighted on a bent-over iris leaf and stayed as long as he wished then flew up in a lilac bush and preened his feathers like any bird.

"I have seen Robins take a sun-bath, but never any but Sparrows take a dust-bath."—MRS. H. H. DUNSHEE, *Cedar Rapids, Iowa*.

Mrs. Bruce Ford, of Philadelphia, says: "Catbirds are most energetic bathers in my little pool. One morning I saw one dip in the water, I think it was twenty-eight times, before it flew up to the tree again."

S. W. Hopper, of East Orange, N. J., writes: "For about seven or eight years I have kept a pan of water for the birds to drink and bathe in, in plain view from the window where I pass many hours each day. When the pan is full the water is about three inches deep. Robins, Starlings, Grackles, and Bluejays will plunge in singly or crowd around and fight and watch a chance to get ahead of one another. There have been as many as eight or ten in the pan at one time and I have seen them one and all plunge in in all kinds of weather, hot or cold, sunshiny or raining, even when sleeting and freezing on their feathers. While the larger birds are in the water splashing, the English Sparrows are all around on the edge of pan enjoying a shower-bath, but as soon as water is low enough, in they go with the others.

"Once I noticed a Yellow-billed Cuckoo, and many times a Flicker, at the bath. They act very much alike when thinking of taking a plunge; they stand at a little distance from the pan as though indifferent and undecided as long as any other bird is near, but when the coast is clear, they perch on the

rim of the pan to which they seem to have difficulty in clinging while they dip their heads two or three times into the water, and then suddenly plunge in and make a thorough job of it, sometimes returning for a second dip to make sure all is clean.

"The Baltimore Oriole likes to plunge and play in the water, also the Goldfinch, and once a Blackburnian Warbler came and took a dip. The English Sparrows are the only Sparrows I have ever noticed go entirely into water; and they never miss a chance any more than the Robins who like to sit right down and stay in the water some time. Song and Tree Sparrows and Juncos only care to be sprinkled."

Mrs. Frederick A. Snow of Aiken, S. C., writes that both Blue Jay and Cardinal take plunge baths.

A SCREECH OWL THAT SOAKED

The following account of an Owl bathing is of unusual interest:

"One evening, just at dusk, my attention was called to a great splashing in the bird-bath near a spruce hedge. Hastily dodging behind a big tree, and gradually crawling up to the bath, within eight or ten feet, there was visible only a confused mass of feathers, wings, tail, and great flurry of water. Out of this maelstrom came a Screech Owl, which hopped to a small shrub nearby, preened and shook himself, then flew into the hedge. Not a drop of water remained in the bath. Thinking it only a common occurrence for all birds to bathe, the matter caused me to mention the affair to my family only as being a most comical performance of a bird's bathing. The next night passed without a visit, but in the morning there was no water in the stone bath while another bath some fifty feet away was full. A few nights after, at a little later hour, my good fortune came again just as he came on the scene. The Owl (to me) seemed to find the water too shallow; at least his actions would so indicate, for he (?) plunged his head down into the water, then beat his wings furiously and finally swirled his tail and belly round and round, over and over, in one mad indistinguishable mass. No water was left in the bath after this, and a more woe-begone looking specimen never greeted an observer of birds as this Owl perched on the edge of the stone and finished his toilet. It certainly afforded me then, as well as several times the next summer, much pleasure. Some mornings last summer the water was all gone in this bath and probably my friend had been too early for me. Now that you tell me it is a rare performance I shall watch for him when the warm nights come again, for there is the same plaintive call as last year."—DR. JOSIAH ODIN TILTON, M.D., *Lexington, Mass.*

THE KINGBIRD IS A DIPPER; THE BLUEBIRD A SOAKER

"I have observed that Bluebirds and Kingbirds are my most frequent bathers, and that they bathe in absolutely different ways. The Bluebirds

bathe very thoroughly, making a business of it, going into the deepest part of the water, to the middle of the bath-tub, throwing the water all about and over themselves, and waiting for one another that everyone may have the deepest place. Sometimes seven Bluebirds have alighted on the bath at the same time and enjoyed a bath *en famille*. The Kingbirds alight on the wire fence and swoop suddenly down into the bath and out again, only dipping into the water, but doing this over and over again, never alighting on the bath-tub itself.

"I have seen seven varieties of birds at one time waiting their turn: Robins, Kingbirds, Bluebirds, Goldfinches, a strange bird almost as large as a Robin with olive back, white wing-bars, and brilliant breast, shaded from deep orange to pale yellow [female Oriole] and two kinds of Sparrows.

"The birds bathe usually in the early afternoon, when I fancy the water has become warmed by the sun. I sometimes have had to refill the bath three times in as many hours. It holds more than a quart of water and is about three inches deep in the middle. Our season in these uplands of New Hampshire is short, and the birds bathe mostly in July and August, June and September being too cold."—E. T. S.

THE BLUE JAY BATHES IN WINTER

"Blue Jays are very familiar neighbors of ours, coming to the window-sill regularly on winter mornings for peanuts and rearing their families in our old forest trees. They take frequent water-baths all summer in the bird-bath under the dining-room windows, thoroughly drenching their feathers and flying to a nearby branch or chair-back to shake and preen them.

"Last Friday, January 29, about the middle of the morning, two Blue Jays came to the bath, which had been recently filled, and enjoyed a real summertime water-bath. The weather had moderated after some days of severe cold, and the temperature was several degrees above freezing.

"Robins bathe as soon as they arrive in March and all through the season. They begin their daily ablutions early in the morning and seem especially to enjoy their evening bath. At midday they like to sit and soak in the shallow water of the bath."—EDITH H. WHITTAKER, *Toledo, Ohio*.

ENTHUSIASTIC ROBINS BATHING

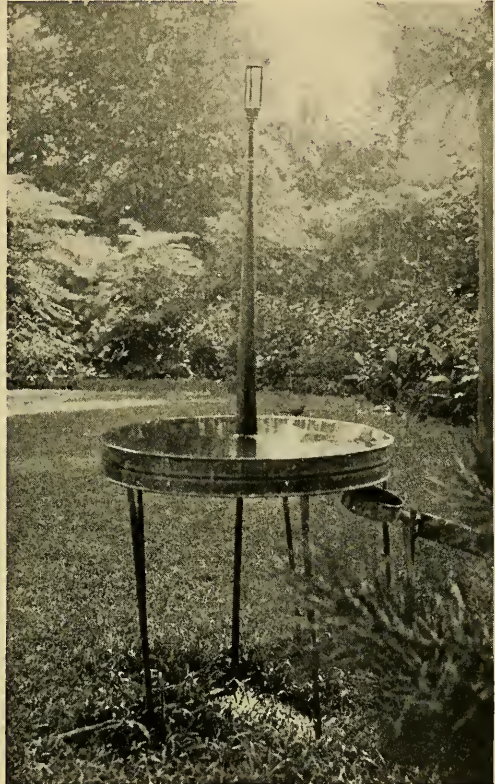
"My friend in town here put two large shallow pans filled with water on the lawn one evening. Next morning, a little before 6 o'clock, she counted nineteen Robins, twenty Sparrows, one Nuthatch, and two Vireos. The Robins were taking their bath, two at a time, going from pan to pan, while the Sparrows tried hard to get a foot in. At times they would sit in a circle on the rim of the pans, but Robins found time amid their splashes to peck—and peck hard too—sending the Sparrows in all directions. Then the Robins would chase their little ones in until they, too, had a bath. The Nuthatch and Vireos

stood on the fence watching. If one wants to enjoy birds, the early hours is the time."—MARY T. BARRETT, *Portland, Maine*.

A BIRD-BATH FOR YOUR LAWN

"A lover of birds has built the bird-bath shown in the illustration and placed it on his lawn directly in front of his living-room window. Every morning during the summer hundreds of birds come and take their daily bath. This little resort has become extremely popular and the trees round about are wonderfully populated with all sorts of song birds and other feathered folk.

"This bath consists of a drum of sheet metal slightly concave and in the center is mounted a long galvanized iron rod through which water is piped to the spray attachment at the top. The surplus water, which amounts to only five to six gallons a day, runs to one edge slightly lower and is piped away as shown in the cut."—DALE R. VAN HORN, *Lincoln, Neb.*



A NUTHATCH SOAKING AND A WOODPECKER SNOW-BATHING

"The only two unusual bathing observations I have made, however, have been in the winter months, when our bird-bath has been stored away. One was the Downy Woodpecker snow-bathing, my account of which was printed in *BIRD-LORE* for November-December; and the other was a White-breasted Nuthatch which I saw at his ablutions this morning.

"The soft, conversational, nasal notes of a Nuthatch made me look up from my book, and I soon located the talking bird. It was perching on an iron-pipe fence, fluttering its wings and preening its feathers, especially its flight-feathers. After a moment, it dropped to a small puddle at the foot of a tree and there splashed about vigorously for perhaps half a minute. Then it ran briskly up the trunk of the tree and out to one of the small branches, where it

shook itself dry and arranged its feathers correctly, and, just before flying away, refreshed itself with a bite or two of suet. The morning was mild (as most of the winter has been), with no snow on the ground; but the absence of sunshine and a dampness in the air made it, to my mind, an unattractive morning for a plunge out-of-doors. White-breasted Nuthatches may have the bath-habit, but, though I have watched them at all times of the year, this is the first time I have seen one enjoying a dip."—R. OWEN MERRIMAN, *Hamilton, Ont.*

A BIRD-BATH OF THE CENTURIES



"This ancient Indian mill, or 'maize-bowl,' showing the rounded cavity where corn was pounded into meal with a stone pestle, was found in Wayland, Mass., and is now used as a bird-basin in a garden in that town. In its original situation on a pasture hillside, it held water and was used by the birds as a bath from the time the last Indian ground corn in it—three hundred years ago.

"Thus may we not assume that we here see one of the oldest bird-basins in consecutive use in the country?"—ALFRED W. CUTTING, *Wayland, Mass.*

SUMMARY

These generalizations represent our present knowledge:

All of the perching birds take soak-, dip-, shower-, sun- and air-baths, but do not take the dust-bath except the English Sparrow, the Thrasher, the Song Sparrow, and the Wren. (I am in hopes that we shall add greatly to this list.)

All of the 'bigwings,' that is Goatsuckers, Swifts, and Hummingbirds, take sun-, air-, dip-, and shower-baths, but never soak- or dust-baths.

All of the Woodpeckers take all kinds of baths.

All of the Cuckoos take all kinds of baths, but their ally, the Kingfisher, omits the dust-bath.

All of the birds of prey take all kinds of baths, excepting that probably the Osprey omits the dust-bath.

All of the Pigeons and gallinaceous birds take all kinds of baths.

All of the wading, swimming, and diving birds are believed to take all baths, except the dust-bath. There are, however, few exact observations available.

When fuller information is accumulated a new chart of birds and their bath-habits will be given.

WHY NOT MAKE A BIRD'S DUST-BATH?

Now that we are establishing bird-baths all over, I wish some reader would try the experiment of a dust-bath for birds. Fine dust or ashes in a dish instead of water, with protection from wind and rain, would answer the purpose. I have tried it with a little lime and sulphur mixed with the dust, assuming that the dust was to combat insects. Reference to my note early in this paper shows how useful a dust-bath may be to the birds in the winter. Here is a chance for a lot of good, new observations.—E. T. S.

BIRDS I HAVE SEEN BATHE

"In the article by Mr. Thompson Seton, 'Why Do Birds Bathe?' published in the November-December number of *BIRD-LORE*, I notice this statement: "Outside of the Divers, Gulls, Ducks, Sparrows and Thrushes, I never saw any bird take a water-bath." In reply to that statement I send the following observations of visitors to our bird-bath. This bath is 4 feet long by 2 feet wide, with a depth of water of not more than $1\frac{1}{2}$ inches. It has been in use since the midsummer of 1916. Besides the bird groups mentioned by Mr. Thompson Seton, I have seen the following birds take water-baths: Rusty Blackbirds, Orioles, Meadowlarks, Cedar Waxwings, House Wrens, Redstarts, Summer Yellow-birds, Cape May and Nashville Warblers, and one Flicker. Of course, there have been dozens of Sparrows, Robins, and Bluebirds. I have seen seven Bluebirds in the bath at one time. One spring a flock of fourteen Cedar Waxwings visited the yard and all bathed, four or five being in at a time. Then in

deliberate Waxwing fashion they dressed their shining feathers in the spreading plum tree over the bath. The most beautiful sight was in the spring of 1917 when I saw a male Oriole bathe in one end of the bath with a male Redstart in the other end.

"As to habits in regard to bathing I have noticed that most water-bathers if undisturbed will go in a second time. Some love to soak a long time. The Junco is of this kind and when in the water he fluffs out his feathers until he looks like a ball and he also spreads his tail out on the water so that the white outer tail feathers show. It took the Flicker a long time to make up his mind to bathe. He came repeatedly to drink and often acted as if he wanted to bathe but could not quite make up his mind to do so. Finally one day he did it. The water was not deep enough to suit him and he looked very awkward as he tried to dip under and get his feathers wet. As to time of bathing, I have little to report. The Bluebirds in the fall always come about five o'clock in the afternoon. The early splasher in the morning is usually a Robin and the one to bathe just as darkness settles over the earth is a Song Sparrow. I once saw a Horned Lark take a snow-bath on a fence post and it seemed to be a most satisfactory performance."—MRS. ARTHUR F. GARDNER, *Troy, N. Y.*



A THRASHER AT THE BATH
Photographed by Craig S. Thoms

HOW TO MAKE A BIRD-BATH

"After trying many expedients for a bird-bath I have found a cement one by far the most satisfactory. It can easily be made in the ground by hollowing out a place, but a bird-bath should be placed at least two feet above

the ground, so that prowling cats cannot so easily take advantage of the bathers when they are off guard.

"To make a good cement bath, mix equal parts of cement and sand, with the necessary amount of water, and pour into a large dishpan, first carefully lining the pan with rather strong brown paper. Then press an ordinary chopping bowl, right side up, into the cement until the cement reaches the rim of the bowl. Weight the bowl down with bricks or other heavy material until the cement is set, but not fully hardened. Remove the chopping bowl and carefully trim the rim of the new cement bath with a knife. When the cement is thoroughly hardened, turn the dishpan upside down and the new bath will fall out. Remove the paper and the bath is complete. It is well, however, since cement is rather porous, to paint the bath inside and out with green paint.

"The bath should be placed, if possible, where it is shady during most of the day, as birds do not like to bathe in blazing sunlight."—CRAIG S. THOMS, *Vermillion, S. D.*

THE VISITORS TO AN ENAMELED BATH-TUB

"Replies to several of Mr. Seton's queries have been supplied by observations of birds which have frequented a white-enamelled pan which I have kept well filled with clean water and placed a few feet from my kitchen window. A sloping stone in the pan permits little birds to bathe in shallow water.

"On hot, dry days I fill this pan three and four times a day and the amount of dirt left in it shows that birds' feathers are by no means as clean as they look. The bathers must have been much relieved to get rid of so much dust. I am sure that many young birds bathe just for the fun of it, as children like to splash and wade in water.

"In that pan I have seen Wrens, Robins, Brown Thrashers, Catbirds, Rose-breasted Grosbeaks, Baltimore Orioles, Grackles, Blue Jays, House Sparrows, Flickers, Red-headed Woodpeckers, and Cardinal Grosbeaks. The two Woodpeckers were slow and awkward in their motions; they did not bathe often nor stay in the water long.

"The more I watch birds the more I am impressed with their human characteristics. Birds like to 'follow the crowd' to see and do what other birds do. In that same door-yard I attracted many birds to eat suet. When the House Sparrows saw the Nuthatches, Chickadees and Woodpeckers eating suet, they would eat it too; but in another home near Chicago I put out suet two winters without attracting birds, and though many Sparrows were around they did not touch it. So I thought that the Woodpeckers tried the bath because they saw other birds do it.

"Last October, at Forest Glen, on the north branch of the Chicago River, I saw a beautiful sight—great numbers of birds bathing at the same time just a little before sundown. Many of them were Juncos; nearest to me were a pair of Bluebirds; just beyond them some yellow birds—they may have

been Goldfinches in winter dress. I dared not go too near for fear of frightening the whole flock. There were Robins, Grackles and, I think, some Sparrows also, but the Juncos far outnumbered all the rest. I went a second afternoon and saw the same thing repeated.

"While one of our family was using the garden hose one afternoon, a Ruby-throated Hummingbird flew under the spray and took a good drenching, then flew up to a telephone wire to preen and dress its feathers.

"It is a temptation to tell of the many incidents connected with that bath-tub which I saw from my window, about four feet away, but I will mention one: A mother Catbird brought her young hopeful there for, I have no doubt, his first bath. She seemed to be coaxing him to enter the water, which he was reluctant to do. Finally he made the plunge and was as delighted as any small boy in the gutter, and one never saw a prouder mother! The pan always stood on a box about two feet above ground and she walked round and round on the box arching her pretty neck like a true thoroughbred; once she hopped on the rim of the pan looking down on her offspring with greatest pride. When he was satisfied with his splashing, they flew away together. She did not go into the water.

"Wrens enjoy a dust bath. The paths in my garden are at times dotted with little hollows made by them. One coquettish little fellow, who always tried to attract my attention whenever I went into the garden, would fly down in front of me, a few feet away and whirl about in the dust.

"I think birds bathe at any hour of the day, but they were more apt to come the first half of the forenoon or latter half of afternoon."—L. ELIZABETH CLARK, *Decatur, Mich.*

NOTES FROM NOVA SCOTIA

"Replying to Mr. Seton's inquiry, I have seen Robins, in pairs, bathing in the early dawn oftener than at any other time, in flower-pot saucers on the lawn, arranged to receive the drippings of the hose from the top of its reel. They go in and shake their wings up and down, hop out and go in again repeatedly. I have also seen them do the same thing in the heat of the day. Two or three times last autumn, when they were supposed to have left us, I saw large flocks of a dozen or more bathing in the dusk of early evening. They perched on the bushes, and flew around in great excitement; they were never still for a moment while waiting a chance to bathe. The three saucers were always in use.

"Sparrows, Warblers, Goldfinches, Chickadees, Redstarts, Juncos, also bathe at intervals all day in warm weather, but I have not seen Vireos nor any of the larger birds except the Robins. Hummingbirds have been seen to bathe by a neighbor, but not by me. They come often to drink the drops at the end of the hose."—A. A. DESBRISAY, *Bridgewater, Nova Scotia.*



BIRD-BATH FOUNTAIN AND SITE NEAR SUMMER-HOUSE AT THE HOME OF
T. B. POWERS SPRINGFIELD, MASS.

THE FLICKER BATHING

"To Mr. Seton's list of birds seen bathing I can add the Flicker. This species frequents a cement-lined pool in our lawn so frequently in hot weather that it has never occurred to me to make a note of its bathing in my daily record of birds seen. On two occasions, however, because of the time of the year and coolness of the weather, I have recorded it at the bath. Thus, on September 6, 1916, not only the Flicker but Blue Jay, Robin and Oriole bathed, and on March 30, 1917 there is another entry of a Flicker at the bath.

"I remember well seeing a Flicker try to teach a young bird to bathe by going into the water and making quite a splash while the baby only stood in the edge of the water and shivered as the water fell on him. He finally did go into the water when the parent flew into a tree but only stayed for a minute. I have often remarked on the length of time it always takes a Flicker to make a toilet after a bath. Only one other bird that I know is more deliberate and that is the Brown Thrasher."—MRS. H. M. BAILEY, *Sioux City, Iowa*.

THE BLUE JAY'S BATH

"In Woodville, Miss., where I formerly lived, I kept a broad, shallow receptacle under the hydrant in the front yard for the sake of the birds. I know that many birds bathed in it, but I never kept an accurate record because I supposed that birds used water-baths pretty generally. One thing, however, I am sure of: There was no species that used the plunge bath more regularly and enthusiastically than the Blue Jay. Whether all the Jays did it, or only a few individuals, I cannot say. But I know that one Blue Jay at least used to plunge and splash every day, like a boy in his swimming hole."—H. W. WELLS, *Port Gibson, Miss.*

THE SONG SPARROW IS A SOAKER

"The recent article in BIRD-LORE, 'Why Do Birds Bathe?' by Ernest Thompson Seton, reminded me of an unusual incident witnessed one stormy April day. We had been feeding a Song Sparrow in the yard since the second of the month. Here is my record:

"April 5, 1920.—The day has been rainy and not warm, featuring fierce showers which swooped upon the earth in relentless fashion, the sound of their determined might occasionally augmented by a rumble of thunder. We thought of the spring birds and spoke of them with pity. We shall have scantier fears next time.

"Looking from a window, in the late afternoon, G—— noticed something moving in a small pool which had collected by the doorstep. Her first thought was that a frog was in the water. A closer scrutiny revealed our Song Sparrow. Her instantaneous idea that it was hurt and drowning was not held long. The incredible fact became evident that at almost dark, on a chill, stormy April day, the bird was taking a bath. G—— called to me and I looked down from my room

upon its thorough ablutions, marvelling exceedingly. Think of the little creature going to bed with sopping wet feathers. Nothing Sybaritic about our Song Sparrow! This astonishing occurrence was at a quarter past five. An hour later the street lights were shining."—CLARENCE E. PATTERSON, *Bangor, Maine*.

THE ROBIN TAKES SHOWER BATH AS WELL AS PLUNGE

"Standing at the window of my room, one rainy day in the summertime, my attention was drawn to a Robin that had alighted on the roof of a nearby shed. There was a shower of rain falling, so much that there was quite a splashing on the shingles. I wondered why the bird didn't seek shelter, but while I wondered it commenced a series of gyrations and gymnastics, ducking its head and flapping its wings precisely as if it were in a pan of water. Then I saw it was taking a bath in the rain. After a minute of this exercise it ran up to the comb of the shed roof and there commenced shaking itself and preening its feathers, while all the time the rain was falling. Presently it flew away, as if convinced that while that might be a good bathing-place it was not a good place to dry one's feathers."—A. W. BEALE.

ROBINS AND FLICKER

"In your November-December issue I noticed the article, 'Why Do Birds Bathe?' with a list of birds observed taking various kinds of baths. To this list let me add the following: Robins taking sun bath, any time; Flicker taking plunge bath, warm mornings in summer."—S. R. INGERSOLL, *Ballston Spa, N. Y.*

Notes from Field and Study

A Nest Census

On June 17, 1919, I set out with a view of ascertaining the number of nesting species of birds in Cobb's Hill and vicinity. This place is in the southeastern part of the city and is very well adapted for the nesting of some birds. A stream runs through the lower portion of it, flowing into a swamp and from there into the Erie Canal. There are about twenty acres of deciduous trees which comprise the woods. The principal ones are the chestnut, white, red, and black oak, shagbark hickory, sassafras, and black cherry. Along the border of the stream there are numerous black willows and very thick underbrush. In the forest proper there is a wonderful place for the birds which usually nest on the ground or in thickets. The sand-banks also offer an opportunity for those birds which burrow holes in the earth for nesting purposes. A field of grass on the eastern side of the woods affords a site where the birds which generally breed in these places may nest. There is an abundance of natural food for birds both in the swamp and the woods. Cherries, apples, grapes, and blackberries grow wild here, and sumach, elderberries, haw, mountain-ash, and flowering dogwood are found in large quantities.

One may find a goodly number of birds here all during the year as it is, in the writer's opinion, a fine place for them.

The following is a list of birds known to be nesting at this place.

1. Killdeer. One pair nesting on an ash-heap near the canal.
2. Sparrow Hawk. Nesting in the edge of the woods near the field.
3. Black-billed Cuckoo. Two birds were seen but no nest was found.
4. Kingfisher. A pair nesting in the sand-bank.
5. Red-headed Woodpecker. One pair had a nest in a red oak tree on the edge of the woods but they left before this date.
6. Northern Flicker. A pair had a nest in the stub of a dead tree in the swamp and another pair were breeding in the woods.
7. Ruby-throated Hummingbird. One

bird was seen. Very likely it was nesting in a nearby orchard as it was seen not far away.

8. Kingbird. One pair nesting.
9. Wood Pewee. Four pairs of these birds were breeding in the woods.
10. Crow. There seem to be no large Hawks or Owls around to usurp these nests, so the Crows live peacefully in the same one year after year. Three nests were occupied.
11. Red-winged Blackbird. One male was seen in the swamp.
12. Meadowlark. Two birds were seen in the field.
13. Baltimore Oriole. Two pairs of these birds were nesting in elms near the swamp.
14. Goldfinch. There are usually about four pairs which nest here later in the season.
15. Chipping Sparrow. One pair nesting.
16. Field Sparrow. One pair breeding in the grass field.
17. Song Sparrow. About seven pairs were nesting.
18. Towhee. One male seen in the woods.
19. Indigo Bunting. Three males and two females seen.
20. Bank Swallow. Only two pairs were nesting this year whereas for the past three years there have been twenty or thirty pairs of these birds breeding.
21. Red-eyed Vireo. Three pairs nesting in the woods.
22. Yellow Warbler. Only five birds of this species were noted and this seems a small number compared with the number of nests found when the leaves fall.
23. Chestnut-sided Warbler. A male was noted in full song in a sassafras thicket on the east side of the woods.
24. Oven-bird. One bird was seen.
25. Mourning Warbler. One bird was observed.
26. Maryland Yellow-throat. Two pairs of these birds were nesting in the marsh.
27. Redstart. Two males and a female seen in the woods.
28. Catbird. About ten pairs of these birds always nest along the border of the creek in the thickest underbrush.
29. Brown Thrasher. Two nests of this bird were found.
30. House Wren. Two nest-boxes were occupied and another pair had a nest in a pile of underbrush.
31. White-breasted Nuthatch. One pair nesting in the heart of the woods.

32. Wood Thrush. Two pairs of these birds were nesting near the stream and another on the margin of the woods.

33. Wilson Thrush. Two pairs nesting in the woods.

34. Robin. About fifteen pairs nesting.

35. Bluebird. One pair breeding in a bird-house on the edge of the woods.—
RICHARD M. CHASE, *Rochester, N. Y.*

The Woodcock as a 'Bluffer'

The instinct of self-preservation is usually strong in all animals, and Nature has furnished many devices for the protection of her children. Color patterns which harmonize deceptively with the surroundings, pretended injury to attract the intruder's attention away from a nest, and the posture of motionless silence are some of the most common forms.

An excellent example of the application of all three methods was seen by the writer a few summers ago when he flushed a Woodcock while passing along an old, unused woods-road. Because of her protective coloring the bird was not seen until flushed, and although it was certain that the nest was directly underfoot, it required several minutes of close observation to discover the three little balls of feathers huddled in the middle of the path.

The mother bird, pretending to have a broken wing, and uttering cries of apparent distress, flew, fluttered, and flopped over a stone wall into a large field adjoining. Recognizing the trick, and wishing to see how long she would 'play the game,' the writer left the young birds undisturbed and followed her. When the pursuer stopped, the bird redoubled her efforts to coax him away, now remaining temptingly near, again flying to a safe distance. This performance was kept up across the ten-acre lot to the farther wall, where, partly concealed by a fringe of small trees, this stupid-looking, shallow-pated, but cunning Woodcock, thinking she had quite fooled the enemy, suddenly recovered the use of her wings, and flew in a wide circle toward her nest.

Retracing his steps, the writer sought the young birds, and, standing very near, slowly stooped with extended hand. Not

a movement or a peep. Closer and closer went the hand, and still, true to the instinct that in absolute quiet lay their safety, they did not stir. Only one inch away! Could they stand the strain? Again the hand moved, but the instant the finger touched those tiny balls of yellow fluff, the spell was broken, and away they went into the bushes, where they were doubtless soon rejoined by their mother.

So well do the feathers match the light and shade of the surroundings that one may stand almost directly over a Woodcock on her nest, knowing the bird to be there, and yet for some time fail to see her. Turn away for a moment, then back again, and it is almost equally difficult to make out the form. Even the large eyes, adapted, perhaps, for nocturnal activities, seem to blend with the foliage of the swampy thicket so frequently chosen for her nesting-place.—S. N. F. SANFORD.
Boston, Mass.

A Tame Grouse

In the November-December, 1920, issue of BIRD-LORE appeared the story of a tame Grouse near Schenectady, N. Y. Several years before that there was a tame Grouse at Oneonta which was discovered twenty miles away the following spring.

June 11, 1920, I noticed a Grouse following me in a patch of woods near Melrose, N. Y., about twenty miles from Schenectady. I was on the highway, walking, but entered the woods and cautiously approaching the bird, a male, succeeded in catching it with bare hands. He had spread his ruff and tail like a Turkey, and slowly walked ahead of me although I was within arm's-length. After admiring and petting it, I set it down and the bird calmly proceeded on its dignified promenade, making a chucking noise. Upon mentioning this to Mr. Burroughs the following week, he told me of the Oneonta bird.

The date is not mentioned in the November-December article, but there is a possibility of this being the same bird. A great many automobiles pass this road on their way to Troy and Schenectady and

the occupants gather wild flowers along the road, also berries. The bird, being so tame, could have been captured and taken along, escaping from its captor near Schenectady.

At any rate, it is a queer coincidence, and coincides with the Oneonta episode also. If BIRD-LORE readers will remember, a tame Grouse appeared in Vermont a few years ago, making perhaps five cases, all in this section.—EDGAR BEDELL, *Waterford, N. Y.*

Preparation of Food by a Blackbird

A kindly neighbor follows the laudable practice of keeping a pan filled with fresh, clean water in the center of her small garden, for the refreshment of the birds. Very often this offering is supplemented by crumbs from the table. I can see this pan and its many feathered visitors from my window.

One day, one of the visitors happened to be a fine, slick Blackbird. He moved about, occasionally perching himself on the edge of the pan and dipping his bill in the water. Suddenly, he cocked his head to one side and then flew a few feet away where lay a piece of crust. Pecking away for a moment, he flew with the crust to the edge of the pan and dropped it in the water. Standing guard for a short while, he quickly took up and swallowed the softened crust and flitted away, evidently feeling well repaid by his sagacity in making a tasty morsel from a hard, dry crust of bread.—GEORGE E. EROL, *Germanstown, Philadelphia, Pa.*

A White Crow

On February 10, 1921, while motoring northwest of Indianapolis, I came upon a flock of about eight Crows, among which was an albino, its wings and upper tail feathers being white. I was quite close to it for several seconds.

On February 14 I again drove to the same locality with a party of six. Near the same place, and in an open, newly plowed field, I saw the white Crow, and

after a period of about a half minute it flew with a black Crow. As I started in pursuit from near the place in the field there flew a second white Crow. I have not seen them since, but farmers in the neighborhood report them still in the same locality. One neighborhood farmer is of the opinion that the Crows have crossed with Pigeons [!] as an explanation for the white Crows. He says that for several seasons white Crows have been common in the neighborhood.

I will attempt to follow up the situation in an effort to ascertain more definite information regarding the cause of so many albinos in the locality.—S. E. PERKINS III, *Indianapolis, Ind.*

A Family of Wood Thrushes

In the latter part of April I heard a sweet, whistle-like call of a bird, which was not familiar to me. I was not positive I had heard it before, so I immediately made a search for it. I heard the bird on the lawn of the Miami Woolen Mills of Lindenwald. I work there and as I am close to the window I had a chance to learn something of this bird. This company has a lawn, about 125 feet square, and bounded on the north and east sides by the large brick structure of the mill itself, and on the south and west by Symmes and Pleasant Avenues. Shade trees adorn the south and west sides, and inside are several birch and maple trees and numerous lilac and other bushes. In the center is a 45-room Martin house which gives it a very pleasing look. It is a very nice place for birds except for the everlasting, menacing house-cat.

It was here that I saw this bird hopping along the ground like a Robin. I soon identified him as the Wood Thrush. For the first week he was there alone, when, one morning, as I was looking for him, I saw something flashing by the window, and, watching closely, saw him chasing another Wood Thrush. Within an hour I saw them again on the ground feeding on insects here and there. The second one was a shade lighter than the first and presumably was

the female. I did not have to wait long for what I wanted to see, for about May 10, I noticed the female carrying bits of paper, dead leaves, and wool into a tree close by. The nest was placed out on a limb about 12 feet high and within 5 feet of an upstairs window. There were all kinds of noise from the looms and warp machines in the weave-room, but it didn't seem to bother the birds a bit. The nest was made up of paper, wool, and leaves for the bottom, then some sticks, and some mud for the inside and finally finished with rootlets for the lining.

The female seemed to do all the nest-building while the male sang to her and sometimes would fly with her to the nest just as if to see how she was getting on with her work. Within a week I noticed the female stayed on the nest most of the time. Knowing that incubation must have commenced, I watched my opportunity to peep in the nest. She did not fly off the nest until I almost touched her. With a loud *pit pit* she called for her mate. They both scolded me until I left. The female returned to her nest immediately. In the nest were three eggs about the color of Robins' eggs but not quite as large.

I patiently waited for the young to arrive and about June 1 the nest contained two young. Both parents seemed to feed the young but one always stayed at the nest until the other returned. The young grew fast and left the nest before the middle of June. They were pretty little fellows with their brownish backs and whitish underparts. The male seemed to do all the feeding after the young left the nest. Within three days after that I noticed the female carrying paper, wool, and leaves as before. I watched her and noticed that she was building another nest in a maple tree about 50 feet from the first and about the same height from the ground. This nest was about 30 feet from the building and well out to the edge of the tree. I do not know how many eggs were laid this time, as I never had a chance to look in the nest.

While the male was busy with the first young the female was brooding the eggs

for the second offspring. I didn't see the first two young after July 10. They were full grown at that time and looked almost like their parents. They left the lawn then and I suppose went out in the world with others of their kind. The second brood were hatched about July 15 and left the nest July 26. This time there were two young again. They did about the same as the first, the male doing the feeding.

About a week ago one of the young flew through an open window direct to the shipping-room. The shipping clerk, who is also a bird-lover, caught him and put him back with his parents.

Yesterday, August 7, when I last saw them, they were getting pretty well grown, and I think they will also soon leave. The female has not been seen for the last week, but the male is taking good care of the young.

I hope all these Thrushes land safely through their migrations. I will be glad to see them return again next spring for these birds have given me much pleasure.—FRANK HARBAUM, *Hamilton, Ohio*.

More About the Song of the Red-eyed Vireo

In the September-October, 1920, issue of BIRD-LORE I had a few notes concerning the ability of a certain Red-eyed Vireo to mimic the call of the Crested Flycatcher.

Since its publication I have received an interesting letter from Mr. Winsor M. Tyler, of Lexington, Mass.; and as he gives me leave to quote his observations, and suggests I send further notes on the subject to BIRD-LORE, I wish to add the following extract from his letter:

"I also have heard a singing Red-eyed Vireo interpolate the note of the Crested Flycatcher and Mr. Walter Faxon spoke to me once of another Red-eye which did the same. From these three observations, two made in Massachusetts and one in Ohio, we must infer (must we not?) that the introduction of this seemingly foreign note is a habit of the species, although the note is rarely heard, rather than a peculiarity of an individual bird.

"That the Vireo is imitating the Fly-catcher seems doubtful to me, for I cannot recall hearing the Red-eye utter the note of any other bird. Then, too, the Great-crest is a very uncommon bird with us."

It would be interesting to learn if others have heard this peculiar song of the Red-eye, and to hear their views upon the subject.—E. A. DOOLITTLE, *Painesville, Ohio*.

The Evening Grosbeak a Summer Resident in Northern Minnesota

About a year ago, I sent a brief article on an Evening Grosbeak which I saw in the month of July, 1917, near the International Boundary, north of Lake Superior on Gunflint Lake. The actions of the bird and the information I gained about the species from settlers, lead me to think that the birds were nesting in that region, although I did not find a nest.

On August 1, 1919, I again saw Evening Grosbeaks in Itasca County, Minn., about a hundred miles farther west and fifty miles farther south.

Two birds, both of which seemed to be males in full plumage, I saw on a little patch of sand near the post office of Pinetop in central western Itasca County. They were apparently picking up fine gravel and when they left, flew into a small tamarack swamp close by. These birds were seen within a few rods of a farm. The postmaster of Pinetop and his boys told me that they were there every summer, but he did not find the nest.

August 8, the same year, I saw two Evening Grosbeaks in a tree in front of the post office of Popple, Itasca County, twenty miles northeast of Deer River. The postmaster told me that these birds were there every summer and that they had been in the habit of picking up sand and gravel in front of his door, and that about a week ago his cat had caught one of them. These birds also flew to some low wooded land on the Popple River which passes the door of the post office.

I did not find a nest in this region and saw each pair of birds only once, but these observations lead me to think that the Evening Grosbeak should be listed as a summer resident over a considerable part of northern Minnesota, and I shall try this summer to discover a nest. Campers and bird students who happen to see this notice would do well to look for nests and young as early in the season as possible.—D. LANGE, *Saint Paul, Minn.*

The Yellow Rail Near Chicago

A Yellow Rail was found dead on the streets of Hinsdale during the spring of 1919. It was mounted and preserved by the Science Department of the school. One of my boys found one alive in a snowdrift during the Easter blizzard of 1920. It appeared very much exhausted, often tucking its head under its wing before a whole room full of observers.

I am inclined to believe these Rails pass through this area in migration more commonly than we had supposed.—ESTHER A. CRAIGMILE, *River Forest, Ills.*



THE SEASON

XXV. February 15 to April 15, 1921

BOSTON REGION.—Following an unusually mild winter, this has proved the earliest spring New England has known for years; not even in the notable spring of 1910 did the vegetation develop so rapidly. The present spring rivals that historic one of 1775 when, during the battle of Lexington, the grass on the Common is reported to have waved in the breeze.

Both from an ornithological and a botanical point of view, it has been interesting to compare this year with the remarkably late season of 1920. On February 20, 1921, just when we had begun to look for Bluebirds and Song Sparrows (the weather had been mild and for a week the ground had been practically bare), there came a foot and a half of snow, the heaviest snowfall ever recorded here for a single day. The delay in the progress of the season was short, however, for after ten days of warm sunlight the ground was bare again, hylas began to sing, and during the week following March 6 the first group of migrant birds entered the region in full numbers—Song Sparrows, Flickers, and Meadowlarks were distributed throughout the country; Blackbirds, Red-winged and Rusty, and Bronzed Grackles came in immense flocks, "clatt'rin' in tall trees," and with them came Bluebirds and Robins (feeding on the ground thus early), and soon afterward Fox Sparrows arrived (on the 11th, before their average date). Close on the heels of this group a few Phœbes and Cowbirds appeared (on the 13th, record dates) and within a few days the latter bird was well represented in the region, fully ten days before its average date of arrival. A year ago at this time the ground was completely covered with snow and no birds had appeared.

During the mild weather of the last two weeks in March the temperature rose to between 70° and 80° on four days; blossoms and leaves burst forth three weeks earlier than they did last season; the birds

pushed northward in such numbers that new arrivals were noted almost every morning; the Vesper and Field Sparrows and the Fish Hawk appeared on early record dates, and Ruby-crowned Kinglets and Yellow Palm Warblers (both early in arriving) are now passing through in full numbers, singing freely.

Thus far in April there have been very few cold days to interrupt the growth of vegetation and the migration of the birds. Chipping Sparrows have been here for ten days, Bluebirds are incubating, and the Robin has begun to build "his adobe house;" the country presents a picture of mid-May with grass of vivid green, blossoming fruit trees, and many spring flowers in bloom, and today, the 10th, appeared an anomaly, a June-bug in April!—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—The end of an otherwise open winter was punctuated by a very heavy snowstorm on February 20.

A question which naturally arises concerning summer birds which linger here and there into a mild winter like the past one, is whether they actually succeed in hanging on until spring. A Brown Thrasher observed at Bayside, L. I., February 27, by H. E. Dounce, and which had been reported to him in the same locality about three weeks, and again ten days previous, had weathered this storm successfully.

The most notable feature of the period under consideration was early and protracted movement of water-fowl, and unusual abundance of fresh-water species, including records of rarer forms (Overpeck Marshes, N. J.—Griscom). Canada Geese wintered on the south shore of Long Island in fair numbers, which were augmented in February. A flock flying over somewhat east of north in migration was observed in February (Bayside, L. I.—H. E. Dounce) and about March 20 (Mineola, L. I.—Griscom and J. T. Nichols). Up the Hudson Ducks were unusually numerous about

April 1 (Rhinebeck—M. S. Crosby). At a corresponding date (April 3) Griscom and Janvrin found the following species on the Overpeck Marshes: American Merganser, Mallard, Black Duck, Pintail, Green-winged Teal (4), Shoveller (1 drake) Lesser Scaup (34), Ruddy Duck (3).

Usually some spring changes may be observed among the land birds on Long Island by the end of February. This year nothing of the sort was noticed in two days spent at Mastic at that time, doubtless due to the storm of the 20th from which the ground was still snow-covered. Ring-billed Gulls and Great Blue Herons had doubtless been present all winter. The snow was gone the beginning of March, and the earliest migrants came at about their average dates.

From this point, as regards vegetation, the spring advanced with unusual rapidity; so that from the 5th to the 10th of April cherry trees and Norway maples were in flower, other maples coming into leaf, and shrubbery becoming quite green. Though there was not much general acceleration of migration to meet these conditions, several species were ahead of time and some notably early records of arrival were obtained. The Ruby-crowned Kinglet and Hermit Thrush were generally scarce, or late in appearing, though from the Bronx a report of the former on April 3 and of the latter on April 4 has come to hand (F. F. Houghton). Among the early records are: March 20, Chipping Sparrow, and April 3, Bittern, near Plainfield, N. J. (W. DeW. Miller); March 25, Vesper Sparrow, Mineola, L. I. (J. T. N.); March 27, Pied-billed Grebe, Fish Hawk, Tree Swallow (2 flocks), Vesper Sparrow, and April 3, Yellow Palm Warbler at Englewood, N. J. (Griscom and Janvrin); March 11, Phoebe, March 26, Vesper Sparrow, March 29, Chipping Sparrow, April 2, Ruby-crowned Kinglet (M. S. Crosby), and April 10, Purple Martin (Crosby and Griscom). At Rhinebeck, Dutchess County, Cowbirds became generally distributed toward the end of March; April 14, Solitary Vireo, Central Park, New York City (Granger and Griscom).

Robins were actively building at Garden City April 8.—J. T. NICHOLS, *New York City*.

WASHINGTON REGION.—If birds about Washington, D. C., were uncommonly silent throughout January, 1921, they certainly were not so during February and March. Most of the resident song-birds, such as the Cardinal, Song Sparrow, Tufted Titmouse, and Mockingbird, began singing regularly about the 1st of February and continued in full song thereafter. They have seemed more than ordinarily active in this respect, though, of course, with intermissions. The weather at this time of year has apparently great influence on the song as on other activities of birds, and it is interesting to note its effect, although of this, as of other phases of their life history, much is still to be learned. Their singing at this time of the year is greatly stimulated by warm, still weather, whereas a windy or damp, cold day seems largely to seal the fountain of song. Sudden changes in temperature or other weather conditions are more likely to cause these changes than gradual transitions. Such variations in activities have been particularly remarked during February and March of this year.

The generally warm weather of these two months has apparently had some influence on the northward movement of early migrants, though not to the extent of bringing them here long in advance of their usual time, nor of breaking many records of early appearance. This effect may best be seen in the following list of arrivals that are earlier than the average, which is added in parentheses after each: Mourning Dove, observed February 6 (average date of appearance, March 16); Fox Sparrow, February 19 (March 4); Red-winged Blackbird, February 22 (March 1); Killdeer, February 22 (March 7); Towhee, March 7 (March 28); Belted Kingfisher, March 7 (March 23); Phoebe, March 7 (March 11); Pine Warbler, March 12 (March 31); Osprey, March 20 (April 11); Pied-billed Grebe, March 20 (April 1); and Blue-Gray Gnatcatcher, March 30 (April 8). It should be noted,

however, that all of these excepting the last five occasionally winter in this region.

One bird, the Louisiana Water-Thrush, was reported on March 27, by Miss M. J. Pellew, in Rock Creek Park, Washington, D. C., which is in advance of the earliest previous record, March 31, 1918; but this is the only species so far that has broken its record of early arrival.

A number of birds, such as the Woodcock, Hermit Thrush, Yellow Palm Warbler, Vesper Sparrow, and Brown Thrasher, put in their appearance at about the normal time, while the Chipping Sparrow (on March 26) was a few days behind time. On the other hand, a few that should have arrived before April 1 have not yet (March 31) been noted. These are the Cowbird, Savannah Sparrow, Purple Martin, and American Pipit.

Comparatively few birds of more than passing interest have been observed. Two Holboell's Grebes, rare here, were seen by Dr. Paul Bartsch on the Tidal Basin, at Washington, D. C., on March 8. No further report from the Whistling Swans that have wintered on the Potomac below Washington has been received, but a flock of eleven was seen flying over Georgetown, D. C., by Mr. William Palmer, on March 18. This last record has a further and melancholy interest, as it was the last or almost the last observation on birds made by Mr. Palmer.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN (OHIO) REGION.—The migration season opened at Oberlin on February 16, when the first wave of Crows, Robins and Bluebirds appeared. The next wave was on the 23d, with Killdeer and Red-winged Blackbird as arrivals, and an increase of those of the first wave. The third wave began on March 2 and terminated on the 5th, involving 14 species as arrivals and the increase of the earlier arrivals. Phoebe came on the 8th, Towhee on the 10th, Field Sparrow on the 12th, Vesper Sparrow and Woodcock on the 13th, Bufflehead on the 14th, Fox Sparrow on the 15th, Baldpate, Pintail, Shoveller and Pied-billed Grebe on the 17th, Turkey Vulture

on the 19th. This scattering wave was due to continued moderately favorable weather over the period, and terminated with the coming of less favorable weather. Yellow-bellied Sapsucker came on the 25th, but the next definite wave was delayed until the 3d of April and was continued until the 8th. The arrivals during this wave were Hermit Thrush, Brown Thrasher, Swamp Sparrow, Pectoral Sandpiper, Purple Martin, Bittern, Barn and Tree Swallows, Ruby-crowned Kinglet, Upland Plover, Bonaparte Gull, Louisiana Water-Thrush, Savannah Sparrow, Myrtle Warbler and Blue-Gray Gnatcatcher. Immediately following this last wave, cold, wet weather arrived and effectually checked any further movement. The first and second waves were about ten days in advance of the average for this region, the third wave was nearly average, and the last wave recorded here approximately average, but with considerable mixing up of species normally belonging to other waves occurred. Thus the exceptionally warm winter has not resulted in any marked departures from normal in the migrations, except that the three species making up the first wave were ten days early. There is so much variation in the species making up the second wave that the same remark cannot be made to apply to it.—LYNDS JONES, *Oberlin, Ohio.*

CHICAGO REGION.—Since the last report, Chicago has been having its usual spring weather, changing from warm and mild to cold and stormy a few days at a time. On April 9, there was a flurry of snow which changed to rain and, with freezing weather, caused some damage to the fruit trees. The birds, however, are arriving every day in spite of the weather, a few earlier than usual. A Hermit Thrush was seen in Jackson Park on February 20 and a Coot February 27. Mr. De Laubenfels reports a Bonaparte's Gull (March 26) at Jackson Park, Brown Thrasher (April 2) Bittern and Tree Swallow (April 7) from Willow Springs.

The marshes are of special interest at this time as Ducks are very plentiful,

15 species having been reported to date, the most notable of which are a Greater Scaup (De Laubenfels), seen in Jackson Park, and the Ring-necked Ducks which are very numerous. Also many Canada Geese and one Snow Goose (De Laubenfels) seen at Hinsdale. The Ducks seem to know that they are protected as they are quite tame and allow a close approach. I watched a Scaup on a small pond for five minutes, while standing within 20 feet of it. Although I waved my arms and made various noises it did not take alarm and only flew when a stone was dropped near it. Pied-billed and Horned Grebes and Great Blue and Black-crowned Night Herons are beginning to arrive; a Pectoral Sandpiper and Double-crested Cormorant (De Laubenfels) were seen at Willow Springs April 2. The Killdeer and both Yellowlegs are here and the Jack Snipe rise from the marsh every few feet while the Redwings continue their noisy mating and the Marsh Hawks keep a sharp watch over the entire swamp.

Lapland and Smith's Longspurs are here in large flocks near Argo; numerous Tufted Titmice have been reported from different localities. This bird seems, like the Cardinal, to be extending its range to the north, as they are seen more commonly every year. Besides the common Hawks, a few Rough-legged Hawks have been seen in the sand-dunes. Most of the Sparrows are here in full song and many Kinglets, Brown Creepers and Sapsuckers are to be found roaming through the woods. The first Myrtle Warbler (De Laubenfels and Ford) was seen March 20 in the sand-dunes and is now common everywhere.

Mr. W. A. Lyons, of Waukegan, is doing some very interesting trapping and banding work and among other birds reports a Northern Shrike (March 20), caught when it entered a trap after a Junco, which it killed.

Three Horned Owl nests were found by Mr. Richardson in the sand-dunes, and Mr. Ford has located a number of early Woodcock nests. The Society now has a list of 96 species and expects to add many more during the next two months.—COLIN

CAMPBELL SANBORN, *Chairman of the Report Committee, Chicago Ornithological Society.*

KANSAS CITY REGION.—All records for warm open winters in this region have been broken during the past season. Trees began to bud in mid-February, and by the end of the second week in March only very late fruit had not yet blossomed. Records of early arrivals of birds were being broken, and most unusual nesting dates were being recorded, when everything was brought to a sudden standstill by two hard freezes during the week of March 27. Fruit was killed generally throughout the region, and some damage to eggs and nestlings was noted. In the nest of even so hardy a species as the Prairie Horned Lark two eggs containing dead embryos were found alongside a fully-fledged nestling.

Mr. B. F. Bush, whose meteorological and botanical notes extend back over a long sequence of years, states that once before (in 1882-1883) a spring-like winter had beguiled vegetation into a too-early awakening only to blast everything by a late killing frost.

Is it worthy of record that reports from scattered correspondents indicate that Bronzed Grackles were present in large flocks over the entire region throughout the winter. This is unprecedented, as winter records for this species are few and far between.

Meadowlarks suddenly appeared on their breeding-stands in full song on February 27 and Red-headed Woodpeckers moved in on the same date in numbers, both species being far in advance of their normal times of arriving in force. From the middle of February to March 1 a great procession of Ducks and Geese was observed on the Missouri River by William Andrews and others. The abundance of water-fowl during this period doubtless accounts for the presence on February 25 of the first Duck Hawk seen in this vicinity in many years. On February 15 the first large flocks of migrating Robins were seen, and on the 16th and 17th numerous flocks of Canada and Blue Geese passed through. Between

the 26th and 28th thousands of Mallards and Pintails were passing, and on March 2 another heavy flight of Ducks, including several flocks of Green-winged Teal, was recorded.

Two Ospreys were seen on March 3; no earlier local date for this species has been recorded. The Phoebe was first noticed on March 6, though it probably arrived earlier, and on this date Walter Cunningham observed and heard Lapland Longspurs and Pipits on the rifle range in Swope Park. The first Coots, a flock of about two hundred, were seen on the 8th. For three days following this date Ducks and Geese were abundant on the river and a few Herring and Ring-billed Gulls were seen (Andrews). Geese noted on the 15th and 16th included a small flock of Hutchins's, 25 Blue Geese and 3 flocks of Snow Geese. Scaup Ducks were first noted on the 13th and by the 16th were abundant. The first Great Blue Herons were seen on March 15, on which date great numbers of migrating Sparrows were noted in all favorable localities in the Missouri bottoms. The most numerous species among the Sparrows on this date seemed to be Lincoln's Sparrow. Purple Martins were noticed in ones and twos on March 13, though earlier arrivals were doubtless overlooked.

Three nests containing full-grown young Prairie Horned Larks were found on the last two days of March, and on the 30th a set of four slightly incubated Killdeer eggs was taken within 500 feet of the end of the Sunset Hill car line. Brown Thrashers came in on a wave of Harris' Sparrows on April 3, when the thickets and hedges of the prairie regions resounded with spring music. Another of these characteristic waves of Harris' Sparrows was noted on the 11th and 12th, when the birds were present over the entire southern part of the city.

The first local nesting of the Sharpshinned Hawk that has ever been made a matter of record was noted on April 4, a noisy old female having been flushed from her nearly completed nest in a small clump of trees well within the city limits. In the same region, on April 10, a set of six Crow

eggs was found. On the same date a Dove was found sitting on her two eggs, and two completed nests of Migrant Shrikes were located. Fifteen Upland Plover and one Woodcock were seen in the Waldo region on this date. Numbers of migrating Vesper Sparrows were seen on the prairie regions on the 11th and 12th, and on the 13th several Black-and-White Warblers were present in Swope Park. Downy Woodpeckers, Carolina Wrens, and Bluebirds were found nesting on this date.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—At daybreak this morning (April 15) three native species were singing near the writer's sleeping-porch, viz., Meadowlark, Robin, and House Finch, and three other species were twittering or calling at the same time, to wit, Pine Siskin, a Junco, and the Flicker. That sentence seems to epitomize bird-life about this region during the past two months—most of the time a few species in evidence and not many of them.

The Robin, House Finch, Flicker, and Siskin are busy just now beginning (or carrying on) housekeeping; Robins and Meadowlarks have steadily increased in the region since February 15, but have not come in large waves, as is so often the case. It has taken the Meadowlark since about March 1 to penetrate from the city's outskirts to its interior parks. The only Juncos present in Denver, so far as the writer's observations have shown during the past eight weeks, have been the Montana and the Shufeldt's Juncos. This makes a noticeable deficiency of Juncos for the season just passing. Ordinarily, up to April 15, one sees hereabouts a considerable number of Chickadees (Mountain and Long-tailed), Chipping Sparrows, Lark Buntings, Say's Phœbes, and Gambel's Sparrows. None of these birds have been noted here up to date by the writer. There has been a striking absence of Ducks from the lakes of our park system, only one species having been seen, a single female Lesser Scaup on February 24. It is interesting and noteworthy that as soon as open water was established in one small park

lake there appeared in it a Pied-billed Grebe, which clung closely to the area in which was seen an individual of the same species most of last year. Perhaps the birds of last and this year are the same individual.

There have been very few Bluebirds in the city and its outskirts since February 15. A Batchelder's Woodpecker remained about my home neighborhood for two days (April 3 and 4); this is the second time the writer has detected the species in Denver during the last twenty-five years. A Richardson's Merlin was seen in the city on March 22. A review of the writer's notes shows that this little Hawk can be depended on to visit this region every spring, and often in the fall, too.

The writer has had little opportunity to spend time in the hills or on the surrounding plains. It is quite likely that his vision, more or less restricted to the city and its immediate environs, has given him an inadequate and an imperfect picture of the existing regional bird conditions. Nevertheless, past experience has shown that a fairly good idea of the bird-life of a considerable area about Denver can be gotten from a study of that within Denver and its outskirts.—W. H. BERGTOLD, *Denver, Colo.*

SAN FRANCISCO REGION.—Warm spring weather reached us the last week of February, but it was anticipated by Allen's Hummingbird, which was first seen on February 18, though a suspicious buzz was heard on the 10th and the 11th. February 22, being a holiday, was spent on the bay, and one of the rewards was the sight of a flock of some three hundred Surf Scoters off Point Richmond. The coloration was so bright that I was deceived for a time into believing that I was watching Tufted Puffins. The only other bird event of the month was a glimpse of a dozen Band-tailed Pigeons as they flew low directly over my head and off over the brow of the Berkeley Hills. March came in like the proverbial lamb, but did not remain lamblike throughout its course. Rather was it like an eastern April with

its frequent showers followed by blossoming flowers. A House Wren was merrily singing on March 4, having beaten the Lutescent Warbler again for second place among spring arrivals—this time by five days. As I stood watching the Lutescent Warbler on the 9th, my attention was attracted by an exquisite warbling song which sounded far away. I was much puzzled by the song and I was surprised and delighted when I discovered that it was being uttered by a Townsend's Solitaire, distant not twenty feet. This whisper song was continued for a full half-hour, being interrupted only by a couple of meals which consisted of five or six crataegus berries hastily swallowed in Thrush fashion.

March 16 was one of the lamblike days and was spent on the lower reaches of San Francisco Bay where a gun club has constructed a fresh-water pond. A flock of seventy Avocets were in an excited state which suggested the approach of the mating season. In addition to these handsome birds, there were 8 to 10 Yellow-Legs, 30 Killdeer, a Wilson's Snipe, a Bittern, 4 Great-Blue Herons, 6 Black-crowned Night Herons, 8 Tule Wrens, 4 Barn Swallows, and a Tree Swallow, sufficient reward, one would say, for the rough walk over marshy cow-paths. For full measure there were added 300 to 400 each of Pintails and Green-winged Teal, about 60 Ruddy Ducks, 50 Shovellers, 10 Baldpates, 10 Lesser Scaup, 4 Cinnamon Teal, and 300 to 400 Pipits, bringing the total up to 40 species and about 2,000 individuals.

Warbling Vireos and Pileolated Warblers were seen in Claremont Cañon on March 26 by Mr. Storer, and Western Flycatchers were quite common on April 1. Tolmie's Warbler was heard singing on April 11 reminding me that a second winter record for him was made by Mrs. Kelly and Mr. Bassett on February 22.

On April 12, a second trip to the marshes and lower bay showed the number of Avocets, Ducks, Coots, and Pipits very much reduced, while Yellow-Legs had increased from 8 or 10 to 30. Species not

seen on March 16, but present on April 12, were Bonaparte's Gulls (40), Dowitchers (300), Red-backed Sandpipers (12), Black-bellied Plover (2), and Black-necked Stilts (12).

Nests found so far this season are as follows: Allen's Hummer (March 20), Bush-Tits (March 9, 18, and April 11), Titmouse (April 1), Flicker (Mr. Hunt, April 7), and Barn Swallow (April 12). Although more than a month has passed since the first Bush-Tit's nest was found, there are still small flocks of them to be seen. It is very apparent that Quail are mating or nesting, but a flock of about twenty was seen on April 11.

The following winter visitants were still present on April 11: Intermediate, Golden-crowned, and Fox Sparrows; Pipits, Audubon's Warblers, Ruby-crowned Kinglets, Juncos, Hermit Thrushes, Robins, and Varied Thrushes. The Sapsucker was recorded for the last time (Miss Wythe) on February 21, Golden-crowned Kinglets on March 11, Mockingbird (Miss Wythe) on March 26, and Townsend's Warbler on April 2. The last may very likely still be here. Only one through migrant has been noted among land-birds' namely the Rufous Hummingbird (March 19) which was positively identified, even to the notch in the tail feather. They are still loitering about the twinberry blossoms, eucalyptus, and other nectar-bearing flowers.—AMELIA S. ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—Midwinter trips afield have yielded somewhat meager returns to the bird observer who appraises the value of his day by the length of his list. Alaska Hermit Thrushes, Fox Sparrows, and Golden-crowns have been notably scarce. California Purple Finches, however, have been in the valleys in more than ordinary numbers.

On February 9, a Townsend's Solitaire was seen among the sand-dunes near Hyperion by Mr. L. E. Wyman. On the 22d, a fine observation of a Ferruginous Rough-legged Hawk was made by three of our members. On February 20, Western Vesper and Western Savannah Sparrows

were found in considerable numbers on the grassy hills of Sand Cañon on the watershed of the Santa Clara River.

The first record of Pine Siskins for the season was made on March 3, when they were found feeding on willow and poplar catkins in company with Green-backed and Willow Goldfinches and California Purple Finches.

Varied Thrushes were seen in foothill cañons March 3 and 8, and on March 16 and 17, five or six were seen in the vicinity of Alpine Tavern, Mt. Lowe. The Gray-headed Junco mentioned in the October-December report was again seen in the vicinity of Eagle Rock on March 8.

Lewis' Woodpecker was noted near Calabasas March 15, and on the same date many Mountain Bluebirds were seen in the San Fernando Valley. Western Bluebirds in small numbers have been occasionally noted, and the number of Robins recorded has been small. Cedar Waxwings have frequently been seen in average numbers.

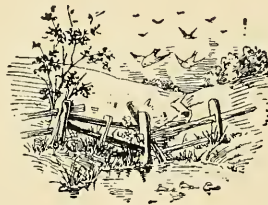
Two Blue-fronted Jays have visited the garden of Mrs. Harriet Williams Myers at frequent intervals throughout the winter. Pipits, Horned Larks, and Lark Sparrows were noticed in large flocks on plowed land (March 24). The Pipits were observed to be still here April 7. Along the shore, bird-life has been more abundant. February 22, at Alamitos Beach, 104 Western Grebes were assembled in a loose flock on the ocean, apparently resting. Lists made at White's Point in February and March included Turnstones in large numbers (76 on February 28), Spotted Sandpipers, American Mergansers, and Surf and White-winged Scoters. On February 28, Black-bellied Plover and Red-backed Sandpipers were observed to be donning summer plumage. On March 16, one Red-backed Sandpiper and one Plover were seen in complete summer dress, and three other Plover in various stages of change. Four Hudsonian Curlews were noted February 22, and a few Marbled Godwits, Willets, and Red-backed Sandpipers. No other Curlew have been seen, though five all-day trips have been made to the shore since that date.

One Caspian Tern was seen in company with California and Ring-billed Gulls at Bolsa Chica where many Ducks were in the lagoons. Most numerous were the Pintail and Shoveller. On the ocean beach many hundreds of Gulls were assembled in large flocks.

On March 3, a few dark heads were seen among the Bonaparte's Gulls at Playa del Rey, and a pair of Red-breasted Mergansers observed on the lagoon. March 16, Marbled Godwits, Dowitchers, Western Willets, and Sandpipers were on the tide flats in large numbers, but Curlew appeared to be wholly absent. Brandt's Cormorants were in breeding plumage March 24 and the Egrets in the harbor district numbered 21. Glaucous-winged Gulls were observed leaving for the North, and Black-necked Stilts appeared in Nigger Slough. Semipalmated Plover were noted April 1, also 2 Caspian Terns at the harbor, and California and Glaucous-winged Gulls were leaving.

The Northern Violet Green Swallow led the van of arriving land-birds from the South, making his first recorded appearance on February 19, a full month ahead of the Rufous Hummingbird. Costa's Hummingbird pushed his previous early date forward by about three weeks, arriving in considerable numbers on February 22, while the Rufous, if present, was not noticed until March 18. Cliff and Bank

Swallows arrived on schedule time, and the wintering Tree Swallows had their numbers augmented by fresh arrivals. Purple Martins took up their regular quarters in Whittier and Long Beach on March 27 and 30, respectively. March 15, brought the first Arizona Hooded Oriole, but they were not common until ten days later, when Bullock's also was noted. To date, only one Black-headed Grosbeak has been listed, arriving March 21. The first Western Tanager was seen April 7, an early date for this locality. On April 1 Black-necked Stilts were again noted at Nigger Slough in company with Long-billed Dowitchers and Greater Yellow-legs. Among the Ducks, Green-winged and Cinnamon Teal were noted in company with Pintail and Shoveller. Cinnamon Teal were again noted with Baldpate April 7. Yellow-headed Blackbirds were seen on the above date at Nigger Slough, where the Tule Wrens are nesting. Lutescent, Pileolated, Black-throated Gray, Calaveras, Townsend's and Macgillivray's Warblers have arrived, in the order named, while Audubon's is still here in high plumage and in song. Warbling, Cassin's and Least Vireos are daily arriving. April 7, a pair of Cabanis' Woodpeckers were seen entering a freshly excavated hole in a tree on the bank of the San Gabriel River near Whittier.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*



Book News and Reviews

BIRDS OF THE WASHINGTON REGION. By MAY THACHER COOKE. Proceedings Biological Society, Washington, Vol. 34, pages 1-22, March 31, 1921.

Within the narrow limits of twenty-one pages, Miss Cooke has placed a surprising amount of information concerning the 299 species and subspecies of birds known to occur within a radius of about 20 miles of the Capitol. We have first a nominal list of the 43 Permanent Residents followed by a fully annotated list of the 108 birds classed as Rare, Irregular or Accidental Visitants (including two hybrids and two extinct species), while the remaining species are included in a table of Regular Migrants with data covering their spring and fall movements. The publication thus makes not only a useful and authoritative list of Washington birds but, in this day of high publishing costs, the method of arrangement may well be considered by prospective authors of other local lists.—F. M. C.

Club Reports and Bird Annuals

Welcome evidence of the steadily growing interest in birds and of the value of organized effort in bird-study is given by the increasing number of club reports and bird annuals which come to our desk. Space permits us only to record the names of the publications of this class which have been received recently. Copies of them all, however, may doubtless be secured by those to whom, for one reason or another, they may prove of assistance either in teaching or studying birds.

The Department of Conservation of the state of Alabama, under John H. Wallace, Jr., issues its usual annual 'Bird Day Book' (address Montgomery, Ala.), and Ohio and Illinois both send admirable Arbor and Bird Day manuals; the first compiled by Anna S. Winters (address Department of Public Instruction, Columbus, Ohio), the second by Francis G. Blair, Superintendent of Public Instruction (address Springfield, Ills.).

The Audubon Societies of Illinois (address 1649 Otis Building, Chicago) and of Indiana (address Frank C. Evans, Secretary, Crawfordsville) have published most attractive and useful 'Bulletins,' and we have also received the 'Bulletin' of the West Chester (Pa.) Bird Club, 'The Murrelet' Official Bulletin of the Pacific Northwest Bird and Mammal Club (address Seattle, Wash.), and the 'Yearbook' of the Rhinebeck (N. Y.) Bird Club. The latter contains an annotated list, by Maunsell S. Crosby, of the 229 species of birds recorded from Dutchess County, which makes a serviceable guide and checklist for local students, as well as a valuable addition to faunal literature.—F. M. C.

The Ornithological Magazines

EL HORNERO.—The principal paper in the December, 1920 (Vol. II, No. 2) issue of the organ of the Ornithological Society of La Plata (address Calle Peru, 208 Buenos Aires) is by the Society's president, Dr. Roberto Dabbene. It is on the 24 species of North American shore-birds which have been recorded from Argentina. Dr. Dabbene classifies these birds according to their Argentine status as follows:

I. Abundant and found in part during all the year: Greater and Lesser Yellowlegs, Pectoral and White-rumped Sandpipers.

II. Common without being numerous and found only during the summer months: Baird's and Solitary Sandpipers, Golden Plover, Stilt Sandpiper, Bartram's Plover.

III. Scarce: Knot, Buff-breasted Sandpiper, Sanderling.

IV. Very rare: Marbled Godwit, Wilson's Phalarope, Spotted Sandpiper, Semipalmated Plover, Hudsonian Curlew.

V. Accidental Visitors: Northern and Red Phalaropes, Curlew Sandpiper, Least Sandpiper, Surf Bird, Green-shank.

VI. No longer observed: Eskimo Curlew (the specimen of this species referred



CHILIAN FLAMINGOES (*Phanicopterus chilensis*) LEAVING THEIR EGGS, LAID ON THE GROUND WITHOUT A NEST, IN A LAGOON TWENTY LEAGUES FROM SANTA CRUZ, PATAGONIA.

Courtesy of *El Hornero*

to in the foot-note on page 108, was collected by R. H. Beck at Mar del Plata, September 29, 1914. It is in the Brewster-Sanford collection at the American—not "Brooklyn"—museum).

Dr. Dabbene presents the known Argentine status of each of the above-mentioned species and a detailed list of its published records of occurrence, besides many others based on specimens chiefly in the Museum of Natural History at Buenos Aires.

The same author also contributes a review of the Rheas of Argentina and several general notes, including one on the nesting of the Chilean Flamingo (*Phanicopterus chilensis*) which is illustrated by a photograph of exceptional interest, and which we are permitted to reproduce herewith. It was made in a lake near San Julian, Santa Cruz, 'Patagonia,' presumably on an island. The eggs, as will be seen, are laid on the ground with no attempt at nest-building. This fact suggests that possibly, in the absence of tides or heavy rainfall, the truncate mud-cones which Flamingoes usually build are not here required, and

that consequently these cones are needed only where the birds nest in shallow water, or where tide or heavy rainfall necessitate building to a height above the probable high-water level.

A paper by Enrique Lynch Arribalzaga on 'The Birds of the Chaco,' 'Notes on Nests and Eggs' by Pedro Serié, and several shorter communications complete the number.—F. M. C.

Bird-Lores Wanted

BIRD-LORE continues to offer the free use of its columns to subscribers who wish to complete their files of this magazine, but hereafter these want notices will appear in this Department, as space permits. Herewith we list a notice from James Grant, Jr., R. R. No. 10, Box 94, Van Wert, Ohio, for the issue of January-February, 1914.

A Second Book of Bird Songs for Children

Lovers of bird music will be interested in a book of birds' songs by W. B. Olds, published by G. Schmirer of New York City.

Bird-Lore

A Bi-Monthly Magazine
Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES
Edited by FRANK M. CHAPMAN
Contributing Editor, MABEL OSGOOD WRIGHT
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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

Few authors have been more intimately associated with their haunts than was John Burroughs with 'Riverby' and 'Slabsides,' and 'Woodchuck Lodge.' Among the thousands of his friends who have visited him at one or more of these places, there are doubtless few who have not hoped that they would be preserved as shrines for the Burroughs' lovers of this, as well as of future generations. It would indeed seem like the violation of a sacred trust to permit 'Slabsides,' for example, to crumble into ruins, and the little valley in which it stands become a neglected waste of brush and weeds. Nor can one accept the thought of its becoming the home of someone whose energies were devoted solely to the growing of celery and onions.

Gilbert White's home at Selborne is now the residence of a manufacturer who has closed it to the public. White died in 1793, and, as year by year his fame grows and the lesson of his life becomes more potent, one realizes that his home should have been for all time open to his followers.

So, too, Burroughs' audience will increase, and though we shall never again see the almost endless line of pilgrims who sought his cordial handclasp and kindly greeting, so long as his haunts exist, so long will they be a Mecca to those who will find John Burroughs living forever in his works.

As a token of our love for Burroughs, as a tribute to his memory, and as a duty to posterity, it is clear that we of today

should spare no effort to acquire and preserve that portion of his estate to which the nature-lovers of all times seem the rightful heirs.

Animated by this thought, some forty of Mr. Burroughs' friends met at the American Museum of Natural History on the afternoon of April 15, to consider the desirability of forming a Burroughs' Memorial Association. The meeting was addressed by Julian Burroughs, Mr. Burroughs' son and heir, by Dr. Clara Barrus, his literary executor, by Judge A. T. Clearwater, of Kingston, N. Y., executor of his estate, by Hamlin Garland and others, all of whom endorsed the object for which the meeting had been called. After a discussion of ways and means, a committee of nine was appointed to draft a constitution and by-laws, and proceed with the organization and incorporation of the Association. While the first object of this Association will be the acquisition of Mr. Burroughs' homes, it is conceivable that it may exert a wide influence in promoting that friendship with nature which was the essence of Burroughs' message to mankind. Provision, for example, may be made for Junior Memberships and for the formation of chapters or branches in the schools, and for the observance of April 3, Mr. Burroughs' birthday, as Burroughs Day, in the schools as well as among nature-lovers everywhere.

John Burroughs left the world not only a written record of his life, but he left an example of it; and this example, as a demonstration of the doctrine he preached, is no less precious than his written word itself. Burroughs, the man, will become, therefore, an object of increasing interest to those who will know him only through his books, and anything that we can do to preserve the scenes among which he lived and of which he wrote, will add immeasurably to the value of the legacy with which he has so richly endowed the world.

Information in regard to the Burroughs Memorial Association may be obtained from Dr. G. Clyde Fisher, secretary of the committee for organization, at the American Museum of Natural History.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

SUMMER BIRD-STUDY

The study of birds is taking an ever increasingly important part in the curriculum of the schools. It is natural that this should be so, not only because of the resource which a knowledge of birds brings into the life of the child, but because bird-study stimulates an interest in all nature. The bright colors of birds, their cheerful songs, and the many amusing little incidents that the child can observe, usually arouse his interest sooner than the less animated plants and trees, and when once his interest in nature is active, he is easily led into other channels. The very difficulties which beset the study of birds only stimulate the red-blooded youth to greater endeavor, so that he frequently outstrips his teacher. Of course, it is not necessary that a teacher know a great deal about birds before encouraging his students to begin to study them, but if he does have a good knowledge of the fundamentals, it eases his mind and he is able to direct his pupils in their further study. At present there are comparatively few teachers who have more than a passing acquaintance with a few birds, and it is for this reason that this number of the School Department is devoted to a consideration of summer bird-study.

The day is approaching when every large school will have its nature-study teacher, and every city its natural-history director. In some of the larger cities this policy has already been adopted, but its rapid expansion is limited by the scarcity of teachers who are equipped to take up the work. The advisability of having a teacher in every school who can devote his entire attention to this type of work has never been questioned, but it is quite another matter to find the teacher who is prepared to do it.

Of recent years it has become more and more the custom of teachers to spend part of their summer vacation in study at some college or normal summer school where they either 'brush up' on subjects which they are already teaching or prepare to teach others. The boards of education of some cities, recognizing the value of such training, provide scholarships to their best teachers so that they can attend these summer schools. Realizing that many of BIRD-LORE's readers are teachers who may be planning to spend a part of next summer in study, the Editor of the School Department thought they might like to know where they can find instruction in the study of birds. Accordingly he addressed the directors of about fifty of the leading summer schools, asking for short announcements of any courses in ornithology or bird-



A BIRD CLASS IN ONE OF THE COLLEGE SUMMER SCHOOLS

Courses are designed primarily for teachers, but others take the work for their own pleasure. The class all meet together for the lectures but are ordinarily divided into smaller sections for the laboratory and field work

study that would be given this summer. At the time this goes to press, some of these schools have not yet been heard from, and, undoubtedly, there will be courses in bird-study given in other institutions than those from which announcements have been received. The schools here listed, however, represent the country (except the Far West) fairly well and give an idea of the types of instruction that will be offered. If anyone decides he would like to take up bird-work at some other institution than the ones listed, he should address



WATCHING A HUMMINGBIRD'S NEST
Individual Work Supplements Class Work in Some Courses

the director of that summer school and he may discover that a course in bird-study will be given. Assurances have come to the Editor from many of the larger summer schools where bird-work will not be given this year, that courses will be offered as soon as the demand justifies it, but that this year the spirit of retrenchment that pervades all educational work forbids them offering it.

It must not be assumed that instruction in bird-study is intended only for teachers or those who plan to use their knowledge professionally. A canvass of the students enrolled in the summer school at Cornell University during the past few years has shown them about equally divided into teachers who plan to use the work in their schools and those who take it for their

own pleasure. The class work, they discovered, crystallized what they already knew about birds by systematizing it, and thus made it possible for them to progress much more rapidly. At the same time it opened up new fields to them and introduced them to new friends. The learning of birds' songs, which is an almost endless task, is greatly shortened by having a teacher who is already familiar with them. Indeed so much does this mean to some bird students that some bird-courses, such as that at the University of Cincinnati, are designed primarily for this purpose.

Another advantage of class study is the inspiration of being thrown with persons of kindred tastes. Too often the student of birds is compelled to work by himself and is discouraged by the lack of interest in those all about him.

At the summer schools he is surrounded by congenial companions. Add to this the inspiration of a new environment and new birds, and what at first seems like work, in that it is 'going to school,' becomes a continual round of pleasure.

In only a few of the summer schools is the work in bird-study designed to take all of one's time. There is usually opportunity to take work in other natural sciences, in literature, history, mathematics, or almost any other study that one desires, although experience has shown that it does not pay to try to carry too many courses. If one attempts too much he gets but little good out of any, for all university courses are thorough and require considerable preparation.

For the benefit of those who have never attended summer schools, a word about the customary organization of the work in ornithology will be given.



AN EARLY MORNING TRIP FOR MARSH BIRDS

Conventionalities of dress are usually not observed on field trips; common sense and comfort take first place

Courses are ordinarily divisible into three parts: lectures, laboratory, and field work, the field work naturally playing a very important part. The summer term is divisible into weeks, and classes meet a certain number of times each week, each meeting of the class being called a 'period' or an 'hour' whether it be for a fifty-minute lecture or for a two- or three-hour field-trip. Depending upon the completeness of the course and the 'university credit' given, the class meets from two to ten times a week. Ordinarily the class meets together for the lectures but is divided into smaller sections for laboratory and field work. The field work is often given in the early morning, or a choice may be offered, but always a definite schedule is followed so that one can select several courses in the summer school and arrange his program of work as he deems best.

In the summer schools there are ordinarily no entrance requirements such as those of the regular year, although since the work is designed for mature minds, children are not usually admitted. The buildings and equipment of the regular college year are ordinarily employed in the summer and often the faculty is the same. Individual work on the part of the students is always encouraged and often proves a most interesting part of the summer program. Anyone planning to attend one of the summer schools should write either to the director of the summer school or to the person in charge of the bird-work for a complete announcement of the summer school in which he will find full particulars as to admission, fees, living expenses, and the like.

Announcements of the courses in ornithology or bird-study in the various summer schools follow:

NATIONAL ASSOCIATION OF AUDUBON SOCIETIES, *Department of Applied Ornithology.*

Informal instruction in bird-study will be given at the Amston Experiment Station, at Amston, Conn., by H. K. Job during the month of August. Special emphasis will be laid on motion picture and other photography of birds, methods of attracting birds, and methods of propagating game and water-fowl species. For further information address H. K. Job, 601 Washington Ave., West Haven, Conn.

UNIVERSITY OF CINCINNATI, *Summer Bird-Study Course. June 27 to July 9.*

The class is limited to 45 and only a few places will be open to non-residents of Cincinnati. Reservations made in the order of names and deposits received. The class will live during the course in the dormitories of the Ohio Military Institute on College Hill, a high beautiful suburb of Cincinnati.

The purpose of the course is the instant recognition of bird-songs. No previous knowledge of birds is required and the class always consists largely of beginners. Bird-trips are from 6 to 8.30 in the morning and 6 to 8 in the evening. Group assignments to special bird-haunts are made for the morning hours and a lecture is given each day at 4.30 P.M. The afternoons are devoted to recreation.

Those who take the examinations and pass with a grade of 60 or better will receive two university or professional credits.

For further particulars as to equipment, expense, and the like, address Prof. Harris M. Benedict, University of Cincinnati, Cincinnati, Ohio, who is in charge of the course.

COLD SPRING HARBOR, *The Biological Laboratory of the Brooklyn Institute of Arts and Sciences.*

Summer school in the biological sciences conducted at Cold Spring Harbor, Long Island. No formal work in ornithology is given, but guides are provided for morning bird-walks. For further particulars address Dr. Chas. B. Davenport, Director.

UNIVERSITY OF COLORADO, *Boulder, Colo.*

Summer Quarters, June 13 to July 20. Work in ornithology will be given by Edna L. Johnson, A.B., Instructor in Biology, University of Colorado.

Special attention will be given to the orders and more important families of North American birds; life histories, structure, flight, ecology, economic importance, game preservation and propagation, geographical distribution. Field work will be devoted to field identification, nesting habits, and the songs of the common birds. There will be two lectures and three field or laboratory periods of two hours each per week. Laboratory fee, \$2. Each student is advised to have a pair of field glasses or opera glasses and Florence Merriam Bailey's 'Handbook of the Birds of Western United States.' A complete announcement of the Summer School can be obtained from the Director, Milo G. Derham.

CORNELL UNIVERSITY, *College of Agriculture, Ithaca, N. Y.*

Summer School, July 2 to August 12. Work in ornithology will be given by Prof. A. A. Allen, Elsa G. Allen, A.B., and Miles D. Pirnie. Two courses will be given, one in general ornithology and one in applied ornithology.

The course in general ornithology is designed to give an introduction to the study of birds and a knowledge of the common species. The lectures will discuss such subjects as classification, migration, coloration, song, nest-building, eggs, care of young, methods of attracting birds, economic importance, etc. The laboratory practice with bird-skins will give an intimate knowledge of the birds of eastern North America and familiarity with the use of a manual. The aim of the field work is the field identification of birds and their songs and observations upon their habits. There will be three lectures, two laboratory and two field periods a week which will give University Credit of three hours. Each student should be provided with Chapman's 'Handbook of Birds of Eastern North America' and with field or opera glasses.

The course in Applied Ornithology is intended primarily for teachers or students who plan to go further with the study of ornithology. The lectures will discuss the field open to prospective ornithologists, methods of teaching, museum work and the preparation of specimens, bird photography, biological surveys, wild-life conservation, and game-farming. The laboratory and field-work will give practical exercises along these lines. This course is open only to students who are taking the first course or who have had its equivalent. There will be two lectures and two laboratory or field periods each week. Two hours of University Credit are allowed for the completion of this course.

For a full announcement of the Summer School, apply to Professor Allen or to the Secretary of the College of Agriculture, Ithaca, N. Y.

UNIVERSITY OF IOWA, *Iowa City, Iowa.*

Two courses in ornithology will be given in the second term of the summer session, July 25 to August 26, by Dr. Dayton Stoner.

Course 105 S, The Birds of Iowa (5 hours; 1.6 Credit). This course is designed to aid the student in identifying our commoner birds as well as to give some idea of their fundamental structures and the basis of classification of this popular animal group. Lectures, readings, class discussions, and the identification of bird-skins in the laboratory and of birds in the field will constitute the bulk of the work. This course should be particularly valuable to those who are teaching or who expect to teach natural science. The following course, No. 106S, affords a fitting companion course. Assistant Professor Stoner.

Course 106 S, Applied Ornithology (3 hours; 1 Credit). A lecture and reading course which will acquaint the student with some of the more practical problems connected with the study of birds. Such subjects as the relation of structure to the economic importance of birds, the economic value of birds, legislation relative to their protection, the function of the citizen in legislation, methods of encouraging beneficial species and of combating those which may be harmful will be emphasized. Assistant Professor Stoner.

A full announcement of the Summer School may be obtained by addressing the Director, Prof. C. H. Weller.

UNIVERSITY OF MICHIGAN, *Biological Station at Douglas Lake, Mich.*

At the coming session of the University of Michigan Biological Station, located on the shores of Douglas Lake, Cheboygan County, Mich., a course in ornithology will be given by Prof. Zeno P. Metcalf, of the North Carolina State College of Agriculture and Engineering, West Raleigh, N. C., to whom letters of inquiry concerning the course may be addressed. The course will concern itself with a study of the more common

local species by means of bird-skins, the recognition of birds in the field, observations of their feeding and nesting habits by means of bird-blinds, a study of their ecological relationships, and, near the close of the session, their migration movements. Since the session opens July 5, the spring migration movements will have been completed, but students will have an excellent opportunity to observe the nesting habits of many species known only as migrants farther south. Before the close of the session, August 26, early autumnal migration movements will have commenced.



BEACH AT 'LADYVILLE,' UNIVERSITY OF MICHIGAN
BIOLOGICAL STATION, 1919, AND THE SUMMER BIRD CLASS

Opportunity will be given to qualified students to do special work on birds. The nature of this work will depend upon the training and inclination of the student and the limitations of the bird fauna of the region. A check-list of the summer birds of the Douglas Lake region has been issued as Occasional Paper No. 27, and may be had on request from the University of Michigan Museum of Zoölogy, Ann Arbor, Mich.

A full announcement of the work offered at the Biological Station can be secured by addressing Dr. George R. LaRue, Director, Ann Arbor, Mich.

MICHIGAN AGRICULTURAL COLLEGE, *East Lansing, Mich.*

Summer School, June 21 to August 2. Work in ornithology given by Prof. Walter B. Barrows.

The bird work is condensed into the first two weeks of the Summer School consisting of fifteen hours a week; five hours of lectures, and ten hours of laboratory or field work. This is followed by two weeks in botany and two weeks of entomology. The nature of the work is similar to that announced by the other university summer schools.

A full announcement of the summer school can be secured by addressing the Director, Prof. E. H. Ryder.

OBERLIN COLLEGE, *Oberlin, Ohio.*

The summer work in ornithology at Oberlin College is so different from that given by any of the other institutions and so interesting that a communication from Prof. Lynds Jones, who conducts it, is given in full:

"In 1915 and 1916 I took the class by train to the coast of Washington, then the war interrupted. In 1919, the trip was made with automobiles to the same region. In 1920, automobiles were used again, but we went into California.

"This summer, starting on June 23, the trip will again be with automobiles (more properly 'Fords'). It will be westward to Grinnell, Iowa, my old home, thence northward to Lake Okoboji, thence northward into Minnesota to strike the Yellowstone Highway west of Minneapolis. This highway will then be traversed all the way to Livingston, Mont., from where a side trip of four days will be made into Yellowstone Park. From Livingston the route leads through Butte and Missoula, and past Flathead Lake, to the west entrance of Glacier Park. Three or four days will be spent in this park. We then run through Spokane, Wenatchee, and Snoqualmie Pass to Tacoma, Wash. From Tacoma a side trip will be made into Ranier Park. After this we will run out to the ocean at Moclips for a short stay.

"It is to be an ecological trip, with rather more attention paid to birds than to other subjects, partly because they are the most conspicuous and easily studied of the animals. Stops will be made along the way for more intensive studies at particularly favorable places. My plan is to make these studies in types of environment rather than try to cover the whole of the route. The life zones traversed will be from the Upper Austral to the Arctic-Alpine. The upper zones can best be studied in the parks because there the bird life has been carefully worked out and there are guide-books obtainable.

"New cars are bought for this trip, and are sold in Tacoma, the members of the party returning by train, each his own way. The proceeds of the sale of the cars go into rebates to members of the party. The cost, exclusive of tuition, and including the return, is about \$350.

"It is a seven weeks' trip, six full days of each week being spent in study. A College Credit of eight semester hours is given as a maximum, but this Credit is based upon a paper which is written after the completion of the trip and after assigned reading.

"In 1919 there were 14 women and 7 men; in 1920 there were 10 women and 9 men. The most of these were students of Oberlin College, but in each party there have been students from other institutions.

"The entrance requirements for this trip, if it is to receive College Credit, are a year of zoölogy or botany. It is desirable for the prospective student to have had, in addition, a good course in physiography, and familiarity with birds.

"This is a strictly camping trip. Every night is spent out in the open. One meal a day is secured at some eating-house along the way, but the morning and evening meals are taken in camp. Each person provides himself with sufficient bedding. Sleeping-cots are not used because of their weight and because they are too cold. Each of the cars is made into a sort of pullman bed. Thus half of the party can sleep in the cars. The other half make their beds on the ground. Tents are taken for emergencies, but are seldom used because we have never encountered wet weather. One readily learns to make a good job of dressing in his sleeping-bag. The cars make comfortable dressing places for the women.

"Of course, lectures are given as occasion demands, but the main part of the work consists in taking the students to the work and giving them such directions as may seem appropriate. Some blunder around at first, but all of them finally learn to make fairly accurate interpretations."

For further particulars address Prof. Lynds Jones, Oberlin, Ohio.



A GOOD CHANCE TO STUDY GEOLOGY WHILE WAITING FOR DUCK HAWKS
In most summer schools opportunity is afforded to supplement bird work with courses in Botany Geology.
Entomology or others of the natural sciences

UNIVERSITY OF VIRGINIA, *Charlottesville, Va.*

Summer School, first term, . . . A course in bird-study given by Miss Kathleen A. Stuart, in coöperation with the National Association of Audubon Societies.

There will be lectures and field-trips daily at 2.30 P.M. Students should bring field or opera glasses, and as textbooks, 'Bird Guide,' by C. A. Reed, and the 'Handbook of Birds of Eastern North America,' by F. M. Chapman.

A full announcement of the Summer School can be secured from the Dean of the University, Dr. Charles G. Maphis.

GREAT HORNED OWL

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 105

Perhaps no creature of the wilderness is so dreaded by birds and small mammals as the Great Horned Owl. To them it is the great tiger of the night that on absolutely silent wings may appear at any moment. When its long, sharp claws sink into the back and neck of its victim, there is nothing more to be said or done—the end comes swiftly.

Over the greater part of North America it is the largest of the Owls commonly met with. From the end of its bill to the tip of its tail, the average specimen measures 2 feet, and the distance across its extended wings from tip to tip is about $4\frac{1}{2}$ feet. Because of its abundant covering of long, soft feathers it has the appearance of being larger than its weight reveals. However, like many large birds, individuals vary much in size. Thus they are known to range in weight from 3 to $4\frac{3}{4}$ pounds.

The Great Horned Owl is a bird of heavy timber lands and is seldom seen at a very great distance from the woods. Like most Owls, it is nocturnal in its habits, and, except on dark or cloudy days or in deep shady forests, rarely comes forth in the daytime. Shortly after sundown its deep bass calls can be



YOUNG GREAT HORNED OWL JUST AFTER LEAVING NEST

Photographed by P. B. Philipp

heard issuing from the swamps or woodlands. Its notes are something like the syllables, *whoo*, *hoo-hoo-hoo*, *whooo*, *whooo*. Sometimes the bird emits a piercing, blood-curdling scream that is very disconcerting to the city-bred person who hears it for the first time. These notes may be given as love-calls, as a challenge to its rivals, or, again, perhaps, for the mere pleasure of hearing itself speak. It would seem that these deep-toned notes, rolling through the silent night air, would serve to frighten into hiding all game within hearing, but I have known those who contended that at times the Owl hoots for the purpose of helping to discover its prey, as for example when trying to locate a rabbit which it has seen but a moment before, and which is now crouched low hoping to escape detection. The claim is made that the sudden hoot of the Owl so frightens the rabbit as to cause it to shudder or jump or make some other involuntary movement that betrays its exact location to the keen-eyed watcher of the tree above. In any event, this Owl engages in much hooting, not only in the mating season but at other times of year, and in regions where the species are abundant, its weird and awe-inspiring serenades are one of the common sounds of the wilderness.

The Great Horned Owl lives well, for it appears to eat almost every form of animal life that it can overpower and capture. It eats many birds, and in hunting them has every advantage, for it may come upon the Robin, Kingfisher, Crow, or even large Hawks while they are asleep. What bird can escape its fearful claws? It is very destructive to game-birds, especially the various species of Grouse found throughout the northern woods and the mountains of the South. It is very fond of visiting the vicinity of farmhouses at night and carrying off the hens and guinea-fowl, or even killing young turkeys that have been foolish enough to go to roost in the open.

While a boy, I remember one entering our poultry-house and killing a hen. She gave only two or three terrified squawks, but my father chanced to hear these and ran out to see what was robbing the poultry-roost. We had many robbers in those days—skunks, opossums, and sometimes human thieves—so when the scream of a hen pierced the midnight gloom, it was customary for my father to seize his gun and rush out to investigate. On this occasion he first closed the small door near the ground by which the hens entered, and then opening the large door and holding the lantern aloft he beheld an Owl standing on a hen that was lying on the floor of the chicken-house. Its great eyes gleamed and winked in the sudden light, and it popped its bill, perhaps in an effort to frighten him away.

One interesting feature of this particular Owl I well remember. It was highly scented with musk from a skunk. Perhaps earlier in the evening, or maybe the night before, it had caught one of these black-and-white wood pussies.

In the southern states, Great Horned Owls capture many opossums, and one of their easiest victims is the rabbit. In some parts of the country rabbits

do great damage to growing crops and frequently girdle and kill young fruit trees. So these Owls in such places assuredly render great service in helping to keep down the increase of these rodents. All Owls seem to like rats and mice, immense numbers of which are taken about outhouses or farms, as well as in the woods and along the borders of fields.

When a Hawk captures a bird it picks off the feathers and throws them to the winds. An Owl, however, does not take this trouble. It will swallow a mouse whole, and if a bird is not too large will consume it in a like manner. Nature has arranged the Owl's stomach in such way that this plucking is done afterward and the fur, feathers, and bones which are indigestible are rolled into a compact mass and later ejected from the mouth. Not two weeks ago I found where an Owl had been roosting. On the ground below were several dozen of these pellets. This particular Owl had been feeding largely on mice, and the pellets were all of the same character. They consisted of a mass of fur more or less cemented together, and every one examined was found to contain the skull of a mouse.

The Great Horned Owl undoubtedly occasionally builds its own nest, but as a rule it selects the old nest of some Crow or Hawk to which it may add a few twigs. At times it lays its eggs in the hollows of large trees. In Florida the hollow trunks of trees appear to be used almost exclusively. Very little if any nesting material is used, in such cases the eggs simply being deposited on the rotten wood at the bottom of the cavity. In some of the regions of the West, where suitable nesting-trees are scarce, the birds often select crevices on rocky cliffs. In northern California I once visited a ranch where the owner told me that a pair of Great Horned Owls had made their nest and reared their young in the loft of his barn. We started out with the intention of paying the Owlets a visit. In passing a weird clump of small trees we were surprised to find a young Horned Owl sitting on the ground beneath them. It had left the shelter of the barn only the night previous. The other young one had also departed but we were unable to discover it.

It will be seen that the Great Horned Owl, like many other birds, builds its nest in a variety of situations, and the spot selected for the abode of its young must naturally depend on the character of the country in which the bird lives. In the southern part of its range it has been known to begin its family duties as early as January or even December. In New York state nests are found as early as February, and even in far away Alaska the bird turns its attention to its duties in April, where the ground is covered with snow and the icicles may be hanging from the trees. Usually two eggs are laid, although three and sometimes four have been found in a nest. About four weeks are required for the eggs to hatch. The young develop very slowly and two and one-half or three months will elapse before they are large enough to leave the nest, and they may be five months of age before the down of youth has entirely disappeared.

By far the larger majority of the birds of our Western Hemisphere are migratory. That is, they move southward upon the approach of winter and return to their northern homes when warm days of spring again visit the land. The Great Horned Owl does not belong to this class. Although it may wander some in quest of food, and when woodlands are cut away by the advance of agriculture it will move on to other regions, these shiftings from one feeding-ground to another would hardly be classed as migratory movements. Wherever found, therefore, this Owl may be regarded as a resident throughout the year.

In the zoölogical gardens it is very usual to find a cage containing several of these large, feathered denizens of the woodlands. The bird is so very striking in its appearance and its plumage is so handsome that when one is taken alive its captor often feels that it should be exhibited for the interest and admiration of others. In captivity many of our native birds, especially when taken young, in time become quite tame and even friendly. This is true of many of the birds of prey, as, for example, the Condor and some of the large Hawks. The Great Horned Owl, however, scorns all friendly advances and its fierce, untamed nature is unsubdued even though the same captor may bring it food daily over a period of months and even years. Upon the near approach of a human intruder the Great Horned Owl will pop its bill and show fierce resentment. In a savage manner it will at times fly at the person who enters its cage and has even been known to strike the hat and head of a man who came only for the purpose of administering to the Owl's need for food.

The Great Horned Owl is widely distributed throughout the North American continent, and, as is usually the case with a bird of such wide distribution, the species is represented by many climatic varieties. The casual observer might regard the Great Horned Owl of northern Canada and the one found in South Florida or Mexico as being identical, but a close examination would show a difference in the shading of the plumage or perhaps the size of the bird. There is not space here to give the range of all the different subspecies, but they may at least be named, and are as follows: Great Horned Owl, common in eastern North America. Then there are the Western Horned Owl, Arctic Horned Owl, Pacific Horned Owl, Dusky Horned Owl, Dwarf Horned Owl, Labrador Horned Owl, and St. Michael Horned Owl—eight varieties in all.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

JOHN BURROUGHS' BIRTHDAY MESSAGE

Just a short time before he died, John Burroughs, world-famous naturalist, wrote a birthday message to the boys and girls of the Audubon Societies. The message was:

The Joy of Life

My Dear Young Friends of the Every Child's Audubon Society:

As the time draws near for my eighty-fourth birthday, I look back down the long road of the years and think what a good jour-

ney it has been. If I could live twice as long I could not exhaust the beauties and wonders of this best of all possible worlds. All my life I have been trying to find out what I could about this big globe of ours that is swimming through space and about its inhabitants, human and otherwise, and this knowledge has helped me to feel at home on our planet. I hope each of you will learn to feel at home and be happy in the learning of the wonders of our world. Your friend,

JOHN BURROUGHS.

LAW REGARDING THE SALE AND WEARING OF FEATHERS

In most of the cities of the United States, and particularly in New York, the plumes of the Bird-of-Paradise are displayed for sale and may be seen in common use on women's hats. Frequently their sale is advertised in newspapers. The traffic in these feathers seems to have been on the increase the past year. Our office receives numerous inquiries from people who tell us of these things and state, "The law is being flagrantly violated. Why do you not do something?" As a matter of fact, in so far as the sale and wearing of these plumes is concerned, the law is not

being violated, for the law does not prohibit these things. It is against the law to sell aigrettes, the plumes of the white Egret, but once they are in private possession there appears to be no enforceable law against their being worn. In the case of Paradise plumes, however, the only restriction is the United States law embodied in the Tarriff Act of 1913, which *prohibits the importation* of the feathers of any wild birds into the United States for commercial purposes. This is the law that is being "flagrantly violated."

Undoubtedly the stock of Paradise feath-

ers on hand when the law went into effect on October 3, 1913,—nearly eight years ago,—has long ago been exhausted, and the plumes we now see sold and worn are most certainly feathers that have been smuggled. Inspectors of the Custom Offices have made a large number of seizures, and in these columns we have from time to time reported the taking of some of these illegal goods and the disposition made of them.

This Association planned to ask the present session of Congress that is revising the Tariff to amend the law in such a way as to prohibit absolutely the sale of Paradise plumes. Just before the date set by the Chairman of the Ways and Means Committee for the President of the Association to appear before the Congressmen having this matter in charge, it was learned that the United States Millinery Chamber of Commerce had a bill to propose, and after a conference and much deliberation it was decided to back their bill, and this was done, not only formally before the Ways and Means Committee on February 11, 1921, but subsequently by other means. This bill makes it illegal to sell the plumes of Birds-of-Paradise or other smuggled feathers unless the seller

can produce evidence to satisfy the courts that the feathers were brought legally into this country before the Tariff Act of 1913 became effective. This is now under consideration in Congress, and if it becomes an item of the Federal statutes it will virtually mean that the last battle of the war waged by the Audubon Societies since 1886 against the legalized feather traffic shall have been won.

Of course, regardless of how stringent the laws may be made, it is probable that feathers for millinery decoration will continually be smuggled into the country. Despite the Association's warden-force, Egrets in the southern swamps will continue to be killed because of the high price that the plumes will bring, and because there will persist a certain type of feminine mind that will be glad to possess and exhibit feathers too costly for their neighbors to procure.

The fight has been a long and hard one, and a successful issue has been long deferred for two reasons: one, man's lust for money, and, second, woman's love for adornment, and these two passions may be ranked as among the strongest that govern the human mind.

NEW JERSEY BOBOLINK LAW PASSED

On April 8, there was successfully consummated a result for which the New Jersey Audubon Society has been earnestly striving for the last five or six years, when Governor Edwards affixed his signature to Senate Bill 80, according to the Bobolink a place in the list of song and insectivorous birds, with permanent protection, and removing from the list of game-birds the name of 'Reed Bird.'

Until almost the last moment, prospects for the success of this measure were extremely discouraging. The bill was introduced January 31, and was not reported from the Senate Committee on Game and Fisheries until March 7, reaching a vote in the Senate on March 16. It passed that House by an affirmative vote of eleven, exactly the necessary number, and with four opposition votes, one of which was cast by Senator Allen, President of the Senate, who also spoke against the bill. The bill was favorably re-

ported by the Assembly Committee on Game and Fisheries on March 30, despite a very reliable previous statement to the effect that it had been passed in the Senate, with the distinct understanding that it was to be held in the Assembly Committee on Game and Fisheries. Under suspension of rules, it was passed by the Assembly on the same date that it was reported, by a vote of forty-two to nothing, and was transmitted to the Governor. While in his hands, it was discovered that there was a legal error in the title, and it was recalled by Senator Case, who introduced it, amended and repassed in the Senate on April 7, and in the Assembly on April 8, in the very last minutes of the final day of the session.

This bill probably established a record for measures of its character, in the consideration that was accorded it in the last minutes of the session, when it was amended and re-

passed. Such consideration is usually reserved for bills that legislators consider infinitely more important than they are wont to consider wild-life conservation measures. From its introduction to its passage, it meant the most continuous and strenuous effort on the part of its sponsors, who enlisted the co-operation of the Junior Audubon Class members in the schools, the State Federation of Women's Clubs, and every available agency

of progressive citizenship in this fight. The passage of this bill is a triumph for Audubon work and removes a long-standing stain from the fair name of New Jersey.

Hearty congratulations are due the New Jersey Audubon Society, and especially its Secretary, Beecher S. Bowdish for this splendid victory in the interests of the much-persecuted Bobolink.

QUAIL AS A 'SONGBIRD'

In some sections of the country an erroneous idea appears to exist as to the attitude of the National Association of Audubon Societies toward the Quail, some people thinking that the Association desires to see the Quail put on the 'song-bird list', and thus permanently withheld from the realm of field sports.

With this there is given a copy of a letter written by the President of the Association to Representative Simon F. Zook, of Pennsylvania, who recently was fathering such a bill in the legislature of that state. This

letter may be regarded as representing the Association's attitude toward the subject.

MR. SIMON F. ZOOK,
House of Representatives,
Harrisburg, Pa. April 2, 1921.
My dear Mr. Zook:

Your letter of March 31, inviting me to appear before the Game Committees of the Pennsylvania House of Representatives on April 5 in support of your bill to put the Quail on the 'song-bird list' reached me this morning.

The National Association of Audubon Societies does not advocate the placing of the



A FOOD-CAR FOR BIRDS DESIGNED AND OPERATED BY JOSEPH R. SWAIN

Quail on the 'song-bird list' and this is the attitude it has always held. As historic evidence of the fact that we regard this bird as strictly a game-bird I may mention that in the old 'Model Law' prepared by the American Ornithologists' Union, and which, as a result of campaigns instituted by workers of this Association, was adopted in forty-one states, including Pennsylvania, the group of birds to which the Quail belongs is specially declared to be game-birds. In most states this bill was known as the Audubon Bill and in many places today is known as the Audubon Law.

If the ordinary safeguards thrown around a game-bird, such as bag-limit, limited shooting-season, non-sale, and other usual precautions do not prove sufficient in preventing the numbers of the species from becoming unduly depleted, then it should be protected by a closed season of a few years' duration in order to allow the bird to recuperate in numbers.

A law placing the Quail on the song-bird list, or in other words giving it perpetual closed season, is likely to have a tendency to defeat the very object for which the bill was enacted. The class of people that has taken most interest in this bird in the United States is the organized sportsmen. In many states these bodies, representing thousands of good, worth-while citizens, in order to perpetuate their opportunities to go afield with gun and dog, have expended much time and large sums of money in feeding Quail during periods of heavy snows and have also been responsible for the introduction of tens of thousands of Quail for the purpose of restocking depleted coveys. Many of these organizations are also active in apprehending and reporting those who kill the Quail by illegal methods or at unseasonable times.

It is my opinion that, especially in many of the northern and central states, the Quail today would be almost as rare as the Passen-

ger Pigeon if it had not been for the efforts of the game-protective organizations of sportsmen who have long been the chief active force in securing and encouraging the enforcement of laws for its preservation. If in attempting to protect Quail the bird is removed for all time from the list of birds that may ever be hunted, you virtually take from it the solicitous protective influences of the one large class of our citizens which has done most for its protection in the past.

This Association has many fights with sportsmen's organizations on the subject of whether the Bobolink, Meadowlark, and some other birds should be regarded as game-birds. However, the wise directors of an organization working for reform do not allow their zeal to carry them beyond the boundaries of their true functions and objects.

My experience has been that in most instances the fortunes of the Quail may with a fair degree of safety be left in the hands of the game-protective associations which have an intense personal interest in the preservation of the species.

If it comes to a fight for recognition of proprietorship of the bird between the land-owners on one side and the people who desire to hunt them on the other, and in which, therefore, the fortunes of the Quail occupy a secondary consideration, the matter assumes a little different aspect, and yet the well-being of the bird is still at stake.

You may always count upon the support of this organization to fight to the limit of its powers to any factors which threaten the continued existence of all desirable species and if the status of the Quail in your state demands a closed season for a term of years to insure its protection we shall be glad to lend our support to a bill to attain this end.

Regretting that I do not feel at liberty to accept your invitation, permit me to remain,

Very truly yours,
T. GILBERT PEARSON, *President*.

THE WYOMING ELK SITUATION

The officials of the Government Bureau of Biological Survey state that a good increase from the survivors of the southern Yellowstone elk herd is looked for this year, in view of the unusually favorable winter just past. Last year's rains, it is said, produced a plentiful growth of feed on the ranges, and as a result the elk are reported to be in excellent condition, with the prospect of only a normal death-rate, instead of a repetition of the heavy mortality of the winter of 1919-20, due to lack of forage and a severe winter.

Reports from representatives of the department engaged in the work of seeing to the welfare of the elk say that in the district tributary to Jackson Hole, including the Gros Ventre and Buffalo Fork valleys, the elk now remaining of the southern herd number about 9,000, having been reduced to this number from almost 20,000 in 1919. There was such a shortage of feed in the winter of 1919-20, resulting from the severe drought of the previous summer, that in addition to hay purchased and fed by the state it was also necessary for the Federal Government to

spend about \$36,000 for hay to save part of this herd from starvation.

The tremendous loss that has recently occurred in this herd cannot be attributed to a single cause. The one most responsible, however, is the almost total lack of suitable winter range in Government ownership. Were these winter ranges within the National Forest the solution would be comparatively simple, even though disastrous to the settlers dependent upon these ranges for their sustenance. Areas upon which the elk are absolutely dependent for winter forage are now largely in private ownership and can only be secured for use by the elk by purchase or some other arrangement with the owners.

NEW YORK LEGISLATION

At the last session of the New York Legislature, which recently adjourned, amendments were made to the game laws, some of which we must regard as being decidedly detrimental to the interests of conservation in the state of New York. There have been 135 salaried game-wardens. These men have been trained with great care for their duties, and for some years have been uniformed, which gave added dignity to their position. The recent change in the game laws reduced

The areas within the forests most suitable for winter range for the elk have been set aside for that purpose as a temporary expedient, but these areas are neither well suited nor located to meet the objects desired. Even with this assistance the elk are only able to survive mild winters, and when a severe season occurs, losses from starvation are appalling. It must inevitably follow that this herd will soon be reduced to the number for which hay can be provided unless winter ranges are immediately provided for them.

It is not too late to preserve the elk in goodly numbers; but there must be a thorough recognition of responsibility and adequate state and Federal legislation.

the number of this active, salaried force of game-protectors from 135 to 90.

Governor Miller also has seen fit to release George D. Pratt from the position of State Conservation Commissioner. There appears to have been no expressed dissatisfaction regarding Mr. Pratt's administration. He was removed simply to make room for a political friend of the Governor. Such things often happen in a republican form of government such as that under which we flourish.

YELLOWSTONE PARK AGAIN ATTACKED

Senator Walsh, undismayed by the defeat of his bill in the last session of Congress, has again undertaken to induce our Federal lawmakers to permit the damming of the Yellowstone River where it flows out of the Yellowstone Lake, in order to provide water for private commercial projects in his home state of Montana. This Association and its friends will fight this new effort of Senator Walsh, and any others who attempt to despoil the National Parks, with all the strength at our command. For some reason he has adopted the unusual method of introducing his bill twice in the Senate and these bills are today known as S.274 and S.275. The measure reads as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the right is hereby granted to the state of Montana to

erect and maintain a dam across the Yellowstone River at a point to be selected by it, not more than three miles below the outlet of Lake Yellowstone, for the purpose of conserving the flood waters draining into said lake, for use in the irrigation of lands in the valley of the said river beyond the bounds of the Yellowstone National Park.

"The said dam shall be so constructed as to serve as a bridge for foot and vehicular travel over said river, and shall be of no greater height than is necessary to maintain the level of the said lake at the mean high-water mark, hereby declared to be six feet above the mean low-water mark.

"That plans for the construction of the said dam shall, before work is commenced, be approved, and the mean low-water mark, upon the request of the said State, shall be fixed by the Director of the Reclamation Service.

"The work of construction of the said dam shall be conducted only by the said State of Montana, or by some irrigation district or association of irrigation districts authorized

by it, and the right to the use of the waters conserved through such dam shall never be authorized by the said State except by the qualified water users of irrigation districts. The flow of the water through the said dam shall be regulated and controlled by the said State of Montana.

"The right to authorize the use, for the development of hydroelectric energy, of any of the waters conserved by means of the said

dam, is hereby reserved to the United States, but any revenues derived from such reserved use shall accrue to the state of Montana for the benefit of the said state or the irrigation district or districts assuming the charge for the construction of the said dam.

"Nothing herein contained shall be construed to authorize the construction of diversion or conduit or other works save said dam within the Yellowstone National Park."

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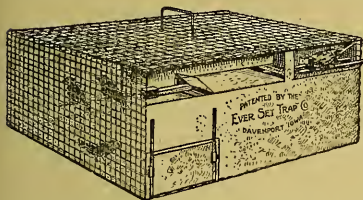
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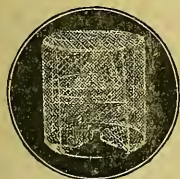
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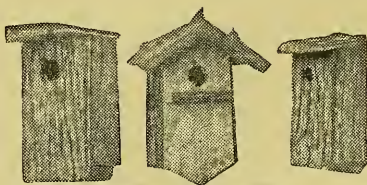
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DEVOTED TO THE STUDY AND PROTECTION OF BIRDS
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

Vol. XXIII

JULY—AUGUST, 1921

No. 4

The Yellow-breasted Chat and the Cowbird

By WILBUR F. SMITH, South Norwalk, Conn.

I HAVE been re-reading Dr. A. A. Allen's article on Warblers in BIRD-LORE for March-April, 1919, and especially his experiences with the Yellow-breasted Chat. Dr. Allen tells us that he has never known a Chat to hatch out a Cowbird's egg, and I find in the 'Warblers of North America' the following quotation from F. L. Burns (M.S.): "The nest is watched very closely, although the owner is seldom flushed from it, while a disturbed nest will almost invariably be deserted after the owner has pierced or broken its eggs. While the Cowbird frequently deposits its egg in the Chat's nest, it is never incubated, but destroyed by the bird with her own."

In the face of such a positive statement as the last, some experiences I have had with the Chat take on an added interest, though perhaps I am overbold in upsetting what seems to be an accepted belief in the Chat's super-keenness in detecting the Cow-bird's egg, which is so like her own.

Let me first fortify my position by quoting a fellow bird student, Mr. Jesse Meeker, who writes me that "on June 2, 1902, at Milford, Conn., I found a Chat's nest with three Chat's eggs and one Cowbird's egg, and the Chat flushed from the nest. All the eggs were slightly incubated."

The only Cowbird I ever caught in the act was seen slipping from a Chat's nest, and I removed the newly laid Cowbird's egg and photographed the nest, with the three Chat's eggs, and know that they all hatched and the young were raised.

In typical Chat country, an abandoned field overgrown with bushes and vines, I found a Chat's nest with one egg and one Cowbird's egg. It was built in a tangle of escaped honeysuckle vines and was not as cleverly concealed as is generally the case. I had only recently been reading of the Chat's ability to detect the alien egg which is so like its own, and a desire possessed me to leave the Cowbird's egg in the nest and see what would happen. If the Chat was as keen as I had been led to believe, she would desert the nest anyway, while if she finished laying her set of eggs and hatched and raised the Cowbird's, something

would have been learned. Besides, the friends of the small birds have never made the Cowbird the outlaw he deserves to be by removing him from the protection of the Connecticut law, and I could salve my conscience with the thought that I was strictly obeying the law in leaving the egg in the nest.

The next morning there was a Cowbird's egg in a Chipping Sparrow's nest, about fifty feet from the Chat's nest, and a second Cowbird's egg in the Chat's



TWO YOUNG COWBIRDS IN CHAT'S NEST. A YOUNG CHAT IS CROWDED OUT OF SIGHT BY THE COWBIRDS

Photographed, just before leaving the nest, by Wilbur F. Smith

nest, from which the female Chat flushed at my approach. I visited this nest every morning. No more eggs were laid, and the Chat began incubation the same day the second Cowbird's egg appeared in the nest. At my approach she would slip off the nest and glide through the tangle like a shadow, but I always could feel that she was watching me, while she herself remained unseen.

After several days' incubation I photographed the nest and eggs, and though I had to disturb the surroundings somewhat, she was on her nest as usual the next morning. All three eggs hatched, and it was the old story of crowding and clamor, greed and starving, and though the young Chat managed to exist and leave the nest, it was 'out of sight' beneath the larger and stronger Cowbirds when I photographed the nest just before they left it.

These Chats were completely deceived by the Cowbird and were as devoted to the alien interlopers as any other Warbler or Sparrow or Vireo would have been.

While it may be argued that this nest was an exception that proves the rule, it can just as well be claimed that far from all the Chat's nests are discov-

ered, and there is no way to tell to what extent the Chat is imposed on by the Cowbird. However, it does not appear to me that the Chat is as 'touchy' about having its nest discovered as some writers believe.

Birdcraft Sanctuary is visited by several thousand people each year, and among its summer bird residents, for the past four years, has been a pair of Chats which nest among the tangles of bush and briar. Three of their nests were built beside a much-used trail, although there were plenty of secluded and equally desirable places without a bird tenant.

One Chat became so tame she would not leave her nest, even when the warden was mowing the trail with a noisy lawn mower, only a few feet away from her. Another nest, on the way to the 'Overlook,' was in a tangle of cat briars and so near the trail that it could easily be touched from it, but the bird frequently remained on the nest as the warden and myself stood in the trail in plain sight. I photographed this nest and eggs and it did not disturb its owner, save for the time we kept her from her eggs.

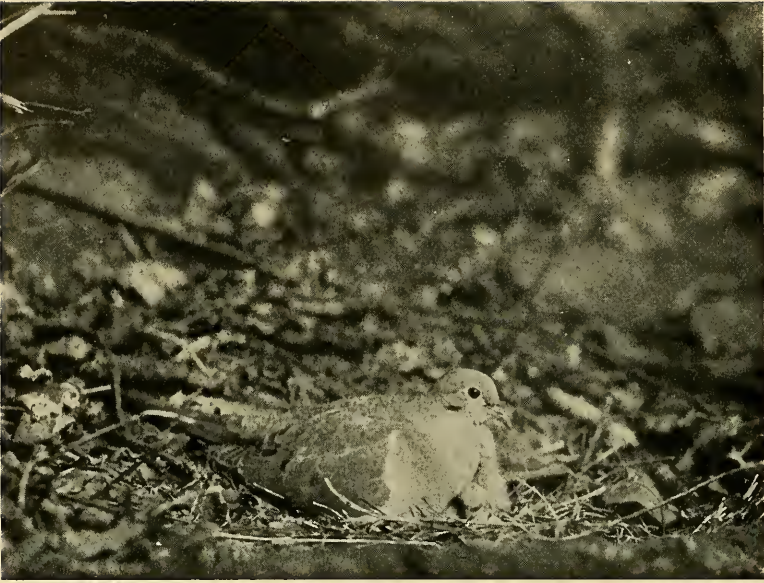
During three years the Chats raised their brood, but the fourth year the nest was destroyed, and, as the Chat's song ended at the same time, we have always believed that a certain bird of prey caught her, as it had been known to catch other breeding birds.

There is an air of peace and quietness brooding over Birdcraft's smiling acres, and much as we hope that the Chats have sensed it and departed from the ways of their kind, we believe, rather, that there is variation in the habits of the Chat just as there is in those of other birds.



A HAT AND THREE SCREECH OWLS

Photographed by Dr. J. B. Pardoe, Bound Brook, N. J.



MOURNING DOVE AND YOUNG
Photographed by W. J. Hamilton, Jr., near Ramapo, N. Y.

The Mockingbird of the Arnold Arboretum

By C. H. EARLY, Boston, Mass.

IN THE early spring of 1915, when I was walking along that part of the Boston park system known as 'Arborway,' my attention was suddenly attracted to the topmost part of a small cherry tree near the Forest Hills entrance of the Arnold Arboretum. From a point of vantage which no one could dispute, one of our feathered friends was pouring forth a melody so sweet and voluminous that I wondered how others who were passing by at the time could so easily ignore it.

As I had been for some little time a follower of the bird-life of southeastern Massachusetts, I knew that the notes coming from that musically developed throat were not those of a bird common to this locality. At first the song was a series of warbles, full-throated, and containing many crescendos and diminuendos; then it resolved itself into a series of short snatches of song resembling the songs of a number of our resident birds, both summer and permanent.

The Blue Jay's notes, both the harsh *jay* and the tuneful, bell-like, *ge-rul-lup*, *ge-rul-lup*, and three of the Robin's repertoire, viz., his alarm call, his 'rain' call, and his ordinary song, were very frequently imitated. Other bird-notes were in evidence, particularly those of the Song Sparrow, the Baltimore Oriole, the *yuk, yuk, yuk*, of the Flicker, the noisy chattering of the English Sparrow, and occasionally the loud call of the male Ring-necked Pheasant.

As I often had heard that the Blue Jay mimicked the songs of other birds, and as this bird used the Blue Jay's notes more often than those of the other birds, I was inclined to believe that I had met another unusual Blue Jay. With some difficulty (for the bird moved at my approach from tree to tree) I got between him and the sun, which was at that time very near the horizon and discovered that I was being entertained by a real Mockingbird.

A few days later I visited the Arboretum and saw him near the top of a large white oak tree. Later that day he was on the ground, evidently feeding on insects. He seemed more willing to be approached than he was on the evening when I first made his acquaintance, for I was able to get within a few yards of him.

Almost every time when I have visited the Arboretum during the past six years he has been very much in evidence. He keeps, for the most part, in the vicinity of the small ponds and along the road leading to the Jamaica Plain entrance, although he wanders very much beyond these limits at times. Many of the followers of the Arboretum birds are of the opinion that he forsakes his usual haunts during the months of July and August each year. Such is not the case, however, for I have seen him several times during each of these months, in the years of 1918 and 1919, and once or twice during July and August of 1920. On nearly all of these occasions he has poured forth his usual

variety of song. During the above months he often repairs to the collection of oaks just across the automobile road near the Forest Hills entrance, but I have observed that he visits his favorite haunts some time during each day.

As a songster this particular Mockingbird has, to my mind, no superior, at least in this locality. His best exhibition was given in May, 1919, when he sang in competition with a Brown Thrasher and a Catbird. The three birds had chosen the topmost parts of three trees for their respective outpourings of song. Each was, no doubt, trying to outdo the others. Such music I had never heard before nor have I heard any like it since. Many times I have listened with delight to the vesper songs of our Thrushes, emanating from an almost primeval woodland. I have frequently enjoyed their matin songs and have marveled at their liquid quality and their flutelike character. But the combined music of these songsters who were extending themselves seemingly beyond their ordinary capacities had an awe-inspiring effect almost beyond the power of description. When I first came within hearing distance I was certain that there were three Mockingbirds singing; but as I got nearer their open-air theatre I was able to identify one of the trio as a Catbird who was leaving out his cat-calls and doing his best to outrival his competitors. On approaching nearer I discovered that a Brown Thrasher was pouring forth the best that was in him, even to the point of almost bursting his throat. The Mockingbird, however, was singing calmly, though effectively, in his own inimitable way, easily out-pointing his rivals in volume, variety, and melody. At times he seemed almost derisive and occasionally he would stop in his production of song to go through a few gyrations and somersaults apparently for the edification of his rivals who were beginning to show signs of fatigue.

Every winter, as well as each of the other seasons of each year since the spring when he was first seen, he has kept close to his adopted abode. One day during January, 1919, when the thermometer registered 6 degrees above zero, I found him feeding on barberries. He looked none the worse for the siege of cold weather which we were having at that time, and had had for a few weeks previously. I saw him many times during that month and during the subsequent months of that year. Near the end of February he expressed himself in song. It was not the song of springtime or summer. It was more metallic than he was wont to have had it and lacked the vibrancy of his music of a few months later.

Last winter, particularly after the snowstorms of January and February, which storms will long be remembered in these parts, I felt that the supreme test was in store for our friend who had been more used to sunnier climes at that season of the year. I looked for him quite often and usually found him near his favorite haunts, looking the picture of health and activity.

I visited the Arboretum twice during January, 1921, and on each occasion he has presented himself to my view. On Sunday January 23, I found him feeding on the fruit of a *Phellodendron chinense glabriusculum*, a variety of

tree native to Central China. On Saturday, January 29, 1921, the day on which this article was written, I visited the same locality and had the pleasure of seeing him on the ground near the same tree. He looked sleek and well-groomed; there was not a feather out of place. He was more plump than at any time when I had previously seen him and looked fully able to withstand the rigors of many more of our winters.

I trust that he will continue to care so ably for himself and that he will enjoy his hermit life (for hermit he surely is) for many years to come. At least let us hope that he will live a bird-life of such extension as would be in keeping with the length of the name of the tree on whose fruit he is gaining his sustenance at the time this article is written.



ENGLISH SPARROW AND NEST
Photographed by Arthur A. Jeffrey, Missouri

The Bird Bath in Molting Time

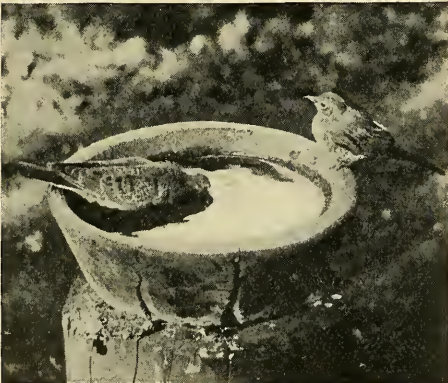
By CRAIG S. THOMS, Vermillion, S. D.
With Photographs by the Author



BLUE JAY



ONE ROBIN BATHING, TWO WATCHING



A MOURNING DOVE DRINKS WHILE
A ROBIN WAITS

WHEN we left home in early August for a month's vacation, the yard was alive with birds; when we returned, the first week in September, not a bird was to be seen.

"Where are the birds?" a friend inquired.

They were gone, but we believed that we could charm them back again.

The bird-bath, which had held no water during our absence, was filled and kept full, and the hose was freely used to revive the grass and give the bushes a drink. We knew that water in a bird-bath had a reflecting surface like a mirror and could be seen by birds in the trees for a considerable distance. Moreover, we believed that birds could actually smell water; and so, after filling the bath and watering the lawn, we confidently waited.

In a few days a flock of a dozen Robins came to the lawn and for a whole month literally made the bath their own. Two or three Flickers came, and a couple of Brown Thrashers; several Mourning Doves camped in the garden; Blue Jays were frequent visitors; and at least one Catbird and one Cuckoo made their appearance, while Bronzed Grackles were occasionally obtrusive by their numbers. Thus it was abundantly demonstrated that the birds had left the vicinity for lack of water.

The birds' need of water in the molting season explains their rather sudden disappearance in late August or early September. At this time they are feverish, weak, silent, almost sick; their strength is expended in growing new feathers; and one will find them in the trees, shrubbery, and willows beside streams, rivers, and lakes. They drink, and drink deeply, every little while, and literally soak themselves in water. I eagerly watched those that I had enticed back from the river, some four blocks away, and found that their conduct at the bath differed from their ordinary conduct in several respects:

1. *They had no fight in them.* Half a dozen Robins would perch on the small bath at the same time, literally surrounding it, while two or three would get into the bath together. Ordinarily, except with rather young birds, a passage at arms would instantly ensue if a second bird hopped to the bath while another was drinking.

2. *They simply could not be satiated with water.* They seemed to be burning with fever. After drinking and bathing to seeming repletion, they scattered, but in twenty or thirty minutes they were back again, some crowding the bath, while others surrounded it on the ground and waited impatiently.

3. *Different species would drink contentedly together,* some-



A CIRCLE OF ROBINS



A FLICKER JOINS THE GROUP



DOVE AND ROBIN

thing not even attempted on such a small bath at other times. Mourning Doves and Robins, Brown Thrashers and Robins, Flickers and Robins, Grackles and Robins, would drink together. One day a Robin and a Flicker were actually in the bath at the same time. A truce seemed to be established because it was molting-time. The only exception was the Blue Jay, which would not permit any other bird at the bath with itself.

4. *Dust-bathing birds now became water-bathing birds.* Ordinarily the Mourning Dove and Blue Jay do not bathe in water but take dust-baths instead. Now they could not get water enough. Their awkwardness in the bath, however, was apparent, and that of the Mourning Dove almost ludicrous. Other birds, such as Robins, Catbirds, and Thrashers, seem to have acquired an impulsive wing reaction which sends the water flying. Jays and Doves want to roll in water as they do in dust; but while the molting fever is on them they must have water.

5. *Toward the end of the molting-season new vigor becomes manifest.* The birds came less frequently to the bath, and drank and bathed less when they did come. They would not permit each other on the bath with the same contentment as before; too close proximity engendered hostility. Different species on the bath at the same time was a thing of the past. They were now more noisy; and even a snatch of song from Robins, Grosbeaks, Wrens—and Meadowlarks in the nearby meadow—was not uncommon. The Flicker even renewed his courting antics and proposed a new mating until the vicious pecks of the female reminded him that the mating season was over.

When full vigor had returned and the birds had become their real selves again, the premises were soon abandoned, for the summer residents had taken wing for their southern winter home.



The Cowbird: A Parasite

By HARRY E. ELDER, Monticello, Ind.

THE common name for the species generally known as the Cowbird varies with different people and with different sections of the country. Cow Blackbird, Cow Bunting, Lazy Bird, Brownheaded Blackbird, and other appellations are among the synonyms in use. Whether most appropriate or not, usage seems to be crystallizing upon the term 'Cowbird,' for the reason that members of the species are so often found among cows in pastures. The reason for this association with cattle is not exactly known. Some writers see no relation between such association and the life of the bird, while others believe that insects, driven from the grass and weeds by the cattle, furnish the foundation for such a habit.

It is as a parasite upon other species of birds that the Cowbird is most interesting. It never builds a nest of its own, it does not incubate its own eggs and it takes no care whatever of its young. Its eggs are deposited in the nests of other birds, usually smaller than itself, and the foster parents incubate them and feed them along with their own. Most evidence indicates that the Cowbird deposits its eggs directly in the nests of its victims. Not less than ninety-one species, according to Bendire, are victimized in this manner. Since its egg is, as a rule, larger than those of the rightful owners of the nests, it receives most of the body heat during the period of incubation and frequently hatches a day or two ahead of the other birds. This gives the young Cowbird the advantage over his nest-mates, with the result that he gets the greater amount of the food brought to the nest and soon starves the others or shoves them entirely from the nest. According to my own observations the number of Cowbird eggs in a single nest may range from one to three, along with from one to five of the rightful owner. Greater variations than this have been reported. The Report of the New York State Museum for 1912 states that in every instance the Cowbirds destroy the rightful owners of the nests. Barrows, in 'Michigan Bird Life', however, states that the Song Sparrow frequently rears one or two of its own young in addition to one or more young Cowbirds. My own observations show that this is also true of the Field Sparrow, the Towhee, and the Catbird.

The observations upon which this paper is based were made in the vicinity of Winona Lake, between June 14 and August 20, 1920. A report of these observations as a whole and of specific instances will make clear the nature of the Cowbird.

On June 17 I was fortunate enough to find a Towhee's nest containing four eggs, all very much alike. Three were white with reddish brown spots well distributed over the entire surface and one was slightly brownish with the spots not so pronounced as in the other three. They were all so nearly the same size, about .8 by .65 inches, that from the eggs alone no one could have

stated definitely whether they were of two different species or merely variations of the same species.

The truth of the matter was revealed by the subsequent history of the nest. By June 23 three of the eggs, including the one of slightly different color from the other three, had hatched. (The other egg never hatched.) All three young birds looked very much alike at first, but, by the 26th, differences began to be noticeable. Two of them were covered with a down of grayish color and had white-rimmed mouths, while the third one was covered with a darker down and had a yellow-rimmed mouth. The first two were developing more rapidly than the latter one. By June 30, when the young were about ready to leave the nest, the differences were very evident. The two were much more completely feathered than the one. They were of a brownish gray color above and light underneath, with darker stripes becoming visible. The one remained dark. The result clearly consisted of two Cowbirds and one Towhee.

While we do not class the Cowbird as a præcocial bird, the above example, as well as others observed, indicates that it develops more rapidly than other altricial birds. This is one characteristic which greatly aids it in being extraordinarily successful in its parasitic life.

While I observed only the one Towhee's nest, I repeatedly saw Towhees feeding young Cowbirds during the latter half of June and the first half of July. The Cowbirds in every instance received the entire attention of their foster parents, there being no young Towhees present. They readily accepted all food offered them and continued to call for more. On several occasions between June 16 and June 25 I saw the same pair of Towhees feeding two young Cowbirds—the male attending to one and the female the other. Although my observations covered only a short period of time late in the nesting season, they indicated a high percentage of Cowbird parasitism among Towhees.

Some writers contend that Cowbirds are careful to lay their eggs in nests where there are already eggs of another species. Others attempt to refute this by citing instances of nests containing Cowbird eggs only. It seems to me, however, that all the circumstances which produce such a condition have not been considered. For example, it is not always possible to tell whether a nest has been used in raising a brood of birds or whether it has been deserted. I doubt very much whether one who did not know could have told on July 1, after the young birds had left the nest, whether the Towhee's nest referred to above was one which had been used or whether it was a deserted one. Yet there was one unhatched Cowbird egg, at least the hollow shell of one, remaining in the nest. Who could say that it had been laid in an empty nest? Again, on July 6, I found a nest, apparently of a Song Sparrow, containing one Cowbird egg. It did not seem to be in use. It was impossible to tell certainly whether a brood of birds had been raised in it and this egg had failed to hatch, or whether it had been deserted because the Cowbird egg had been found in it.

Not knowing the complete history of the case, both assumptions are equally probable. Two other similar nests were found late in July.

One other observation proves conclusively that only Cowbird eggs may be found in a nest without having been deposited originally in an empty nest. On June 18 I found the nest of a Warbler containing three eggs of the Warbler and two of the Cowbird. On my next visit to the nest, June 21, I found only the Cowbird eggs remaining in the nest. The others had been destroyed, and the shell of at least one of them was lying on the ground near the nest. This, in addition to giving light on the subject in question, is circumstantial evidence, at least, that the Cowbird sometimes destroys the eggs of the rightful owner of the nest. Unless the Warbler eggs in this case were destroyed by the Cowbird, why were the Cowbird eggs spared? The same two eggs were still in the nest on June 26, when I last visited it, but they were cold, and numerous ants were crawling about the nest and upon the eggs. Evidently the destruction of the eggs caused the desertion of the nest.

I do not contend that the Cowbird always lays its eggs in nests containing other eggs. There is evidence that they frequently do otherwise. According to Barrows of the Michigan Agricultural College, "The Yellow Warbler is constantly victimized by the Cowbird, and in places where this parasite is abundant many deserted nests are found containing from one to four eggs of the Cowbird, with or without some of the Warbler. . . . As is well known, this Warbler not infrequently covers a Cowbird egg with a new layer of material in the bottom of the nest, raising the rim of the nest correspondingly, and instances have been known where this has been done a second time, making a three-storied nest." I have in my possession one two-storied nest of this species, found on July 6 in a raspberry bush just north of Indiana University Biological Station. The Cowbird egg is almost completely buried in the bottom, and the two stories of the nest are very distinct. Undoubtedly a brood of birds was raised in the upper story while the Cowbird egg remained in the basement unincubated.

Of three other nests of the Yellow Warbler found in use, one contained a Cowbird egg. Owing to the fact that after the birds hatched the nest was robbed, I did not observe the struggle for existence between the Cowbird and the Warblers of this nest. One Kentucky Warbler's nest, found June 22, also contained a Cowbird egg, but this nest was robbed before any of the eggs hatched. Out of a total of six Warbler nests found, whose history was certain, four had been contaminated, indicating a very high percentage of parasitism by the Cowbird among the Warblers.

On June 17 I found the nest of a Scarlet Tanager containing one bird and two eggs. The eggs never hatched and on June 22 when I last saw the young bird, it was evident that it was a Cowbird. According to Amos W. Butler in his 'Birds of Indiana,' the nest of the Scarlet Tanager is a frequent receptacle for the eggs of the Cowbird.

A nest of the Wood Thrush was found on June 29 containing two eggs of the Cowbird and none of the Thrush. What had become of the Thrush eggs, if any had been laid, could not be determined. On July 2, one egg hatched and on July 3 the other was gone. On July 10, the young Cowbird, fairly well feathered, left the nest, constituting the entire brood of one of our most beneficial birds.

A second nest of the Wood Thrush, containing two eggs of the owner, was found on July 14. On my next visit to this nest on July 17, one of the Thrush eggs had been picked, evidently by a bird, and thrown from the nest. Two Cowbird eggs had been deposited in its place. This, again, is circumstantial evidence that the Cowbird destroys the eggs of other birds. By July 28 all three eggs had hatched. All three birds thrived well until August 5, when one of the young Cowbirds was found dead, from some unknown cause, in the nest. It was removed by its foster parents on the same day. The other two birds, one Thrush and one Cowbird, continued to thrive and left the nest on August 8. Although the Cowbird was a little more developed than the Thrush, both probably survived and reached maturity.

There is every reason to believe that the Sparrows suffer heavily from the Cowbird. Of fourteen nests observed, ten of the Field Sparrow and four of the Song Sparrow, all contained one or more eggs of the Cowbird except three nests of the Field Sparrow. In two of these three nests the young were raised unmolested. The eggs of the third nest were destroyed before the period of incubation began and the nest was deserted. The fourth nest, found June 29, contained one egg of the Sparrow and two of the Cowbird. By June 30 one more Cowbird egg had been deposited. The period of incubation now began. On July 12 one of the Cowbird eggs was found missing and the Sparrow egg was found on the ground near the nest with the young Sparrow almost ready to emerge, apparently a little prematurely, from the shell. I replaced it in the nest, but found it dead, the Cowbirds dead in the shells, and the nest deserted the next day. So many tragedies of this character are found among the birds that one wonders how we have as many feathered friends as we have.

A fifth nest, found June 30, contained one egg of the Field Sparrow and one of the Cowbird. Persons who had observed this nest, previously, informed me that one Cowbird had been hatched here but that it had disappeared from the nest a few days after hatching. On July 1, my sixth nest of the Field Sparrow, containing four eggs of the rightful owner and one of the parasite was found. By the 5th all the eggs had hatched, two Sparrows and the Cowbird having appeared as early as July 3. It is interesting to note that the Cowbird had one or two days the start of at least two of the Sparrows; also that one Sparrow had been crowded out before July 7 and another before July 12, when two Sparrows and the Cowbird left the nest. The seventh, eighth, and ninth nests of this species were found during the second half of July and each contained a Cowbird egg or eggshell. The previous history is

unknown in all three cases. The tenth nest, found July 19, contained three Sparrow eggs and one Cowbird egg. All four eggs had hatched by July 30, but the nest was robbed and the birds destroyed, probably by a Hawk, on August 3 or 4.

The first Song Sparrow's nest, found June 28, is interesting because of the large number of eggs and its subsequent history. When found there were five Sparrow eggs and three Cowbird eggs. By 4 o'clock P.M. of the same day, one Sparrow egg had disappeared. By July 7, another was gone. On July 10, when I visited the nest, I found two young Sparrows, two young Cowbirds, and one egg of each; on July 12, three Sparrows, two Cowbirds, and one Cowbird egg; on July 13, one Sparrow, and two Cowbirds. On the morning of the 15th the Sparrow was found dead; one Cowbird was found in a similar condition on the 16th. The remaining Cowbird, now receiving the food of the entire brood, grew very rapidly and left the nest on July 17 or 18. The other three nests were found late in July, after the nesting season was over, but each contained one Cowbird egg. Repeated observations, between June 22 and August 18, of Song Sparrows feeding young Cowbirds tend to confirm Barrows' statement that "probably this species rears more Cowbirds than any other species which we have."

On July 19, a nest of the Acadian Flycatcher, containing one Cowbird about to leave the nest, was found. On this same date a member of this same species was observed feeding a young Cowbird which had left the nest. The small, frail, shallow nest of this Flycatcher makes it almost certain that it does not raise any of its own young in the same brood with a Cowbird.

In addition to the birds which I have found nesting which were victimized by Cowbirds I have noticed several species feeding young Cowbirds which had left the nest. The young Cowbirds, usually already much larger than their foster parents, were always calling for food more frequently than it could be found and carried to them. Indeed, after they were well able to fly, they followed their foster parents about and almost incessantly repeated their hunger-call. They were, undoubtedly, fed long after they were able to care for themselves. I have seen Vireos, Maryland Yellow-throats, and American Redstarts imposed upon in this manner. If these birds had any offspring of their own, I did not see them. They gave the young Cowbirds their undivided attention, while the adult Cowbirds flitted merrily about, probably spying out new victims.

During the period of my observations I saw at least ninety different species of birds. Thirty-three of these were either nesting or feeding young which had left the nest. Thirteen of these thirty-three were victims of the Cowbird. In other words, almost 40 per cent of the species found nesting or feeding young birds were rearing young Cowbirds. Probably, if the entire truth were known, the figures would show a still higher percentage. Considering some single species, such as the Field Sparrow, Song Sparrow, Towhee, Yellow Warbler, and Maryland Yellow-throat, there is every reason to

believe that in some localities the percentage of parasitism approaches very nearly 100 per cent.

The status of the Cowbird cannot be determined without viewing it from an economic standpoint and noting its relation to agriculture. Four questions must be answered in doing this: (1) Of what does the food of the Cowbird consist? (2) Of what does the food of its victims consist? (3) How does the food of a single Cowbird compare in kind and quantity with that of the brood of birds it has replaced? (4) What, if any, service to man does the Cowbird perform that cannot be performed by victimized species?

According to Barrows, in 'Michigan Bird Life,' the food of the Cowbird is 22 per cent animal matter and 78 per cent vegetable matter. Of the 22 per cent of animal matter, 20 per cent consists of insects as follows: grasshoppers, which during August furnish 45 per cent of the food of the species, 10 per cent; weevils, 2 per cent; caterpillars, including cutworms and army worms, 2 per cent; and wasps, bees, ants, and miscellaneous insects, 6 per cent. The vegetable matter consists mainly of weed seeds and grain, the former predominating. The latter is largely waste grain, but some is from newly sown fields. I have also seen young Cowbirds accept wild fruit, such as mulberries and raspberries from their foster parents. Undoubtedly, the food habits of the Cowbird are, on the whole, beneficial.

In answer to our second question above, we learn from Barrows, in 'Michigan Bird Life,' and Butler, in 'Birds of Indiana,' of what the food of some of the birds commonly victimized by the Cowbird consists. The Towhee feeds mainly upon weed seeds and insects. Although it is fond of wild fruits and eats almost everything from strawberries and blackberries to wild cherries and grapes, it does no damage to cultivated fruits and plants. Owing to the nature of its haunts, it is not as beneficial as many other species. In view of the fact that it frequently raises two or more Cowbirds along with one or more of its own young, it is questionable whether much economic loss results from its victimization by the Cowbird.

All the Sparrows, with the exception of the English Sparrow, are very beneficial in their eating habits. Weed and grass seed, an immense number of injurious insects, and small wild fruit constitute the bulk of their food. It is easy to see the harm done by the Cowbird when we know, for example, that the Song Sparrow raises more Cowbirds than any other species and that, as a rule, one Cowbird is raised at the expense of an entire brood of Sparrows.

The food habits are uniformly beneficial. They consume largely insects, spiders, small wild fruits, and insect eggs. They usually make use of food most easily obtainable. Forbes has shown in one case that where an orchard was infested with canker-worms, these larvæ formed two-thirds of the food of the Yellow Warbler. While Cowbirds are voracious feeders, and one of them undoubtedly destroys many more harmful insects than a single Warbler, the good done by one Cowbird by no means balances with that accomplished by the

entire brood of Warblers at whose expense it exists. In addition to this consideration, a comparison of the esthetic, sentimental, and educational value of the two groups places the Cowbird in exceptionally ill repute.

How does the food of a single Cowbird compare in kind and quantity with that of the brood of birds which it has replaced? This question has been answered partially already. In kind, the comparison is favorable; in quantity, unfavorable. One Cowbird certainly does not consume as many injurious insects and seeds of noxious weeds as the three or four song-birds whose place it has taken.

What, if any, service to man does the Cowbird perform that cannot be performed by parasitized victims? Edward H. Forbush, in 'Useful Birds and Their Protection,' says: "This much-maligned bird is, nevertheless, an essential part of nature's plan. Birds that rear their own young are confined by necessity to a certain radius about their nests; but the scattered bands of Cowbirds form a wandering, unattached light squadron of insect destroyers, which all summer long can go where their presence is most needed. In the warmer months of the year they feed almost entirely upon insects, but during the colder months they live on seeds." From my own observations, however, places are rare where we find the Cowbird in which we do not also find species of more exemplary habits just as capable as the Cowbird of consuming insects and weed seeds detrimental to human welfare. The numbers of these species would be even more numerous if Cowbirds were exterminated. I doubt whether the "unattached light squadrons" of Cowbirds cover any more territory than is covered by the various species of birds working out from their nests as centers.



The Migration of North American Birds

SECOND SERIES

XVI. PURPLE GRACKLE

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

This species is the well-known Crow Blackbird of eastern North America. In some one of its several forms it occurs north to Labrador and Mackenzie, west to the Rocky Mountains, and south to the Gulf of Mexico. It is divided into three subspecies as follows:

The Florida Grackle (*Quiscalus quiscula quiscula*)¹ is resident in the southern part of the southeastern United States, and breeds north to the coast of South Carolina, to southern Georgia, southern Alabama, and southern Mississippi; west to eastern Louisiana; south to the coast of the Gulf of Mexico, from eastern Louisiana to southern Florida; and east to the Atlantic coast of Florida, Georgia, and South Carolina.

The Purple Grackle (*Quiscalus quiscula ridgwayi*)¹ breeds north to southern Rhode Island, southern Connecticut, southeastern New York, and northeastern Pennsylvania; west to central Pennsylvania, extreme western Maryland, eastern West Virginia, southeastern Kentucky, central Tennessee, and northern Mississippi; south to central Mississippi, central Alabama, and northern South Carolina; and east to central North Carolina and the Atlantic coast from Virginia to Rhode Island. It winters south to southern Louisiana, southern Alabama, southern South Carolina, and probably to Florida.

The Bronzed Grackle (*Quiscalus quiscula æneus*) breeds north to central Labrador, James Bay in northern Ontario, Fort Churchill in northern Manitoba, and to southern Mackenzie; west to southwestern Mackenzie, western Alberta, western Montana, western Wyoming, central Colorado, northwestern and west central Texas; south to central southern Texas, northern Louisiana, western Tennessee, central Kentucky, central West Virginia, southwestern Pennsylvania, southwestern and central New York, northern Connecticut, and northern Rhode Island; east to eastern Massachusetts, eastern Maine, Nova Scotia, and eastern Newfoundland. It winters south also to southern Louisiana, southern Alabama, southern South Carolina, and probably to Florida.

In the following tables of migration the records marked with an asterisk refer to the Purple Grackle, all the rest to the Bronzed Grackle.

¹ The change in the scientific name of this race, although not yet taken up by the American Ornithologists Union Committee on Nomenclature, is apparently necessary.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
*Variety Mills, Va.	11	February 23	February 15, 1887
*Newmarket, Va.	33	March 3	February 18, 1909
*Washington, D. C.	30	February 23	Rare, winter
*Philadelphia, Pa.	26	February 24	Rare, winter
Beaver, Pa.	19	March 8	February 17, 1917
Renovo, Pa.	21	March 19	March 4, 1903
*Morristown, N. J.	18	March 3	Rare, winter
*Demarest, N. J.	9	March 10	Rare, winter
*New York, N. Y.	24	March 8	Rare, winter
*Shelter Island, N. Y.	16	March 7	February 12, 1898
Geneva, N. Y.	12	March 13	February 24, 1915
Hartford, Conn.	22	March 14	Rare, winter
Providence, R. I.	23	March 9	Rare, winter
Pittsfield, Mass.	10	March 18	March 8, 1898
Boston, Mass.	24	March 18	Rare, winter
Harvard, Mass.	7	March 14	February 23, 1909
Bennington, Vt.	13	March 14	February 28, 1909
St. Johnsbury, Vt.	19	April 2	March 19, 1894
Tilton, N. H.	6	March 28	March 23, 1908
Portland, Maine.	13	April 2	March 15, 1908
Orono, Maine.	11	April 4	March 24, 1889
Montreal, Que.	16	April 9	March 23, 1898
Quebec, Que.	9	April 28	April 15, 1899
Scotch Lake, N. B.	19	April 8	March 19, 1903
Chatham, N. B.	24	April 12	March 19, 1903
Pictou, N. S.	5	April 22	April 17, 1894
North River, P. E. I.	3	April 15	April 4, 1890
*Athens, Tenn.	8	February 27	February 6, 1903
St. Louis, Mo.	11	February 24	Rare, winter
Concordia, Mo.	10	March 9	February 20, 1914
Odin, Ill.	8	February 26	February 18, 1890
Chicago, Ill.	29	March 21	March 7, 1908
Richmond, Ind.	15	February 27	Rare, winter
Waterloo, Ind.	19	March 5	Rare, winter
Oberlin, Ohio.	26	March 6	Rare, winter
Detroit, Mich.	13	March 14	Rare, winter
Vicksburg, Mich.	15	March 9	Rare, winter
London, Ont.	14	March 18	Rare, winter
Toronto, Ont.	17	March 21	February 26, 1906
Ottawa, Ont.	38	March 28	March 8, 1907
Keokuk, Iowa.	17	March 13	Rare, winter
Sioux City, Iowa.	14	March 25	March 4, 1910
Madison, Wis.	21	March 21	March 8, 1902
Racine, Wis.	17	March 16	March 5, 1910
Lanesboro, Minn.	11	March 26	March 15, 1889
Minneapolis, Minn.	20	March 27	Rare, winter
St. Vincent, Minn.	2	April 18	April 16, 1897
Onaga, Kans.	29	March 20	February 23, 1919
Red Cloud, Neb.	9	March 18	February 24, 1917
Sioux Falls, S. D.	4	March 24	March 19, 1911
Fargo, N. D.	8	April 5	March 26, 1919
Aweme, Manitoba.	22	April 16	April 1, 1895
Alexander, Manitoba.	8	April 20	April 3, 1912
Qu'Appelle, Sask.	16	April 25	April 5, 1910
Hay River, Mack.			1 wintered, 1905
Yuma, Colo.	5	April 23	April 28, 1908
Denver, Colo.	5	April 22	April 15, 1909
Great Falls, Mont.	13	April 27	April 16, 1908
Flagstaff, Alberta.	9	April 23	April 7, 1910
Edmonton, Alberta.	5	April 22	April 2, 1910
			April 7, 1910

FALL MIGRATION

LOCALITY	Number of years' record	Average date of fall departure	Latest date of fall departure
Scotch Lake, N. B.....	9	October 11	November 3, 1902
Montreal, Que.....	9	October 6	October 23, 1897
Portland, Maine.....	4	October 7	October 23, 1913
St. Johnsbury, Vt.....	3	October 13	October 18, 1915
Harvard, Mass.....	6	October 29	November 24, 1913
Boston, Mass.....	13	October 31	Rare, winter
Providence, R. I.....	10	November 6	November 26, 1911
Geneva, N. Y.....	2	November 13	November 22, 1914
*Shelter Island, N. Y.....	2	November 15	November 20, 1901
*New York, N. Y.....	13	November 6	Rare, winter
*Demarest, N. J.....	7	November 10	Rare, winter
*Morristown, N. J.....	14	October 30	Rare, winter
Renovo, Pa.....	18	November 4	November 30, 1914
Beaver, Pa.....	4	November 1	November 21, 1888
*Philadelphia, Pa.....	13	November 9	Rare, winter
*Washington, D. C.....	5	November 17	Rare, winter
Ottawa, Ont.....	26	October 11	November 12, 1887
Toronto, Ont.....	7	October 20	November 14, 1902
London, Ont.....	4	October 25	Rare, winter
Vicksburg, Mich.....	10	October 22	Rare, winter
Detroit, Mich.....	7	October 31	Rare, winter
Oberlin, Ohio.....	9	November 2	Rare, winter
Waterloo, Ind.....	9	November 1	Rare, winter
Richmond, Ind.....	7	November 11	Rare, winter
Chicago, Ill.....	9	October 27	November 17, 1903
Odin, Ill.....	5	November 11	November 16, 1892
Concordia, Mo.....	8	November 3	November 20, 1910
Athens, Tenn.....	7	October 29	November 12, 1909
St. Vincent, Minn.....	3	October 14	November 3, 1897
Minneapolis, Minn.....	5	October 22	Rare, winter
Lanesboro, Minn.....	6	October 20	November 8, 1887
Madison, Wis.....	9	October 27	December 21, 1913
Keokuk, Iowa.....	12	November 17	Rare, winter
Qu'Appelle, Sask.....	2	October 25	October 26, 1907
Aweme, Manitoba.....	18	October 26	November 8, 1901
Sioux Falls, S. D.....	2	October 23	October 23, 1910
Onaga, Kans.....	25	November 4	December 8, 1903
Yuma, Colo.....			October 31, 1906



Notes on the Plumage of North American Birds

SIXTIETH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Purple Grackle (*Quiscalus quiscula quiscula*¹, Figs. 1-3). Nestling Grackles are almost uniform sooty brown with traces of iridescence in the wings and tail. In August this plumage is exchanged, by complete molt, for the glossy dress of the adult bird. There is no spring molt and the slight differences between winter and summer plumage are due to wear and exposure. The female (Fig. 3) is smaller in size and duller in color than the male, somewhat duller, even, than our figure.

Florida Grackle (*Quiscalus quiscula aglaeus*, Fig. 4). The plumage changes of this bird are similar to those of the Purple Grackle, from which it may usually be distinguished by its smaller size, purple-violet breast, and bottle-green back.

Bronzed Grackle (*Quiscalus quiscula aeneus*, Fig. 5). The nestling plumage of this species resembles that of the Purple Grackle, and, as in that species, the plumage of the adult is acquired at the fall (post-juvenal) molt. There is, however, a more pronounced difference between the color of the winter and summer plumage in the Bronzed, than in the Purple Grackle, the shining brassy back and abdomen of the fall and winter Bronzed Grackle becoming dull seal-bronze in summer.

The Bronzed may be known from the Purple and Florida Grackles by the absence of the iridescent bars which, whether exposed or concealed, are present in the back and abdomen of the other two birds.

The Relationships of Our Grackles

The relationships of the Bronzed, Purple, and Florida Grackles is a classic problem in North American ornithology. The case has been stated at length by the writer in the Bulletin of the American Museum of Natural History, (Vol. 4, 1892, pp. 1-20) to which the interested reader is referred. Briefly there appear to be two species of Grackles in this small group: first, the Bronzed Grackle, an exceptionally stable form, which, throughout a breeding range extending from southern Texas to Labrador and west to the Rockies, apparently shows no geographic variation in color; second, a variable species of which the Florida Grackle is the southern form, the Purple Grackle (Fig. 2) the northern form. When, however, the range of the Bronzed Grackle touches that of the Purple Grackle (as it does from southern New England, the upper Hudson Valley, and southward along the Alleghanies at least to Alabama), the two intergrade producing a bird with a brassy green back (Fig. 1), which is found breeding only in this comparatively narrow area of intergradation.

¹ This is the nomenclature of the A. O. U. Check-List. According to Dr. Oberholser (see preceding article) this name should be applied to the Florida Grackle, while the Purple Grackle should be known as *Quiscalus quiscula ridgwayi*. The case has not yet been acted upon by the A. O. U. Committee on Nomenclature.

The constancy in the characters of the Bronzed Grackle throughout its enormous breeding range, the fact that it varies in color only where its range reaches that of the Purple Grackle, and the further facts that without regard to locality, whether in Massachusetts or Tennessee, its intergradation with that species is always accomplished through a similar color character and that this area of intergradation is not one in which geographic or climatic intergradation is known to occur among other birds—all indicate that the Bronzed and Purple Grackles intergrade by hybridization.

The case is an exceedingly interesting and important one and presents a rare opportunity to the field ornithologist who may set the question of the exact status of these birds at rest by a study of their distribution and relationships during the breeding season in the lower Mississippi Valley and particularly western Louisiana where it is possible the ranges of the Florida and Bronzed Grackles may come together.



Notes from Field and Study

Birds and Salt

In reference to the interesting notes on the above in BIRD-LORE, by Esther Recks and Fred. J. Pierce, I would like to add that I have found Pine Siskins and Crossbills fond of salt. One year, about the middle of April, we had bacon curing in sugary brine in a large tub placed on a back veranda. There was a leak from this tub onto and between the planking of the floor and both species came in considerable numbers to enjoy the encrusted salt, and even picked away and swallowed small fragments of wood saturated with the brine.

A friend, when trapping in the mountains, spilt some salt outside his cabin door and a few Pine Siskins ate it ravenously. Some days later he accidentally dropped a small quantity of strychnine, which he was using in a bait close to the cabin door. Whether some Pine Siskins, already accustomed to come there for salt, mistook the strychnine for that substance, or perhaps thought it grit, a few unfortunately were poisoned, and were found dead on the snow outside the cabin.

Many bird fanciers years ago used to warn people against giving salt to their cage birds, considering it poisonous.—J. E. H. KELSO, M.D., *Edgewood, B. C.*

Scarcity of Nighthawks

As the summers pass, I notice, with increasing apprehension, that the ranks of the Nighthawk become smaller and smaller. This bird, which a few years ago was quite plentiful throughout the summer, has now become so rare in the vicinity of my home that the sight of it is a matter of special interest. A few years ago the summer evenings were rarely complete without the sharp notes of the Nighthawk cutting the air as they circled about in quest of aerial insects, and the fall migration of them was often the most spectacular ornithological feature of the year. I well remember one fall afternoon, about five years ago (unfortunately, no exact date was recorded), when I witnessed by far

the largest migration of Nighthawks I have ever seen. For a period of fifteen minutes or more the air was literally *alive* with Nighthawks; almost as far as one could see they filled the sky. I believe they numbered, approximately, ten thousand, but it is, of course, very hard to correctly estimate so many individuals at one time.

In 1919, I saw the first Nighthawk of the year in Cedar Rapids, Iowa (35 miles south of Winthrop), on May 25, and this was the only date I secured for my spring migration record. None were seen again until August 23, when two were seen at my home. A flock of about twenty-five was seen August 28, 1919, which was apparently migrating, and no more were seen that year.

This year (1920) a lone Nighthawk appeared May 10, and not another one was seen until August 30, when I saw several. One more appeared September 12 and this was the last one seen. I have spent practically every day throughout the summer out of doors and feel quite sure that very few Nighthawks appearing during the day and evening passed unnoticed. Moreover, I have gone through my records very carefully to make sure that no notes of its appearance have been overlooked.

In comparison with the large numbers of Nighthawks which formerly were found here, the few visitants noted above seem, to me, to indicate that some serious factor has prevented their return in even a small measure of their former abundance. I would be glad to hear from bird students in other parts of the country in regard to the numbers of Nighthawks they have observed in the last few years.—FRED. J. PIERCE, *Winthrop, Iowa.*

Birds' Love for Color

One day I tied three new door-keys together with about a yard of bright red satin ribbon for Helen, my little girl, to play with. A short time afterward they had disappeared, and although we searched everywhere, they

could not be found. The incident was soon forgotten.

Then we noticed that a pair of Robins had commenced to construct a nest in the topmost branches of a tall maple tree that stood at the back of the house. We watched them carrying mud, horsehair, and quantities of cotton twine, and when their house was finished we saw a long red streamer gaily waving from it in the wind.

All summer the bright pennant fluttered in every breeze. The Robins reared their broods—one followed by another. I often wondered what the red flag was that was flaunted so boldly high above our heads and so far out of our reach.

Autumn came. The birds had flown. Then one night the wind blew a terrible gale, and the next morning I found that a large bough had been broken off from the maple tree. It was the one that held in its forked branches the Robins' nest. I picked it up, and, woven into its adobe walls, along with twine and horsehair, was a bright red satin ribbon, and resting in the bottom, thickly covered with cotton, pieces of twine, feathers, and more ribbon, was Helen's bunch of keys to which the ribbon was attached.

I would not have believed that a Robin could carry such a heavy weight as three door-keys—one a brass one—had I not the proof positive before my eyes.—ROSALEE M. FEE, *Oregon*.

A Kingbird's Nest

During the summer of 1919, a pair of Kingbirds deserted their usual abode in the orchard and built a shaky nest in a dead tree growing in the lake. The location afforded no protection whatever, and was in plain sight of all who went up or down the body of water. The nest was but five feet high and so insecurely fastened that every storm loosened it dangerously. The attention of those watching the structure was much taken up in keeping it from falling into the water. Despite the publicity the nest received, from the knowledge of its location, three eggs were laid and jealously guarded from all intruders by the beaks and wings of the elder birds.

During incubation pictures were taken and several lusty pecks sustained in the operation. We were not the only ones to receive taps from the lord of the house, as many small birds deserted the neighborhood on account of their quarrelsome neighbors. If a tyrant ever lived it is the Kingbird, fighting his fellowmen and everything else. He is not exactly a coward either, for I have seen him attack birds twice his size, though the reason for this may be the larger birds' lack of speed in flight.

In a few days the shells burst and three young birds emerged. But little time was given to the elders for the seeming pleasure of fighting, as food was needed. The young developed rapidly and were ready to fly when one night a storm blew the nest on an angle of forty-five degrees. One young one hung by its claws imbedded in the material of the nest. The other two piled up on the side of the cup, crying for help. The parents flew about uneasily as we straightened the home, but when it was adjusted we were attacked as of old. That day they left and more than one person was happy to see them leaving.—DON H ROBINSON, *Scranton, Pa.*

Starling and Henslow's Sparrow in Ontario

On the morning of May 15, 1921, several members of our Bird Club motored to Port Stanley to spend a few hours with the birds. We found them very numerous and in the sheltered nooks the air was full of song. The principal item of interest was the finding of three Starlings along the lake-front. Our attention was attracted by their harsh, guttural notes, and although they flew away several times, always returned to the tall dead tree where we first noticed them. This is the first record for the Starling for our vicinity. For the benefit of American readers who may not be familiar with Canadian geography, we might say that Port Stanley is on the north shore of Lake Erie, directly across from Cleveland, Ohio. London, where most of our Bird Club members live, is some thirty miles inland.

We have another interesting visitor to

report in Henslow's Sparrow. It was first noticed on May 4 and remained in the same field for ten days; in fact, it may still be there, but Kingbirds and Bobolinks were making so much racket (perhaps this is a harsh word to use with reference to the Bobolink) that we were unable to catch the insignificant song of the Henslow's on our last visit or two to the field. This is the second record for London and the bird has only been reported from three other places in Ontario.—E. M. S. DALE, *President, McIlwraith Ornithological Club, London, Ont.*

Louisiana Tanager in Massachusetts

Bird observers may be interested to know that a Louisiana Tanager was observed at the foot of Mt. Toby, in Leverett, Mass., on June 12, in company with three Rose-breasted Grosbeaks. There could be no doubt of its identity for it was watched through field-glasses by two observers for some time, and corresponded exactly to the illustration and description in the 'Color Key to North American Birds' by Chapman and Reed. Of course, this bird was way out of its range, but it has been seen and taken in Massachusetts before, according to a statement of Mr. Forbush, Director of Ornithology in Massachusetts.—ETHEL M. SMITH, *Amherst, Mass.*

Yellow-throated Warbler at Lake George, N. Y.

While on a visit to Lake George, I found a dead bird by a wooded path. It lay on a flat stone and it was in good condition, save the tail, which was partly missing. It coincided with the description and plate of the Yellow-throated Warbler (the female). I was unable

to get anyone to skin it, so brought it home and Mr. Waldo Rich, the president of our Bird Club, identified it as the Yellow-throated Warbler without a doubt.—(Miss) ADELAIDE L. DENTON, *Vice-President, Saratoga Springs (N. Y.) Bird Club.*

An Albino Redstart

On September 1, 1911, while out looking for fall migrants, I visited a pasture lot which was partly grown up with underbrush and thorn apple trees, and found numerous Warblers flying about the trees. While identifying several varieties with the aid of my field-glasses, my attention was called to a sudden flash of white in a tree some distance from where I stood. I at once proceeded to investigate, and had a surprise that is rarely in store for the ornithologist, that of finding a perfect albino. Upon closer observation, this one proved to be a Redstart, and the handsomest albino it has ever been my good fortune to see. It was of the purest white, with the exception of its wings, which were of a canary-yellow, adding beauty to this handsome bird. Its tail feathers had the faintest shade of black, just enough to show the markings of a normal plumage. It was feeding with several others of the same species. As I remained quietly observing it, it came, at one time, within six feet of me, and was where I could examine it closely for fully five minutes, then, with the others, it flew to a neighboring wood and was lost to view. Upon reporting this to the Biological Survey they stated that it was the first instance of an albino Redstart that had been reported to the Department.—S. R. INGERSOLL, *Ballston Spa, N. Y.*

THE SEASON

XXVI. April 15 to June 15, 1921

BOSTON REGION.—At the close of the period covered by the last report, the season was far in advance of the average; birds normally due here during the first week of May were confidently expected on their breeding-grounds long before their usual dates of arrival; an April Oriole was a possibility. The weather, however, changed suddenly; for nearly a month the wind blew from the east and, chilled by countless icebergs, held back vegetable growth and influenced the birds either to retard their northward progress or to seek an inland route of migration. Late in April and early in May, day after day brought no new arrivals, or only a single individual of a species not recorded previously. For a month there was so little movement of the migrant birds that it seemed as if the spring migration were over, although the great May flight was still to the south of us.

Birds already on their breeding-grounds in the first part of April responded to the advanced state of the season by commencing to breed at early dates; Mr. George Nelson's records show that the Bluebirds and Robins began to build in Lexington as early as in any year during his long experience; Woodcocks discontinued their twilight aerial songs before their normal time of year.

Another instance of precocious nesting is furnished by a breeding-record of a Brown Creeper in Sharon, Mass. Mr. and Mrs. E. N. Fullerton, of Stoughton, kindly inform me that they saw the bird building on April 8 and 13, and that "the young had left the nest by May 11." This record seems to me of unusual interest in showing that a northern bird, finding suitable conditions for breeding well to the south of its normal range, was able to take advantage of the advanced season and breed more than a month earlier than the dates indicated in the rare previous records for this state.

The flight of Warblers in May was a disappointment; they straggled along during the first half of the month until the 15th when the chief wave came, which comprised few

individuals of the rarer species (very few Tennessees, Cape Mays, and Bay-breasts), and in which the Blackpoll was represented in very small numbers, compared to recent years. A good flight of Canadian Warblers brought up the rear of the spring migration, which was practically over on June 1. The abundance of Purple Finches and the continued increase of House Wrens is worth remark.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—The most interesting ornithological phenomenon recurring annually during this period is the wave of migrants from the South (summer residents and transients en route to more northern nesting-grounds) which arrives more or less coincident with the leafing-out of the trees. This year, on about April 20, the foliage was fully two weeks in advance of its usual condition at that time. It might have been expected that the migration would have been exceptionally early and, in fact, in late April there were very early records for a few individuals of some of the species. Then followed weeks of cool easterly weather, unfavorable for migration, during which few birds arrived, though the leaves continued to unfold, the general impression now being that birds were late. Their arrival was far behind the vegetation and slightly behind the normal dates. The main wave of birds arrived and passed through all in a bunch, May 10 to 15.

To compare the arrival of the birds with the early vegetation the writer spent considerable time in the field at Mastic, Long Island, from April 23 to May 10. This is an excellent locality for summer resident species, but remote from any spring migration route, so the absence of any particular transient species is not significant. For purposes of discussion he presents herewith dates of arrival, Mastic 1921, together with the earliest date for Long Island in previous years, and the normal date of arrival, the latter obtained by averaging Long Island dates in the tables in Eaton's 'Birds of New York.' April 24, Brown Thrasher (earliest April 2,

normal April 23-24); Pigeon Hawk (e. April 13, n. April 25). April 25, Solitary Vireo (e. April 24, n. April 28); Black-and-white Warbler (e. April 19, n. April 28); Black-throated-green Warbler (e. April 26, n. May 6). April 26, Chimney Swift (e. April 24, n. May 2); Indigo Bunting (e. April 19, n. May 16). April 27, Catbird (e. May 1, n. May 6); Ovenbird (e. April 25, n. May 2); Prairie Warbler (e. May 2, n. May 4). May 2, Yellow Warbler (e. April 18, n. April 30). May 3, Grasshopper Sparrow (e. April 21, n. May 9); Parula (e. April 25, n. May 9); Wood Thrush (e. April 13, n. April 30). May 7, Black-throated Blue Warbler (e. May 4, n. May 10). May 8, Kingbird (e. April 21, n. May 2); White-eyed Vireo (e. April 29, n. May 6); Blue-winged Warbler, (e. May 2, n. May 11). May 9, Hummingbird (e. May 3, n. May 13). May 10, Least Flycatcher (e. May 5, n. May 11); Baltimore Oriole (e. April 28, n. May 7); Nashville Warbler (e. May 4, n. May 9); Magnolia Warbler (e. May 5, n. May 11); Chestnut-sided Warbler (e. May 1, n. May 8); Maryland Yellow-throat (e. April 20, n. May 7); Hooded Warbler (e. April 30); Redstart (e. May 2, n. May 8). In ten arrivals from April 24 to 27, four are within three days of the normal, three are earlier than this and within two days of the earliest, two are still earlier, respectively four and five days ahead of previous records, and only one intermediate between earliest and normal but approaching neither. In sixteen arrivals from May 2 to 10, twelve are within three days of the normal, three (Grasshopper Sparrow, Parula, and Hummingbird) earlier than this and intermediate between earliest and normal, but it would seem that for just these three too late a normal had been obtained by our method. One, the Kingbird, is six days behind the normal. Space has been taken for the above detailed statistics, because they indicate the importance of actual calendar dates in the northward movement of these birds, not only the normal date, but apparently the earliest date also having significance. This should be an important principle in interpreting migration if it can be definitely established.

The warm night of May 13 a heavy flight of birds reached this latitude. Encountering thick, showery weather over the city the ensuing dawn, they became confused, and many were killed by striking the Metropolitan Tower while others descended to the city yards and small open squares.—J. T. NICHOLS, *New York City*.

WASHINGTON REGION.—Bird migration about Washington during April and May, 1921, was decidedly unusual. The weather, particularly during the latter half of April and the first half of May, was generally cool, part of the time more so than is ordinarily the case, while the very few hot days occurred only at intervals, thus reversing conditions obtaining in the preceding months of February and March. These meteorological conditions had apparently a very peculiar effect on the movements of migratory birds in this region, and this peculiar migration is the most notable ornithological happening of the present spring.

Notwithstanding the generally cool weather, the arrivals of a number of migrants were in advance of normal, some of them by many days. Among the most important of these are the Grasshopper Sparrow, which arrived on April 3 (average spring appearance, April 22); Rough-winged Swallow, April 3 (average, April 10); Henslow's Sparrow, April 7 (April 19); Black and White Warbler, April 7 (April 16); House Wren, April 5 (April 18); Yellow-throated Warbler, April 12 (April 18); Yellow Warbler, April 15 (April 22); White-eyed Vireo, April 15 (April 22); Maryland Yellow-throat, April 15 (April 21); Green Heron, April 15 (April 21); Wood Thrush, April 19 (April 25); Long-billed Marsh Wren, April 23 (April 30); Black-throated Blue Warbler, April 24 (May 1); Magnolia Warbler, April 24 (May 5); Olive-backed Thrush, April 25 (May 4); Nashville Warbler, April 26 (May 3); and Chestnut-sided Warbler, April 26 (May 2).

One species, the Northern Water-Thrush, was detected earlier than ever before in the spring, by Miss M. J. Pellew, on the Anacostia River, near Washington, April 16, its earliest previous record being April 18, 1920.

To this generally early arrival of spring migrants there were some notable exceptions, such as the Purple Martin, which was first observed on April 10, whereas its usual time of appearance is March 29; the Barn Swallow first seen April 24 (average, April 12); Nighthawk, May 8 (May 3); Baltimore Oriole, May 9 (May 2); Bobolink, May 9 (May 2); Rose-breasted Grosbeak, May 10 (May 3); and the Alder Flycatcher, May 19 (May 13).

In the case of the great majority of migrants, particularly those that arrived earlier than usual, the bulk of the species lagged considerably behind, and appeared even much later than common, this resulting in a comparative scarcity of birds that was noticeable throughout practically all the spring migration. At what should have been the height of the migratory movement, the weather suddenly became very warm for a few days, and evidently the birds passed on without tarrying. As a consequence of this, many transients did not at all reach their ordinary abundance for the spring season. This warm spell, however, does not fully account for the fact that few birds, particularly winter visitors, remained beyond their usual time, since it occurred after many had gone, having departed even during the cool weather. Yet some remained beyond their ordinary time, as established by records of past years. Among these were the Hermit Thrush, last seen on May 10 (average date of departure, May 1); Ruby-crowned Kinglet, May 9 (average, May 4); American Coot, May 18 (May 5); American Merganser, May 15 (May 4); Purple Finch, May 19 (May 8); Chestnut-sided Warbler, May 26 (May 22); Tree Swallow, May 18 (May 14); Bonaparte Gull, May 18 (May 9); and Olive-backed Thrush, May 30 (May 24).

Furthermore, two species remained as late as ever before—the Solitary Sandpiper, seen by Miss M. T. Cooke, near Black Pond, Va., on May 21, the latest previous record of which is May 21, 1906; and the Black-throated Blue Warbler, observed by Mr. Joseph Kittredge, Jr., near Washington, on May 30, which is the latest recorded spring date since May 30, 1888. Two species re-

mained later than ever before—the Black Duck, seen by Mr. E. A. Preble, near Dyke, Va., on May 18, its previously latest spring record being May 11, 1917; and the Red-breasted Merganser, found by Mr. Joseph Kittredge, Jr., near Washington, on May 10, whereas its previously latest date is May 2, 1920.

Among the few transients that reached their normal abundance was the Myrtle Warbler; and the Blue-winged Warbler, always a rare bird about Washington, seemed to be rather more often in evidence.

Many familiar species, particularly transients, were present in unusually small numbers. Among these might be especially mentioned the Purple Finch, which was very seldom observed, the Cape May Warbler, Tennessee Warbler, Blackburnian Warbler, Chestnut-sided Warbler, Rose-breasted Grosbeak, Tree Swallow, Wilson Thrush, Olive-backed Thrush, and Gray-cheeked Thrush.

On the other hand, the Bonaparte Gull and the Ring-billed Gull seemed to be exceptionally common, and remained in considerable numbers up to the middle of May, especially on the Potomac River below Washington. The Laughing Gull was very much in evidence some 40 to 60 miles down the Potomac River from Washington, and was seen also not infrequently within a comparatively short distance of the city. Either it is gradually extending its regular range up this river, or observers have recently been giving it more attention.

The Ducks that were present abundantly on the Potomac River during the winter remained throughout a considerable portion of April, and the Lesser Scaup Duck was numerous until at least the middle of May. On May 14 three flocks of White-winged Scoters, totaling some 300 birds, were seen on the Potomac River about 15 miles above Colonial Beach. On the same day, along the river between Colonial Beach and Washington, the Great Blue Heron was frequently seen pursuing its favorite pastime of visiting the fishpounds to obtain the fish imprisoned there.

Three Common Terns were found by Mr. Joseph Kittredge, Jr., on May 9 and 10, on the river near Washington. The American

Bittern, which seems to be somewhat increasing in numbers about Washington, was reported to be breeding not far from the city. An always interesting bird, the Prothonotary Warbler, was three times seen during the spring migration,—on April 27, at Dyke, Va., by Mr. L. D. Miner; on May 3, in the same locality, by Miss M. T. Cooke; and on May 9, at Miller, Va., by Mr. L. D. Miner.

While in many respects the spring migration of 1921 was unsatisfactory, particularly in the small numbers of birds present, especially Warblers, the peculiarities of the movements of the various species more than made up in interest for the scarcity of both species and individuals observable.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN (OHIO) REGION.—The outstanding feature of the period was the continued cold and unfavorable weather until almost the end of May. There were no large movements of the birds at any time. Most of the species were represented by fewer individuals than ever before in my experience. But while many of the birds were late, the foliage was at least two weeks ahead of schedule. Thus, when the Warblers and later Sparrows and Flycatchers did come, it was difficult to make them out in the dense foliage. Many of the Warblers did not go on north until the first week in June. On June 5 there were six Ruddy Turnstones and one Semipalmated Plover feeding along the shore of Lake Erie, near Huron. This is the latest record for these two species.—LYNDS JONES, *Oberlin, Ohio.*

CHICAGO REGION.—While the warm winter kept a number of species in this region which generally winter a few miles south, it did not affect the majority of the later migrants which passed through about the usual time, some, of course, a little earlier and some a little later.

Thirty-three species of Warblers were reported, including a Kentucky (Mr. Nathan Leopold, Jr.), a Prothonotary, found singing in Garfield Park, in the center of the west side of the city, by Mr. Benjamin T. Gault,

and a Pine Warbler taken at beach, May 7, by Mr. Sanborn. Other rarer ones are the Cerulean, Wilson's, Golden-winged and Blue-winged; a nest and six eggs of the latter were found by Mr. Edward R. Ford in the same place that he found them seven years ago, and is the second breeding-record for this region. A few species stayed later than usual, a Black-and-White and a Canada being seen June 5, at Highland Park by Mr. Sanborn and a Connecticut and Mourning were found dead the 7th and 8th respectively. The migration was at its height May 11 to 15 and 20 to 23.

Mr. Gault has observed a number of interesting shore-birds, Semipalmated, Stilt, and Baird's Sandpipers being seen in Grant Park May 9, and Sanderling, Red-backed, Turnstone and Black-bellied Plover in Lincoln Park May 24; the Red-backed were seen again June 5. Mr. Ford found a large flock of Semipalmated Plover in the Skokie Marsh west of Fort Sheridan May 22, and Mr. Sanborn a flock of Least Sandpipers in the same place May 15. Dr. Eifrig also found the Least and Semipalmated Sandpipers at Addison May 26.

Other interesting records for the region are Clay-colored and Lincoln's Sparrows in Grant Park May 15, and a Harris Sparrow in Humbolt Park May 14 (Mr. Gault); Turkey Vulture April 24, and Lark Sparrow May 8, in the Dunes (Dr. Lowey); Osprey May 15, in the Dunes (Mr. Ford), and an Orchard Oriole May 19, in Jackson Park (Mr. Watson). Short-billed Marsh Wrens have been reported from a number of places south and west of the city and a colony of Dickcissels has stopped for the summer in the Skokie.

Dr. Eifrig reports from River Forest, west of the city, Pheasant and Quail, probably breeding; Red-bellied Woodpecker May 1, and 14; Mockingbird May 21, which stayed around his home all day; Louisiana Water-Thrush May 11, and a Barn Owl was brought to him dead May 29, from Maywood. A Bewick's Wren was seen April 30; these Wrens were also reported from the Dunes (Mrs. Richardson) April 2 and 21.

Twenty-eight species have been found breeding to date, a few of which might be

mentioned. Mr. Ford found a nest of Woodcock hatched in the snow April 17. Dr. Eifrig reported two nests of the Migrant Shrike at Addison April 28, and a young bird was caught by Mr. Coale in Highland Park June 7. No birds had been seen by either Mr. Coale or Mr. Sanborn previous to this time, so it was a surprise to find a young bird hopping about the yard. Dr. Eifrig found 250 nests of the Black-crowned Night Heron in a colony at Orlando May 19. Mr. Ford reports the Piping Plover breeding in the Dunes again this year May 14. Mr. Hunt, May 8, found a nest and four eggs of the Savannah Sparrow in the Dunes, and June 5, in Lincoln Park, Mr. Gault found a nest of the Spotted Sandpiper.

The Society now has a list of 211 species and hopes to be able to report some interesting nests in the next paper.—COLIN CAMPBELL SANBORN, *Chairman Report Committee, Chicago Ornithological Society.*

MINNEAPOLIS REGION.—The weather during the period covered by this article has been characterized by rather frequent and abrupt changes in temperature which have disturbed the normal progress of the spring's development. The early awakening of vegetation and premature activity of animal life that resulted from the unseasonably mild weather of March and early April was checked somewhat by cool nights and cold northerly winds in late April and early May, but occasional hot days during that time and continued very warm weather with frequent rains from mid-May on, stimulated the woodlands, meadows, and fields to such an extent that summer conditions were anticipated by fully two weeks.

The effect of the early and irregular spring upon bird-life in this locality was to break up somewhat the usual sequence of events. Most of the earlier migrants came ahead of schedule but those journeying from afar were in many instances delayed until, for a time, it seemed as though we were not to experience the great May movement, so eagerly awaited by all bird-lovers. And when it did finally come, on May 19, it was deficient both as to species and number of individuals and passed by so

quickly that in two or three days nearly all traces of the migration were gone. Previous to this date some of the common summer residents had appeared in very limited numbers, and it was not until this 'wave' of north-bound migrants came along that the missing quota was supplied from laggards traveling in its ranks. This, the only large and the final 'wave' of the season, reached the vicinity of Minneapolis on the morning of a warm and beautiful day immediately following a spell of cold and stormy weather. Great numbers of birds must have been held up somewhere in the mid-Mississippi Valley, and when they were released they hastened to their destinations with greatly increased speed.

A brief statement of actual weather conditions will give a better idea of just what the bird-travelers had to encounter hereabouts, though it is probable that conditions farther south had more to do with irregularities in this latitude. Mid-April presented two days with freezing temperature, thin ice forming on the nights of the 15th and 16th. The remainder of the month was cool at night and warm, or even hot, at noon. May came in with three days so cold that ice nearly an inch thick formed on bird-baths out at Lake Minnetonka on the night of the 3d, and light flurries of snow occurred on the 1st. Hot days and warm nights followed until on the 13th to the 16th it was again so cold that light frosts occurred, this kind of weather extending over a wide area in the upper Mississippi Valley. In northern Minnesota it was still colder, the mercury dropping to 27 degrees at Duluth and to freezing at Fargo. From this time on the weather became intensely warm, with thermometer readings at times over 90 degrees at noon. This has continued with but little interruption until the present date.

The progress of the season will be most clearly and easily shown by arranging the data in the form of a nature calendar. I have again to thank Mr. and Mrs. F. W. Commons for the generous use of their spring notes which form a not inconsiderable part of the following record. A few dates have also been supplied by Miss Fetter, Miss Humiston,

and Mr. Orcutt Frost, members of my bird class, and by Mr. William Kilgore, Jr. First records in italics.

April 15. A completed Robin's nest.

April 17. *Yellow-headed Blackbird*, 2 males; *Pied-billed Grebe*; *Bittern*. Many Herring Gulls passing. Vegetation has advanced but little of late.

April 18. *Chipping Sparrow*. Sapsuckers tapping trees extensively. In bloom: Dutchman's breeches and bloodroot.

April 19. *Myrtle Warblers*, *Cowbirds*, *Loons*. Many Yellow-headed Blackbirds, all males; the males arrive ten or twelve days ahead of the females, Rusty Blackbirds migrating in numbers. White-breasted Nuthatch building.

April 24. *Towhee*, male; *White-throated Sparrow*.

April 25. Rue anemone and bellwort in bloom.

April 26. *Swamp and Vesper Sparrows*, *Bank Swallow*, *Sparrow Hawk*, *Lesser Yellow-legs*, *Louisiana Water-Thrush*. The Water-Thrush was seen at the same spot where the nest was found two years ago, the only place where this species has been encountered in this vicinity. It was a pretty sight to see the bird walking mincingly along in the shallow water, tossing the dead leaves this way and that, and daintily picking up the many tiny water creatures that came into view. This species arrives here three weeks or more in advance of Grinnell's, which is only a transient in the southern part of the state. A Pileated Woodpecker excavating its nesting-hole in a dead stub only 16 feet from the ground.

In bloom: Three-flowered geum, ground plum, wild ginger, marsh marigold, shadbush, plum trees, flowering almond, and Missouri currant. Skunk cabbage leaves 8 to 12 inches high and many blossoms still fresh.

April 27. *Brown Thrasher*.

April 29. *Barn Swallow*, *Palm Warbler*. A Blue Jay's nest, 5 eggs, in a small pine tree close by the front door of a suburban residence. The Blue Jay is increasing in numbers of late and it is not uncommon to see parties of 8 to 10 roving about the country or it may be within the city limits. Many nest within the city.

April 30. *Chipping Sparrow* building. Visited a colony of Great Blue Herons and Double-crested Cormorants on an island in upper Lake Minnetonka. The birds are increasing rapidly in numbers. There are now several hundred nests. During the past two years many large elm and basswood trees have died as the result of their

being occupied by the birds. Twenty nests were counted in one such tree.

Blue cohosh in bloom.

May 2. *Purple Martins*.

May 3. *Turkey Vulture*.

May 4. *Tennessee Warbler*, *House Wren*.

May 5. *Lark Sparrow*, *American Pipit*, *Black Tern* (many), *Wilson's Phalarope*, *Least Sandpiper*.

Woods now quite dense. Oaks in bloom.

May 7. *Sora*. There has seemed to be a great scarcity of this bird this year.

May 8. *Baltimore Oriole*, *Rose-breasted Grosbeak*, *Chimney Swift*, *Solitary Sandpiper*.

Lilacs in bloom.

May 9. *Yellow Warbler*.

May 10. *Kingbird*, *Veery*, *Catbird*, *Red-headed Woodpecker*.

Red-berried elder in bloom. Wood and rue anemone at their best.

May 11. *Common Tern*.

May 12. *Bobolink*, *Yellow-throated Vireo*, *Pine and Black and White Warblers*, *Gray-cheeked Thrush*, *Semipalmated Plover*. Eight Wilson's Phalaropes in pairs. Lark Sparrow's nest just completed.

May 13. *Red-eyed Vireo*, *Warbling Vireo*.

May 15. *Oven-bird*.

May 17. *Magnolia Warbler*.

May 18. *Least Flycatcher*.

May 19. The one great bird 'wave' of the season came today. Foliage dense, like summer. *Nashville*, *Chestnut-sided*, *Blackpoll*, *Wilson's and Canada Warblers*, *Redstart*, *Maryland Yellow-throat*, *Grinnell's Water-Thrush*, *Scarlet Tanager*, *Black-billed Cuckoo*, *Ruby-throated Hummingbird*, *Crested Flycatcher*, *Wood Pewee*, *Solitary Vireo*, *Wood Thrush*, *Olive-backed Thrush*. Many Rose-breasted Grosbeaks, White-throated Sparrows, Tree Swallows, and other belated birds came today.

May 20. Country appears like summer, a very rapid advance in vegetation lately.

May 21. *Yellow-billed Cuckoo*.

May 21. Young Killdeer just hatched; Bittern's nest, one egg.

Small white and small yellow cypripediums in bloom.

May 22. Bird 'wave' of 19th has passed; but few northern migrants left. Baltimore Oriole building. Male Rose-breasted Grosbeaks fighting furiously. Watched Sapsucker visiting its 'borings' closely followed by a male Hummer.

May 22. Wild thorn apple in full bloom.

May 28. Four nests of Brewer's Blackbird—eggs and young. This bird, formerly rare here, is steadily increasing in numbers until now it is a common summer resident and generally distributed. It nests in colonies. Rose-breasted Grosbeak's nest, 3 eggs. Young Meadowlarks out of nest.

- May 30. Least Sandpiper still here—flock of 19.
- May 31. Bobolink's nest, 7 eggs; wood Thrush's nest, 4 eggs. An Olive-sided Flycatcher, a belated migrant.
- June 3. Young Pileated Woodpeckers in nest found April 26 large enough to come up to the hole to be fed. Both sexes feeding as is usual with the Woodpeckers; trips rather infrequent, the interval sometimes an hour. A second nest of this remarkable bird was reported in the vicinity of Minneapolis the present season.
- June 7. Young Migrant Shrikes just out of nest.
- June 10. Hummingbird building nest. Laid foundation of spider-webs as apparently do most birds that saddle their nests on small limbs.
- June 11. Ruffed Grouse with chicks only two or three days old. Both parents with young.

The Bob-white is more than usually numerous this year in this locality, its whistle being heard on all sides, sometimes within the city limits. The harsh call of the Ring-necked Pheasant is becoming a rather frequent new note in all the country round. The past mild, snowless winter has probably favored the increase of these two birds.—
 THOMAS S. ROBERTS, *Zoölogical Museum, University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—The unusual opportunity of viewing uninterrupted a spring migration has been enjoyed this season by the writer, and enough interesting and valuable data has accumulated to fill several times over the space allotted to these brief notes. Particular attention has been paid to nesting habits with special reference to dates of laying, and exact information regarding over forty species has been recorded in this locally neglected department.

Encouraged by the finding of additional evidence last year of the local breeding of the Blue Grosbeak, a systematic and extended search has lately been made for the nest of Traill's Flycatcher, with the result that eight nests have been located in this county. The most productive field proved to be the willow thickets in the Missouri River bottoms near the mouth of Big Blue, where a nest and set of eggs were collected to substantiate the

record. This bird has hitherto been searched for here in vain during the breeding season, but has very evidently been merely overlooked.

A tempestuous and killing blizzard, entirely out of season hit this region on April 16, leaving death and destruction to nesting birds and late fruit in its wake. A brooding female Robin whose nest was exposed to the full blast of the north wind and snow had to lie close with head under wing to keep from freezing, and next morning her four large nestlings were dead. Five other Robins' nests, as well as Meadowlark, Chickadee and Bluebird nests, were found containing frozen eggs.

As reported in the last letter from this point, very early spring had advanced the arrival dates of the early migrants, but the return of winter conditions not only played havoc with the early breeders, but kept several of the wintering species here longer than usual, and delayed migration generally from that date forward. Such prompt migrants as Hermit Thrush, House Wren and Chimney Swift, noticeable perhaps on account of their abundance, were later than for several years past. However, a few species were early in spite of adverse conditions, as, for instance, Yellow-legs, Greater Yellow-legs, Bittern, and Spotted Sandpiper. Junco, Winter Wren, and Harris's and White-throated Sparrows were four winter species to remain long after their normal times of departure; Juncos were noted in small numbers as late as May 5 and the Sparrows were common up until the last of the second week in May, when normally only stragglers are present. Savannah Sparrows passed during the last half of April in unusual abundance, especially on upland and prairie regions. On the 24th, Shrikes and Phœbes had young in the nest, hatched during the past week since the blizzard. On the 25th, Baltimore Orioles, Kentucky and Blue-winged Warblers, and Wood-Thrushes arrived, and Dove, Meadowlark, Brown-thrasher, and Cardinal had full sets of eggs. Tanagers arrived on the 29th with an immense wave of Harris's Sparrows. Belated groups of migrating Blue Jays and the late arrival of Indigo Bunting and Red-eyed Vireo

were probably results of the late cold. On this date Bronzed Grackle nests contained the full complement of eggs. The first White-eyed Vireos were heard on the 4th, and on the 5th Gray-cheeked and Olive-backed Thrushes were numerous and a few were singing.

On May 5, the up-river lakes and ponds in Platte and Buchanan counties contained numbers of Pied-billed Grebes, Coots, Mallards, Baldpates, Gadwall, Pintails, Shovelers, Blue-winged Teal, and Yellow-legs. A pair of large Grebes could not be identified. Red-winged Blackbirds were not yet building, as but few females had arrived. Numbers of Lincoln's Sparrows in song, a small flock of Bobolinks, and three small troops of Juncos were seen.

A visit to Holt County on the 10th disclosed the fact that breeding birds were far behind those in the Kansas City region, only a hundred miles to the south. Meadowlarks were found to be mostly Western, and, for the first time in western Missouri, migrating Blue-headed Vireos were heard in full song.

Returning on the 11th, Kansas City was found swarming with Tennessee Warblers, and out on the prairie regions Grasshopper, Savannah, and Harris's Sparrows were everywhere. A small flock of Bobolinks, a very rare bird here, was seen at 63d and Brookside Streets, and one was heard to sing lustily as they flew off. A Whip-poor-will was flushed, and singing migrant Thrushes were still common.

Nests and eggs too numerous to list were found during the first half of May, and during this period the late migrants, which are usually silent, were all in full song. On the 17th three Bob-whites' nests, containing 1, 3, and 5 eggs respectively, were found in the southern part of the city, and in the same region on this date a successful stalk was made on the four treasures of a noisy pair of Killdeer.

The flood-tide of Warbler and Flycatcher migration seemed to be on May 20, which is a little later than usual. Yellow-billed Cuckoos were mating, and a pair of Blue Grosbeaks were seen on this date. Nests of Yellow Warbler, Orchard Oriole, Bell's Vireo, Red-winged Blackbird, Bank Swallow, and Dickcissel, containing full sets of eggs, were

found on the same day. A set of three Broad-winged Hawk's eggs was found on the 22d. On the 23d migrant Thrushes were still present—very late.

On the 24th the following nests were found in the southern part of the city in a wild thicket, little suspected by the neighbors of containing such wild birds: Bob-white, 17 eggs; Field Sparrow, 4 eggs; Green Heron, 4 eggs; Cooper's Hawk, 5 eggs nearly ready to hatch; Red-winged Blackbird, 4 eggs with 3 of the Cowbird; and Dickcissel, 5 eggs.

Grasshopper Sparrows are again present this summer on the Swope Park rifle range meadow, but even rope-dragging fails to discover the hiding places of their nests. Traill's Flycatcher nests were found on June 1, 5, 8, and 12, with the search still on. Black Terns were noted on the Missouri River on the 12th and 13th.

William Andrews has assumed the guardianship of a nesting pair of Wood Ducks on Mill Creek, near Courtney, but is not very hopeful that they will ever succeed in bringing off their young. He states that boys and Mexicans in the neighborhood are too bountifully supplied with ammunition.

It is regretted that interesting matter received from Sidney Hyde, of Topeka, and other correspondents cannot be included this time.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—If the flood of spring migration in this region during March and April was small and slack, it soon became a tidal wave after April 15. The writer cannot recall a season when the birds returned seemingly all at once and in large numbers. This was especially true of the summer residents, and, to some extent, with the passing migrants.

The region has swarmed with Robins, Chipping Sparrows, Yellow Warblers, and there has been an unusually large influx of Bullock's Orioles and Black-headed Grosbeaks. This spring's crop of young Robins and young House Finches is extremely large, more so than for years past. Some individuals of these species began housekeeping promptly and very early; thus there were a number of full-fledged young Robins out of

the nest and well able to fend for themselves by May 16. If one allows fourteen days for nest period, fourteen days for incubation, four for the laying of a set of eggs, and four for nest-building, we get back to April 10 for the beginning of nesting, which is, indeed, a case of 'the early bird.'

On May 7 there was an extraordinarily large number of Clay-colored, Brewer's and Chipping Sparrows in a partly abandoned cemetery near my home. They must have been largely migrants, for a few days afterward our usual local Chipping Sparrow population only was in evidence.

The writer spent as many hours as possible in the field watching this concourse of '*Spizella*' Sparrows; its chorus from sunrise to dusk was continuous and delightful beyond words.

The following brief review of some arrival dates may be of interest: The first Chipping Sparrow was seen on April 22, which is three weeks later than its earliest previous appearance, according to the writer's records; Gambel's Sparrow arrived on April 17, eighteen days later than its previous earliest, while both the Audubon's and Yellow Warblers returned within one day of the previous earliest, viz., on May 1 and May 5. Some interesting facts have developed this spring concerning the spread of these two Warblers in the vicinity of Denver.

The first Audubon's Warbler was seen at a point about twenty miles south of Denver. The species was not detected in the city proper until May 22, taking apparently twenty-one days to work its way northward twenty miles. It is interesting to note that on both occasions it was accompanied by Lutescent Warblers. The Yellow Warbler was seen first in a park about three miles south of the writer's home, on May 5, and not at the latter place until May 8. The writer has no explanation for this slow travel rate, unless it be that he missed the species on an earlier date than given.

A lone Mockingbird appeared in the writer's neighborhood on May 8 and 9, and then disappeared.

It was suggested in the last report of this region that the spring migrants would arrive

earlier than usual. This has proven to have been poor prophesy. Many arrived late, some very late, and a few on time.

Taking the earliest previous arrival dates as data, it appears that the Rock Wren, Black-headed Grosbeak, House Wren, and Green-tail Towhee were all five days late, the Wood Peewee sixteen, and the Bullock's Oriole seventeen days behind time, while, for example the Catbird was on time, viz., arriving on May 29. In fact the number of species arriving late was in the majority, a tardiness ranging from one to three weeks.

Two Rock Wrens lingered in the aforesaid cemetery until June 5. It was hoped that they would remain to nest, but their disappearance after June 5 has blasted this hope. Aside from one rainy spell, which came about a week ago (June 6), the weather conditions have been all that one could desire and what a mere human would imagine ideal to bring the birds back to their summer homes early. Yet they did not come. A simultaneous state-wide survey would doubtless throw a good deal of light on this interesting and unusual migration situation as it has developed in the Denver Region.—W. H. BERGTOLD, *Denver, Colo.*

SAN FRANCISCO REGION.—Though April and May were unusually chilly and light frosts were recorded as late as May 2 and 3, the warm weather of February had started the blossoms, so that the season was two weeks in advance of that of last year. This difference showed no corresponding difference in the dates of migration among the birds. The winter birds recorded as still present on April 11 were seen last on the following dates: Intermediate Sparrow and Varied Thrush, April 11; Audubon Warbler, April 15; Ruby-crowned Kinglet and Fox Sparrow, April 17; Hermit Thrush, April 27; and Golden-crowned Sparrow, April 29. The Cooper Hawk was seen on May 11 and the Sharp-shinned Hawk on May 22—a fact which implies a decided loss of life among the newly hatched generation of small birds. Cedar Waxwings were still present on June 5.

The summer birds arriving after the middle of April were the Black-headed Grosbeak,

April 16; Yellow Warbler, April 20; Russet-backed Thrush, April 26; Lazuli Bunting, April 27; Olive-sided Flycatcher, May 4; Wood Pewee, Chipping Sparrow and Oriole, May 5. The Thrush was not in full song until May 15. A pair of Lawrence Goldfinches was seen repeatedly in North Berkeley and on April 29 seemed to be building. Juncos and Robins were seen in so many localities that they will soon be in the class with Flickers and Pine Siskins—permanent residents but more numerous in winter.

The first whistle of Quail on guard was heard on April 20, but a flock of eight to ten was seen on April 22. Young Allen Hummers left the nest on April 15, while in another nest young, just hatched, were found May 5. Another nest was just in the formation stage on May 6. On the same date a Warbling Vireo's nest was nearly finished.

After May 14 the scene of observation was shifted to the Santa Cruz Mountains, where also the season was found to be farther advanced than at the same time last year. The bird list of two previous years was increased by the addition of Anthony Green Herons, Poor Wills, House Wrens, Western Martins, and Pygmy Nuthatches. The Nuthatches and a colony of Martins were occupying holes in the same dead yellow pine on the top of a sandy ridge. A Bluebird, hovering near, seemed interested in the tree too and very likely had her young in the lowest story. The Nuthatches were housed in the attic and were catching insects between trips to a live pine near by. Black-throated Gray Warblers, which were officially added to the list of birds in this region only a few months ago (see *Condor*, March, 1921), but have been noted as one of the common Warblers of the region during the three years I have visited it, have totalled in my notes eleven pairs, if each singing male represents a pair. They seem to be stationed from a quarter to half a mile apart along the bottom of the valley, only one of the eleven being on the hillside.

Juncos, Creepers, Bush-Tits, and Allen Hummers had young out of the nest by May 20, and a family of Lutescent Warblers, tucked snugly in a nest placed in a hole in

the stream-bank, tried their wings on May 23. On June 8, Tanagers were found in the same tree where they were seen last year, but there was no opportunity to discover whether they were nesting or simply helping to dispose of the cherry crop in an orchard near by.—AMELIA S. ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—Cool weather and abundant rain have prevailed during April and May in Los Angeles and vicinity. The only noticeable effect of these nearly unprecedented weather conditions upon the seasonal migration was to bring the birds in their old-time abundance again to Nigger Slough, which held more water than for several seasons past. Ducks observed there during the period covered were the Pintail, Scaup, Baldpate, Shoveller, Ruddy, Red-head, Cinnamon Teal, Green-winged Teal, and Fulvous Tree Ducks. Black-necked Stilts, Yellow-legs, Long-billed Dowitchers, Hudsonian Curlew, Marbled Godwits, Black-bellied and Semipalmated Plover, Red-backed, Least, and Western Sandpipers were there in considerable numbers. An Anthony Green Heron was noticed April 16, and the resident Black-Crowned Night Herons were observed to be wearing their nuptial plumes. Less common visitors were the beautiful Black Terns and five Wilson Phalaropes seen there on April 25 and 27. On these dates the Black Turnstones were seen at White's Point for the last time, and on the 27th, the first Wandering Tattlers appeared. They were seen there several times during the succeeding fortnight, in groups of six or seven birds. The 27th also marked the departure of the last of the Black-bellied Plover, and the arrival of a colony of Bank Swallows at San Pedro. Rough-winged Swallows were seen near the Laguna hills May 8, and near Sycamore Grove, Arroyo Seco, about the same date, where Vaux Swifts were also observed several times. Tree Swallows were found nesting in willow trees at Sanford Bridge, San Gabriel River, May 9, and Violet-Green Swallows occupied their old nest-tree in Eaton Cañon.

The arrival of the land-birds was noted as showing little variation from average dates. The Blue Grosbeak, occasionally noticed late

in April, was not seen until May 8, about its average date. Lazuli Buntings were abundant at that time, as were also the Western Tanagers. Long-tailed Chats arrived April 23. May 16, the nest of the Cabanis Woodpecker, referred to in last report, held young about ready to leave, and a brood of four Red-bellied Hawks were well fledged.

Cedar Waxwings were common until late in May, flocks of 50 to 75 being seen on the 20th and 22d during a week of rain. Russet-backed Thrushes were then abundant and in song in gardens and orchards, as were also Pileolated and Yellow Warblers. The Hermit Warbler was not observed until May 9. On May 4 a pair of Dusky Warblers was seen near the edge of the cliffs beyond Pt. Firmin, their behavior indicating that they were nesting there, though a brief search among the cactus, *Rhus integrifolia*, etc., that covered the ground revealed nothing. At the same place a male Linnet, singing under full observation for several minutes, showed no trace of red in his plumage but was marked with pure bright yellow. White-throated Swifts soared about Pt. Firmin, and an Osprey patrolling the waters bore away a fish in his talons, while at White's Point a migrating Kingfisher had dropped in among the Spotted Sandpipers and Wandering Tattlers.

Red-winged, Tricolored, and Yellow-

headed Blackbirds are abundant about the tule-filled sloughs. A flock of 50 Tricolored were observed near the head of Newport Bay May 27. On that date 10 Great Blue Herons, 8 White Pelicans, a few Cormorants, and many Least Terns were seen in the inner bay at low tide.

The small ravine leading down to the shore near the ferry landing at Del Mar was occupied by Bullock's Orioles with young out of the nest, Arizona Hooded Orioles, Western Kingbirds, Willow Goldfinches, Wood Peewees, several Flycatchers, Pileolated Warblers, Yellow-throats, a pair of Blue Grosbeaks, and Russet-backed Thrush in song, Anna Hummingbird nesting, and on the dry upper bank a Costa Hummingbird brooded her newly hatched young. Rufous-crowned Sparrows sang from the dry walls, and a Road-runner shared their habitat. At the Point at least two pairs of Say's Phœbes and several Barn Swallows were nesting in the caves. Horned Larks occupied the flowery sands above the beach.

On the same date, 20 White-faced Glossy Ibis were seen at Nigger Slough. Only one Northern Phalarope has been observed there this season. Phainopeplas were abundant near the entrance of Lytle Creek Cañon on June 5.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*



Book News and Reviews

INSTRUCTIONS FOR BIRD BANDING. By FREDERICK C. LINCOLN, Asst. Biologist, Dept. Circular 170, U. S. Dept. of Agriculture. April, 1891. 8vo. 19 pages, 12 ills.

The problems that can be solved by bird-banding are stated in this manual on the subject as follows:

1. How fast do the individuals of any species travel on their periodic migrations; that is, how many miles per day will any one bird average during these journeys and what is the total time consumed in a trip?

2. Does any one flock continue in the van or is the advance made by successive flocks passing one over the other in alternate periods of rest and flight?

3. Do individuals of any species always follow the same route, and is it identical for both spring and fall flights?

4. Do migrating birds make the same stop-overs every year to feed?

5. How long do birds remain in one locality during the migration, the breeding, or the winter seasons?

6. What is the relation between the breeding and the wintering grounds of individuals; that is, do those birds that breed farthest north winter farthest south, thus jumping over those that occupy the intermediate zone, or do they merely replace the latter individuals as winter residents?

7. Do birds adopt the same nesting area, nest-site, and winter quarters during successive seasons?

8. For how many broods will one pair remain mated, and which bird, if not both, is attracted next year to the old nesting site?

9. To what extent do males of a species assist in incubation and brooding?

10. How far from their nests do birds forage for food, and after the young have left the nest, will the parent birds bring them to the feeding and trapping station?

11. To what region do the birds go, particularly the young, that do not return to the vicinity of their original nests?

12. How long do birds live?

Birds may be banded before they can fly or they may be trapped, banded, and re-

leased. The making of the trap and all the details of banding, recording, etc., are fully described in this publication, a copy of which should be in the hands of every one who proposes to become a bird-bander. It may be procured from the Superintendent of Documents in the Government Printing Office at Washington at the nominal price of five cents.—F. M. C.

BIRD STORIES. By EDITH M. PATCH. With Illustrations by ROBERT J. SIM. Atlantic Monthly Press, Boston. 12 mo. 211 pages; 29 line-cuts.

This is a book for young people and its general character is well indicated by its title. Life histories of the Chickadee, Herring Gull, Spotted Sandpiper, Loon, and eight other birds are presented in a manner well designed to interest the audience the author addresses. A bibliography gives the sources of information on which the book is based (a plan which might be adapted with credit by what we may term transmuting writers) and also enables the reader to pursue the subject further. Special mention should be made of Mr. Sim's pen-and-ink drawings which exhibit a highly developed technique, are artistic and accurate.—F. M. C.

The Ornithological Magazines

THE AUK.—Three articles in the April number are devoted to bird-banding. Two of them, by S. P. Baldwin, cover somewhat the same ground as a paper by the same author in the 'Abstract of Proceedings', Linnæan Society of New York for 1919, but with additional data, those concerning the House Wren and its habit of changing mates being worked out in detail. These papers show what results may be expected from systematic trapping and banding of birds, and will repay careful reading for interesting habit details probably obtainable in no other manner. The third article, by F. C. Lincoln, gives an admirable résumé of the history and purposes of bird-banding.

A monographic account of the Dickcissel

in Illinois, by Gross, and description of the nesting of the Philadelphia Vireo, by Lewis, are concluded from the January number. In the former, chapters on food and life history are accompanied by several plates illustrating very completely in photographs the growth of the young and also plumages and plumage changes of grown individuals (from skins). Mr. Lewis goes into description of the voice of the Philadelphia Vireo in great detail, and his remarks on that subject will be of value for reference. He finds as regards the young being fed "that the feedings exhibit a marked periodicity, as though the young were given regular meals, with intervals of comparative rest," and that this is probably not chance but intentional on the part of the parent birds. We have here an interesting theme for investigation and discussion bearing on the life of nesting birds in general.

In 'Nesting Habits of the Nighthawk at Tacoma, Wash.,' J. H. Bowles presents the history of a brood of Nighthawks raised on the gravel roof of an apartment house. The location afforded unusual opportunities for observation, which were well utilized, and the account is of great interest. In summing up the characters of the precocial young he says (p. 216): "Their actions and general resemblance, until their primaries began to lengthen, were so strongly suggestive of an abnormally smart young grouse that we must wonder what manner of birds their remote ancestors could have been." In this connection, young occur in various unrelated groups of animals which differ not only from the adults but from any probable ancestors, and in the reviewer's opinion the young Nighthawk is a case of the sort, its peculiarities being due purely to the ground-nesting habits of its parents, and giving no indication of phylogeny. W. H. Bergtold, in 'The English Sparrow and the Motor Vehicle' finds that there has been a decrease of this bird in Denver, coincident with a decrease in the horse population and amount of street sweepings, and correlated with the introduction, and multiplied uses of the motor vehicle. Oberholser lists proposed changes in the A. O. U. check-list.

Aside from various items of a faunal nature

in General Notes, 'A List of the Birds of Royal Palm Hammock, Florida' is a faunal paper by A. H. Howell. "This hammock, containing about 400 acres, largely covered with a dense tropical jungle, together with a considerable tract of the surrounding Everglades, has been set aside recently as a reservation." Possibly it will provide a permanent refuge to such birds as the Limpkin and Ivory-billed Woodpecker, both of which species are listed as occurring there, though rare.

Among interesting items which catch the eye in General Notes, A. W. Anthony mentions capturing a number of Loons while fishing with live bait in the waters of San Diego Bay. In every case the bait was taken near the bottom. "From the fact that the hook was often well down in the throat" he thinks "that fish are often swallowed without coming to the surface." A. T. Wayne relates seeing a Loggerhead Shrike attack and kill a Phoebe, a bird which one would suppose too large for it. By study of differences in the songs of birds of the same species, A. A. Saunders finds that individuals often sing for a part only of the song period of the species, which would lead to underestimates of numbers when based on singing males at a given time.—J. T. N.

WILSON BULLETIN.—The March, 1921, issue contains a short article on the breeding of the Bachman's Sparrow in Tennessee, by Albert F. Ganier, whose name is unfortunately misspelled. Mr. W. J. Erichsen continues his notes on the breeding water-birds of Chatham County, Ga., and we are impressed chiefly by their scarcity. The main article of the issue, however, is the first installment of a study of 'Comparative Periods of Nestling Life of Some North American *Nidicola*,' by Frank L. Burns. Mr. Burns shows with considerable success that the division between altricial and præcocial birds is by no means as hard and fast as the definitions of those terms would lead one to suppose, and in support of his thesis adduces many little-known facts in the life histories of the nestlings of various families of North

American birds. An account of the annual meeting, the membership roll, and the usual notes and reviews conclude the issue.—L. G.

The first number of the fifth volume of the *American Bird-House Journal*, published by J. Warren Jacobs, at Waynesburg, Pa., contains much information in regard to nesting-houses, Sparrow-traps and food-shelters.

The *Maine Naturalist* (Thomaston, Maine) has a Department of Ornithology edited by Arthur H. Norton and Alfred O. Gross.

The issue for April, 1921 (No. 1, Vol. 1), contains an illustrated article on Petrels by Mr. Norton and various shore notes on other birds.

In the *Scientific Monthly* for May, 1921, (pp. 457-480) Dr. R. W. Shufeldt brings together much information in regard to illustrations of the Passenger Pigeon and reproduces fifteen of them. Two photographs of living birds in Forbush's 'History of Game-birds' are considered to possess exceptional value, as, so far as the author's "knowledge carries these are the only pictures of the kind extant." Dr. Shufeldt has, however, overlooked the unique series of nine superb photographs by J. G. Hubbard of Professor Whitman's birds which appeared in *BIRD-LORE* for March-April, 1913.

The Murrelet (Vol. II, No. 2) Official Bulletin of the Pacific Northwest Bird and Mammal Club (Seattle, Wash.), contains an important paper on 'Breeding Dates for Washington Birds' by J. H. Bowles; 'Shore Bird Notes at Westport, Wash., by D. E. Brown; 'British Columbia Bird Notes,' by J. A. Munro; and other shorter communications.

From the summer number of *Bird Notes and News*, the quarterly journal of the Royal Society for the Protection of Birds, we learn that the bill prohibiting the importation of plumage into Great Britain (certain species excepted) having passed the House of Commons, was read for a second time in the House of Lords on June 21. We trust that before these lines are published this supremely important measure will have become a law.

Ira N. Gabrielson has published, in the Proceedings of the Iowa Academy of Sciences (Vol. XXV, 1919, pp. 123-153; Vol. XXVI, pp. 47-75; Davenport, Iowa), a well-annotated list of 'The Birds Found at Marshall County, Iowa.' The list is based on observations made between Sept. 1, 1912, and Sept. 7, 1915, and includes 201 species, all but two of which were personally recorded by the author.

In the May, 1920, issue of *School, Science and Mathematics*, Horace Gunthorp, of Washburn College, Topeka, Kans., gives some interesting data in regard to bird-study in the educational institutions of the Mississippi Valley. It appears that out of a total of about one hundred and forty colleges and universities having over one hundred students, thirty-four (of which a list is given) offer courses in ornithology. Mr. Gunthorp makes some admirable suggestions in regard to the desirability of having those in charge of these courses become members of an ornithological society.

Chauncey J. Hawkins' paper on 'Sexual Selection and Bird Song' which originally appeared in *The Auk* (Vol. XXXV, 1918) has been honored by republication in the Report of the Smithsonian Institution for 1918 (pp. 461-473).

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

THE John Burroughs Memorial Association has issued an appeal for contributions toward a fund of \$40,000 with which to acquire possession of Riverby, Slabsides, and Woodchuck Lodge. The fee for active membership in this Association is \$5. Surely no friend of John Burroughs should have to be asked twice for this amount. It may be sent to the Association, care of the American Academy of Arts and Letters, 15 West 81st Street, New York City.

IT IS SAID that one of the worst enemies of the rarer breeding British birds is the egg-collector who, in the name of 'Science,' spares no effort to add to his cabinet British-laid eggs of birds which may be on the verge of extinction in Great Britain though common enough elsewhere. The last report of the Royal Society for the Protection of Birds records the difficulty paid 'watchers,' or, as we call them, wardens, have in guarding nests of the less common birds and of collectors' attempts to bribe these watchers, and the Secretary of the Society writes asking us how we combat this evil in America. We answer that it does not exist. It is true that we still have some collectors of eggs, but the day when bird-nesting was a characteristic phase of ornithology in this country has long since passed. Speaking from memory we cannot recall, since the time of Bendire, the presentation of a purely oölogical paper or exhibition of eggs before the annual congress of the American Ornithologists' Union, nor, to be more local,

do we believe there is a single egg-collector among the representative group of young bird students who compose the active membership of the Linnaean Society of New York.

Doubtless stringent laws prohibiting egg-collecting, except under the terms of a permit issued only to qualified persons of eighteen years or more, has had much to do with the suppression of bird-nesting, but we believe that the campaign of education conducted by the Audubon, and other Societies, nature study in the schools, and the use of the camera in recording nesting habits has aroused so great an interest in the living bird, and particularly in the life of the nest, that the mere gathering of empty eggshells seems a very trivial thing to the modern bird student.

BIRD-LORE is often honored by requests for permission to republish articles and illustrations, particularly the latter, which have appeared in its pages. So far as this magazine is concerned, such permission is invariably granted, for the chief object of our existence is the dissemination of information concerning birds, and we have an abiding belief that this end can be served, and well served, by increasing the number of our readers. BIRD-LORE, however, is not the only party to be considered in this connection. It is, indeed, the least important member of the group composed of author, photographer, and publisher. The first-named gives, the second sells us the right to publish certain articles or photographs, and after such publication all further rights in these articles or photographs revert to the person or persons from whom we obtained them. In almost every instance these persons, no doubt, would be willing to extend to other magazines the same privileges they have granted BIRD-LORE, but it is obvious that this right must be obtained from them and that we are no more authorized to give it after than before publication in our pages.

May we therefore suggest that hereafter those who desire to use BIRD-LORE material write direct to the author rather than to us. If the author's address is not given, communications may be addressed to him in our care at the Harrisburg office.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

THE GEOGRAPHY OF BIRDS

In the days when the Editor of this department of BIRD-LORE went to school, geography was a very impersonal, abstract subject. It consisted of memorizing the names of the foreign countries and the states of the Union, the largest cities, the largest rivers, the mountain chains, and as many unrelated facts about each as the teacher herself could master or read from a book. Today all is changed. Our educational schemes call for but little of this pure memorization. Foreign countries are studied as made up of living people whose work and play can be compared with ours. Reasons for the locations of cities, and effects of rivers and mountains upon the climate and industries are learned that make geography a much more personal, concrete study. Whenever possible the facts of geography are linked up with the stories of history or current events which tend to make it a living vital subject, and it retains its important place in the curricula of our schools.

The field of bird-study is seldom called upon to enliven other subjects. It is used more often to freshen the general routine, to furnish a necessary relaxation, and, of course, above all, to give to the child that knowledge of birds which will be a constant resource to him. There are certain features in the migration and distribution of birds, however, that can well be utilized in the geography lessons which will at the same time make for a better understanding of bird life. Birds are our greatest travelers, and what better way is there of learning geography than from those who have actually visited the lands which we would study? The journeys of our North American birds are fairly well known today, and most authoritative bird books, like Chapman's 'Handbook of Birds of Eastern North America,' or Mrs. Bailey's 'Birds of the Western United States,' give the summer and winter ranges of all birds. With one of these books before him, the teacher can plot fairly accurately on a map of the two continents the summer and winter ranges of any bird in which the children have become interested. Better still, the children can be supplied with outline maps of North and South America and can block in with colors the ranges and indicate the probable route of the bird's migration, the details depending upon the grade in which the work is done. When the one map has been completed it would be well to compare the ranges of other common birds

with it, selecting such as will give the greatest diversity, for it will be recalled the summer and winter ranges of some birds are identical, others overlap, while still others are many thousands of miles apart.

The geography lesson should not be complete when the ranges have been located on the map, but an endeavor should be made to bring out what the particular bird saw on its journeys in the lands which it traversed. If it were written up in story form it could be used as a language lesson as well, and certainly it would make a splendid review of geography. Let the bird tell where it has been and what it has seen, or let several birds discuss their travels. I hope that some of the best children's stories will be sent to the School Department of BIRD-LORE and, if space permits, the best one will be printed.

For the benefit of those who like to have something definite for the children to work from, the Editor offers the following little story of a Yellow Warbler as one type that may be followed, though it might be even more satisfactory to have several birds discuss their winter wanderings.

THE YELLOW WARBLER'S TALE

"Sweet, sweet, sweet, sweeter, sweetest" he seems to say to me as he lands on the topmost bough of my pear tree and throws back his head in song. It is my old friend the Summer Yellowbird back from his long winter's absence and ready to take up his abode with me another year.

"What is so sweet, my good fellow?" I feel like asking him, and "How can you be so fresh and happy after your long trip? Tell me where you have been and what you have seen since we last met. I am just as interested in you and your journeys as I am in any of my other friends who travel."

"Oh, the whole world is sweet" he replies. "I love it all, but most of all this place I call home, and particularly that syringa bush where my mate and I have built our nest the past two years. Oh, but it's a big world and a bad world, but I love it just the same. I don't suppose I have seen it all, but I know I have seen a great deal and I have flown over a great deal more of it without seeing it, for you know I make my longest flights after dark. Where have I been since last we met? Let's see, that was last August, wasn't it? The one youngster we managed to raise from those four eggs in the syringa bush had left us for exploring expeditions of his own. I don't suppose I will ever see him again or recognize him if I do, though maybe he will be coming along here in a couple of weeks and I will have to drive him away like any other intruder. You know the youngsters always come north later than we old birds, and then if anything happens to us on the way they can step into the places that we have already discovered to be satisfactory for our kind of needs and the good places in the

world will still have their Yellow Warblers. If nothing has happened to us we just drive them on as fast as they come and make them find suitable places for themselves. You know it takes a great many insects to feed a family, and I don't want any other Yellow Warblers close by, catching my kind of insects. Other birds take somewhat different bugs and I don't mind them so much. Then, too, you know I always like things my own way in my family and like to have Mrs. Yellow satisfied with my songs without hearing any others just like them.

But I am digressing too far from the question you asked. Where have I been? Well, I will tell you. I spent the winter near Popayan; do you know where that is? Get out your geography and look up the country called Colombia in the northwestern corner of South America. Do you find a river called the Cauca River that flows into the Magdalena from the west? Together they flow due north into the Caribbean Sea. Well, follow up the Cauca River until you come nearly to the boundary of Ecuador, within three degree of the Equator, and there you will find Popayan. Hot? Well not as hot as you would think considering that it is so near the Equator, for it is about 6,000 feet above the sea and each 1,000 feet means about three degrees less temperature. In fact, I suffered more from the cold than from the heat. On the whole, its climate wasn't so very different from what you have right here in New York State in summer, except that the nights were colder. Do you know, Popayan is one of the few places in the Tropics where I have seen any glass used in the windows. I suppose it keeps the houses warmer at night. The one-story houses are made mostly of mud, whitewashed within and without, and the roofs are of red tile.

"What do the people do around Popayan? Well, you must know that in spite of the fact that they are industrious, there are no large industries for there are no railroads or canals or navigable rivers leading to it, and all transportation has to be done by horses, mules, or oxen. It seems curious to see the long lines of pack animals winding down the trails, each with his load of coffee or cacao or hides. You see it doesn't pay to ship many things out of this part of Colombia for it takes ten days to get to the nearest port of Buenaventura. Can you find that on your map? But cattle and coffee and cacao, from which chocolate is made, can be raised with little expense in the fertile Cauca Valley and on the mountain sides so that they are the only things that are raised on a large scale. So the mountain sides and the rolling foothills about Popayan are divided into small farms and you would smile to see the crude way in which the ground is cultivated. Heavy steel plows have not yet been brought in and most of the Indian farmers still plow with the old-fashioned wooden plows drawn by oxen. The most interesting thing I saw the people doing was weaving Panama hats. They didn't call them Panama hats there, of course, and they didn't

charge such outlandish prices for them. They are a very different people there from you up here and they talk a different language but they are very honest and very religious and never lose an opportunity to celebrate a "fiesta" or feast day.

"But Popayan is only one of a multitude of places that I have seen and its people but one of many. I stayed there for only about three months, behaving much as I do here, though I seldom sang and, of course, did not build a nest or even see Mrs. Yellow the whole time. I really don't know just where she did spend her winter though I am expecting her back here in a few days and then we can ask her. I always like to go back to the same place and I suppose she does too, though if you should ask me why, I couldn't tell you.

"Well, I left Popayan on a clear night when something within me told me I had better start. I really don't know just what it is but I always feel it every year at just the same time. Then, too, I heard lots of other birds starting and I just felt I had to go too. There weren't a great many of us right around Popayan that belonged up here, but there were quite a number of Black-and-White Warblers, Blackburnians, and Redstarts as well as we Yellows and you know we all get here at just about the same time each spring.

"Well I didn't fly very far that night, only about a hundred miles and I stopped near a place called Cali. The weather was warmer there as it is only about 3,000 feet above sea-level. Here were large rice-fields and fields of sugar-cane. Bananas and oranges were much better than at the higher altitude and also the cacao, but the coffee was not as good. Large areas were still given over to cattle. I stayed around Cali for about a week before I felt like moving again and then the instinct started me off once more. I had to cross some rather high mountains this time, for the Cauca River that I was following flows through a deep cañon after it leaves Cartago, so I mounted high in the air and by morning had crossed the divide into the land drained by the Atrato River. This was low country and heavily forested. The Cauca valley had but few forests, except at the higher altitudes, but now I was in the real tropical forest and was not happy until I had found a clearing made for a banana plantation. I remained about this region for some time, meeting old friends who had wintered as far east as Guiana and others who had flown still farther south than Popayan and who had spent the winter on the slopes of Mt. Chimborazo. I wonder if you know where those places are?

"Well, the time came when I felt that I must hasten on to my old home in the syringa bush. Some of my friends from Venezuela and Guiana said they always took a short cut straight across the Caribbean Sea to Jamaica and Cuba and thence to Florida, but I had always crossed over the Gulf of Mexico from Yucatan to Alabama, and I knew the good feeding-places in

Panama, Nicaragua, and Honduras and I didn't know anything about Jamaica and Cuba. You know most of the things we birds do is from force of habit and it's a lot easier for us to do anything the way we have done it before than it is for us to try a brand-new way. That's the reason you humans have advanced so much farther than we have and the reason why some of you are so much better off than others. A person who is a slave to his habits never gets very far.

"I should like to tell you all about my trip through Central America and what I saw of the Panama Canal, about my long flight across the Gulf of Mexico when I almost got drowned when overtaken by a storm, and all the things I saw in the Southern States as I worked my way north keeping just behind the advance of spring and trying not to get ahead of the opening foliage and the insects that go with it until I arrived home again once more, but it is too long a story to be told at one time."

FROM YOUNG OBSERVERS

CROWS BATHING

In the November-December number of BIRD-LORE Ernest Thompson Seton makes the statement that he has never seen a Crow take a cold-water bath.

I thought perhaps some of the readers of BIRD-LORE might be interested in hearing about a pair of pet Crows we had last summer at Lake Itasca, in Itasca State Park.

They were taken from the nest about a week before they could fly. At first we kept them in a cage at night, and put them on a perch hung between two birch trees near the lake in the daytime. They would stay there all day, and we fed them with a spoon which they did not seem to mind. We gave them hard-boiled eggs, minnows, bread, fruit, and other things, and My, how those Crows did eat. Later, after they were old enough to hunt grasshoppers and other food for themselves, we gave them mice, and it was a comical sight to see them strutting around with a mouse partly swallowed, and the tail and part of the body hanging from the bill.

When the Crows could fly we turned them loose, but as they did not go away far we threw food out for them. Before they could fly they had learned to bathe in the pan of water we had put out for drinking purposes, and as they grew older it frequently happened that one Crow would splash so much water out of the pan that it would have to be refilled before the other Crow could take his bath. We filled the pan many times a day. They were always given cold water, and the hotter the day the oftener they bathed. I have seen them soak up so much water that when they started to fly the water would drip from wings and body. Before they could fly we often

took them down to the lake shore and let them bathe in the lake. Later they flew down of their own accord, but they never slighted the pan of water and seemed to enjoy it as much as the lake. We could hear them splashing in the pan of water soon after daylight, and often late in the evening.

The two Crows stayed around our cabin until long after we left the lake in September, and we are wondering if they will be there to greet us when we go to the lake next June.—MARGARET E. WENTLING (age 13 years), *St. Paul, Minn.*

[Observations on pet birds that have their liberty often yield most interesting and valuable results and shed light on the actions of their wild brothers that often can be observed only intermittently and with great difficulty. A pet Crow is always an education to anyone who cares for him but one must be ready to give him considerable attention. The Editor's pet Crows have likewise always been fond of bathing.—A. A. A.]

A BLUEBIRD'S NEST IN A MAIL BOX

Last spring (1920), on May 17, a male and female Bluebird were seen looking into the mail-box on the front porch. They flew around the porch several times, then Mrs. Bluebird lit on the water-spout near the mail-box, while Mr. Bluebird flew over to the mail-box and looked in. Mrs. Bluebird remained on the water-spout, apparently unconcerned. After the male bird had dodged in and out of the mail-box several times the female decided to have a look for herself, and she fluttered down. Mr. Bluebird flew over to the porch rail and sat there twittering and flapping his wings in great excitement. Mrs. Bluebird peeped into the box and seeming to think it very nice popped in the rest of the way.

The next day (the 18th) they started their nest, flying in and out of the mail-box all day with bits of grass, small twigs, and other things suitable for the nest of a Bluebird. In two or three days the birds had completed the interior of their home.

Father feared that the birds would not stay if everyone entered by way of the front porch, so he put saw-horses across the steps. Nobody was to go onto the porch except the mailman who left the mail in the front hall.

On May 25th, at 7.45, father called my brother and me out on the front porch. We peeped into the mail-box and there lay a little blue egg. Father gently picked it out in his hand to show to us. The next morning at the same time we looked and there were two eggs; the third morning, three; and the fourth morning, four. On the fifth day in the morning when we looked into the box there were not five eggs but four. At 4.45 P.M. father looked again and there were five little blue eggs. The fifth egg was the last.

After the eggs had been laid father took the saw-horses away from the front door and people entered it as freely as they wished. During this

time the house was painted. Although the birds flew away occasionally when greatly annoyed, they did not desert their eggs.

On June 11th, in the afternoon, four little birds were hatched, and although they were very ugly no one could help loving them. Soon afterward the fifth was hatched:

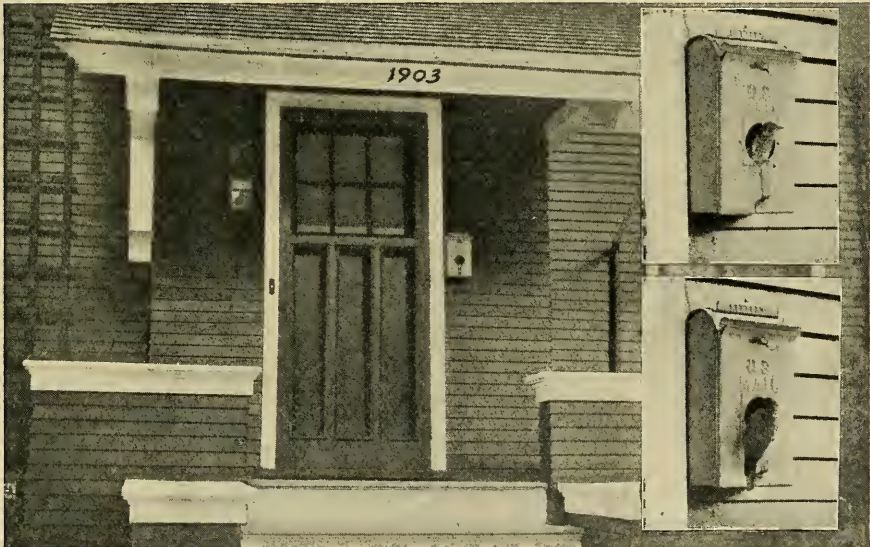
Nearly a month later the five little birds learned to fly, and it was very interesting to watch them. As soon as they were able, they flew away, and we certainly did miss their merry little twittering out on the front porch.

The mailman on our route said that a pair of Bluebirds had built in some one else's mail-box, but these people had gradually moved their mail-box away from the front door so as not to disturb the birds by using the front porch.

The thing that interested us was that our Bluebirds had successfully raised their young on our porch without anyone having moved their home. —MARGARET G. COLE (age 13 years), *Madison, Wis.*

P. S. March 12th (1921). The Bluebirds returned today and were looking into the mail-box.

[Let us hope that Margaret's Bluebirds nested in the box again this year and that they return for many years. Perhaps her father will put bands on their legs so that we will know if it is the same birds that return each year.—A. A. A.]



THE MAIL-BOX WHERE THE BLUEBIRD NESTED, WITH INSERTS OF THE YOUNG BLUEBIRD ABOUT TO LEAVE AND ONE OF THE PARENTS BRINGING FOOD

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

ANNUAL REPORT FOR THE JUNIOR AUDUBON SOCIETIES

The eleventh fiscal year of the Association's Junior organization effort came to an end June 1, 1921. The conditions under which we have worked have been trying because of the enormously increased costs in connection with printing the supplies furnished to Junior Members. In fact, it was impossible with the funds at our disposal to publish enough material for all those who wished to join. As the children pay fees of only 10 cents, and as the material furnished them costs about twice this much to manufacture and deliver, it can readily be seen there is a limit to the number that can be supplied. The total contributions the past year amounted to \$26,288.45, of which \$20,000 was contributed by the unnamed Benefactor who for ten years past has made this important phase of the work possible. With these funds the Association was enabled the past year to organize 5,851 Bird Clubs with an enrollment of 229,787 boys and girls.

These Junior Clubs or 'classes' were organized in all the states of the Union and in many of the Provinces of Canada. Teachers heading the groups not only sought to arouse interest in bird-study on the part of their pupils, through the literature furnished, but directed them in many activities of a co-ordinate nature. Thus, through the states

where colder temperature prevailed, the birds were fed during snows. Seeds were placed on boards, on the ground after the snow had been removed, and fragments of suet were tied to stakes or limbs of trees. In the late winter and spring many thousands of bird-boxes were built and erected to provide homes for hole-nesting species. Throughout the year hundreds of little entertainments, all dealing with the subject of bird-life, were given in schoolrooms throughout the land, where recitations and plays were given and thousands of young voices were raised in songs about their bird friends.

Anyone intimately in touch with this work and familiar with the enthusiastic reception which the subject is given by school men and women, as well as by the boys and girls, cannot help but regret that funds are not available so that the Junior effort can be vastly broadened and strengthened. With sufficient funds, one million children might readily be organized every year into these bird-study groups. Fortunately, owing to the recent fall in the cost of paper and the slightly increased income for the work, the Association expects to be in position to handle a larger number of Junior Members the coming year than during any like period of its history. In fact, before these lines were

written, an order had been placed for 300,000 sets of bird-study supplies for children.

During the year the central office of the Association has had the most hearty support of many of the affiliated societies and clubs throughout the country; especially has this been true with the State Audubon Societies of Massachusetts, New Jersey, and Oregon. The Long Island Bird Club contributed so generously that it was possible to keep Mrs. Mary S. Sage in the field lecturing on Long Island throughout the year. She visited over one hundred communities and gave 206 talks and bird lectures, 57 of which were illustrated with stereopticon slides. In this manner she addressed 20,000 school-children, besides many adult gatherings.

Since the Junior work was begun, eleven years ago, these children's clubs, to the number of 66,709, have been formed and the total paid members number 1,676,743.

The following statement shows the distribution of the Junior Clubs organized the past school year:

Annual Summary of Junior Audubon Classes and Members Under the Children's Educational Fund

Summary Ending June 1, 1921

States	Classes	Members
Alabama.....	12	559
Arizona.....	4	219
Arkansas.....	18	738
California.....	142	5,862
Colorado.....	51	2,301
Connecticut.....	184	6,977
Delaware.....	38	1,552
District of Columbia.....	2	50

States	Classes	Members
Florida.....	176	5,963
Georgia.....	18	856
Idaho.....	10	412
Illinois.....	320	13,457
Indiana.....	181	6,700
Iowa.....	123	4,106
Kansas.....	44	1,543
Kentucky.....	25	1,023
Louisiana.....	7	219
Maine.....	42	1,471
Maryland.....	58	2,482
Massachusetts.....	497	18,231
Michigan.....	146	5,840
Minnesota.....	202	8,183
Mississippi.....	5	164
Missouri.....	110	4,081
Montana.....	27	1,115
Nebraska.....	79	2,897
Nevada.....	8	313
New Hampshire.....	40	1,404
New Jersey.....	243	10,689
New Mexico.....	4	182
New York.....	843	33,664
North Carolina.....	11	339
North Dakota.....	37	1,288
Ohio.....	616	22,562
Oklahoma.....	9	377
Oregon.....	32	3,635
Pennsylvania.....	607	25,086
Rhode Island.....	12	652
South Carolina.....	16	508
South Dakota.....	36	1,184
Tennessee.....	9	518
Texas.....	42	1,697
Utah.....	26	992
Vermont.....	25	1,052
Virginia.....	41	1,838
Washington.....	114	5,392
West Virginia.....	33	1,384
Wisconsin.....	159	6,139
Wyoming.....	8	274
Canada.....	358	11,571
British Guiana.....	1	26
Japan.....	0	20
Totals.....	5,851	229,787

JUNIOR SOCIETIES AND THE PRESS

An ever-increasing number of comments commendatory to the Junior Audubon work are appearing in the daily newspapers. It would seem there is hardly any important community in the country where the local papers have not had something to say about Audubon Societies formed among the children. Three clippings picked up at random from among the hundreds that have appeared, run as follows:

Milwaukee (Wis.) Journal.

"Wild bird life will be promoted in Shorewood by the Audubon Society, organized among the village children. Although formed only two months ago, the society numbers between 80 and 90 children. The older boys plan to circulate petitions asking Wisconsin congressmen to defeat the water power act and Fall River basin bill, which, it is claimed, are destructive to wild life. The children are providing drinking-pools and bird-shelters, and are studying the problem of control of

stray cats. Three contests are under way for the best Audubon bird pictures. Prizes will be awarded in each of the three age divisions."

Fresno (Calif.) Republican.

"Birds winging their way northward this spring are finding 175,000 new houses built for them during the past year by boys and girls who are members of the 65,000 Junior Audubon Clubs scattered over the entire United States and parts of Canada. These youths are among the 1,500,000 members of the organization planted in kindergartens, grammar schools, and among groups of young Americans by the National Audubon Society. Each Club Member after paying 10 cents as an initiation fee, starts acquiring knowledge of the appearances and habits of both songsters and the unmusical types of birds. Through picture books and hikes to woodland spots they learn to distinguish one kind of bird from another by the kind of feathery clothes they wear, and how also to tell them by their eggs, their nests, and sometimes by their chirps. The migratory habits and the singing qualities or lack of them in each species form other phases of instruction. Game laws of state and of the nation are explained, but none of the teachers or lecturers sent out by the national organization ever says to little Willie, 'You must not kill the pretty birdies.' Officials of the organization's headquarters here declare they are striving to conserve bird-life, not by having more stringent laws passed against hunters, but by interesting children in the birds so that they lose all desire to use them in tests for marksmanship with sling-shots, air-guns, or light rifles. Careless hunters have found the club members uncomfortably observant of those who they suspect are bagging more than the limit, or shooting out of season. Recently the Association received a letter from a sportsman saying there were 'four hundred young volunteer game-wardens in his city exerting a restraining influence upon tricky hunters.'"

Quincy (Mass.) Ledger.

"There are many indications to those interested that the Junior Audubon Society is bearing a valuable return in the thoughtfulness shown by the young folk as regards the birds and other living creatures. One party of boys on a sidewalk was overheard lately to discuss at some length the characteristics of a bird they had observed, there being some controversy in regard to its name. Several years ago these boys would much more likely have been engaged in a hand-to-hand scuffle; or it might be trying their aim at the very bird itself, to see which could end its life. Having made bird-houses and had their attention called in an interesting manner to the beauty and needs of the little Warbler, they

are now among its best friends. One former member of the local society has been giving bird-talks this past season, and interesting other young folk in caring for the needs of the songsters, and in this way the good work has been passed on.

"'Birds are Friends,' was the slogan yesterday at the exhibition of the Junior Audubon Society being held this week in Wollaston School Hall, under the auspices of the Education Committee of the Wollaston Parent-Teachers Association. A lively crowd of over 500 boys and girls from the Wollaston schools assembled at 3 o'clock yesterday afternoon to see the display and hear the address, and a large amount of interest and enthusiasm was manifested. It is evident that birds are truly friends to these young residents and that moreover they are considerably acquainted with their habits and needs. The display is interesting and instructive, calling attention to the care and interest of human beings in the preservation of our feathered songsters who come here each spring to make the world happier and to do their part in helping toward the productiveness of the country, through their zeal in behalf of insects and worms.

"On the platform, trees with bare branches showed the nesting of the various birds and also the needs in winter for a supply of food when the earth is covered with snow. Different departments of the display illustrated different phases of the bird proposition. Their needs, their natural tendencies, and what may be done towards their preservation—books and views illustrated these subjects, and posters drawn by pupils of the various grades showed much originality and thoughtfulness on the subject of birds and animals. Some of these posters were in hand drawings by the young artists, and others were done in views clipped from periodicals, to illustrate the subjects chosen, much intuition being manifested in the choice of illustrations. There was an exhibit of mounted birds, and samples of the eggs and nests. The display of bird-houses made by those interested in birds in the city showed a wide variety of ideas as to the artistic and utilitarian. The exhibit as a whole was of an educational interest and of much credit to those associated. Mrs. Jesse F. Stevens, leader of the Junior Audubon Society, was in charge, with the able coöperation of Principal David Goodspeed, of the Wollaston schools, and the teachers who contributed a generous interest in its welfare.

"Winthrop Packard, of Boston, agent for the National Association of Audubon Societies, gave an address on 'Birds, Their Needs and Habits,' in which the members of the young audience were much interested, and manifested their enthusiasm."

THE LEGAL KILLING OF ROBINS

Considerable discussion has recently arisen regarding the action of the Federal Government in issuing permits to kill Robins during the spring months when they are engaged in caring for their young.

From the time the first cherry tree came into bearing in this country, America's Robin has been actively demonstrating his desire to mix this luscious fruit with his diet of worms. For the nineteen years during which the writer's activities have had to do with the work of the Audubon Society there has not been one season during which numerous complaints, either in the form of letters or newspaper clippings, have failed to reach the Audubon Society office.

As is well known to all bird students, there is a human tendency to magnify any damage that a bird may inflict on the crops, and minimize, or overlook, the good which it does the crops during the greater period of the year. In Article VII of the Treaty between the United States and Great Britain, dealing with migratory birds in the United States and Canada, the following provision is made:

"Permits to kill any of the above-named birds which, under extraordinary conditions, may become seriously injurious to the agricultural or other interests in any particular community, may be issued by the proper authorities of the High Contracting Powers under suitable regulations prescribed therefor by them respectively, but such permits shall lapse, or may be canceled, at any time when, in the opinion of said authorities, the particular exigency has passed, and no birds killed under this article shall be shipped, sold or offered for sale."

The officials of the Biological Survey of the Department of Agriculture, in whose hands lie the details of the execution of the Treaty, became impressed with the extent of the complaints received regarding the destructiveness of Robins to small fruits. After investigation, the Bureau communicated with state bird and game protective officials in a number of states and asked whether these state officers would countersign permits to kill Robins doing damage to fruit within the boundaries of their commonwealths. Six states thus approached agreed to do this, while eleven

others refused. Permits to kill Robins have, therefore, been issued in the states of New Hampshire, New York, Indiana, Wisconsin, Minnesota, and Oregon.

Mr. John M. Phillips, of Pittsburgh, long an active and influential member of the Pennsylvania Board of Game Commissioners, has sent to this office a communication setting forth the reasons why the Pennsylvania Game Commission declines to countersign these Government permits to kill Robins in that state. His letter follows:

"*Dear Mr. Pearson:* I am inclosing a copy of the license issued by the U. S. Department of Agriculture, good when countersigned by the Game Official of the State for which issued, authorizing the killing of Robins when destroying small fruits.

"At the last meeting of our Game Commission, we decided not to countersign any of these permits:

"1st. Because our laws prohibit the killing of song and insectivorous birds.

"2d. Our laws allow game to be killed only between sunrise and sunset—this permit would allow Robins to be killed for at least fifteen hours each day during June, while migratory wild waterfowl can be killed for only ten hours each day during the fall and winter.

"3d. These permits would be issued by the Government to unnaturalized foreign-born residents, who are prohibited by our Pennsylvania law from possessing firearms.

"4th. Any game-bird or animal killed as vermin while committing depredations, in accordance with our laws, must be turned over to the Game Commission to be given as food to hospital patients.

"You will note that the permit allows Robins to be used as food and even held in cold storage for ten days after the 'Robin season' is over. This would be an incentive to the killers.

"The main reason our people and the Game Commission object to these licenses is that they permit the killing of the Robin from May 16 to July 15 inclusive, during the nesting season of the birds, allowing the young to starve in their nests. Nearly any man killing birds to protect his fruit would also kill catbirds, woodpeckers and other birds, which feed on it during the short time it is ripe.

"You are likely aware that these permits are being issued in New York and some of the other states. We are all aware that the Robins have increased since the Migratory

Bird Bill was passed and are very plentiful. However, if they must be thinned out, this can be done during the fall and winter after the nesting season is over. This would be more humane.

"Inclosed find a clipping from the *Pittsburgh Post*, which gives the paper I read before the Pennsylvania Forestry Association here—you will note that I touched on this subject. Kindly let me have your thought in regard to the matter.

"With best wishes, I am,

Your friend,

(Signed) JOHN M. PHILLIPS."

Mr. Phillips has given general publicity to his official objections to the killing of Robins in this manner. In the issue of the *Pittsburgh Post* for June 17, 1921, occurs the following quotation from one of his recent addresses:

"The Federal Government is issuing permits authorizing the killing of song-birds and insectivorous birds when found destroying small fruits.

"These permits are effective right during the nesting season, from May 15 to July 15, when possible to do the most damage to the birds. The permit also allows the killer to retain his birds in cold storage until July 25 for food purposes. These nesting birds would be as palatable as setting hens. For many years we fought against the killing of Egrets for plumage in southern swamps on the ground that killing the parent birds in the nesting season allowed thousands of baby Egrets to starve.

"This inhuman condition will be multiplied a thousand times if farmers are to be permitted to kill Robins and other insect-eaters during their nesting season when, after working for months for the farmers, they ask only a little dessert, a small reward for their labor, asked for at a time when their own domestic crisis is at hand."

PERMIT TO KILL ROBINS

* UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Biological Survey

Permit to Shoot Robins to Protect Cherries and Other Small Fruits

Permission is hereby granted to.....
.....of.....
State of.....
to kill Robins by shooting from half an hour
before sunrise to half an hour after sunset
each day from May 16 to July 15, inclusive,
192.. when necessary to protect cherries and
other small fruits from damage on lands
owned or leased by.....
of.....but sub-

ject to the following conditions and requirements:

Robins shall not be so killed except when they are committing or are about to commit serious injury to growing cherries or other small fruits and it is necessary to kill such Robins in order to protect the cherries or other small fruits from damage, but no persons shall shoot at such Robins from any artificial or natural blinds, nor shall the Robins so killed be sold or offered for sale, or be shipped, transported, or carried in any manner, except that they may be carried by the person killing them to the residence of the owner or lessee on the lands where such Robins were killed and there may be used for food purposes by the persons authorized to kill them. Robins killed between May 16, 192.., and July 15, 192.., may be possessed not later than July 25, 192..

This permit shall not be valid unless countersigned by the chief official in charge of the enforcement of the fish and game laws of the State of, or his duly authorized representative and shall be revocable in the discretion of the Chief of the Bureau of Biological Survey or of the person countersigning same.

Countersigned by: Secretary of Agriculture.

.....
.....
(Title)
Date.....

The Government's Side of the Story

After reading these presentations by Mr. Phillips a letter was sent to the Biological Survey stating that the above communication would be published in BIRD-LORE and requesting an official statement from the Biological Survey as to why it was deemed necessary to issue permits to kill Robins. Under date of July 2, 1921, the following letter was received:

"My dear Mr. Pearson: I have your letter of June 30, requesting the reasons why the Bureau deems it necessary and wise to issue permits to allow Robins to be killed in certain states to protect small fruits from their depredations.

"You are aware, of course, that Robins have increased possibly several fold under the protection afforded by Federal laws during the last few years, and that despite the general usefulness of Robins and other species of migratory insectivorous birds the Robins and some of the other species at times are seriously injurious to fruit and to agricultural interests.

"A representative of the Bureau who inves-

tigated during the year 1910 complains of serious depredations by Robins to small fruit in New York found that these birds had practically destroyed the cherries in many orchards in the state. The Bureau communicated on the subject with the Conservation Commission of New York, which agreed to the issuance of a Federal permit, good only when countersigned by the State Commissioner or one of his duly authorized representatives after an investigation in each instance.

"During that and subsequent years many complaints of serious depredations by Robins also were received from other states, including Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Ohio, Michigan, Indiana, Illinois, Iowa, Wisconsin, Minnesota, Washington and Oregon. In 1920 a representative of the Bureau investigated conditions in Michigan and Indiana, and in 1921 in Oregon, and found that the complaints were well founded. It was apparent to the Bureau that the greatly increased number of Robins and their propensity to eat small fruit would result in damage to a greater or lesser extent, in any of the northern states where small fruit is grown and Robins occur in any great numbers.

"The Bureau, therefore, communicated with the chief game officials of the states named in the preceding paragraph, asking to be advised concerning the extent of depredations, if any, being committed by Robins, and whether it was the desire of the representative state game officials to have a permit issued similar to the one issued in New York State. The Migratory Bird Treaty Act, as you know, confers on the several states the right to enact and enforce legislation giving to migratory birds additional protection to that afforded by the Federal law; and therefore it becomes necessary for the Federal

Government and the respective states to cooperate in matters of this kind. Several of the states have no laws authorizing the commissions to issue permits to kill birds seriously injurious to agricultural or other interests, and the commissioners of some of the states did not deem the conditions to be so serious as to warrant the issuance of these permits.

"State authorities in New Hampshire, New York, Indiana, Wisconsin, Minnesota, and Oregon, where serious depredations were occurring, deemed it necessary and wise to have the permits issued. We, therefore, this year, issued the permit, copy of which is inclosed, effective in those states. We have an understanding with the game authorities in those states that due caution will be exercised and that no permits will be issued except after careful investigation and determination that a permit must be issued allowing the birds to be killed in order to prevent serious depredations to small fruit.

"State authorities of Maine, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Ohio, Michigan, Illinois, Iowa, and Washington deemed it unwise to issue the permits in those states at the time and accordingly such states were not included in the order of the Secretary providing for the issuance of permits to kill Robins.

"Sufficient time has not elapsed to permit the receipt of information concerning operations under these permits this year, but no complaints of any kind have been received from New York in regard to the abuse of any permits issued in that state, and we believe that the number of birds actually killed under the permits will be very small, while at the same time the permits authorize orchardists to protect their crops without violating the law.

Very truly yours,

(Signed) W. C. HENDERSON,

Acting Chief of Bureau."

ABBOTT H. THAYER'S CONTRIBUTION TO BIRD PROTECTION

By T. S. PALMER

To Abbott H. Thayer, artist, idealist, and man of broad vision, bird-lovers of America owe a debt of gratitude for a practical demonstration in conservation that has had far-reaching results. What Alfred Newton did for sea-bird protection in England half a century ago, Thayer later accomplished on a larger scale for the birds of our Atlantic coast.

Early in 1900, shortly after the appearance of a notice calling for sea-birds for millinery

purposes, Mr. Thayer wrote to Dr. Witmer Stone, then chairman of the Committee on Bird Protection of the American Ornithologists' Union, suggesting that something be done to protect the Gulls and Terns of our eastern coast. On learning that the principal obstacle to the carrying out of the project was a lack of funds, he generously undertook to raise a special fund for the purpose and in a short time placed a substantial sum at the

disposal of the Committee. The details of the work were taken over by William Dutcher then actively engaged in securing protection for the Gulls of New York and New Jersey. Through the Thayer Fund, wardens were employed at the principal colonies in Maine, New York, New Jersey, Maryland, and Virginia, and a careful examination was made of the more important points along the coast from Chesapeake Bay to Long Island to locate the largest colonies. In the following year a comprehensive plan was carried out for securing effective laws to protect sea-birds and prevent traffic in their plumage. As a result the 'A. O. U. Model Law' now known as the 'Audubon Law' was passed in eleven states.

The man who made this possible was Abbott Handerson Thayer. He was born at Boston, Mass., August 12, 1849, and was the son of Dr. William Henry and Ellen Handerson Thayer. He was educated in private schools and from early childhood he painted animals. At the age of sixteen, having decided to make painting his profession, he spent four years, from 1875 to 1879, at the *École des Beaux Arts* in Paris. He was fifty years of age when he actively entered the field of bird-protection, and up to the time of his death, on May 29, 1921, he maintained his interest in the work. His accomplishments in the realm of art and his contributions to the theory of protective coloration may be found elsewhere, while the details of the bird-protective work which he made possible will be found in the annual reports on the Thayer Fund in 'The Auk' and in *BIRD-LORE*.

The work of collecting this fund devolved almost entirely on Mr. Thayer who continued it from 1900 until 1905 when the National Association of Audubon Societies was incorporated and was in a position to insure a regular fund for bird-protection. During the five years that activities were conducted under the Thayer Fund, more than \$12,000 was raised: \$1,400 in 1900, \$1,680 in 1901,

\$1,945 in 1902, \$3,603 in 1903, and \$4,070 in 1904. Mr. Thayer himself contributed \$1,000 to the fund in 1903. But the size of the fund was less important than the circumstances under which it was collected, for it was more difficult to raise \$1,000 for bird-protection in 1900 than a much larger sum for the same purpose in 1920. The money was expended not only for warden service, to guard the nesting colonies, but for securing publicity necessary for the enactment of better protective laws. So well directed and effective was the campaign that comprehensive laws were secured in most of the coastal states and most of the important colonies of plume-birds from Maine to Florida were placed under the charge of special wardens.

Thayer's active interest in bird-protection was manifested at a psychological moment when the destruction of sea-birds for millinery purposes was at its height, when the second Audubon movement was just getting under way, and when the bird-protective forces were groping their way, seeking means to check the destruction which was increasing on all sides. The time was ripe for action but it remained for an artist rather than an ornithologist or a business man to galvanize the ideal into a practical reality and to demonstrate that bird-protection could be placed on a working basis. As Dutcher well said in referring to Thayer in his first annual report on the fund: "Where he should have received encouragement, i. e., among ornithologists, he met with discouragement . . . [but] by his personal courage and faith he accomplished what others said could not be done." It is perhaps not too much to say that this practical demonstration and the success of the work conducted under the Thayer Fund was in large measure responsible for the endowment of the National Association of Audubon Societies which later made possible the development of warden and educational work on its present broad and permanent basis.

HIKING FOR THE BIRDS

In Pittsburgh, Pa., there lives a gentleman who for some years has been conducting an unique undertaking with boys, which con-

sists of a long bicycle hike during the summer months. This active worker is Mr. F. C. Copp. The present season the expedition

left Pittsburgh on July 11, the boys proceeding on their wheels through Beaver Falls, Pa., then on to Canton, Ohio, where a visit was paid to the tomb of President McKinley. Then they inspected the great rubber-producing city of Akron, and went on through towns and countrysides until Cleveland was reached. Here the bicycles were placed in storage and the regiment of khaki-clad boys proceeded by steamer 200 miles down Lake Erie to Buffalo and then on to Toronto. Of course Niagara Falls and other local points of

interest were enjoyed. It required more than three weeks to complete the trip.

Every summer Mr. Copp has the boys undertake some special work as they ride. This year, according to the announcement, "The party will distribute pamphlets and post warning posters under the sanction and direction of the National Association of Audubon Societies." At Buffalo the entire party waited on the mayor of the city and handed him a letter of greetings from the President of the National Audubon Societies.

THUMBS DOWN FOR FLORIDA BIRD PROTECTION

Again the Florida Legislature has had the subject of the conservation of the state's resources presented strongly to it by able advocates and again has this honorable body turned a deaf ear to those who would have the state appoint game-wardens to enforce the now unenforced laws for the protection of the wild birds and animals.

During the greater part of a period of six weeks, Mrs. Katherine Tippetts, of St. Petersburg, President of the Florida Audubon Society, resided in Tallahassee and daily labored with the law-makers in an effort to induce them to see the light and pass a bill for the establishment of a state game warden system, which had been drawn and presented by the Florida Audubon Society. She was

received cordially and most courteously, she was the recipient of gracious and complimentary remarks as was meet, but in the end went back to her home without getting her bill passed.

A less courageous individual would have been discouraged, but Mrs. Tippetts has announced to the women's clubs of the Pinellas Peninsula and to the Florida Audubon Society that the fight is going on, and it may be prophesied that two years from now, when the Florida Legislature goes into session, they will find that Mrs. Tippetts has behind her a fighting force that will in the end spell victory for the birds and game still left in the 'Land of the Flowers.' The Association pledges her its most earnest support.

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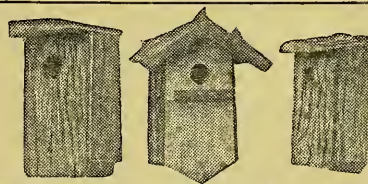
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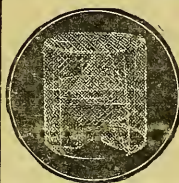
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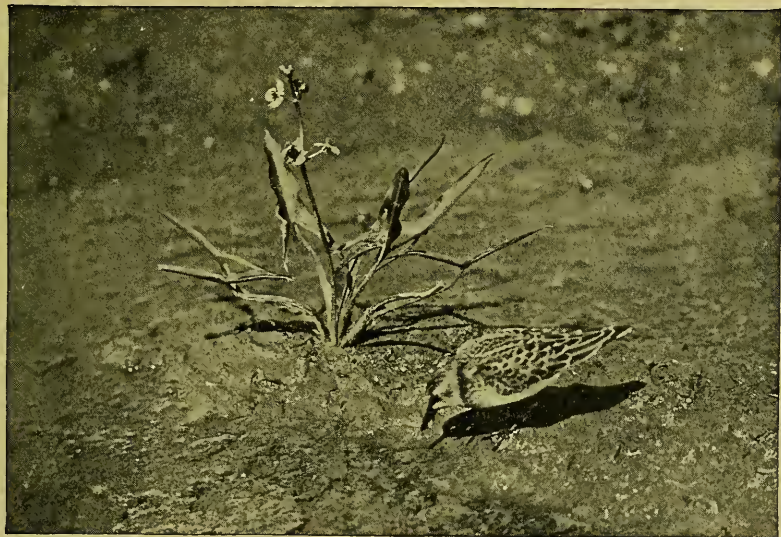
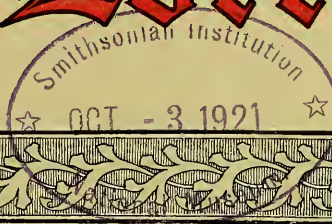
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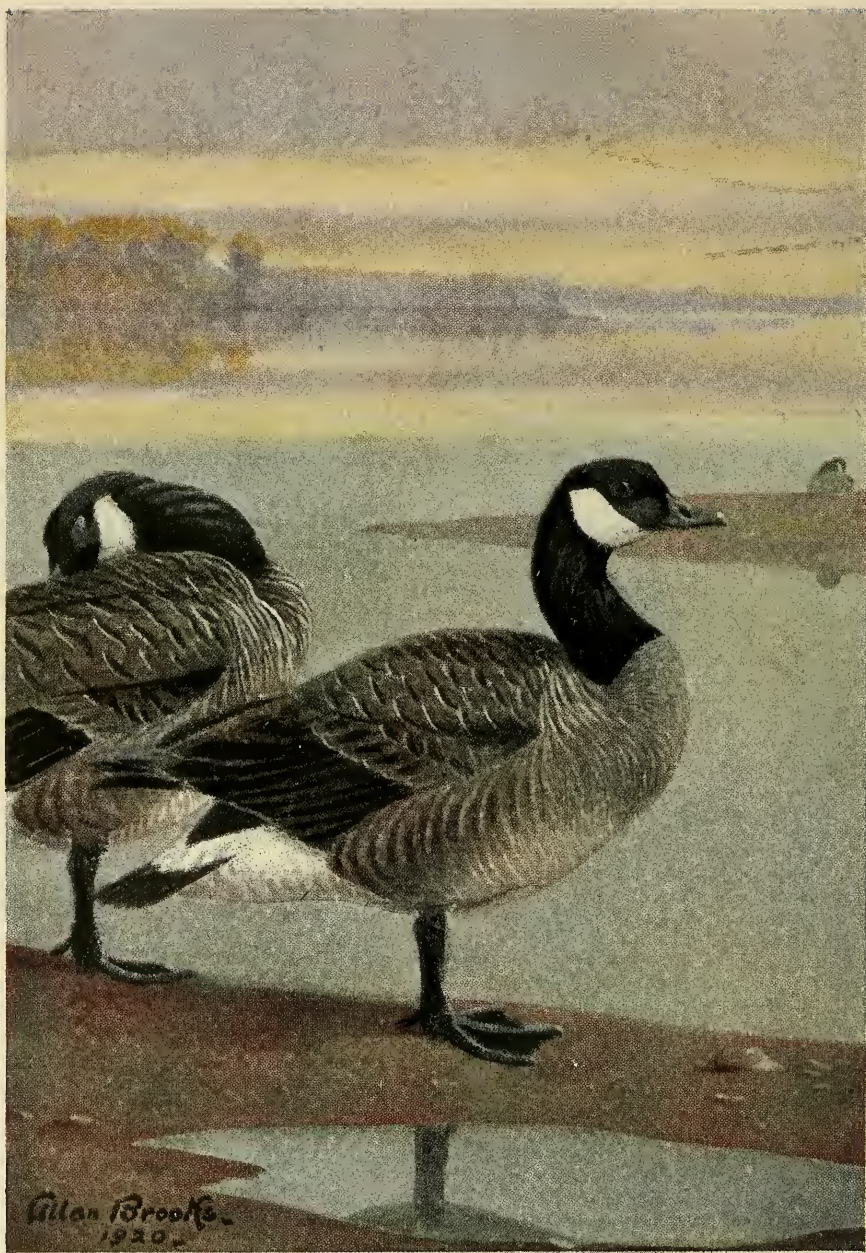
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Vol. XXIII

SEPTEMBER—OCTOBER, 1921

No. 5

Why Birds Interest Me

By EUGENE SWOPE

I HAVE often noticed that many intelligent people wonder how anyone can have a sustained interest in birds. Friends have asked: "How can you find it worth your time and effort to tramp about the deserted fields, camp in the lonely woods, and loiter along the byways just to see and hear birds?" "What do you find in birds to charm you so continually?" "What is the source of your unfailing interest in birds?"

It was a long time before I myself fully understood that it is not alone the shape, the form, the coloring, and the classification of birds, instructive and entertaining as these matters are, that holds my interest. But it is what, for the want of a comprehensive word, I call the glad-free-life of the wild birds. This never fails to hail an element of myself that lies beyond my workaday thoughts. Wild birds in some way symbolize to me a life of more spirit and less clay which I seem to have lost for the most part somewhere along the way, or perhaps that nature promised in full measure in youth but later in some indigent mood withheld. No other manifestation in nature or art so nearly corresponds to this eluding side of my life as the independent, songful life of wild birds.

Bird-life, it seems to me, definitely expresses a released state of being which I feel an inherent right daily to live but cannot attain. Glimpsing this in birds, I find a perpetual interest in them. If such a state of mind is possible, I have a serene, emotional response to birds at any and all times.

The charm I find in birds is, I believe, similar to that quiet joy known to many when they chance upon verses wherein the poet has presented with beauty and fullness, thoughts and emotions they themselves vaguely feel but have not the gift to express. Bird-life is to me a living lyric theming an aspiring element of my being.

I seek the birds for that uplift for which we read the inspired authors, for that state of fuller thought and feeling that others find through the agency of music, for that more than everyday self that still others arrive at through religious services. In the end, as I understand it, we are each seeking the same

evasive fulfilment. The difference is alone in the means we employ. Because we lose sight of this fact we think we do not understand one another's interests.

A friend of mine who can be lifted to the seventh heaven and all the enchantment therein by classical music, has no patience with what he calls my ornithological nonsense. He sees nothing in birds worthy a full-blooded man's serious attention. I, on the other hand, fail to find in music the nearest approach to my visions. A scholarly friend of mine who cannot understand what he considers my foible, is noticeably patient with me when I talk of birds. And I, with equal charity, *endure* his animation over ancient ruins and the meager records of perished nations.

That hermit, Henry Thoreau, pondering upon life and nature, wrote "I long ago lost a hound, a bay horse, and a turtle dove and am still on their trail. Many the travelers I have spoken to concerning them, describing their tracks and the calls they answer to. I have met one or two who have heard the hound and the tramp of the horse and have even seen the dove disappear behind a cloud, and they seemed as anxious to recover them as if they had lost them themselves."

When we pass from the simplicity of childhood to complexities and cramping realities of maturity we seem to lose something in one of those thousands of blind alleys we mistook for the highway. Later we suspect the loss and begin the search for what we believe to have been our greatest treasure. Some seek to recover this treasure in the exhilaration of profound study, others in the ecstasy of music, still others in art, or the solemnity of worship. Some by one means and some by another. Some even in the glad-free-life of the wild birds in God's out-of-doors. Then there be many who in the mad rush of commercial life and the social whirl, never miss the lost treasure, and are never tantalized with the desire to search for this elusive element of life.



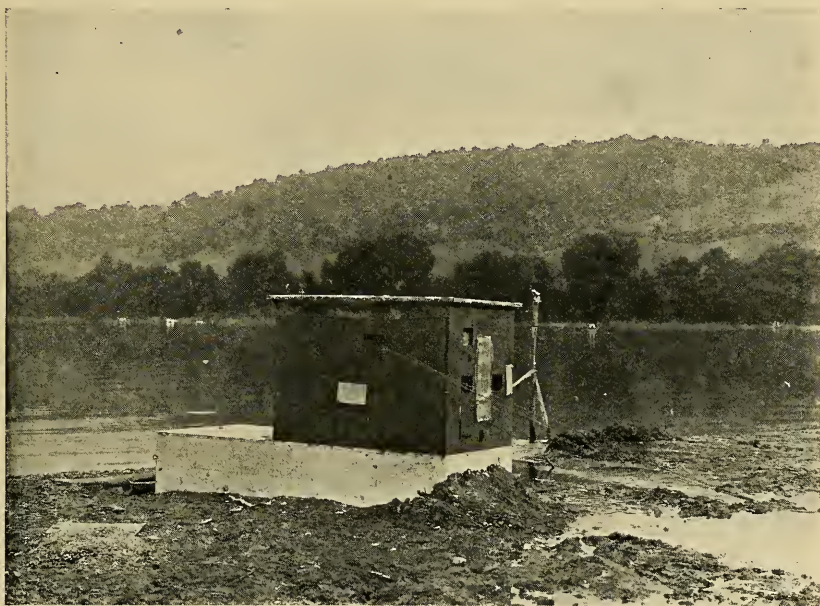
Three Weeks in the Boat-Blind

By GUY A. BAILEY, Geneseo, N. Y.

With Photographs by the Author

THE latter part of August and the most of September is a dull time for the average bird photographer. Most birds are through nesting and few birds are attracted to feeding-places so early in the year.

For some time I had been planning a boat-blind that would enable me to get near the shore-birds and be portable in case my first site was unfavorable. In August, 1917, in company with Mr. Joseph Taylor, a camp was set up on Sandy Point and we moved our boat-blind to the Point. The camp was pitched a few rods from the Point, and, as it was in a pasture lot, we decided to put a

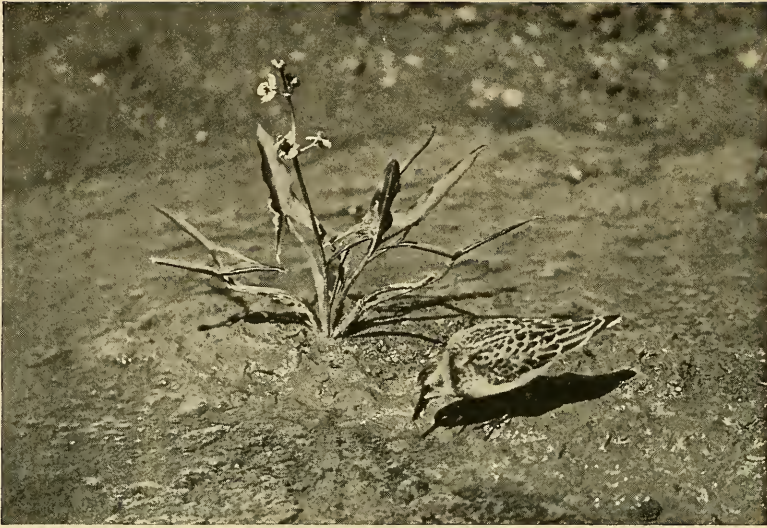


THE BOAT-BLIND

light fence around the camp to keep out the inquisitive cattle. The device was hardly successful for they broke it down and disturbed the peace and quiet of the camp.

The boat-blind was a better blind than a boat, as we discovered when we tried to float it to the Point. However, Mr. Taylor, with much dexterity and good balancing, succeeded in keeping it right side up until it was towed to the end of Sandy Point. Once landed we had little trouble in digging a canal and moving it inland to what we thought was safe anchorage.

The next move was to get some little pools of water on the level plain near the blind so that the water would filter out and leave its load of small organisms that seemed to be the food of the Sandpipers that we found to be



SEMIPALMATED SANDPIPER

the most numerous birds at this time. The little stream that had built up the plain was a harmless little babbling brook that we shifted around the Point with ease. But it was this same little babbling brook that later, under changed conditions, made trouble for the blind and its contents. After we had located some pools we next focused a few cameras on them, led our wires to the blind, and started to wait for the birds. We usually worked in three- or four-hour



SEMIPALMATED PLOVER

shifts, so that each could have a chance at the birds and also rest up from the rather tedious work of keeping watch on so many spots of photographic interest.

One of the first things to come to our attention was that the pools we had selected for the birds to use were no more attractive to them than dozens of others provided by due process of nature. So we began to fill up all the natural feeding-places, and once we made over a greater part of the Point so that we could have some control of the distribution of the food-supply. Then the cattle came to inspect the blind during the night and every hoof-track was a pool to gather food for the hungry birds. These we had to fill, and once more we were delayed. To prevent this happening again we built a fence across the Point and kept the cattle out.

Eventually the birds came to our pools and we made numerous exposures on the Sandpipers. After we had developed several of these plates

we decided that the pictures were not artistic. Mud and water with a pretty bird did not appeal to us as a pleasing picture. So we stole one of Prof. A. A. Allen's ideas of a 'scenario.' For our 'scenario' we chose a little sagittaria that we found nearby. This also gave us a spot to watch that would indicate when our bird was in range. We tried many poses of the Sandpipers—side views, front views, rear views and so on—and often we made a picture of the spot where he *had been*. Sandpipers are very active, and there is no better way to become impressed with the idea than to try taking their pictures.

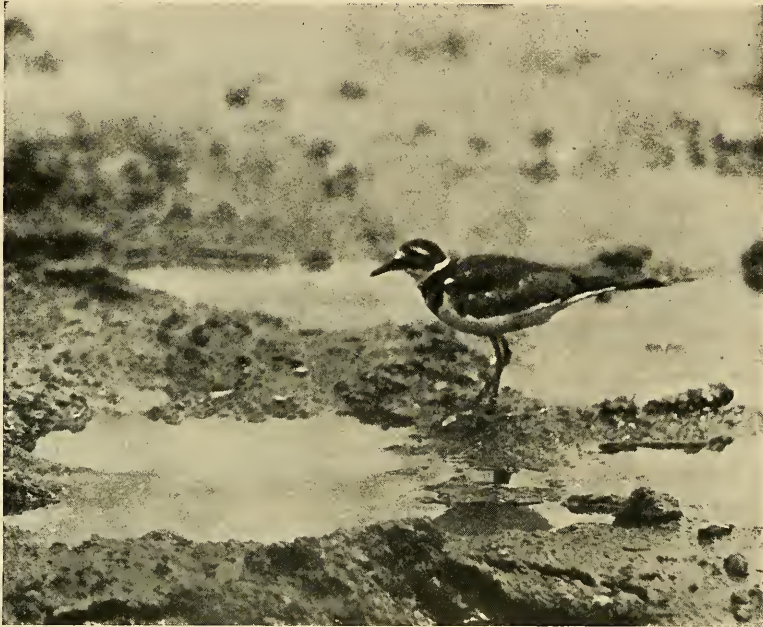
While we were working with the Sandpipers we had the pleasure of seeing the Semipalmated Plover hurry across the Point and move on along the shore. In two to three hours he would come back again. He did not feed at the pools like the Sandpipers but kept to the higher and drier ridges, so we picked out a ridge that seemed to please him and focused another camera on it. We placed two stones to mark the limit of our range and went back to wait. In the three weeks that we were there we did not make over six or seven exposures of this



BLACK TERN

Plover. However, while we were waiting for two or three birds, it took no longer to wait for a dozen, so we didn't mind adding a new one to the list.

Black Terns paid us a visit during this time. We first noticed them flying over the water. Later they came and perched on the fence-posts. Another camera was brought out and focused on the favorite post. In a short time we



KILLDEER

had several exposures of the new visitors. Then, after four or five days, they disappeared and we saw them no more during our stay.

Killdeers came in large numbers and in the usual voice. Now and then they came to our pools but they were not at all addicted to this; they used the Point more as a resting-place. Our real occupation was photographing Sandpipers and the others gave us relaxation.

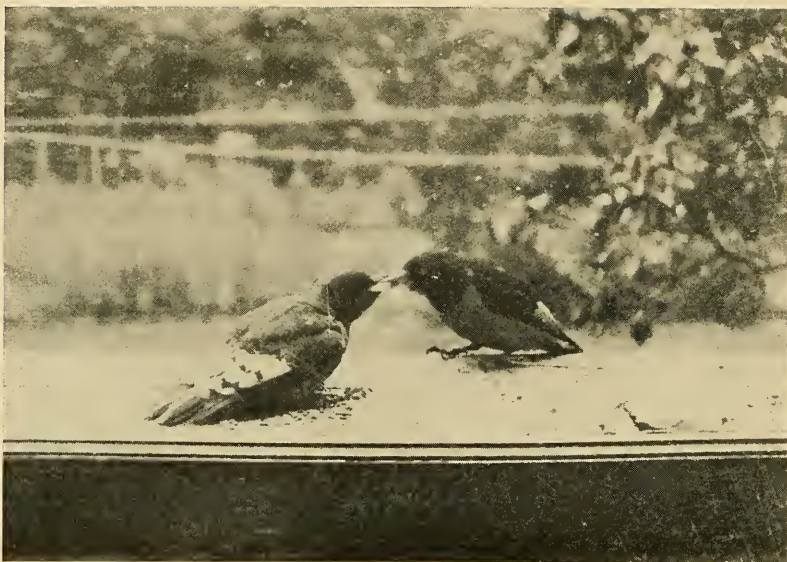
At first our nights were useless, merely sleeping and waiting for tomorrow. Finally we thought of making use of the automatic flash-gun to get the Great Blue Heron. They were noisy and numerous at night but during the day we saw them only at a distance. After a north wind had strewn the shore with dead fish we could hear them quarreling, and we judged there must be a dozen or more, so after the photographic day had closed we opened a photographic night. We set up two cameras and connected them with a flash-gun. Then a thread was attached to the electric switch and led to a dead fish placed in the water close to shore. Then we retired to camp, had supper, and waited for the explosion. Sometimes it would come just at dusk, sometimes at midnight, and

sometimes almost at daybreak. When it came early enough in the night, we would go down and reset the camera trap with the aid of our lanterns. Our greatest difficulty in this night photography was from dew on the lens. We finally overcame this partially by covering the camera and lens with a box with a hole in front just large enough to let us get the picture on the plate.

A letter came calling Mr. Taylor to the colors and the photographic party broke up. The boat-blind stayed in place for several days, and then a rain-storm came and the little babbling brook became a torrent. It left its little channel, undermined the boat-blind, and carried it out in the cove where the Black Terns fed. In the blind were five cameras securely locked but not protected against a flood. The wind had driven it on the shore but the waves were beating over it. The cameras were ruined but the lenses and shutters, after a visit to the optician, were none the worse for their adventure and are still doing business.



GREAT BLUE HERON TAKING ITS OWN PICTURE
BY FLASHLIGHT



YOUNG RED- EADED WOODPECKER (LEFT) AND PARENT



BRONZED GRACKLE FEEDING YOUNG

A Lake Forest (Ills.) lunch-counter becomes a nursery. Two photographs
by George Roberts, Jr.

With the Birds in Alaska

By MRS. G. W. GASSER, Agricultural Experiment Station, Rampart, Alaska

THIS has been such a wonderful bird year at this station that I am sending you extracts from my notes, as several requests have come to me for more Alaska information on this subject, since the publishing of my first letter, more than a year ago.

All through March and April the Snowflakes were abundant in the stack-yards, and with them, in a stack-yard across the river, was a large flock of what must have been Pine Grosbeaks, as nearly as can be determined from the descriptions given me. I was not fortunate enough to see the flock but did see several of the female birds, and they answered the description of the female California Grosbeak. The owner of the oats in the yard shot between forty and sixty of these intruders. Only one pair was seen on these grounds, and I did not succeed in getting a glimpse of them.

The first Robin was seen at the Station May 11, and the last one September 23, although one was heard the next day. Twenty-nine were counted one evening in a field where fish offal had been plowed in for fertilizer. On May 11 the first Rusty Blackbirds were heard and a few days later the stack-yard was noisy with their clatter; they seemed to be everywhere.

On May 12, a few Juncos appeared. They are never abundant here, and with them were many Gambel's Sparrows. The woods around us are alive with the latter every summer. Among the Juncos was one that was very much smaller than the others and brown in color, instead of gray.

The next day, the 13th, a few Fox Sparrows arrived, a flock of Violet-Green Swallows, a pair of Teal Ducks, one of Canada Jays, and an immense flock of Longspurs. The latter were a small, rather faded species, not particularly attractive, but a few days later they were joined by a larger, more brilliantly colored variety.

All of these birds were in a pitiful condition when they reached here, as the snow was so deep in the woods at that date that they had not been able to pick up food along the way, and many dead and dying ones were found in this vicinity. One of these hungry little fellows, picked up in our front yard so weak he could not stand, sits beside me on the floor as I write. Even a few days on a diet of crumbs and grain did not restore the use of the little legs but two meals of flies did the work, and gradually he regained his activity but not the use of his wings. Pete, as he is called, was given the freedom of the glass porch but it was fully three months before he attempted the use of his wings, and then it was done very carefully. When offered his liberty by way of the open door, he refused to take it and is spending a happy winter with the plants, subsisting on whole-wheat bread crumbs, ground nut-meats and egg-yolks. His bath and drinking-dishes must have sand in the bottom or he will not use them. He always announces when he is about to take a plunge and seems to demand an admiring audience. Recently he has been given a mirror and

spends much time looking in it and seems puzzled about the reflection. In the evening he frequently joins the family in the living-room, settling down near the heater. When his comrades return in the spring he will be offered his liberty.

Our plowed fields and the stack-yards were rich in food for these hungry little friends, and it was a joy to see their bodies fill out and to hear their happy chatter. Melting snow made streams which added to the attraction and contentment.

On May 14, Tree Sparrows arrived in abundance but not a Chipping Sparrow was seen during the season, nor did a Redpoll appear, but I heard of them in the Iditarod District. We usually have them in great numbers. On the evening of the 14th, four Snipes and a pair of Baldpates found the stream in the stack-yard and were with us several weeks.

The next night, while watching the antics of a Wilson's Snipe, a pair of Varied Thrushes were seen to alight on the fence and were the sight of the season. In that light, yellow as the yellowest orange, with their black markings, they were beautiful beyond description. One of them was seen three successive evenings, but Dr. Gilbert, of Leland Stanford University, told me he saw many of them as he came up the Yukon. That same night we saw a Golden-crowned Sparrow and counted three in all, while the birds were with us. They were not plentiful, that is certain.

About 15 large birds, called Cranes around here, lighted on the grounds but only for a few minutes. I did not see them, but two years ago I saw a flock of 24 that remained here for several hours. This same day, May 19, a female Horned Lark appeared among the Longspurs but was not welcome; they made it very difficult for her to get enough to eat.

At about 8 o'clock in the evening of the 23d, 14 male Golden Plovers alighted in the front yard of the Station Cottage and were constant visitors around the house for more than two weeks. A Semipalmated Plover, a Lesser Yellow-Legs, and several Sandpipers were seen that evening also, and 8 huge Ravens circled over the fields.

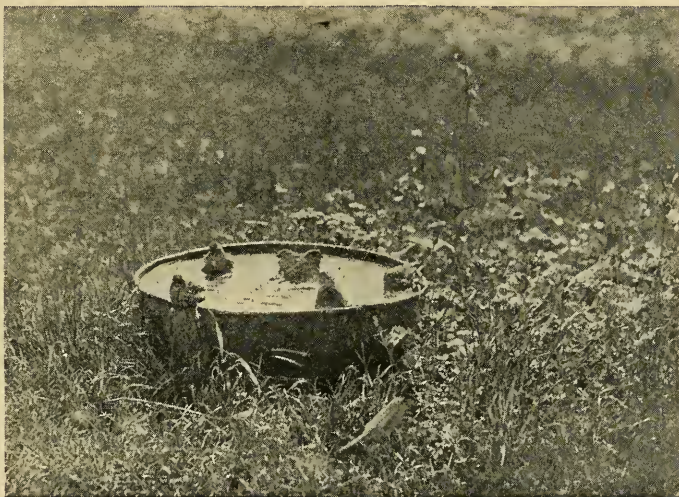
The next three days brought a large Hawk, which could not be identified, a pair of Buff-breasted Sandpipers, a Pacific Loon, and a pair of Pintail Ducks. On one of these days a pair of Flycatchers took possession of the clothes-lines and later built a nest under the implement shed and brought off a family of five that spent the entire summer with us. These birds were a puzzle as we could not locate them in any of the bird-books we possess. There seemed to be no difference in appearance between the male and female and when separated they uttered loud, piercing calls from the top of the buildings.

There were Cliff Swallows in abundance but we did not know when they arrived. One of their nests fell from where it was built while the little ones were but a day or two old. One was so badly injured it had to be killed; the other three were put in an old Robin's nest on some cotton, and practically

covered with the same material. Then the nest was placed on a shelf that was fastened to the building, as nearly as possible where the old nest had been. The parent birds then took possession and built the usual mud structure from the top of the Robin's nest to the roof of the building and they raised the family successfully.

On August 6, the Swallows of both kinds, Violet-Green and Cliff, congregated on the clothes and telephone lines, and for three days we were treated to a most interesting exhibition of the training of the young, then on the fourth day, about 5 o'clock in the morning, they took their departure.

A bird-bath, of which a picture is enclosed, was a lively place all summer, enjoyed mostly by Gambel's Sparrows, for from 4 in the morning until 6 at night they splashed. Occasionally a Robin would come for a bath, and one



GAMBEL'S SPARROWS BATHING

day, August 11, a yellow-breasted bird had a plunge. Two or three little fellows visited a birch tree in the front yard frequently after that date, until the freeze-up, but could never be identified. The wings were dark and the heads and breasts a bright orange-yellow but their markings could never be determined as they were very shy.

A female Shrike appeared in September, but left after the first hard freeze. During the fall Canada Jays, unidentified Hawks, and Owls and what looked like Eagles, were seen. Five Sparrow Hawks were around for several days.

The Sparrows left gradually. The ice in the bath was broken for them several mornings before their final departure. On September 20, one little one, seeing a member of the family in the yard, came down from a field and went to the bath and apparently made a little speech. The ice was broken for it, a last plunge was taken, it uttered a few more sounds and was gone. It

seemed to be taking a reluctant farewell, expressing appreciation for food and water furnished during the season.

White Gulls were common all summer and one Brant was seen. A man from the camp told of seeing a pair of birds in his yard, that from his description were thought to be Killdeers, and upon being shown the pictures of that species, said that was the bird, without question.

[Now, in December, we have with us a flock of Chickadees, but they are never still long enough for us to determine which kind; some Spruce Hens, three Ravens, and a Hawk Owl, while in the distance we hear what is supposed to be a Snowy Owl, but of this I am not certain. A Woodpecker was heard but not seen.

On September 10, 1919, a female Hummingbird came to this station and was with us three days, darting in and out among the petunias and pansies right under the windows of the house. The evening of the third day it flew into the greenhouse door and directly across to the glass on the opposite side. I picked it up from the sill where it had fallen and it was held in the palm of my hand from 6 o'clock until 10, without moving, when it turned on its side and was gone. Apparently there was no suffering, it was simply stunned. The next morning, as far as the eye could see, all outdoors was a mass of ice and sleet, and it seemed a mercy the little wanderer had perished so easily the night before. One of the oldest pioneers here tells me he has seen Hummingbirds on the Yukon and that the natives report seeing them occasionally.



Notes from Field and Study

A Bird Battle

In front of a house in Princeton, N. J., stands an old linden. Several years ago the upper part of the trunk became decayed, leaving a condition that has proved in previous seasons very alluring to Flickers in search of a nesting-place. For some weeks this spring a pair of that species had been busily chiseling a hole into the trunk. The nest was apparently about ready for their brood when a pair of Starlings arrived to dispute the possession of it. Birds of the latter species like to lay their eggs in the hollow of a tree, but as nature has not equipped them with an excavating apparatus, they often appropriate holes made by other birds.

When the pair of Starlings arrived for the attack, only the male Flicker was on guard; the female did not put in an appearance at all. The defender would pause in his efforts to enlarge and complete the nest, in order to put to rout first one and then the other of the Starlings, but the latter proved very spry in dodging and very persistent in returning to a branch in the immediate neighborhood, sometimes alighting on the trunk itself, either just above or below the hole. Their manner of sitting near and opening their beaks, as if 'making faces' at the defender of the hole, all the while emitting their discordant notes, must have been peculiarly irritating to the Flicker, who would dart after the intruder and pursue him through the air and over branches, but would never quite come up with him.

In the course of one of these chases, one of the Starlings plunged into the hole. Thereupon the Flicker, bracing his feet and tail against the trunk, proceeded by a succession of rapid thrusts of head and beak into the hole to pull the offender out. The Starling at first resisted successfully, but in the end he was slowly dragged out, and, after a short tussle in the air, made his escape.

Both Starlings then resumed their tactics, as if trying by flight to lure the Flicker away from the spot that he was guarding. If that

was their game, they succeeded, for, taking advantage of the Flicker's momentary absence, one of the Starlings entered the hole and a few seconds later the other popped in too. On this second occasion, despairing of being able to pull the two out at long range, so to speak, the Flicker also plunged into the hole. Then followed a battle royal, lasting for what seemed minutes. It was rather ghastly to imagine the blows that were being dealt at closest quarters; not a sound was emitted, but one could imagine what was going on within the hole by the feathers that flew from it. The first bird to emerge—that is, to be pushed out, by fractions of an inch—was one of the Starlings, which then flew away. The fight between the other two birds then continued out of sight until something appeared at the mouth of the hole. This proved to be the tail of the Flicker. When he had backed out of the hole into view once more, it appeared that he and the remaining Starling had clinched in a desperate grapple. With the latter gripping one of the wings of the Flicker, they fell, fluttering and, fighting, a distance of nearly 40 feet; but just before touching the ground, they parted and flew in different directions. After that, each was apparently too much exhausted or too busy in trying to heal his wounds to renew the battle, and so the shades of night fell, leaving neither side triumphant.

The above events occurred a fortnight ago. Since then the Starlings have been in full possession of the hole of contention. The Flicker has appeared once or twice in that neighborhood but has not dared or cared to dispute their title.—SYDNEY RICHMOND TABER, *Princeton, N. J.*

Cardinal and Other Birds at Kellogg, Minn.

I should like to report a rare visitant for this part of the country. Last Sunday, while I was hiking along a railroad track at the foot of a large hill north of town, I was sur-

prised to catch a fleeting glimpse of a bright scarlet bird as he skulked through brown brush and low-hanging grape-vine. Soon the handsome fellow appeared in plain sight, closely followed by his sober-hued mate. It was the Cardinal Grosbeak. The pair seemed very timid and flew away to the heavy timber when I cautiously tried to approach nearer. Soon his whistle, clear and sweet, reminiscent of Kansas, came floating to us from the distant wood.

Residents of this place tell me that this pair of birds has been here for three or four years. Once during the past winter I saw what I thought was a Cardinal in the woods near here, but it flew away before I could tell whether it was a Cardinal or Pine Grosbeak. I have made a study of southern Minnesota birds for twenty years and have never before seen a pair of Cardinals this far north.

Late in November, 1920, I discovered another very rare visitor in the course of my numerous tramps along river and lagoon. This was the Pileated Woodpecker. The only one of these birds I have seen in this region heretofore was at Taylor's Falls. This bird, I regretfully report, was wantonly shot by a so-called hunter.

Winter visitants have been quite rare in this vicinity during the past winter. The Downy Woodpecker, Chickadee, and an occasional Jay were about the only birds to be found. But the spring migration is unusually early and has brought a goodly quota of songsters.—OWEN D. FLEENER, *Kellogg, Minn., April 6, 1921.*

Two Rare Kentucky Songsters

The bird-lover south of the Ohio River can scarcely expect to hear the songs of some of the birds of the Canadian wilds, especially such as the Winter Wren and Northern Water-Thrush. However, it was my good fortune to listen to both of these birds during the spring migration of 1921.

On the morning of April 27, I was in a narrow strip of woods bordering a small stream, had just recorded my first arrival of the Chat and was listening to the great multitude of songsters, when a strange bird-

voice joined in the chorus. It seemed to come from a little patch of willows about 30 yards distant. Proceeding toward them, it was somewhat surprising, when about half-way there, to hear this same bubbling, tinkling, song break out afresh a few yards behind me.

Turning about I caught a glimpse of a small brown bird just a second before it disappeared in a brush-heap in a ditch. In a few minutes it appeared again on the top of the brush, and straightway delivered its exquisite little song, which was at once recognized as the same voice that, when first heard, seemed to be some distance away. At first sight I was nearly certain that I was listening to a Winter Wren, and as it returned to sing several times, it gave me every opportunity to verify my first opinion. Its fine silvery song is best described by John Burroughs as "a little cascade of melody," and as I listened I was impressed with the fact that some of our finest songsters are so rarely heard singing in their winter homes as to be themselves unfamiliar when in song. In this bird I had a double record; the first time I had ever recorded it as singing, and the latest date I had observed it in spring.

Twice in May the Water-Thrush was observed, and both times it was singing. It was first heard on May 12, in a small open woods that would hardly be expected to attract a bird that is as retiring as the Water-Thrush. It was about 25 feet up in a tree, where it sang several times, the continual tilting of its tail serving as the first clue as to its identity. After a bit it flew down to a clump of willows about 50 yards distant, where I got a good view of it and confirmed my identification. Its song is different from that of the Louisiana Water-Thrush, being high pitched and liquid, and reminded me of the Winter Wren's song though it was not as fine and silvery.—BEN. J. BLINCOE, *Bardstown, Ky.*

White Egrets at Smithtown, N. Y.

On July 16, 1921, I saw a pair of birds which I recognized as American Egrets. I have seen them almost daily since that date and the number has now (Aug. 18) increased

to five. I have seen this species but once before, a single bird at Setauket, L. I., about five years ago. The black legs and yellow bills of the birds made them easy to identify; also the fact that when I first saw them they were standing with a Great Blue Heron, and I estimate them to be about 5 inches smaller.—HAMILTON F. POTTER, *Smithtown, N. Y.*

White Egret in Connecticut

On July 18, 1921, in company with Henry Ferguson, of Fisher's Island, N. Y., I saw three American Egrets, on a marsh near the mouth of the Connecticut River, near Old Lyme, Conn. We identified them by their yellow bills and black legs.—BLAIR S. WILLIAMS, *New York City.*

A Flicker's Bed

One night, the latter part of November (1920), when the weather was beginning to be cold and stormy, we found we had a new lodger.

The bathroom is on the north side of the house, with the window quite close up under the eaves, and here a Red-shafted Flicker was located. He had gotten up as far as possible under the eaves and was clinging by his toes to the screen. Just about half of his body was visible.

Some nights when the wind was quite strong he would sway from side to side, but this did not seem to disturb him in the least. During the short winter days he would go to his bed at 4 in the afternoon and be up at 7 in the morning. He never seemed alarmed when anyone was near.

When the weather began getting warmer and some nights were pleasant he would find lodging elsewhere. Then, when a bad night came he would be back again.

It has been some time since he has been in his old quarters and I am inclined to think our winter friend has deserted us.—EDNA HOPE ASHENHURST, *Colorado Springs, Colo.*

Chimney Swifts in Fall and Spring

For many years I have watched the migration of the Chimney Swifts, and their

sudden departure from us in late September has always been a mystery to me. For some days the cold blue or cloudy sky would be without these darting, quick-winged objects, and, suddenly, some evening just before sunset, certain favorite chimneys about town would suck into them streams of these living things. I arose one morning before sunrise, determined to discover when they came out. Just at sunrise, this misty morning late in October, the first Swift came 'over the top', and then followed 247 birds. I counted on to over 400, and then lost track of them. They went off over the Hudson into the mist, and I waited to see what would follow. In a few minutes I was surprised to find them coming back out of the mist and fog and counted over 200 birds as they dropped back into the chimney. After waiting half an hour for some movement of the birds, I gave it up and left the Swifts in the chimney to work out their own fate.

The spring migration has varied from April 19 to April 30, as to dates of my first Swift and this year (1921) I did not see any over the city until April 27. For days there have been no Swifts about, and wondering what had become of them, I remarked to one of the men in the office of a large plaster works here, that I wondered what had become of the Chimney Swifts, as I had not seen any for several days. The weather had been wet and cold, and insect life not very abundant. The Swallows I have often seen skimming over the water where they scoop up insects floating on it, but I have never noticed the Swifts do this. One of the men in this office told me he knew where the 'Swallows' were, as he had seen them go down the big chimney at the foot of South Street, and said we would go up and knock against the chimney and get them out. We went up and he took a large stone and banged it against the chimney, as we used to bang a stick against a tree where a Hawk had a nest, and in a few moments we saw a Swift come over the top, and out they came in twos, threes, and fives, and probably over 400 birds came out into the rain and mist. In about half an hour, they began to return and we left them peacefully in their roost. This chimney I am sure is a 'wing' on their north-

ward and southward migrations and has been used for many years. The fall migrations are ordinary happenings, but this spring meeting has been a new one for me, and I suppose these may have been north bound, and were held up here by the unusual weather.—F. B. ROBINSON, *Newburgh, N. Y.*

An Unusual Accident

A female Hummingbird was seen by my daughter and her playmates flying about under the high roof of an open shed, presumably in search of insects. It came in contact with a pendulous mass of cobweb, became entangled, and soon hung suspended, head downward, fluttering to escape. The children rushed to me and I ran for a pole long enough to reach the little bird. Soon the mass of web broke and the bird, still helpless, fluttered within reach of the children.

Gently I took the tiny, glittering bird, no larger than some moths I had seen in the Tropics, and with thumb and forefinger I cleaned the right wing, and then the left which was also tied to the tail by encircling cobweb. Then the feet were also cleaned and the bird, set free, flew into a very tall elm tree to finish the preening in her own more perfect fashion.

An accident like this probably happens very rarely. Although I have loved and observed the birds all my life, this was the first time I have been privileged to aid a Hummingbird with my own hands.—RALPH E. DANFORTH, *Jaffrey, N. H.*

A Grackle's Intelligence

We feed the birds constantly, using seeds of various kinds, suet, cheese and various other kinds of food to attract as many species as possible. On the shelf was some bread, which had become rather hard and dry, owing to the excessive heat. One of the pieces of bread taken by a Grackle was too large to be swallowed at one gulp, being too dry and unyielding. After several unsuccessful attempts at swallowing the bread, the Grackle flew to a bird-bath, some 22 feet away, and dipped the bread into the water—once, twice, three times—but the bread was

still too hard. Again and again the bird would immerse his piece of bread, until finally, it disappeared without further effort.

On several occasions lately Mother has noticed Grackles fly to the fence, adjoining the bath, and then jump down to the bath; but shrubbery concealed any further thing the bird did with the bread. This has happened so frequently that Mother has pondered about the matter quite a bit but since narrating my observation, we have concluded that this Grackle has been doing this repeatedly.

It may be of interest to bird-lovers to know that bread has proved a greater attraction in my garden, than any other food. We take old bread—quite a good-sized piece—and soak it in cold water, until thoroughly soft. Then squeeze out the excess of water and break the bread into small pieces. These pieces the birds can then readily tear into pieces as small as they wish. Bread soaked in this way is relished by the Blue Jay, Bluebird, Cardinal, Catbird, Grackle, Titmouse, Wood Thrush, and Thrasher. The quantity consumed by the Bluebird is amazing, in view of the fact that it is supposed to be almost entirely insectivorous.

We also feed dry bread, allowing it to get very dry, and then reducing its size on a grater. But the soaked bread is the chief attraction at my shelf; it is eaten before any other food is touched. It has also proved the choice bait for my Sparrow trap.—G. A. HINNEN, *Cincinnati, Ohio.*

Redwings and Caterpillars

The Blue Jays and Cuckoos have been given credit for their useful work in destroying tent caterpillars and I wish to add this pest to the menu of the Red-winged Blackbird. The fruit trees in our neighborhood have been overrun with tent caterpillars for the last three seasons. Two different times I have found the Red-winged Blackbirds busily engaged in tearing open the cocoons of the tent caterpillars and eating the chrysalis.

It is interesting to note that at no other time do the Redwings leave the swamp on the lake shore nearby to visit our gardens,

They seem to take no interest in the caterpillars in the tents but only after they have spun their cocoons.—M. I. COMPTON, *Seattle, Wash.*

Goldfinches Nest in Thistles

On August 8, 1915, while walking in a pasture containing many large thistles, I noticed a Goldfinch fly into one of these thistles, and later found it was building a

A Song Sparrow Family

Sometimes in our quests for birds of gayer plumes and rarer species, we pass by the more apparently familiar and the more directly useful ones. It was on one of these quests that the author of this article was stopped by a small boy, who knew of the location of a bird's nest from which the mother bird walked as if she were 'lame'.



A SONG SPARROW FAMILY

nest in it. On August 22, there were five eggs in this nest and the bird was sitting. On this day I found three more nests in this same pasture, all in thistles; one nest had 6 eggs, one had 4, and one had 2. On September 5, all four nests had young birds.

We had been having some very severe rainstorms just previous to this last date, and one of the thistles had fallen over, but the birds were still in the nest, notwithstanding the fact that the nest was tipped very much. On September 12, all but two of the nests were empty and I discovered young birds nearby which were able to fly and were being fed by the old birds.

In 1916, I expected to find them again nesting in thistles and found at least six nests of these birds in this same pasture, but they were all in trees.—CLARENCE H. BUSH, *DeKalb, Ills.*

Accordingly, a trip was made to the nest, and, true to nature, the bird left the nest very cautiously and with both wings close to the ground. The nest proved to be that of a Song Sparrow. It was built on the ground near a small willow tree which was only about 16 inches high. The leaves of the willow afforded ample shade from the rays of the sun. There were three birds and two eggs in the nest.

This discovery accounted for the author's hearing for several mornings previous to the finding of the nest, the notes of a Song Sparrow, which was most invariably perched either on a fence-post or on the telephone wire. And so, morning after morning, and evening after evening, there continued the same outpouring of song from a happy bird.

About a week later, another visit was made to the nest, and five well-developed birds

greeted the observers with open mouths. The time was now favorable for taking pictures, so the camera was set on a tripod. A fish-line was attached to the shutter release and portrait lens was used. The stop was $f:8$, and the exposure 1-50th of a second. The camera recorded faithfully the bird of the field in its characteristic poses. The conditions for taking the pictures were also good, as the sky was bright, and the parent birds were feeding the young quite frequently. The bill-of-fare was grasshoppers, and it was certainly a bad afternoon for the orthoptera in the vicinity of this nest. The stout mandibles of the Sparrows are well adapted for killing grasshoppers.—THOS. A. TAPER, *Houghton, Mich.*

The Migration of the Martin

August 27, 1920, a friend called at my house and wanted to know if I would like to see thousands of Purple Martins which were congregating on the shore of Lake Winnisquam, about three miles south of here. I visited the place about 5 o'clock that afternoon, and on the electric wires beside a large factory building I counted 176 birds. As there were about 60 such wires that were completely covered with the birds, I feel justified in saying that there were over 10,000.

I visited the place again August 29 and there were apparently double the number that were there on the 27th. Other bird-lovers visited the place the next day and estimated there were 30,000 Purple Martins getting ready for their long flight. September 1 I returned to the place and not one Martin was to be seen.—BLANCHE D. SANBORN, *Laconia, N. H.*

A Redstart Tragedy

At a summer camp which I have, I make an effort to encourage nesting birds, and this season have had unusually bad luck as nearly every nest has been broken up. Some, I know, probably are destroyed by Crows, but there was an instance recently which I cannot explain: There was a Redstart nest with four half-grown young and at dark one afternoon both birds and young were all

right, and when I looked at the nest shortly after daylight the next morning, I found that the mother bird was dead on the nest and the young had been pulled out of the nest and killed and were lying on the branches near the nest. The mother's head was picked as if by some other bird.

There are, of course, Crows, Owls, red squirrels, and Hawks, but it does not seem to me that any one of these could kill the old bird before she could leave the nest, and if they did, I should think they would surely carry her and the young away, or at least throw them out on the ground.

The nest was high enough up so that nothing could reach it from the ground. Can anyone explain this tragedy?—HARRY A. SLEEPER, *Claremont, N. H.*

Wren Attacks Squirrel

We were much amused and interested one morning recently, while eating breakfast on our porch, to see our little friend the Wren scoop down upon her enemy the gray squirrel who was trying to steal from the feeding-box. Many times did she dart at his head and each time he was compelled to find shelter. She finally succeeded in driving him away entirely while the larger birds looked on, but took no part.—MRS. ARTHUR W. BRINTNALL, *Glencoe, Ills.*

A Wisconsin Mockingbird

On November 16, 1920, when the southward migration was almost complete, a Mockingbird appeared in our little city and took up winter quarters in the trees and shrubbery of a half-dozen adjoining gardens. This bird remained all winter, feeding mainly on asparagus berries and the fruit of the Virginia creeper. By February it was willing to feed occasionally on the bittersweet. When the snow thawed enough to leave the ground bare in patches, the bird may have secured some insect food, but the amount must have been very small.

The winter was unusually mild, so the period of song continued till about December 1. The notes, however, were subdued and lacked the brilliance of the summer song.

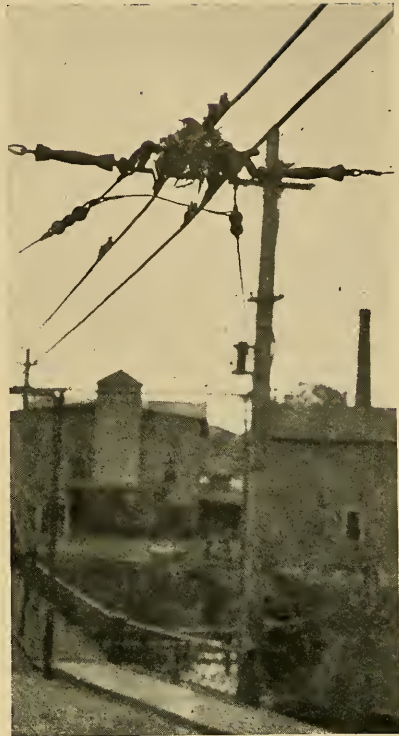
On February 11 a mild period began, lasting five days. Every day during this period it sang, usually when the sunshine was warmest. A return of the cold made it silent till the warmth of spring began. Now, on March 25, it is singing with all the joyfulness of the summer season.

Many times this courageous songster endured sub-zero weather, the coldest being 21 degrees below. Evidently food rather than temperature is the large factor in bird migration.

River Falls, almost on the forty-fifth parallel, is far north of the usual range of the Mockingbird; and, so far as I know it is the farthest north the bird has ever been seen.—LLOYD GOBLE, *River Falls, Wis.*

Robin's Nest on a Trolley Wire

The accompanying photograph was taken near Neenah, Wis. Cars passed under this nest every few minutes, their trolley being only a few inches below it. On each occasion the Robin stood up, then settled back on the nest. In spite of this disturbance and the exposed position of their home, the birds raised their brood.—H. P. SEVERSON, *Winneconne, Wis.*



ROBIN'S NEST ON A TROLLEY WIRE

THE SEASON

XXVII. June 15, 1921, to August 15, 1921

BOSTON REGION.—The notable feature of the present summer was the record rainfall in July. A foot of water fell during the month, chiefly in heavy storms. On the 9th a succession of thunder-showers, accompanied by a drenching downpour, left behind over 4 inches of rain, a remarkable precipitation for a single day. Fortunately, the young birds, for the most part, were sufficiently well-grown to withstand such peril. Had the storm come earlier it would, without doubt, have proved disastrous to our smaller birds.

Fledgling Robins and Bluebirds of the second brood were early on the wing, as these species started to breed sooner than usual after their arrival in the spring. Later breeding birds also appeared to complete their nesting activities promptly, aided by favor-

able weather conditions in June. Indeed, the season of courtship and nesting, when birds are in full song, active, conspicuous, and so very busy, passed quickly this year, and even during the last days of July, after a season of quiet and moult, it was apparent that the birds had begun to move in large numbers toward the south. Thus early the notes of migrating birds were heard frequently during the night, and sometimes in the daytime birds were seen and heard, evidently hurrying southward. On August 1 I picked up a Water-Thrush which had just struck a window-pane, a bird traveling far in advance of its average migration time.

Another indication of the early season is the date on which the Baltimore Orioles began their morning piping. For a week or two

before they leave here for their winter quarters the Orioles, after a long period of silence, whistle a few short phrases in the first hours of the day. This summer they began to pipe fully a week earlier than in an average season.

A noteworthy increase in the breeding stations of the Short-billed Marsh Wren was observed in this vicinity. This observation is of more than passing interest because Nuttall, writing of eastern Massachusetts in 1832 ('Land Birds,' p. 438), reported that this bird's voice might be heard "from the borders of every low marsh and wet meadow, provided with tussocks of sedge-grass," whereas William Brewster ('Birds of the Cambridge Region,' 1906, p. 370) says of the species "now of infrequent occurrence, chiefly during migration."

In the light of these facts, it would be of extreme interest to learn how widespread this invasion is—whether or not the bird has lately been becoming more numerous in the country to the south of this region.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—This year shore-birds were again unusually early in reaching Long Island in southward migration, especially the Lesser Yellow-legs. On July 10, forty to fifty of this species were observed at Mastic, a very large number for that date. Two or three, likely more, Stilt Sandpipers with them and a Wilson's Snipe put up from dead soggy stubble on the same meadow at that time, appear to be the earliest Long Island dates for those two species respectively. The same is true of a lone Least Sandpiper observed on June 22, which gave every appearance of being in active southward migration, although the Semipalmated Sandpiper and two or three other species are sometimes still moving north as late as this. An American Egret at Mastic on July 16 is early. A white Heron at Port Jefferson, August 13, was probably of the same species, which is reported from that vicinity August 1 by R. C. Murphy. In the writer's experience the Egret is of more frequent occurrence hereabouts than the Little Blue Heron, though the latter probably outnumbers it, sometimes occurring in small flocks, instead of singly or

occasionally two together. The beginnings of land-bird migration are obscure unless one has opportunity to give them especial attention. Tree Swallows are present in somewhat larger numbers than for the last year or two. Barn Swallows are migrating east to west over Long Island Sound by day. Northern Water-Thrushes have been present since July, and on recurring favorable nights increasingly frequent lispings Warbler notes come from the sky overhead. August 12 to 13 was such a favorable night.

In the opinion of Mr. Ludlow Griscom the August migration of land-birds this year is the earliest on record. He finds the following data of especial interest. Migrant Shrike, Englewood, N. J., August 9 (E. R. P. Janvrin); Myrtle Warbler, Rhinebeck, N. Y., August 11 and daily since (M. S. Crosby); Plainfield, N. J., August 13 (W. D. W. Miller); Red-breasted Nuthatch, Rhinebeck, N. Y., August 11 and daily since (M. S. Crosby); New York City, August 13 (Ludlow Griscom).—J. T. NICHOLS, *New York City.*

WASHINGTON REGION.—Bird-life about Washington during the months of June and July, 1921, was characterized by little of more than ordinary interest. Comparatively few of the transients remained much after June 1, notwithstanding the moderate temperature of the latter part of May and the early part of June. Whatever effect the hot weather of July and the last third of June may have had on the human population, it seemed to have little or none on the birds, beyond the usual midday relaxation. The resident species have been just as much in evidence as during the cooler weather, and the singing of such birds as the Wood Thrush, Robin, Cardinal, Indigo Bunting, Song Sparrow, Scarlet Tanager, Redstart, Yellow Warbler, House Wren, Yellow-throated Vireo, and Red-eyed Vireo continued as usual throughout the whole of July.

An American Egret, seen by Miss M. J. Pellew on Alexander Island, in the District of Columbia, on July 7, was one day earlier than its earliest previous appearance in summer, which was July 8, 1894.

Two female Bobolinks were seen on June 12 at the mouth of the Patapsco River, in

Arundel County, Maryland, by Mr. T. Denmead. No males were noted, and it is probable that this does not represent a breeding record, notwithstanding the lateness of the date.

Miss Katharine H. Stuart reports that a male White-throated Sparrow made its appearance on the campus of the University of Virginia about June 26, and remained there until at least July 10, in full song and apparently quite unaware that he was far away from his usual summer home, and equally unconscious of the interest that his presence in such a place at such a time aroused.

The European Starling is breeding about Washington in increasing numbers, utilizing here chiefly the natural hollows of trees. The bird has become a common sight in the fields as well as in the city of Washington itself, and does not appear seriously to molest other birds.

The Purple Martins have again returned to their roost on the Mall opposite the Red Cross Building along 17th Street. They first appeared here on June 11, and have continued to return to the same place, although their numbers much decreased during the latter part of July. They are apparently as restless as they were last year, when they changed their roosting-place several times during the summer. There are not so many resorting to the roost this year as previously but the gathering possibly may be much augmented during the month of August.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

CHICAGO REGION.—Excessive and continued heat has marked this period as one of the hottest summers for fifty years, and has tried the endurance of the most hardy observers when in the field. Many nests have been reported, however, and early migration notes are already coming in.

One of the most interesting nests was that of the Black-and-White Warbler, found by Mr. W. D. Richardson in the Dunes in June. The nest held four eggs when found and was watched until the young flew. There are only one or two other nesting records for this species in this region. On June 18, Mrs. Coffin found a nest of the Prairie Warbler

containing four eggs, in the Dunes, from which the young flew July 3. On the same day a pair of Blue-winged Warblers and a Yellow-throated Vireo were seen, but no nests found.

At Beach, Ill., on July 24 I found a pair of Blue-gray Gnatcatchers feeding almost full-grown young. The young were catching insects, too, but had not outgrown the habit of opening their mouths and quivering their wings when the old bird came near, for which they were often rewarded. This bird is a rare breeder north of the city but is more common in the Dunes where Mr. Ford and Mr. Richardson found a number of nests this year. Mr. Ford also reported four nests of the Ruby-throated Hummingbird.

Mr. Wm. Lyons, of Waukegan, in connection with his banding work found thirty-five nests of fourteen different species, from which he banded ninety-four birds. These include Spotted Sandpiper, Baltimore Oriole, Crested Flycatcher, and Downy Woodpecker. The female Downy was one of three birds he banded last January and had stayed to breed in his orchard. Mr. Harper reports the Scarlet Tanager and Virginia Rail breeding at River Forest, and Mr. Watson a few pairs of Dickcissels breeding on the far south side of the city. I have noticed a decided scarcity of Yellow Warblers this year—in places where they have always been common previously no nests were found and only one or two birds seen.

The early migration notes have to do mainly with the shore-birds. Mr. Benjamin T. Gault has made an extensive study of their movements at Lincoln Park. The first seen were the Least, Semipalmated, and Pectoral Sandpipers on July 17, and the latter again on the 20th. On the 24th, besides these, the Lesser Yellow-legs, Sanderling, and Semipalmated Plover were noticed, also on the 28th. The 31st a Turnstone was added to the list, and August 3 all except the Least and Semipalmated Sandpipers were seen. Mr. Lewis's notes duplicate some of the above but add Greater Yellow-legs, August 5, at Hyde Lake, and Sanderlings and Ruddy Turnstones, July 31, in the Dunes; July 24, on Dead Lake, at Beach I found a large flock of Greater and

Lesser Yellow-legs, Pectoral and Least or Semipalmated Sandpipers. August 13 and 14 I spent the night there but although the wind changed suddenly to the north it brought no birds with it, five Greater Yellow-legs and a pair of Jack Snipes being the only ones seen.

Black Terns first appeared on the lake July 10; again seen the 17th, and since then have been common; Bonaparte's Gulls, July 28 and 31 and August 3 and 14. Common Terns, August 14. On July 3, in the Dunes Mr. Ford found a lone Willet; he was able to observe it closely and heard its call, so identification is positive. Mr. Gault found a Mallard in Lincoln Park August 3, with young about two weeks old. While this may have been one of the park Ducks, the late record for young seemed worth mentioning.

In the last report the Kentucky Warbler and Orchard Oriole should have been credited to Mr. Lewis but were erroneously credited to others.—COLIN CAMPBELL SANBORN, *Chairman of Report Com., Chicago Ornithological Society.*

MINNEAPOLIS REGION.—In common with the entire country, southern Minnesota experienced unprecedentedly hot weather from June 15 to August 1, which continued day after day with only two brief intermissions. There was little relief at night and there were only occasional passing showers of rain. The maximum temperature was reached on June 30 when the thermometer rose to 99 degrees, exceeding all previous records. July 10 the temperature was 98.2 at 4 P. M. and 86 in the night. The humidity was much above normal most of the time.

The excessive heat and clear skies had a disastrous effect on some forms of vegetation but the general result was to speed up growth to such an extent that by the latter part of July all plant-life, including farm and orchard crops, was two to four weeks in advance of the usual stage at that time of the year. Linden trees, white water-lilies, and other early July bloomers all appeared in June, and the late summer flowers began to blossom in mid-July. Upon bird-life there was no apparent effect so far as the writer could detect.

June 17, found a Phoebe's nest containing five spotted eggs, two of them well speckled and on one the spots tended to form a wreath around the larger end.

June 18, two Redstarts' nests with young, a Wood Thrush's nest with young, and young Rose-breasted Grosbeaks out of the nest.

June 21, a family of four young Screech Owls accompanied by their parents, both in the red phase. The young were fully grown and could fly well. A Brown Thrasher's nest with young one-third grown.

July 5, Turk's-cap and wild orange-red lilies in full bloom.

During June and July several Dickcissels were noted on the Fort Snelling Reservation, the first that have been seen hereabouts for several years. They were once abundant in the same locality.

June 16, a Red-headed Woodpecker's nest containing young; not examined closely. On July 2, sixteen days later, the young were inspected and found still imperfectly feathered and helpless. On July 5 the young were removed from the nest for photographing and were yet not fully feathered, were weak and clumsy and with difficulty maintained a hold on the bark of the tree. It is thus apparent that the young remain in the nest for at least three weeks. The small dead stub that contained the nesting-hole was directly exposed to the heat of the sun every afternoon throughout the torrid period that then prevailed and it seemed a marvel that the nestlings could survive such a prolonged baking. The young birds to the very last did not crowd up into the entrance to be fed. Both parents fed and the operation was a quick one accomplished apparently without the forcible regurgitation practiced by some other Woodpeckers.

Between June 20 and July 28 several visits were made to a Sapsucker 'farm', and some of the observations made may perhaps be of interest. The borings were in four medium-sized silver poplars, planted as shade trees. The pair of birds owning the 'farm' had a nest containing young in a basswood at a little distance. The trunks of the trees and, to some extent, the larger, lower branches were well punctured, a few of the openings being of sufficient size to admit a finger-tip.

The sap flowed freely on all the trees and in many places the bark was saturated. The trunks of the trees were fairly alive with ants, big and little, and thousands of flies buzzed about in the air or alighted in dense groups around the oozing apertures. Numerous butterflies flitted hither and thither, alighting from time to time to sip a share of the feast. Of these the most abundant was the red admiral accompanied by many mourning cloaks and angel-wings, a few banded purples and an occasional viceroy. Cabbage and yellow sulphur butterflies were abundant in the vicinity but did not visit the trees. Several Red-headed Woodpeckers slipped in now and then and helped themselves to the spread; once a Flicker came and occasionally a Hummingbird poised for a moment at one of the holes. But the most persistent and voracious intruders were two red squirrels. They seemed fairly intoxicated by their prolonged and frequent tiplings and resented with many indignant 'chucks' and angry jerks of body and tail all attempts at forcing them to leave. They enlarged the holes by gnawing away the bark thus converting several small openings into one large one that would more easily admit their tongues and even their noses. All the other visitors kept away while these large marauders were present. This is but another evidence of the special fondness of this squirrel for the sap of trees which leads them to work such havoc among the twigs and branches of forest and shade trees. They are at times a veritable pest in this way, defacing and even destroying many valuable ornamental trees.

Amid all these busy doings the Sapsucker owners of the borings came and went at frequent intervals all day long. The male was more active than the female and much more fearless. The young evidently got by far the greater part of their food from this source. Close watching showed that it was the insects, chiefly ants with a few flies, that the Sapsuckers collected at the trees. The drier holes would fill up with ants, closely packed, with others trying to get in, and these the woodpeckers quickly gathered, their bills often loaded on the outside as well by adhering sticky insects. No doubt a consider-

able amount of sap was taken in addition but it seemed plain that insects composed the greater part of the food taken to the young. Some 300 yards distant was a second 'farm' in a grove of small elms surrounding a vine-covered stub housing a brood of young Sapsuckers which was being fed in the same manner. Is it possible that by these grouped tappings, close by the nesting-site, this Woodpecker provides an abundant and easily accessible supply of food for its family? After the young are a-wing they are directed to the source of supplies and soon learn to feed themselves as long as the larder holds out. The sap-holes soon dry up when they are not taken care of properly.

On July 28, when the last visit was made to the 'farm' described above, it was found that the owner of the trees, discovering their condition and thinking to save them, had applied a thick coat of whitewash to the trunks. While this deterred the insects to some extent, the Sapsuckers were still feeding both at the old holes and at new ones made higher up. Both the old birds and one brown headed young were present. They were, in addition, giving some attention to an old, insect-infested telephone pole that stood close by one of the trees.

Even though it may be shown that the greater part of the food of the Sapsucker consists of insects, yet the destructive procedures by which the larger portion of such insects is obtained, at least during the nesting season, are sufficient to condemn the species.

ITASCA STATE PARK REGION, MINN.—August 1 to 15. The weather up here in the north woods was almost as warm during July as at Minneapolis, noon temperatures of over 90 degrees being frequent. The nights, however, are usually cool. There was a light frost on the night of July 30-31.

We arrived at the Park August 1. Driving in from Bemidji, 36 miles through cut-over pine country, the roadside, where not cultivated, was an almost continuous late-summer flower-garden. In full bloom were sunflowers, many of them 6 to 7 feet high, giant fireweed in profusion, tall blazing star, Canada hawkweed, clumps of anise, hyssop, and in the low places, meadowsweet and Joe Pye-weed. But few asters had yet appeared.

The woods were nearly silent, only the songs of a few Red-eyed Vireos and an occasional White-throated Sparrow, the call of the Wood Pewee and the frequent screaming notes of the Crested Flycatcher breaking the stillness. One note, however, is all too common here and growing yearly more frequent—the discordant caw of the Crow. Sharing in the protection afforded all wild creatures in the Park, this miscreant is rapidly multiplying and is becoming a serious menace to all bird-life. The only apparent service they render is in assisting the Buzzards in clearing the shores of the lakes of dead fish.

The Great Blue Herons, usually abundant at this date, had all gone on our arrival, two weeks at least ahead of the customary date. The Black Terns also were beginning to leave, much earlier than usual. The miscellaneous groups of birds that assemble preparatory to the southward movement were already forming. All this, together with a tinge of yellow in the birches and the dying undergrowth in the forest, suggested that the summer was already on the wane.

On August 4 saw a belated Junco's nest containing three young birds about ready to fly. On the 10th saw a male Scarlet Tanager just beginning to molt—showing yellow patches along the sides and flanks.

It was a surprise to find that there are no Ducks about the lake as at this time in previous years there were broods of Golden-eyes, Wood Ducks, Mallards, and Lesser Scaups. Report says that a few bred here this spring but they have apparently disappeared. There is a very much heavier growth of wild rice around the shores of the lake this year than usual.

It is the opinion of bird observers at the Forestry School that there is a decided decrease in the small bird life in the Park and they are disposed to attribute this to the marked increase in the numbers of Crows, Grackles, and red squirrels, all of which have been seen destroying birds' nests, eggs, and carrying off young nestlings.—THOS. S. ROBERTS, *Zoölogical Museum, University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—Enough reliable data are at hand to prove conclusively that

Wood Ducks, Blue-winged Teal, and Mallards are again nesting in this immediate region in some numbers. It is also quite likely that a few pairs of Shovellers and Pintails have succeeded in bringing off young in the lake regions of Platte and Buchanan counties, as family parties of these Ducks have lately been seen on the Missouri River between Leavenworth and St. Joseph. A report of a nest of Hooded Mergansers could not be investigated. It is, of course, encouraging to be able to chronicle this return of water-fowl to their former breeding-places in western Missouri and eastern Kansas, but discouraging to reflect that the only remaining sites of sufficient wildness and quiet seclusion to enable these birds to breed safely and without being disturbed are located in the Missouri bottom-lands and are in constant danger of being flooded during the nesting season. In spite of this and other dangers the Ducks seem to be slowly but surely reëstablishing their breeding stands in this region.

Three more nests, with eggs, of Traill's Flycatcher were collected in the region of the mouth of the Big Blue River where the only colony of these birds has ever been found breeding in this neighborhood. It has been thought unlikely that this species has been merely overlooked previously, but that it has suddenly appeared here as a breeder and that the cause for this might not operate for their return another season. Needless to say these birds will be eagerly sought for in this region next spring.

A pair of Rough-winged Swallows nested this season in the Country Club district in the same bank with a small colony of Bank Swallows. The burrow was over 3 feet long and the nest was lined with petals instead of feathers. It is presumed that this burrow was excavated by the Bank Swallows.

A pair of Blue Grosbeaks were seen within the southern border of Swope Park worrying a Shrike, and it was hoped that this species might be added to Professor Shirling's list of breeders within this preserve, but the nest, though evidently near at hand, could not be found.

Several Black-billed Cuckoos have been seen here during August. This species has

always been extremely rare in this region, there having been only one or two previous summer records. A local plague of tent caterpillars may account for the presence here of these birds. Yellow-billed Cuckoos, unaccountably scarce last summer, seem to be present in their usual abundance this year.

The season withal seems to have been most favorable to nesting birds, and at least one species (the Mourning Dove) is so abundant this year as to cause comment among casual observers not specially interested in birds.—HARRY HARRIS, *Kansas City, Mo.*

SAN FRANCISCO REGION.—The San Francisco region has enjoyed a very 'open' summer. The birds that ordinarily winter here through the summer must have felt themselves out of their zone when Lower Sonoran weather struck us the third week in June and again the first week of July. Probably they, as well as the human inhabitants, welcomed the ensuing fogs as a blessed relief. During half of the period observations were limited to one small pocket in the hills opposite the Golden Gate, so that my notes are very brief.

Blue Jays have been distressingly abundant, while Russet-backed Thrushes are reported as rare all along the East Bay shore. I am wondering if the cool spring in southern California induced a larger proportion of the Thrushes to breed in that vicinity. The report from that region in the last number of *BIRD-LORE* suggests such a solution. Dr. Grinnell reports a Traill's Flycatcher on the University Campus, June 16. Cliff Swallows are reduced to very small numbers in Berkeley, but on June 29 a flock of 30 to 40 flew over and up the Bay. Judging from experiences in other years, they may have been on their way to a rendezvous on the Suisun Marshes where I have seen them assembled in enormous numbers after the middle of July.

Being stationary myself, I could only judge of the progress of events in the bird world by their scattering into my neighborhood. Robins did not nest within hearing distance I feel quite sure, but scattered into the cañon on July 8. Russet-backed Thrushes could be heard singing at the head of Strawberry

Cañon but did not come down into the garden until July 22, while the Olive-sided Flycatcher spent July 23 and 24 in the near neighborhood. Spotted young of the San Francisco Towhee were on the feeding-table beginning July 27, and young Wren-tits were giving their ventriloqual calls and accepting food from their parents as late as August 6. Flocks of Bush-tits were very large by the middle of July. On August 9 molting Thrashers, San Francisco Towhees, and Song Sparrows looked extremely unhappy.

Mrs. G. E. Kelly has very kindly contributed the following notes on the migration movements of birds on the Alameda shore: Hudsonian Curlew, Semipalmated Plover and Western Sandpipers were first seen on July 19 and were common ten days later. Two Western Willets were seen July 24, a Marbled Godwit July 29, and 12 Dowitchers and 1 Black-bellied Plover on July 31. Forster Terns are numerous and on July 19 a Caspian Tern was seen.—AMELIA SANBORN ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—On June 18 a trip was made to a locality in the Tejuja Wash where Cactus Wrens are still left in possession of a limited area of their fast-diminishing domain. A Black-tailed Gnatcatcher first claimed attention among the junipers, then the nest of a Mockingbird containing a full complement of eggs placed deep in the heart of a cholla cactus plant. The male bird sang from the top of a nearby tree, and, on approaching the nest a second time, the female was seen to slip quietly from the nest.

Several pairs of Phainopeplas were about the large *Rhus integrifolia* bushes, and a nest containing two eggs was very soon located in full view saddled on an outer branch little more than 6 feet from the ground. The nest was a closely woven shallow cup of gray plant-fibers and the small, dry flowers of pearly everlasting, bound together with spider-web. Photographs of the nest, eggs, and both birds were secured by Mrs. F. T. Bicknell. As we withdrew, the male bird resumed his interrupted incubation, after an apparently anxious survey of nest and eggs. A Cactus Wren sang from a Sycamore tree,

while three full-grown youngsters impertuned him in vain for food, which the mother soon supplied. Beneath the tree was a nest that showed signs of having been but recently vacated, while a few feet away a new nest was ready for occupancy. A further search would no doubt have revealed several other families, as in former seasons. A Costa's Hummingbird was seen about the blossoming echeverias. A drive of two or three miles to the head of Tuna Cañon showed it to be favored by Phainopeplas, about fifteen pairs being noted. A Black-chinned Hummingbird here visited a flower I was in the act of gathering. Wood Pewees, Warbling Vireos, Black-headed Grosbeaks, and Bullock's Orioles were much in evidence.

The abundant nesting birds of the cañons of the Sierra Madre range, observed in June and July, feeding young, have been: Warbling Vireo, Hutton's Vireo, Parkman's Wren, Western and Traill's Flycatchers, Wood Pewees, Green-backed and Willow Goldfinches, Yellow and Pileolated Warblers. One family of Lutescent Warblers was observed and carefully followed up for positive identification on July 27. Black-throated Grays were fairly numerous, as were also young Thurber's Juncos. A dotted Cañon Wren busily gleaned insects from the face of the cliff, feeding her family of three bob-tailed replicas of herself that scrambled about among the rocks of the stream-bed. A few Tanagers were seen and one family of Olive-sided Flycatchers. From the higher altitudes come notes from our contributing members, placing the last two, with the Black-headed Grosbeak, the Robin, the Western Bluebird, as perhaps the most abundant nesting birds in the vicinity of the mountain resorts. A complete list of the nesting birds observed this season would be quite too long for the space available. Calliope Hummingbirds, Lazuli Buntings, and Violet-green Swallows appear in goodly numbers. One Varied Thrush was seen by several competent observers in company with Robins near a San Bernardino Mountain resort. A pair of Blue Grosbeaks have successfully reared a family for the third successive season in a locality near the coast. On July 24 they were

still about the nesting-site, the male in full song.

About twenty-five Purple Martins were seen about the cornices of a Broadway building in the center of the business district at 6:45 P. M., July 15, and again a few days later.

The migration of shore-birds seems to have developed early, the common species having been present in large numbers for a full month.

On July 10, at Balboa, I had under observation for the greater part of the afternoon, six Knots, four of which were in full summer plumage. So far as I can learn this constitutes an early record for the region, August 8 being the earliest published record heretofore. One Yellow-legs was noted, and a few Least Terns.

July 12, three Western Grebes were seen on the ocean at Santa Monica; July 15, one Black Turnstone, a few Willets, and many Marbled Godwits, Hudsonian Curlew, Least and Forster's Terns, and large flocks of small Sandpipers; July 20 Forster's Terns, one Caspian Tern, five Long-billed Curlew, many Snowy Plover, Godwits, and Hudsonian Curlew. The colony of Bank Swallows at San Pedro was visited and young seen at the entrances of the burrows, in most cases two, but in a few instances three, being fed.

August 10, shore-birds were abundant, Willets being especially numerous. Black Terns were resting with the Least Terns on the sands, and others flew about over the ocean. Semipalmated Plover were in considerable numbers, and three Red-breasted Mergansers were in the Lagoon. White-winged Scoters, probably non-breeding birds that remained through the summer, were noted in considerable numbers. A small colony of Barn Swallows that nest under a bridge at Playa del Rey, were apparently feeding young in the nests on this date, though the young birds were not actually seen. A Yellow-billed Cuckoo has been about an Artesia ranch for the last fortnight.

The first southbound land-birds were reported, August 7, as Rufous Hummingbirds and Western Tanagers.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*

Book News and Reviews

TERRITORY IN BIRD-LIFE. By H. ELIOT HOWARD. With illustrations by G. E. LODGE and H. GRÖNVOLD. 8vo, xiv+308 pages, 11 photogravures, 2 line-cuts. E. P. DUTTON & Co., New York. 1920.

In this volume Mr. Howard has made a contribution to the study of birds in nature of unusual importance. Briefly, a bird's 'territory' is the area in which the nest is built and which is protected from trespass by other individuals of the same species (and rarely closely allied species) during the whole nesting season from the time the male arrives until parental cares end for the season. The size of the territory may vary from a few square feet with colonial nesting birds like Murres, to a very much larger area with birds like Duck Hawks and Eagles; its extent, according to Mr. Howard, is dependent primarily on the amount of food it can supply, or which, as in the case of the Murres, can be found in the immediate vicinity.

It is shown that the acquisition of this home habitat is essential to the existence of the species and that to take possession of it is the first in the series of acts included in the season of reproduction.

With migratory birds, the male, prompted by an internal organic change,¹ begins his journey toward the breeding-ground in advance of the female in order to take possession of the nesting territory. With resident species, which may have wintered in flocks or bands, the males leave the females for the same purpose, evidence that the acquiring of the home-site is at this time of more importance than mating. Having selected his territory, the bird announces his title to it by song. He thus proclaims his presence to the female when she arrives and at the same time warns intruders that he has 'staked his claim.'

Mr. Howard presents a mass of detailed observations in support of this thesis and at the same time opens a fascinating field of study for those who have the time, patience, training, and temperament to pursue this

subject further. We add 'temperament,' for the temptation to explain the actions of birds in terms of human nature is particularly strong in studies of this character, and unless sympathy with one's subject be checked by good judgment and scientific discrimination, the result is more apt to be fancy than fact.

In Mr. Howard's case we feel that he has not given due consideration to the temperament of the bird. Some species we know are of a sociable, others of a solitary disposition. Colonial nesting habits are not always to be explained by lack of suitable nesting-sites, but by the desire for companionship.

The Brown Pelicans, of Pelican Island, in Indian River, Florida, for example, ignore hundreds of favorable sites, some within gunshot of their home, to crowd together on one small island. The Flamingoes of Andros Island in the Bahamas, place their nests within a few feet of one another when each bird, if it desired, might have a territory of many square acres. Cliff Swallows nest in close-massed clusters where scores of favorable sites are available.—F. M. C.

ECONOMIC VALUE OF THE STARLING IN THE UNITED STATES. By E. R. KALMBACH and I. N. GABRIELSON, Asst. Biologists. Bull. No. 868, U. S. Department of Agriculture; Contribution from the Bureau of Biological Survey. 8vo, 64 pages, 4 plates (1 colored), 3 text figures.

Regarded as a contribution to economic or biographic ornithology, this is a model piece of work. It is based on adequate, exhaustive observations in field and study by men wholly qualified for their task and the great mass of data secured is presented in a readable, informing document.

The publication may be secured from the Superintendent of Documents at Washington for 25 cents a copy, and it should be in the possession of every one who desires to know the history of this European bird in our country.

Here we may simply state that after a

¹The reviewer may be pardoned for stating that he called attention to this fact in an article on the 'Origin of Bird Migration' published in 'The Auk' for 1894, pp. 12-17.

critical examination of the contents of 2,466 "well-filled stomachs" and prolonged study of the bird in life, the authors of this paper conclude that economically the Starling is the superior of either the Flicker, Robin, Catbird, Red-winged Blackbird, or Grackle, and advises the enactment of laws for its protection except when it is "actually doing or threatening to inflict damage."—F. M. C.

The Ornithological Magazines

THE CONDOR.—It is not often that a single number of a journal reports the addition of three new extralimital species to the list of North American birds but such is the record of the May number of *The Condor*. In 'New Bird Records for North America', Mailliard and Hanna report a Japanese Swift (*Micropus pacificus*) taken on St. George Island, Alaska, August 1, 1920, and an Eversmann's Shrike (*Lanius mollis*) captured on board the *U. S. S. Saturn*, 260 miles west of Sitka, Alaska, September 20, 1920; white Bent, in a paper on 'The Probable Status of the Pacific Coast Skuas', finds four records of the Chilian Skua (*Catharacta chilensis*) from Monterey, Calif., and three off the coasts of Washington and Vancouver Island.

Two other papers of special interest deal with the nesting habits of western forms of the Fox Sparrow. John W. Mailliard describes the nesting of the Yosemite Fox Sparrow near Lake Tahoe, Calif., where fourteen nests were observed in June and July, 1920. Six of these were on the ground, three others in buckthorn or ceanothus bushes, and five in shrubs and trees less than 5 feet from the ground. W. M. Pierce gives the results of a trip to Big Bear Lake in the San Bernardino Mountains in 1919 where three nests of Stephens' Fox Sparrow were found and a visit to the vicinity of Mt. Baldy in the San Gabriel Mountains in 1920 where five nests with eggs were discovered either in or under buckthorn bushes.

Leopold publishes a useful summary of the weights of 300 Ducks of 15 species killed in the Rio Grande Valley, New Mexico; Dice, an account of 'A Bird Census at Prescott, Walla Walla Co., Wash.', in 1908; and Jewett notes on 18 species of water- and shore-birds of Netarts Bay, Oregon. The number, which

is an unusually interesting one, closes with the annual Directory of the Cooper Ornithological Club, containing the names of 754 members, or 99 more than last year.—T. S. P.

Bird-Lores Wanted

L. E. Thomas, care of BIRD-LORE, Harrisburg, Pa., offers \$3 for a copy of BIRD-LORE, No. 1, Vol. III, February, 1900.

Thos. L. McConnell, 151 Center Ave., Emsworth, Pa., wishes to purchase No. 1, Vol. XVI, January-February, 1914.

Book News

Dr. Clara Barrus, literary executor and authoritative biographer of the late John Burroughs, asks that all persons owning interesting letters from Mr. Burroughs communicate with her at Woodchuck Lodge, Roxbury, N. Y. All letters sent will be promptly copied, or extracted from, and returned to the owners.

The Bulletin of the West Chester (Pa.) Bird Club for the years 1920-21 contains much of interest to local bird students and reflects the spirit of good fellowship which animates this organization. The Club has experienced a severe loss in the removal of its President, Dr. E. C. Ehinger, to his boyhood home in Iowa.

Farmers' Bulletin No. 1235 of the United States Department of Agriculture is a complete compendium of the game laws of the United States for 1921. Copies of this publication may be obtained through all state game commissions or from the Superintendent of Documents at Washington, D. C.

The Audubon Society of New Hampshire has decided to issue a quarterly 'Bulletin' of which the first number, dated 'July-August-September' [1921?] has appeared. Reports from local bird clubs and contributions from members show that this publication has a field to fill and we trust that it will receive the support it deserves. The subscription price, including annual membership in the Society, (address, the Secretary, Strafford, N. H.) is only \$1 a year.

Bird-Lore

A Bi-Monthly Magazine
Devoted to the Study and Protection of Birds
OFFICIAL ORGAN OF THE AUDUBON SOCIETIES
Edited by FRANK M. CHAPMAN
Contributing Editor, MABEL OSGOOD WRIGHT
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Bird-Lore's Motto.

A Bird in the Bush Is Worth Two in the Hand

IT IS IMPOSSIBLE to conceive of a person possessed of normal sensibilities to whom the living bird does not appeal. The most primitive, as well as the most highly developed representatives of the human race have, in varying degrees, an inherent interest in bird-life. This is the common, universal heritage of mankind. But, occasionally, there are individuals for whom birds possess so strong a fascination that they become, beyond comparison, the most eloquent expression of animate Nature. Doubtless many of the fortunate possessors of this rare gift have, with Dr. Swope, asked themselves why it is that birds are possessed of such significance for them; have attempted, introspectively, to analyze their keen, sympathetic response to the sight of a bird or the sound of its voice.

It is not the grace of motion, beauty of plumage or musical ability of birds which alone explains their hold on us, but a combination of all these plus a certain ethereal independence which makes the bird an apparently immortal expression of every hour of the day and night, every season of the year, every aspect of the material world.

Your true bird-lover may not be an ornithologist in the scientific sense, but he must be a nature-lover, for whom, in an infinite variety of ways, birds will give form to emotions born of a temperamental response to the manifold beauties of the world as he sees it.

Pamela Tennant, writing of an English sunrise, confesses herself unable to clothe her feelings in words and with the line

"For what I cannot say is in that Thrush's song,"

leaves the task to the Song Thrush.

Burroughs, at sunset, listening to the hymn of the Hermit Thrush, experiences a "serene exaltation of sentiment of which music, literature, and religion are but the faint types and symbols."

Whitman's lines to the Man-of-War Bird,

"Thou born to match the gale (thou art all wings),

To cope with heaven and earth and sea and hurricane,

Thou ship of air that never furlst thy sails,
Days, even weeks, untired and onward,
through spaces, realms gyrating,"

proclaim the birds' mastery of the air.

A wedge of Geese crossing the sky in March is not so much a flock of birds as the visible spirit of returning spring. So we might continue to name bird after bird—Eagle, Owl, Raven, or Wren—and find that each in its widely differing way symbolized or expressed that "Sense sublime of something far more deeply interfused" of which Wordsworth writes.

But separate the bird from its true environment and the spell is broken. What is more painful than the song of a caged Nightingale. The Wild Goose in captivity is a mere waddling fowl. So we see that the bird's freedom is an essential part of its charm. Emerson understood this when he wrote:

"I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home, in his nest at even,
He sings the song, but it cheers not now;
For I did not bring home the river and sky."

This is the crucial test, proving, as Dr. Swope says, that it is primarily the freedom of bird-life which appeals to us and to which, in endless ways, the bird within us responds.

It goes without saying that the extent of the average person's interest in birds is dependent upon the opportunity that he has for becoming familiar with them, but to what degree the development of an inherent affinity for bird-life is related to the environment of the possessor of this heritage, is a question we may discuss on another occasion.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

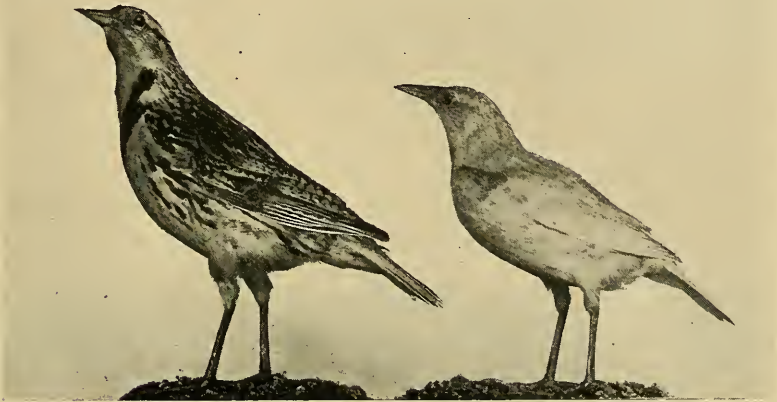
THE COLORATION OF BIRDS

If you have followed the hoarse song of the Scarlet Tanager and found him perched on some dead branch ablaze in the sunlight; if you have noted the emerald back and the ruby throat of the Hummingbird as he flashed through your garden; or if you have seen the Indigo Bunting change from pale to deepest blue and then to black, as you moved around him, you must certainly have begun to wonder at the marvels of bird coloration. Then, if you have tramped the woods and heard the Grouse rumble from the roadside and the Woodcock go whistling from under your feet, or if you have tried in vain to locate the Vireo singing in the tree-top, you must have been impressed by that law of Nature that causes her children to be clothed so differently. For the Grouse and Woodcock and the Vireo in their haunts are as invisible to the untrained eye as though they were but a part of the twigs and leaves that surround them, while the Tanagers and Hummingbirds hold the eyes of even the least observing. What, then, are the laws determining that one bird shall be clad like the sun and his neighbor like the soil? What is the reason for this brilliancy, on the one hand, and how is the concealment, on the other, brought about? Certainly there is enough of interest in the coloration of birds to make it worth our while to analyze the problem in some detail.

Let us begin by considering the actual colors which make up the birds' coloration, for they are very different in their origin as well as in their general effect. One who ordinarily thinks of the colors of animals as produced by pigments or color granules deposited within the skin or hair will be surprised by the small percentage of the colors of birds' feathers that are produced in this way. In fact, there are, in ordinary birds, supposed to be but three pigments in any of the feathers: reds, yellows, and browns. A green pigment occurs the African Plantain-eaters, but in other birds the green is due to a yellow pigment overlaid with a structure that refracts the light. Blues and all the metallic colors are due entirely to this process of refraction, the exposed portion of the feather being coated with a transparent colorless layer of extreme thinness (8-1000th of an inch) which acts like a number of prisms in breaking up the rays of light. A Scarlet Tanager is red in any light because the red is a pigment, but an Indigo Bunting or a Bluebird is blue only by reflected light, when refraction occurs. Thus, when a Bluebird gets wet or when it is perched between one and the sun, it will appear only black or brownish. This fact adds to the

difficulty of bird-study, if also to the interest, for everyone has had the experience, occasionally, of being unable to distinguish the colors of a bird even though at close range. It doubtless also accounts for many of the strange descriptions of birds that one receives from young observers.

Some authorities claim that a black pigment is also to be found in the feathers of birds, but when the brown pigment is very dense it appears black, and it seems impossible to distinguish between the two. Occasionally an excess of this brown or black pigment develops in the feathers of an individual which will make it appear much darker than the other members of the same species. This is called *melanism*, (from the Greek *melas*, meaning black) and



A NORMAL MEADOWLARK AND AN ALBINO

Albinism is due to lack of pigment caused by some physical weakness

apparently it can be brought about by subjecting moulting birds to extreme humidity. In nature, regions of extreme humidity usually produce darker races of birds than arid regions. Thus, the sooty Song Sparrow of the Pacific Coast is so much darker than the Desert Song Sparrow of Arizona that one would not hesitate to call them distinct species were it not for the fact that their color patterns are identical. The dark and light phases of the Rough-legged Hawk are another example of melanism, but even more familiar is the case of the black and gray squirrels, examples of each occurring in a single litter of young without reference to sex or vigor. In this case humidity can play no part though it is said that the black phase was formerly more abundant when the country was heavily forested, and it is still the dominant form where the primeval timber exists, while the gray phase is the abundant form of the wood-lot and open country.

The opposite of *melanism* is *albinism* (from the Latin *albus*, meaning white). It is caused by an absence or degeneration of the pigment. Pure albinos are

snow-white, having no pigment whatsoever, the eyes being red owing to the blood showing through the iris. They are apparently much more frequent with domestic animals than in the wild state, as in the familiar white mice, rats, and rabbits, but they are likely to occur at any time with any species. The brown pigment seems the most likely to disappear, pure albinos of birds having red or yellow in their plumage being extremely rare. The Meadowlark in the accompanying photograph, for example, shows a well-defined tinge of yellow on the underparts and before the eye. Partial albinos are much more frequent with all species, and mottled Robins and Sparrows or birds with white feathers in unusual places are not at all infrequent. Usually this partial albinism is symmetrical on each side of the bird but it is not always so. The exact cause of albinism is not known though it is thought to be a form of physical weakness due to inbreeding or to some other cause.

More unusual than albinism is what is called *dichromatism* (from the Greek di+khromatikos, meaning two-colored) or the occurrence in a species of two color phases irrespective of age, sex, or season. The familiar Screech Owl affords us a good example where extremes of red and gray individuals occur as well as intermediates. These may be, and often are, individuals from the same nest, and they may be all males or all females. It is apparently due to an excess of red or brown pigment and may represent but a step toward melanism. *Dichromatism* likewise occurs with certain other owls, and with certain Hawks, as well as with some species of Herons. The case of the rare Cory's Least



A DISABLED CORY'S LEAST BITTERN

This species is probably only a color-phase of the common Least Bittern, but such 'dichromatism', as it is called, is rare except with certain Herons, Hawks, and Owls

Bittern is one of the most interesting as scientists are not yet agreed as to whether it represents a distinct species on the verge of extinction or whether it is but a dark phase of the common Least Bittern. Its color pattern is apparently identical with that of the common Least Bittern but all of the buffs have been replaced by chestnut.

But to return to the gorgeous Tanagers and the inconspicuous Grouse, surely there is some reason for the difference in coloration which study might lead us to understand. In thinking over the birds with which we are familiar we soon discover that brilliant colors, in almost every species, are restricted wholly to the males, and a moment's reflection suggests to us that the law of "The Survival of the Fittest" would soon



YOUNG KINGFISHER

Few young birds are as brightly colored as their parents but the young Kingfisher is an exception



YOUNG CHIPPING SPARROWS

Note that they differ from their parent in having streaked breasts, as do most Sparrows. The plumage of many young birds gives a clue to their relationships. Young Robins and Bluebirds, for example, are spotted like many members of the Thrush family, to which they belong.

weed out any bright-colored females, should they arise, by drawing attention to their nests and inviting the destruction of their offspring. The very exceptions to the rule further substantiate it, for when bright colors are normal to the female, as in the Kingfisher and Red-headed Woodpecker, nature protects the offspring by causing the eggs to be laid in holes in trees or in tunnels in the bank where the female is entirely hidden from sight while incubating.

Another method of protecting conspicuously colored birds is by endowing them with extreme wariness and it is seldom that any of them will allow as

close an approach as do their dull-colored mates or relatives. They seem to realize that they are conspicuous and rely upon their alertness to escape. Moreover, is it not of direct benefit to the species that there should be a conspicuous decoy to lure away from the vicinity of the nest any enemy that passes that way?—for even should the male be seen and captured, the offspring might still persist.

Brilliance of plumage probably originates, we are told, because of an excess of strength and bodily vigor, and this fact undoubtedly tends to perpetuate and increase the brilliancy, whenever the bright colors are not directly disadvantageous to the species, because the vigorous bird is most likely to secure the best mate and have the strongest offspring. It may well be asked, then, why the males of all species are not conspicuously colored and able to rely upon their wits to escape their enemies. But think for a moment of the environments which birds are called upon to fill.

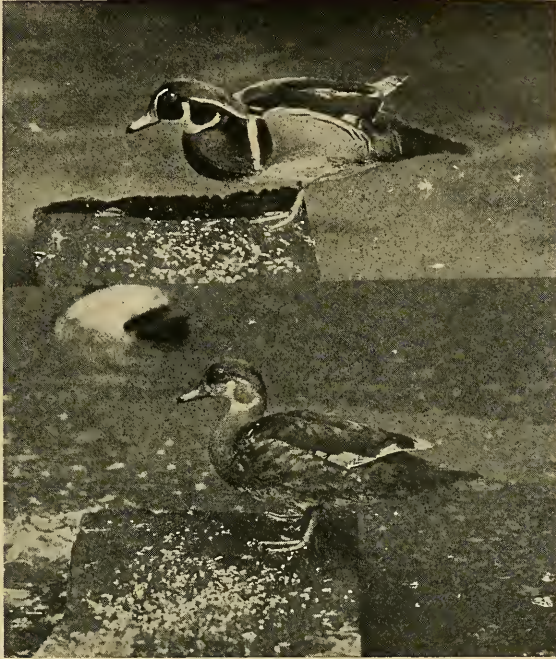


MALE ROSE-BREADED GROSBEAK FEEDING ITS YOUNG

When the male and female differ in color the young usually resemble the female—as in this case

There are the tree tops and the great open spaces where enemies cannot lurk unseen, and here it is that we find the conspicuous Tanagers, Trogons, and Honey Creepers, the Gulls, Terns, Herons, and Flamingoes. On the other hand, there are the thickets and dense coverts near the ground where enemies can approach closely or lie concealed, and here it is that we find our most protectively colored Grouse, Woodcocks, Sparrows, etc. Thus it is clear why the

gaudy Tanager is confined to the tree tops and why streaked Sparrow must simulate its dry grass haunts if it would persist. Birds dwelling within reach of skulking enemies seldom wear brilliant colors or bear feathers that are continuously conspicuous. They are protectively colored and often fit into their environment to such an extent as to be practically invisible. The ways in which this concealment is brought about are varied and interesting, so



MALE WOOD DUCK (CAPTIVE). UPPER FIGURE, BREEDING PLUMAGE; LOWER FIGURE, ECLIPSE PLUMAGE

The eclipse plumage corresponds to the winter plumage which many brightly colored birds assume, but it is worn only during July and August

much so, in fact, that we will devote the next issue of the School Department to the discussion and will now pass on to a few other matters regarding the coloration of birds.

In discussing brilliant colors we should remember that very few birds wear the bright colors throughout the year, the Kingfisher and the Red-headed Woodpecker being notable exceptions. The vast majority shed their bright colors after the breeding season and do not don them again until the following spring. With many of the Ducks, however, this change from a brilliant to an obscure plumage in the male occurs as early as June or July and by the time most birds are ready to take on their obscure plumage in August and September, they are ready to assume their brilliant feathers once more. It will be remembered that after the breeding season all birds moult every feather on the

body, including the wings. In the spring the molt of the Tanagers and Indigo Bunting and others, in order to regain their bright feathers, is incomplete as the old feathers of the wings and tail are retained.

It is interesting to examine the young of these birds in their first plumage, which in the male is brighter than the female, for almost invariably they resemble the female, or when there is a difference, the male in winter plumage. It is a well-known fact that the young of animals often summarize in their development the steps through which their ancestors have passed in the course of their evolution. The plumage of the young birds, therefore, or the winter plumages of the males may often show relationships that one could never guess by examining the breeding plumages. Thus, the immature and winter plumages of the Blackpoll and Bay-breasted Warblers are almost indistinguishable, although the adults are so different in the spring. The spotted breasts of young Robins and Bluebirds indicate their relationship to the Thrushes, and the streaked breasts of the young Chipping and Field Sparrows show the typical Sparrow coloration from which the adults have departed. With a very few species, the young in their juvenal plumage are just as bright as the males or even brighter. Young Kingfishers, for example, can scarcely be distinguished from the adults except by the rufous feathers in the band across the breast, and young Downy Woodpeckers tend to have the whole top of the head reddish rather than a mere crescent of red on the nape.

SUGGESTIONS TO TEACHERS

The subject of coloration of birds may seem rather technical to some teachers for presenting to school children, but so many questions have come to the Editor regarding 'albinos' or white birds, regarding winter plumages, the plumages of young birds, and the reason for bright and dull colors that it seems best to devote two numbers of this Department to a consideration of the problems involved. After all it is much easier for some teachers to secure feathers for the schoolroom than it is actual birds, and the most conspicuous thing about the feather is its color. Perhaps sometime we will devote an entire lesson to the feather, but in the beginning it is well to consider the feather as a part of the covering of the bird and its color as a part of the bird's coloration. If we are to explain to children the reasons why birds are so beautifully marked or why the particular feather is colored as it is, we must have a general understanding of the problems involved. It is not difficult, ordinarily, to determine whether the color is due to a pigment or to the structure of the feather, because if it is a pigment it will appear about the same when viewed from any angle while if it is a structural color it will change when held at different angles. Then if the light is allowed to shine through the feather by holding it toward the window, most of the color will disappear unless it is due to pigment. It would all disappear if it were possible to cut out all of the reflected light from other windows or from the walls but there is always sufficient change for one to

decide to which factor the color is due. Moistening the feather is another way of counteracting the effect of refraction.

An understanding of the frequency of refractive colors will likewise cause one to be more careful in his observations and descriptions of birds and will also give him a valid reason for being unable to identify many of the descriptions of birds that are offered him in perfectly good faith.

The question is often asked, "Where do the brightly colored birds go in the fall?" When one knows that the bright plumages are worn by most birds only during the breeding season, the answer should be easy. The question is also asked, "Why are young birds, and the old birds during the winter, dull-colored?" When we realize that these dull plumages are doubtless the original plumages that the birds wore before they gained the bright breeding dress, there seems to be a better reason for them; and we are justified in this belief because in these plumages they usually resemble much more closely their relatives and probably also their ancestors. Many of us recognize birds only when they are in their bright breeding plumage, and it is true that a study of the fall birds is quite an advanced course in ornithology, but the study of the fall birds becomes much more interesting when we are able to interpret the plumages that we see.—A. A. A.



FROM YOUNG OBSERVERS

TWO PET MOURNING DOVES

My teacher, Mrs. Engleman, rescued a young Mourning Dove from the mouth of her son's dog. She put him in a tree but later he was attacked by Blue Jays. Another lady took him home and fed him until he was well enough



A PET MOURNING DOVE

to fly. Then she gave him to me and I brought him home for a pet and named him 'Flower.' My sister Constance climbed a tree and caught a baby Dove which she named 'Daisy.' My mother fed her by stuffing bread and milk down her throat.

Flower was so tame that we used to take him riding outdoors on the baby carriage. Although he was such a nice pet with us, he used to peck Daisy very unkindly until Daisy grew big enough to peck back. Daisy was tame as long as she could not feed herself, but as soon as she learned to do that she became timid and never seemed to like us. We fed them weed seeds, grain, and bird seed. We kept them on the sleeping-porch all winter, but when

spring came we let them go. MARJORIE DUNCAN NICE (Age 8 years).

[One soon learns, from keeping pet birds that no two individuals, even of the same species, are exactly alike. They are often as different in their behavior as two people. —A. A. A.]

A FIGHT FOR A HOME

I had been watching a Woodpecker finish building his nest in a pine tree; he had built it in a hole that he had made himself. One day I woke up to hear an awful noise in the pine grove. It sounded like a lot of Magpies trying to see how much noise they could make. I quickly got dressed and went out there and I looked all around to see who could be making all that noise. I happened to look up the pine tree where the Woodpecker had his nest, and

there was a Starling fighting the Woodpecker for his nest. They had an awful fight, pecking each other in the face, and scratching each other awfully. The Woodpecker would run up and down the tree just as fast as he could put one foot in front of the other, with the Starling after him. At last the Woodpecker, beaten, flew away. The Starling slowly poked his head into the Woodpecker's hole, as if expecting to meet the female Woodpecker. At last he went in and all I could see of him was his tail sticking out of the hole. All of a sudden there was a whir of wings and both male and female Woodpeckers returned to fight the robber Starling. They looked into their hole and saw the Starling but he didn't see them. The Woodpeckers, on seeing him, both rushed together at the Starling. They went right into the hole together and judging from the feathers that flew from the hole there must have been an awful fight inside.

There were two holes in the tree, one high up and one lower down where they were now fighting. All of a sudden there was a triumphant scream and the Starling flew out of the higher hole and soon disappeared on the horizon. The Woodpeckers seeing that they were left alone, took possession of the hole and raised a family of four, and when winter came they all flew south. ROBERT LIVERMORE, JR. (Age 11 years), 23 *Charles River Square, Boston, Mass.*

[This is a very interesting story but we wish Robert would tell us what kind of a Woodpecker it was that built a nest in a hole and ran up the tree putting one foot in front of another. We are wondering if the birds could have been Nuthatches.—A. A. A.]

WATCHING STARLINGS

In the winter of 1920-21, there were quite a few Starlings about the barn. I was watching these birds and found they whistled like as many different birds as do Mockingbirds.

One evening when the work was done I went up in the barn and lay down and waited for the Starlings to come to bed. All at once there came a scratching and scrambling against the boards and then they began to whistle like a Bluebird, Bobwhite, guinea, rooster, Blackbird, Flicker, and they gave many other shrill whistles. When one of the birds came in, I was quite near him and he did not see me and walked across my arm.

I have put three boxes in the barn with holes outside, and I hope to have them build in them and then I think I will write about their broods.—HARRY G. HERR (Age 13 years).

[Let us hope to hear from Harry again. Much can be learned by watching the Starlings about their nests.—A. A. A.]

CANADA GOOSE

By T. GILBERT PEARSON

The National Association of Audubon Societies

EDUCATIONAL LEAFLET NO. 106

Few sights in the bird-world are so calculated to stir the imagination of the bird-lover or the hunter as that of a flock of Canada Geese passing overhead. In V-shaped formation the great grey-and-white birds move through the upper air in what seems to be a most leisurely and deliberate manner. As a matter of fact they are probably traveling at a rate of more than fifty miles an hour. This fleeting view of a flock passing high above the buildings and tree-tops is about all the average man or woman ever sees of the famous Wild Goose. If the air be free from distracting noises, the observer may even catch the musical *honk, ah honk* that falls clear as a bugle-note from the sky above. On quiet mornings about lakes or over extensive marshes I have known the sound of this cry to carry to the ear from a distance of a mile or more.

When thus observed, Wild Geese are usually on a long journey. If it be autumn, they are probably moving southward to their winter home. Immense numbers of them pass the cold months along the coasts of the Middle and South Atlantic States, being especially abundant from Long Island to South Carolina. The center of their winter abundance in this region is Chesapeake Bay, Virginia, and the sounds of North Carolina. In Currituck Sound, Canada Geese at times are seen in numbers almost beyond belief. I have watched one wave of flying Geese follow another for a period of more than two hours' duration probably 40,000 being in sight during the time they were under observation.

This species is not a common bird on the great salt marshes of the Louisiana Coast, but many are found in the bayous along the Mississippi River from northern Louisiana to Missouri. Here they feed, especially among the stubbles of the grain-fields, and resort to the river at evening, where on the moonlit bars they may be heard chattering among themselves as the night closes down. Many go down the Pacific Coast and pass the winter months in the great irrigated valleys of central and southern California. During their autumn migration, and after reaching their winter home, Canada Geese are persistently sought by gunners, and many are the devices that have been invented for outwitting these most wise and wary of water-fowl.

Except on their breeding-grounds Canada Geese are always found in flocks, and when feeding in stubble fields, on the marsh, or perhaps standing in shoal water in the wide expanse of some sound or estuary, it is folly for the hunter to think of approaching the birds by stealth. The vision of the Wild Goose is marvelous, and its power to detect danger is developed to an extent that is positively uncanny. When resting or feeding, some of the birds always have their heads elevated and are scanning the horizon for danger.

One successful method of hunting these birds in autumn is to dig a pit in a cornfield and cover it with corn-stalks. The hunter here conceals himself and shoots the Geese when they come into the field to feed on the corn, which for some time has been daily scattered over the ground as a lure. Along the South Atlantic Coast many are shot from 'blinds' erected on points of marsh or shallow shoals where the Geese come to feed or rest. These 'blinds' are constructed of four strong stakes driven into the mud, forming a square three feet or more across. These, in turn, support the blind which consists of a boarded floor and sides made of long grasses or reeds cut from the neighboring marshes. In this the hunter crouches and shoots the Wild Geese as they approach the wooden or live-Goose decoys anchored nearby. A modification of the blind-shooting is



CURRITUCK WILD FOWL HUNTERS PAINTING THEIR CANADA GEESE DECOYS
Photographed by T. Gilbert Pearson

battery-shooting. Here the hunter lies on his back in a box shaped like a coffin, and protected from the waves by wings of boards and canvas. Around him on the water are the bobbing wooden dummies of Geese. Live decoys, too, are always used when available. These are of great help for they will honk and call to the gunner any of their kind that chance to be passing within half a mile.

Until the passage of the recent Federal laws which make it a misdemeanor to sell the bodies of wild fowl, Canada Geese were annually killed in large numbers and sold in the markets. When properly prepared this bird makes a most acceptable addition to the menu. Adult Canada Geese weigh from eight to fourteen pounds, hence one is indeed a prize for the game-bag.

Along our eastern seaboard, many Canada Geese are reared as domestic birds. The original parents of these flocks were wounded in winter shooting and from the same source additions to the flocks are made from time to time. From these decoys we learn many interesting characteristics of this great bird of passage. The writer knew one wild gander in North Carolina whose history as locally recounted was as follows: Wing-tipped by a shot long ago he was put in the Goose-pen with other decoys. His wing healed, but he could never fly. He moved about with the other Geese but paid no particular attention to any of them for thirty years. Then he mated, and when I last saw him, he had been a faithful mate, winter and summer, for thirty-two years.

It is often difficult to get these decoys to select mates and as indication of



CANADA GEESE ATTRACTED TO A SMALL POND IN ONTARIO CANADA, BY MEANS OF CORN

Birds fed and cared for by Jack Minor

the value of mated Geese I may state that the writer remembers the time, only a few years back, when in North Carolina a pair of mated decoys would readily sell for \$5, while an unmated Goose was worth only from 75 cents to \$1. A man who had a 'stool' of two dozen Geese thought himself fortunate if he had as many as four or five pairs that were mated.

Canada Geese are supposed to keep their mates for life. However, it is but natural that, with the recurrence of spring, evidences of solicitation on the part of the gander should be most pronounced. At this season he goes through many weird contortions of his neck, wings, and body, either with the evident intention of charming his mate or warning away any other lovelorn gander who

may wander near. Leaning forward, with neck stretched to its full length and head swaying only an inch or two from the ground, the bird will make sudden rushes all about the place. His mouth is open, he hisses furiously, the feathers of his wings are ruffled, and altogether he is quite a fierce antagonist to face.

The male keeps close, jealous watch over the nest and his brooding mate, and if he thinks they are endangered he at once gives battle. If the nest is approached he will not hesitate to attack a human intruder as the blue bruises of my own body, on more than one occasion, could have borne testimony.

The summer home of the Canada Goose is in our northwestern states and over large portions of Canada. Five to eight white eggs are laid, usually in a feather-lined nest on the ground in the immediate vicinity of water. I have found the birds particularly partial to little islets for nesting-sites when these are available.

The molting season comes while the birds are in attendance on their young, and there is a time in the history of every family of Wild Geese when neither the parents nor the young can escape by flight. It is, however, no easy matter to capture an adult Goose under such circumstances. For the sake of experiment the writer has upon occasion attempted the pursuit of old Geese when found in company with the young. The utmost effort that could be put forth by two men paddling a light canoe or rowboat was wholly insufficient to overcome the rapid progress which the wild Goose made, first by swimming and later by flapping along the surface of the water, in which movement both wings and feet were used. There are printed records tending to show that Canadian Indians sometimes succeed in driving the molting Geese out of a pond by means of dogs, and thus bring the birds within range of their arrows.

With thousands of men constantly seeking to kill the Canada Goose, it seems strange that they have not long ago been exterminated. As a matter of fact, it appears that of recent years their numbers have been increasing.

The food of this species consists of a wide variety of objects gathered on land as well as in the water. Small frogs, insects and other aquatic life are taken in a small degree, but usually these birds are vegetarians. Corn gathered from the ground in the autumn cornfields, grain picked up among the wheat stubble and even acorns are eaten. Various kinds of water plants are consumed. Near the country club house of the Camp-Fire Club of America there is a pond of several acres where in 1921 nine Canada Geese were kept. During the summer these birds destroyed nearly all vegetation growing in the shallow water about the margins.

Science recognizes four forms of this Goose, varying from each other but slightly in size or marking of the plumage. These, known as Canada Goose, Hutchins's Goose, White-cheeked Goose, and Cackling Goose are all inhabitants of North America.

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

JOEL ASAPH ALLEN

On the morning of August 29, 1921, Dr. Joel Asaph Allen, of the American Museum of Natural History, New York City, passed away in the eighty-fourth year of his age.

The amount of scientific work he accomplished during his long lifetime was very great. Yet few, if any, realized the extent of his accomplishments until a few years ago when under heavy pressure from the President of the Museum he was induced to prepare for publication his autobiography. When this was issued it was found that he was at that time the author of over 1400 scientific papers. Although a scholar of great erudition and deeply engrossed in research work in his chosen field of mammalogy, he nevertheless took keen interest in the cause of popularizing the subject of Natural History and in the conservation of wild life. His name has been connected with the cause of bird-protection for nearly thirty-five years, a longer period, with one exception, than that of any other man in this country.

Charitable toward the shortcomings of others, eager to help those in need of counsel, and seeking nothing for himself in return, he unconsciously held, in strongest bondage, the loyal devotion of his friends and asso-

ciates. He asked only to labor and to serve. Extreme modesty concerning his own attainments was a profound characteristic of which his friends never tired of speaking. His active efforts for the protection of wild birds date from the very beginnings of organized bird-protective efforts in the United States.

At the third annual meeting of the American Ornithologists' Union, held in New York City in the fall of 1885, he became a member of the newly appointed 'Committee on Bird Protection.' The following year this Committee prepared for publication a 16-page supplement to *Science*, and shortly afterward 100,000 copies of this were issued as Bulletin No. 1 of the American Ornithologists' Union's Committee on Bird Protection. By far the most forceful article in this Bulletin was by Dr. Allen, and bore the title, 'Present Wholesale Destruction of Bird Life in the United States.' When in August, 1886, the original Audubon Society was formed by Dr. George Bird Grinnell, then editor of *Forest and Stream*, Dr. Allen's name appeared as one of its five incorporators. In 1897, the New York State Audubon Society was established, and Dr.



JOEL ASAPH ALLEN

Allen at once became not only a member of the Board of Directors, but a member of the Executive Committee, which position he held as long as the Society continued active. Dr. J. A. Allen was one of the founders and incorporators of the National Association of Audubon Societies, established in January, 1905. From that time until his death he remained an active member of the Board and was most faithful in his attendance at its meetings. To the very last he took deep interest in all the Association's problems and

achievements. His mature judgment and deep, sympathetic interest made his services of the greatest value to the organization.

The burial took place in Windsor Cemetery at Cornwall-on-Hudson, on the afternoon of September 1, 1921. Many of his friends and associates journeyed from New York, Washington, and elsewhere to be present on this impressive occasion and by their attendance do such poor honor as was possible to one whose life had been so largely spent in the interests of others.

NEW AUDUBON BIRD RESERVATION

In an article by the writer, which appeared in *BIRD-LORE*, September-October, 1920, some account will be found of the vast bird-life which he discovered to exist on Big Bird Island, Little Bird Island, and Green Island situated in Laguna de la Madre, Texas. Thousands of Herons, including the rare Reddish Egret, here collect in summer to rear their young. Here also are found tens of thousands of breeding Terns and Laughing Gulls. From an ornithological standpoint the most interesting discovery was that of a breeding colony of White Pelicans.

Two good friends of the Association in Texas, viz, Judge James B. Wells and R. D. Camp, both of Brownsville, interested themselves in endeavoring to secure from the state of Texas the title to these islands, in the name of the National Association of Audubon Societies, in order that the birds resorting to this territory might have the fullest measure of protection during that season of the year when they stand in great need of such aid. As the islands were state property, the most feasible way of securing jurisdiction over them appeared to be by legislative action.

On August 18, 1921, a cheering telegram was received from Judge Wells in which he stated that the Texas Legislature had just passed a bill leasing these and the Three Islands, also located in the Laguna, to the Association for a period of fifty years. This splendid action was taken entirely at the solicitation of Judge Wells and Mr. Camp. The law leasing these islands to the Association is as follows:

A BILL

To Be Entitled

AN ACT to authorize the Commissioner of the General Land Office to lease Green Island, the group of islands known as Three Islands and North Bird Island and South Bird Island and the adjacent flats and reefs in Laguna Madre on the Texas Coast for a term not to exceed fifty years to the National Association of Audubon Societies for and in consideration of said Association undertaking to propagate, protect, and conserve birds and bird-life thereon; providing for the protection of birds and bird-life thereon; providing punishment by fine and imprisonment for violation of this Act and declaring an emergency.

Be it enacted by the Legislature of the State of Texas:

SECTION 1. For and in consideration of the undertaking by the National Association of Audubon Societies to propagate, protect, and conserve birds and bird-life on North Bird Island and on South Bird Island in Kleberg County; on Green Island in Cameron County and on the group of islands known as Three Islands in Cameron County, and on the flats and reefs and shallow waters in the vicinity of and adjacent to all of said islands so far as such waters, flats and reefs may be necessary for purposes of this Act, and as the same are situated in Laguna Madre between Padre Island and the main coast lines of said counties, the Commissioner of the General Land Office shall, upon application of said Association, lease said areas or so much thereof as said Association may desire for the purposes stated herein for a term not to exceed fifty years; provided, if said Association should at any time during the term of any lease issued under this Act dissolve its organization or consent to a termination of such lease the Commissioner of the General

Land Office shall cancel same and thereupon all rights acquired by said Association shall terminate.

SECTION 2. All Leases shall be recorded in the county in which the leased area is situated and after the record thereof the lessee shall have the exclusive right to enter upon, have, hold and occupy exclusively the area included in such lease and shall have the exclusive right to adopt such rules and regulations as may be necessary for the execution of the purposes of this Act; provided, nothing herein shall be construed to prohibit or interfere with the authority of any peace officer of the state of Texas or of the United States to enter upon any such leased area for the purpose of discharging any duty imposed upon such officer by the laws of Texas or by the laws of the United States.

SECTION 3. After such lease has been recorded it shall be unlawful for any person whomsoever, except a representative, an agent or an employe of such Association or a peace officer of the state of Texas or of the United States to enter upon such leased area without the knowledge and consent of said Association for the purpose of catching or killing any bird or birds or for the purpose of taking any bird or bird eggs or for the purpose of destroying any bird nests or bird eggs; it shall be unlawful for any person whomsoever to catch, kill or maim any bird or birds on any such leased area or to catch, kill or maim any bird or birds on or above said area by any means whatsoever even though such person may be above or outside of such leased area; it shall be unlawful for any person whomsoever to discharge any firearms or other explosive on or above any leased area; or to land, tie or anchor any fishing-boat within any such leased areas; provided nothing herein shall be construed

to prohibit any representative, agent or employe of said Association from catching, killing or destroying within any such leased area any bird or birds and any animals that may be known to prey upon bird-life or bird eggs nor to prohibit such representative, agent or employe from taking bird-eggs and catching any bird or birds for propagation or conservation or scientific purposes only, nor to prohibit persons from taking refuge on any leased area on account of storms.

SECTION 4. Any person who shall violate any of the provisions of this Act shall be deemed guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine in a sum not less than twenty-five dollars and not to exceed five hundred dollars or by imprisonment in the county jail for a term not less than ten days nor more than six months or by both such fine and imprisonment. The provisions of this section shall be construed to be cumulative of other statutes upon the same subject and not to repeal any other such statute.

SECTION 5. The importance of the legislation proposed and the short term of this Special Session creates an emergency, and an imperative public necessity exists that the Constitutional rule requiring bills to be read on three separate days in each House shall be suspended and this bill be placed upon third reading and final passage and that it take effect from and after its passage, and it is so enacted.

It need only be added that the Directors of the Association will, of course, take immediate action looking to the future protection of these vast nurseries of our southern water bird-life.

ACTIVITIES OF THE BIRD CLUB OF LONG ISLAND

The Sixth Annual Report of the 'Bird Club of Long Island' was issued July 1, 1921. It is a 30-page publication, with covers, and contains much interesting material. It will be remembered that this is the organization of which Colonel Roosevelt was the founder and first President. At his death Mrs. Edward Mitchell Townsend, of Oyster Bay, succeeded to the presidency, and the splendid growth of the Club has been due largely to her interest and initiative. Colonel Roosevelt's daughter, Mrs. Ethel M. Derby, is the active Secretary.

The Report contains a number of articles, among which we find discussed such subjects

as 'Violations of Game Laws,' 'Extracts from the Penal Code of the State of New York,' 'Winter Feeding,' 'Nesting-Boxes and Bird-Baths,' and 'Planting to Attract Birds.'

The Treasurer's report shows an income of \$3,019.39 and expenditures of \$2,964.19. The Club is a strong-going institution with energetic officers and a growing membership containing an unusually large number of influential people. Mrs. Derby's very interesting report as Secretary is as follows:

"In presenting the report of the Work of the Bird Club for the year 1920-21 I should like to make all the members realize that the work of the Club is entirely due to them and

their interest. Some of our members may feel that they are doing very little personal work, and do not even see the work which they are making possible, but I cannot emphasize too strongly the fact that they are supporting a constructive piece of public education which has already won a place for itself in the community.

"When the Bird Club was first organized, its President, Colonel Roosevelt, was anxious to have the membership extend over the whole of Long Island, and to have the members develop local groups giving special attention to the problems of each district. The first part of this wish is being realized as there are fifty-two villages represented in the Club, and each year new members come in from new districts; but to form active local groups required an amount and a kind of leadership which has not been easily found, and it has seemed that the work which was begun last year in the public schools had a more far-reaching possibility and would more quickly interest a larger number than any other plan which the Club could undertake.

"The program thus initiated has proved even more successful than was expected. With the coöperation and financial assistance of the National Association of Audubon Societies, the Field Agent, Mrs. M. S. Sage, has gone from one end of the Island to the other, with most encouraging results.

"During the months of the school year of 1919-20 she spoke to more than 10,000 children. During the year just closing her audiences have totaled more than 20,000. In 1919-20, 102 Junior Audubon Classes, with a membership of 3,023 were formed for six to ten weeks' study in the schools, because of the interest created by Mrs. Sage in her talks to the public. This year 142 classes have been organized, with a membership of 4,269. A greater number of talks have been given, by request, in private houses to groups of members, to clubs and associations such as the Home Bureau, the State Institute of Applied Agriculture of Farmingdale, at the Children's Home in Mineola, to the Woman's Club in Great Neck, and in a number of the parochial schools.

"Gratifying as this increase in number is, even more so is the increased interest shown

by all sorts of people, and which can only be known to the officers who receive the requests for information of every kind and the expressions of appreciation for service rendered. Much information has been sent out in regard to planting for the attraction and protection of birds, directions for the placing of nesting-boxes and for winter feeding. Several hundred placards have been issued stating the law concerning the sale and carrying of weapons and the list of protected birds. These have been welcomed by the schools and game-wardens, and have been hung in post-offices and railway stations.

"An interesting conference was held with the officers of the Forest Hills Audubon Society, who presented a suggestion for securing the coöperation of golf and country clubs in protecting birds and for planting along the borders of their property trees and shrubs which will provide shelter and winter food. The two bird clubs hope to enlist the interest and action of all the country clubs on Long Island.

"Mrs. Sage announced that photographs of children with birds on their hands, if clear enough, will be made into slides and shown with her collection. A number have been sent in and have been much appreciated, indicating, as they do, patience, persistence, and concentration on the part of the children. To succeed at last in photographing a bird means a great many efforts.

"We record with regret the death of John Lewis Childs, of Floral Park, the well-known horticulturist. Mr. Childs was one of the charter members of the Club and was un-failing in his interest and in his desire to further the work of the Club. In the death of Henry de Forest Weeks, of Oyster Bay, the Club has also lost a loyal friend.

"The membership is growing slowly, and it is hoped that many more will come in this year. Thirty have been added to the list since the last annual report. There have been seven resignations. The total membership is now 357, divided among fifty-two places. A large proportion of the charter life members have become sustaining members as well, thus making it possible for us to undertake the work in the schools. As will appear, however, in the report of the Treas-

urer, we are still obliged to accept assistance from the National Association of Audubon Societies, and we sincerely hope that we may so increase our numbers that we may be entirely self-supporting. The Secretary will be glad to receive the names of any residents of Long Island who would be willing to become members.

"In conclusion I wish to add that without the constant inspiration and guidance of the President and without her actual work, it would be impossible for the Bird Club to have grown to its present importance.

"Respectfully submitted,

"ETHEL C. DERBY,
"Secretary."

ANNUAL MEETING

The Seventeenth Annual Meeting of the National Association of Audubon Societies will be held in the American Museum of Natural History, New York City, at 10 o'clock A.M., on Tuesday, October 25, 1921. Plans are under way for a public meeting to be held in the large lecture hall of the Museum on the evening of October 24, at which moving pictures and speakers with interesting messages will be provided. The National Association and its affiliated organizations throughout the country have during the past year enjoyed a most successful and interesting period. It is hoped that as many of these organizations as possible will send

representatives and that the general membership of the Association may be largely represented at the different sessions. To one who has never visited the American Museum of Natural History an inspection of the exhibit of this great institution is in itself worth a journey of many hundreds of miles. It is a good thing for Audubon Society members and others interested in wild-life conservation to come together from time to time. The interchanging of experiences and the stimulation derived from personal contact is good for all. Bear in mind, therefore, the date of the annual meeting and try to be present if possible.

THE WYOMING ANTELOPE EPISODE

At the last session of the Wyoming Legislature a bill was passed granting authority to the Game Commission to issue permits, if they thought wise, for the killing of buck antelope and bull moose within the borders of the state. Both of these animals for some time have been absolutely protected. The antelope especially is becoming a very rare animal, in fact, entirely exterminated over large areas of its western range.

During the latter part of August the Commission had under consideration the granting of permits to kill antelope and moose. It appears that the question of permitting the slaughter of antelope was decided adversely on receipt of vigorous protests, the filing of which came about in the manner indicated in the following telegrams:

T. Gilbert Pearson, Audubon Society,
1974 Broadway, New York.

Had a long consultation with Judkins, Chief Game Warden of Wyoming. I have protested to him against the decision of the new State Game Commission composed of

Governor, Secretary of State, and Auditor who have voted to allow the killing of one hundred buck antelope and one hundred bull moose. Judkins says about three-fourths of licenses already sold to hunters. Argument is that killing of surplus old males will increase the herds. I believe the desire of local hunters and guides of eastern hunters to have one grand hunt before species become extinct is the real reason for such an unwise and wanton procedure. Animals from Yellowstone Park stray down into Wyoming in the fall. I was told by cattlemen that they could easily recognize park animals because they are so tame. This proposed killing festival can yet be stopped by Governor Carey and the licenses cancelled. The season opens, I understand, September 15. It is notorious that antelope are nearly extinct. Such a hunting program would be as cruel to the beautiful antelope as it would be shocking to the American people. Governor Carey should receive many telegrams of protest. Wire me your suggestions for greatest publicity. If Grinnell is in New York please give him copy of this. Copy also to McFarland, Harrisburg. If the Associated Press wants a story by wire I can write it.

(Signed) WILLIAM C. GREGG.

Mr. Gregg is a Life Member of the National Association of Audubon Societies and greatly interested in all the Association's activities for the protection of wild birds and animals. With a view of receiving confirmation of the information that had come to him, the following telegram, on August 26, was forwarded to Governor Carey, president of the State Game Commission of Wyoming.

National Association of Audubon Societies for the Protection of Wild Birds and Animals is alarmed at report that you are granting permission to kill one hundred buck antelope. Please wire facts, 1974 Broadway, New York.
(Signed) T. GILBERT PEARSON, *President*.

If licenses had already been issued to kill seventy-five antelope it would probably have been too late to save the slaughter of this many animals, but it might be possible to induce the authorities not to issue the remaining twenty-five licenses.

His reply received next day was as follows:

No licenses have been granted for the killing of buck antelope. Matter will be considered by Game Commission within a few days. (Signed) ROBERT D. CAREY, *Governor*.

It was a great joy to find that no permits whatever had thus far been granted. There was, therefore, a possibility of accomplishing much by speedy action. The Association immediately filed a formal protest in the following message:

Governor Robert D. Carey,
Cheyenne, Wyoming.

On behalf of Audubon Societies of the United States I respectfully urge you refrain from granting permits to kill one hundred antelope.

(Signed) T. GILBERT PEARSON, *President*.

At the same time every effort was made from our New York office to get in touch with officials of various national organizations interested in the protection of wild life. The Conservation Committee of the Camp-Fire Club of America was notified, as was also J. Horace McFarland, President of the American Civic Association. To Edmund Seymour, President of the American Bison Society, the matter was explained over the telephone. He immediately sent a strong telegram of protest. A wire was sent to Mr. Gregg informing him that Dr. Grinnell,

of the Boone and Crocket Club, was in Montana, and Mr. Gregg reached him. Mr. Holland, Vice-President of the American Game Protective Association was advised and telegraphed his objections. A telegram was sent to Madison Grant, Secretary of the New York Zoölogical Society, who was at that time in Victoria, British Columbia. Mr. Grant wired a very strong protest to Governor Carey against the killing of these animals. We also explained the situation by wire to the Chicago office of the Associated Press, with the result that the general public in the West was notified as to what was going on.

In conclusion it need only be added that on the morning of September 7, 1921, the following message was received from Mr. Gregg.

Yellowstone Park, Wyoming.
T. Gilbert Pearson,
President, Audubon Society,
1974 Broadway, New York.

Livingston paper prints a despatch from Cheyenne that, following protests from several national game protection societies, the Wyoming Game Commission decided not to issue permits to hunters to kill one hundred antelope and reducing moose permits to fifty. You have done fine work with happy and prompt results. Dan Beard who is here joins me in congratulations.

(Signed) WILLIAM C. GREGG.

Such action as the above is taken very frequently by the Home Office of the National Association and this has been the custom for many years. Often very little is said of these things in a public way, for it is not always wise to advertise the fact that a large series of protests really are stimulated from one source. However, it has been decided to make some mention of this case in order that our membership may know something of the methods the Association employs in its fight for the preservation of America's wild life. It also indicates the very great advantage of having a large active membership, and shows how one member may help the cause. But for Mr. Gregg's timely warning, it is altogether possible that permits would have been issued in Wyoming to kill as many as one hundred bull moose and the same number of the rapidly disappearing antelope.



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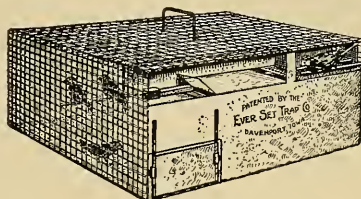
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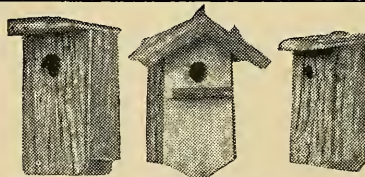
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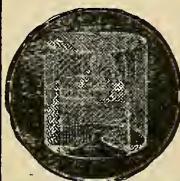
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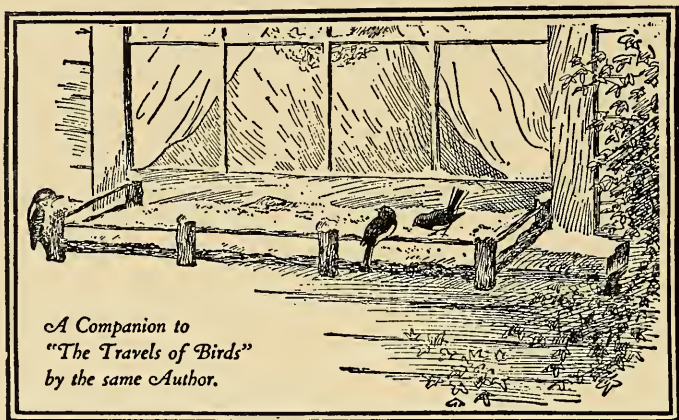
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OUR WINTER BIRDS

By FRANK M. CHAPMAN

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OFFICIAL ORGAN OF THE AUDUBON SOCIETIES

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NOVEMBER—DECEMBER, 1921

No. 6

A Double Tragedy

By DR. and MRS. FRANK N. WILSON, Ann Arbor, Mich.

With Photographs by Dr. Wilson

IN MAY, 1920, while looking for nests in a large tract of brush and open woods in the western outskirts of St. Louis, Missouri, I flushed two Quail from the tall grass that grew about a brush heap, and a short search revealed a nest containing a single egg. During the next fortnight, I visited the spot frequently; each day another egg appeared until the set contained twelve. Then, for the first time, I found the female on the nest. I was anxious to secure some photographs so I hurried home and returned with the camera and hiding-tent. The Quail was not at home when I got back and did not return until late in the afternoon. Two exposures, made just before sunset, were absolute failures because of the poor light, and although I sat in the tent most of the following day no more pictures were secured. Further attempts could not be made because of my departure from the city.

This failure only increased my desire to have photographs of a Bob-White, so I was very happy when, in June, 1921, a visitor at a farmhouse where I was spending my vacation found a nest in a neglected field, grown up to thistles and weeds. It was built just at the base of a tall bushy weed in a rather open spot and was completely arched over. There were twelve eggs piled helter-skelter, as if the bird had not yet begun to incubate. In the evening I put up the hiding-tent near the nest and concealed it with weeds, and the next morning, just after sunrise, I crawled in and made ready for an exposure. Observations made on the nest of 1920 led me to believe that the eggs were deposited in the early morning, but the half-hours and then the hours slipped by and the Quail did not return; so, after a time, I turned my attention to some small Sparrows that had built about 3 feet away from the Quail's nest.

I had noted their nest on the previous evening and had taken it for that of a Vesper Sparrow, a species that was abundant in the field; but now I recalled that the eggs were smaller and much less freely marked than the

usual eggs of the Vesper Sparrow, and I saw that the nest was partially arched over. This morning the eggs were hatching and the female was going on and off the nest frequently, bringing food to the newly hatched young and carrying away the broken shells. Once the male came and fed her as she sat brooding. I had an excellent view of them through the peep-hole, and it soon dawned upon me that I was dealing with an unfamiliar species. The median stripe



GRASSHOPPER SPARROW AT NEST

through the crown, the plain breast, a bit of yellow at the bend of the wing, and the insect-like song told me that my first Grasshopper Sparrows were before me. I promptly turned my camera upon their nest and secured a series of pictures.

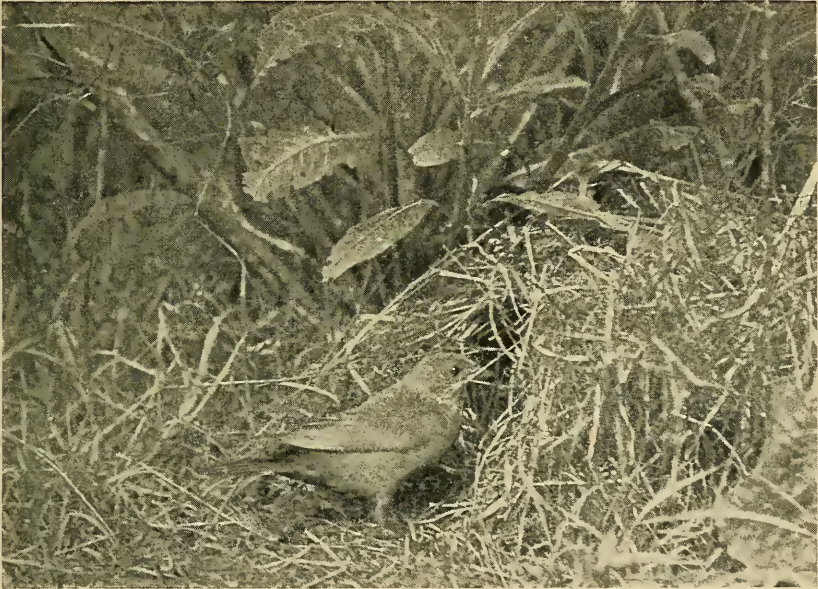
I was still at it when, about 12.30 P. M., I saw the Quail just behind her nest. A few minutes later she came around the base of the tall weed at its door and entered. She seemed suspicious of the changed surroundings and at a slight noise from the tent she promptly took leave. A half-hour later she came back but was still restless and repeated her previous performance. Later in the afternoon she remained on the nest in spite of the various noises that I made intentionally and unintentionally. When I came out of the tent late in the afternoon, I found that another egg had been deposited. I had obtained several pictures but the darkroom proved them to be less perfect than I had hoped.

Two days later, I returned with the hope of securing better pictures. The nest now contained fourteen eggs. I had not yet convinced myself that this bird normally laid in the late afternoon, so I again entered the tent in the early morning, the most favorable time for picture-making, for the tent had been placed to the east of the nest. During the previous night the Sparrows had met with an accident too common to ground-nesting species. In order

to get suitable pictures I had pulled up and pressed down some of the vegetation that stood in front of the nest; and thinking that there was little danger, I had failed to conceal it when I left. Some prowling animal had happened along, and the four lusty young that I had inspected late on the previous evening were gone, scattered feathers at the door of the nest telling me that the mother had been caught as she brooded them.

I heard the male singing nearby, and once he came with food. He looked into the empty nest from which hungry mouths had been wont to greet him, and for a moment seemed puzzled (I hesitate to say dismayed) at the change. Then, after looking to the right and left, as if seeking his mate, he flew away and I saw him no more.

It was an hour or so later that I heard the peculiar call of the Cowbird, and almost immediately a female appeared in front of the peep-hole. She



A COWBIRD INSPECTS THE QUAIL'S NEST

had spied the empty Sparrow's nest and went directly to it. It apparently suited her purpose for after a brief inspection she entered and sat down. If I had only had the camera focused on the nest I might have caught her there, but there was no time to rearrange my apparatus. Whether she saw the feathers before the nest, or whether some instinct told her that the nest was deserted, I know not, but she suddenly jumped up as if frightened and came off. It was then that she saw the Quail's nest and she proceeded to investigate. Just as she was peeping in I released the shutter, but, unfortunately, the focus was poor and the exposure inadequate. Perhaps she realized that

a Quail would make a young Cowbird a poor foster mother, or maybe the noise of the focal-plane shutter startled her, for she soon flew away to seek some more suitable home for her future offspring.

After this incident there was a long, warm wait, but finally, about 2 P. M. the Quail came slyly through the grass and entered her nest. She repeated the tactics previously described, leaving at the slightest sound but promptly



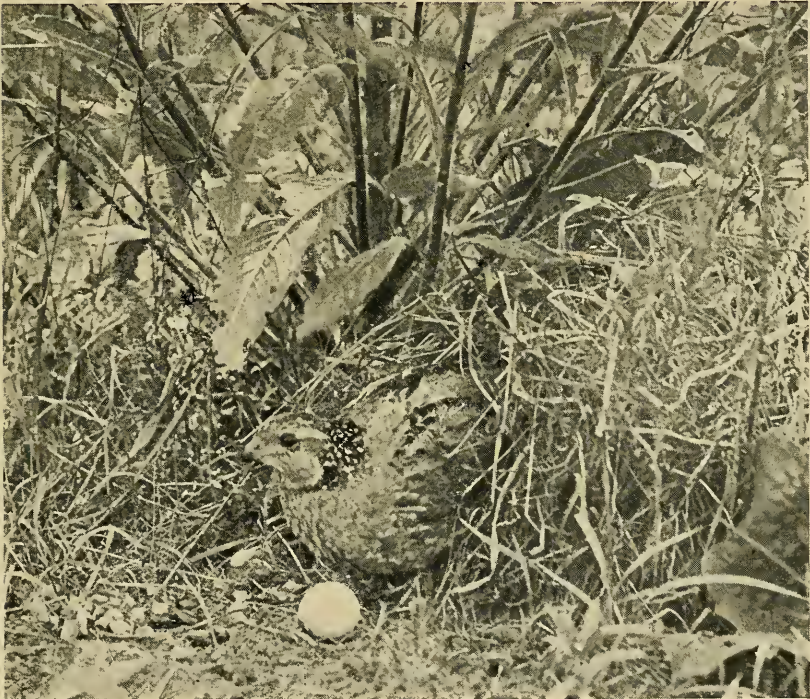
"ON LEAVING THE NEST SHE STOPPED AS IF TO LISTEN"

returning. Sometimes as she left the nest she stopped for a moment as if to listen, giving just time enough for a fifth-second exposure. On one occasion she remained longer than usual; she appeared to be arranging her eggs, and as she turned about in the crowded nest she accidentally dislodged one which rolled over the edge. She came out at once, as if to recover it, but perhaps the shutter frightened her for she left promptly. After that she gave the egg no more attention and it remained outside until I replaced it before leaving.

Toward 4 o'clock she settled down and no noise that I could make seemed seriously to disturb her. She yawned occasionally, pecked now and then at some insect that had invaded her domain, but for the most part sat quite

still until I came out of the tent and approached her closely, when she flew directly off the nest to some tall weeds a few rods away.

A week later she was sitting closely and refused to leave even when I came within a few feet of her. Fearing lest she share the fate of her neighbor, I had carefully concealed the nest, but this precaution proved of no avail, and my hope of securing pictures of the young was never realized. On my next visit the nest was deserted, eleven damp, cold, and slightly stained eggs were inside, one broken shell lay a foot or two away, and many feathers about the doorway told of a midnight tragedy for which some prowling feline that is supposed to live on rats and mice and not on Grasshopper Sparrows and Quail, is probably to be held responsible. Hawks do not fly at night, Owls are very scarce in the vicinity; predatory mammals are also uncommon; so I am afraid that the cat (of which the nearby village shelters many) must be held the transgressor.



"SHE CAME OUT AT ONCE AS IF TO RECOVER THE EGG SHE HAD DISPLACED"

What Birds Signal with Their Tails?

By ERNEST THOMPSON SETON

IN EACH family of birds there seems to be at least one species that makes wig-wag signals with its tail, that is, uses the tail to signal to others of its kind. And in each case, with one or two rare exceptions, the tail so used is decorated with colors or with white spots, bars, and blotches, so as to make it more easily seen from far off.

The best known of these tail-waggers is the Robin. The clear white spots at the corners are very plain as the Robin alights and then, for the benefit of 'whom it may concern,' gives the wig-wag sign of his race—a wag down to right, and then a wag down to left, so the tip makes a cross in the air when he makes the full sign.

The Catbird is another. He has an extraordinary performance with a very unusual equipment. His outfit consists of a red lantern and a black fan for screen. He spreads the black fan (his tail), then raises it so you see the red lantern (his undertail coverts), then drops the fan to shut off the lantern, so we get alternately blackness and flashes of red-lantern light, recalling some of our army and navy signals.

The Song Sparrow pumps his tail as he flies.

The Phoebe makes an extraordinary performance with his tail, often swinging it in a *complete circle*. This is the great exception to the rule that the signal tail is always conspicuously marked, for the Phoebe's tail is very plain indeed, but used with such energy that it never fails to identify the bird, even without the aid of spots and bars.

His cousin, the Crested Flycatcher, does some adroit tail-work, greatly assisted by the fact that said tail is painted reddish brown.

The Hermit Thrush is a most delicate tail-wagger. When he alights he raises the tail about half an inch, then slowly swings it down again. The action is slight, but is made more effective by the tail being colored reddish brown, brighter than the rest of the bird's upper plumage.

The Water-Thrushes and one or two of the Warblers are wig-waggers, and I was surprised not long ago to see a Nuthatch, on my lunch-counter, turn his back and spread his tail like a little Peacock, as a kinsman came flying to join him. As the tail pointed straight up at the time, the white-and-brown-splashed under coverts were remarkable. They spread like a little *aurora borealis*, and surely were doing service as signals.

Among larger birds, the Sparrow Hawk and Pigeon Hawk signal with their tails. The Green Heron is an energetic wig-wagger. The Spotted Sandpiper is well known for his tail signal; usually its line of movement describes a W in the air, beginning at the tip on one side and ending at the tip on the other. There are tail-waggers even among the Ducks.

In general, whenever you see a bird's tail that is strikingly marked, you may believe that that tail is used in some sort of signalling. Every bird, indeed, has some identifying trick or color pattern, besides peculiarities of voice and flight. And one proof that they serve such purpose is the fact that it is by this that we identify them. A few are here noted. If you watch the common birds of the garden, you will surely discover many that have hitherto escaped observation.

Cultivating the Birds

By CRAIG S. THOMS, Vermilion, S. Dak.

With Photographs by the Author

BIRDS have become plentiful at Vermilion, S. Dak., and before the year is done nearly all of them seem to come to my yard. Of course, there are inducements. I feed them and water them and arrange nesting-places, and grow raspberries and strawberries, and have a home-garden, which provides them with numerous insects.

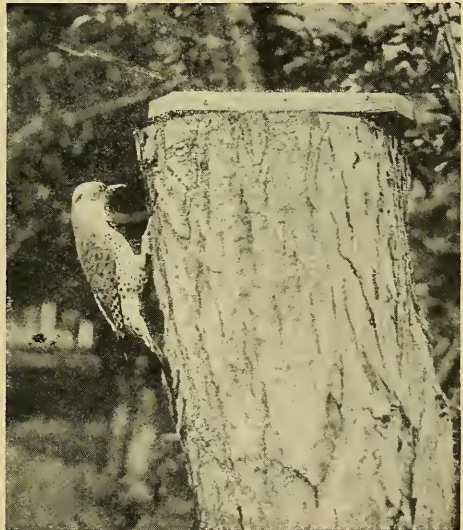
I have counted the following birds in my yard in a single year:

WINTER BIRDS

1, Downy Woodpecker; 2, Hairy Woodpecker; 3, Black-capped Chickadee; 4, Junco; 5, Cardinal Grosbeak; 6, White-breasted Nuthatch; 7, Red-breasted Nuthatch; 8, Brown Creeper; 9, Redpoll; 10, American Goldfinch; 11, Screech Owl; 12, Tree Sparrow.

SUMMER BIRDS

13, Robin; 14, Bronzed Grackle; 15, Red-winged Blackbird; 16, Cowbird; 17, Mourning Dove; 18, Blue Jay; 19, Flicker; 20, Catbird; 21, House Wren; 22, Wood Thrush; 23, Warbling Vireo; 24, Brown Thrasher; 25, Yellow-billed Cuckoo; 26, Chipping Sparrow; 27, Field Sparrow; 28, Rose-breasted Grosbeak; 29, Summer Warbler; 30, Kingbird; 31, Bluebird; 32, Baltimore Oriole; 33, Orchard Oriole; 34, Red-headed Woodpecker; 35, Least Flycatcher; 36, Wood Pewee; 37, Towhee; 38, Ruby-throated Hummingbird; 39, Cedar Waxwing; 40, American Coot (evidently exhausted in flight).



THE FLICKER AT THE DOOR OF HIS NEST IN THE LOG WITH THE KNOTHOLE WHICH I FIXED FOR HIM

MIGRATING BIRDS

41, White-throated Sparrow; 42, Lincoln's Sparrow; 43, Oven-bird; 44, Ruby-crowned Kinglet; 45, Golden-crowned Kinglet; 46, Black-and-White Warbler; 47, Maryland Yellow-throat; 48, Tennessee Warbler; 49, Black-poll Warbler; 50, Myrtle Warbler; 51, Magnolia Warbler; 52, Olive-backed Thrush; 53, Veery Thrush; 54, Hermit Thrush.

Besides the migrants named, others were seen but not identified.

One of the chief reasons for so many bird records in Vermilion is the interest taken by the school teachers and the instruction in bird-life which they give to their pupils. During a stereopticon lecture on birds not long since, the children were able to name every bird thrown on the screen. After the lecture a teacher proudly showed me the Bluebirds which her pupils had drawn in colors.



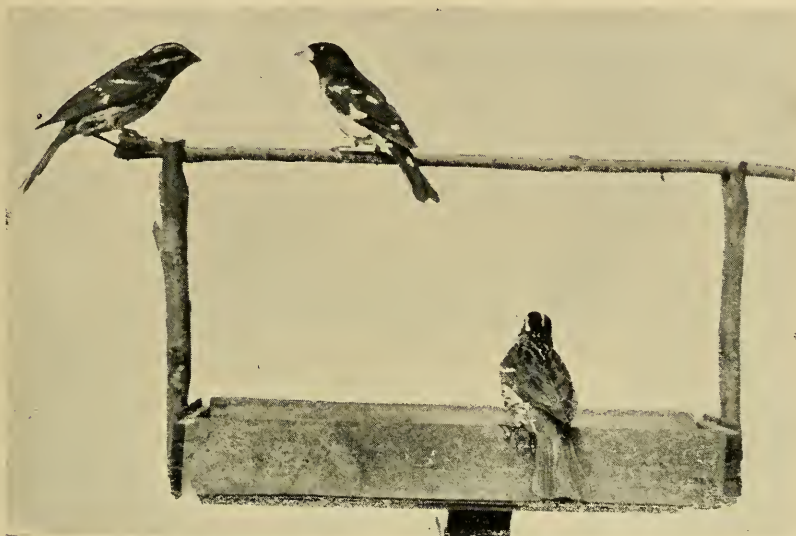
THE MOURNING DOVE DOES NOT SIP WATER LIKE OTHER BIRDS,
BUT SUCKS IT UP

The sympathy of children in Vermilion for every bird tragedy is very marked. Half a dozen small girls brought a wounded young Bronzed Grackle to our home one day to see if anything could be done for it. After a hard storm a group of children carried a dead Hermit Thrush to their teacher for identification. After a vicious winter storm a group of boys brought a wounded Lapland Longspur to our door. They had gathered a number of crippled birds into a hayloft where they could feed and be warm until well. A girl of six, between sobs, scolded a boy of ten because he had wounded a Grosbeak with his slingshot. And a little lisping lad of four rang the bell one day and timidly remarked, "I came to ask if a bat was a bird." Few are the yards where the children do not know the location of every nest and diligently guard them from all enemies.

So general is bird knowledge in Vermilion that men over seventy years

of age have bird-baths and talk knowingly about the actions of Blue Jays, Flickers, Catbirds, and many others.

The birds build their nests as near our houses as possible. A pair of Robins chose the bracket under my roof for their nesting-site, although the yard is full of trees, and as I write, their fledglings are calling loudly for food from the grape-vine trellis. During the cold spring rains those same fledglings, which were then sightless, featherless, wriggling bits of birdhood, were snug and dry under the roof. While the mother brooded them the father proved good provider, coming regularly with bug-steak^{1,2} and angleworm cutlets, and



A MALE ROSE-BREASTED GROSBEEK BETWEEN TWO FEMALES,
NONE OF THEM CONTENTED

was quite unconcerned about high prices. When he came the mother would raise herself up and to one side and he would feed their tender young under her.

A sense of protection from enemies seems to induce birds to build on one's bracket, or sometimes on one's window-sill. It can hardly be for protection from storms, for just over my roof a Mourning Dove has placed her nest in the corner of the eaves spout, which is on the roof, not under it. Drenching rain and blazing sun do not disturb her in the least.

A half-dead plum tree holds the nest of another Mourning Dove. I have watched both of them at the work of nest-building. Most birds are yet in the 'tribal stage' in the sense that their women do the drudgery, but the female Mourning Dove has modern ideas. She sits on the nest, or rather where the nest is to be, and the male brings materials for the nest to her, dropping it at her side, and together they build the nest around and under her. He usually brings a single piece at a time, and when he comes with it he is just as apt

to light on her as on the branch at her side, or he steps on her back as he walks across to place material on the other side of her.

Doves are peculiar birds. They do not lift their heads when they drink, but submerge their bills and suck the water up. They do not feed their young like most perching birds, but regurgitate half-digested food into their throats. A friend, looking at the parent Dove feeding her young, said, "They are scrapping." It looked as though they were 'scrapping' with clenched bills, but it was the regurgitation process.

Although the Dove is proverbially gentle, I once saw the male drive a Blue

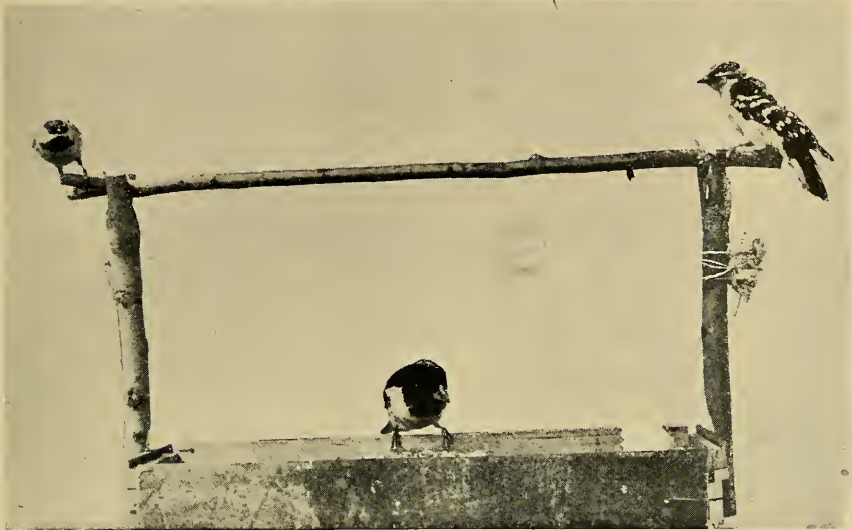


THE ROSE-BREADED GROSBEAK AND THE BROWN THRASHER AT THE BATH

Jay from the tree in which the female Dove sat on their nest, and when the Jay stopped in a nearby tree he went to the nest and took the female's place on the eggs, as much as to say, "Come and rob the nest if you can." One morning the Robin flew to the bath where the male Dove was drinking, evidently expecting to scare him away, but the Dove raised both wings in protest and stood his ground.

Last fall a pair of Red-headed Woodpeckers began excavating in a dead box elder limb in our yard. We wondered at this, for although Downy excavates a winter home, the Red-head goes South for the winter. Do they begin their next year's nest the autumn before? I planned to cut off the dead limb, but my curiosity was aroused and it was allowed to remain for 'scientific' purposes. I knew that Red-heads were lazy birds, watching for insects from fence-posts, and sometimes even taking them in flight, like flycatchers, instead of industriously searching and drilling for them like well-bred Woodpeckers,

but I had not suspected them of being too lazy to excavate their whole nest in the spring. No doubt I misjudge them, and they may have other adequate reasons for their conduct, but, sure enough, as I write (the following May) they are back finishing the excavation for their nest. Of course, I cannot swear that it is the same pair, but it doubtless is, for they have made themselves very much at home about the premises, as though knowing themselves on familiar ground. They eat suet at the food-box and drink at the bath like old-timers.



A MALE ROSE-BREADED GROSBEAK, A DOWNY WOODPECKER, AND A BLACK-CAPPED CHICKADEE AT THE FOOD-TRAY. THERE WILL BE NO FEEDING UNTIL SOMEBODY LEAVES

My food box has a summer patronage that it never had before. Suet, sunflower seeds, and cheese rinds constitute the bill-of-fare, and my summer patrons are Robins, Catbirds, Brown Thrashers, Chickadees, Downy Woodpeckers, Bronzed Grackles, and Rose-breasted Grosbeaks. Robins eat suet and even feed it to their grown young, but they dearly love cheese rinds. Thrashers and Catbirds like the same fare as the Robin; but Grosbeaks care only for sunflower seeds.

All the birds are jealous of each other's enjoyment of the food-table. The Catbirds slip in stealthily for a bite of suet as soon as larger birds leave. Downy creeps up the post on which the table is placed and surprises the feeders by appearing suddenly from below. The Chickadees are rather timid among so many giants, but they dart stealthily to the far corner of the table, snatch a bite, and hasten away in an ecstasy of achievement.

The boys take about as much interest in my bird families as I do, for they seem to belong to us all together. They come through the yard every few

days to see how many eggs are laid or how the young are getting on, meanwhile shying stones at the too-inquisitive squirrels or sicking the dog on the prowling neighborhood cat. They showed me where a Mourning Dove had appropriated an old Robin's nest for its own nesting-site, and where a Summer Warbler had placed its nest in one of my raspberry bushes. In fact, they allow nothing to escape my notice.

A pair of Flickers made their nest in a short log which I set on top of a post for them. The upper end of the log had a deep decayed knothole cavity. I cleaned it out as well as I could and covered it with a board, but at best it was a dirty sort of place. Having seen their well-made, gourd-shaped excavations, I was not sure that they would take kindly to my improvised cavity. But when their nine eggs were laid I found them on an exquisite bed of clean chips which they had chiseled out of one side of the knothole. They had thrown out the dirty chips, using only the small clean ones for their nest. These they formed into a neat low mound on the broad bottom of the cavity, and their eggs were laid in a shallow depression in its center.

The Cardinal Grosbeak has been seen in the woods of the Missouri bottom for several years, but they are now venturing up into town. They were frequently seen about homes last winter. Male and female came for a time to a friend's food-box to eat sunflower seeds. In the spring I saw a pair in my own back yard, and from all signs a pair is nesting this season in our nearest ravine.

My yard was as full of birds as my bushes were of fruit when my raspberries began to ripen, but I wanted a few berries myself, so I turned the bird-bath upside down and bade my feathered friends good-bye for a little while. In half a day nine-tenths of them were gone. When the berries are safe in cans for winter use I shall fill the bath again and invite the birds to return. From past experience I know that many of them will respond; but some of them will soon begin to gather in flocks for their southward journey, and I shall see no more of them until next year.



Billy, a Great Horned Owl

By DELL COLEMAN, Milwaukee, Wis.

BILLY and his sister, or brother,—I do not know which—were born in a Crow's nest 12 miles north of Decorah, Iowa. A farm-hand brought them to town and I bought Billy for a dollar. When he first became one of the family he was wrapped in a grayish down with a few pin-feathers for wings, but when put on a ration of liver, English Sparrows, rats and mice he acquired weight and feathers.

About the last of May he had become an expert flier and a public nuisance. We never kept him shut up or clipped his wings and so helped him indirectly to a great many adventures.

During most of the day he sat on the peak of the roof to the consternation of all respectable birds who mobbed him unmercifully. He would sit through it all sedately because, above all, Billy was a gentleman and never lost his dignity.

No sooner would anyone on the street come out and sit on the porch than Billy would make an informal call, prompted, of course, by the hopes of something to eat. He would always alight on the walk, hop up the steps, and then bob his head. If this did not get any results, he would utter a soft *l l l ap*, and if there still were no signs of capitulation, he would fly up on the person's knee, head, arm, or shoulder, and this always brought some sort of result, usually ending in a flurry of feathers and Billy on his back in the grass at the foot of the porch—and why? Because Billy was almost 2 feet tall, weighed in proportion, and had claws as big as my hand.

One morning, two dogs came into the yard, a collie and a bird-dog. Seeing Billy, who was sitting on a stump, they gradually approached. When within 20 feet of Billy, the bird-dog slunk away but the collie was curious—so was Billy! He drifted off that stump and onto the collie's back. With a yelp, the collie set about going away from there—Billy decided to go with him—and did! He dug his claws in and hung on, balancing with the aid of his wings, and, believe it or not, he actually lifted that dog off its hind feet for about 8 feet. When the excursion reached the sidewalk, Billy dropped off at the feet of a little girl. With a screech, she followed the collie. I called Billy back and locked him in the chicken-coop.

This was another of his traits: He would follow a Plymouth Rock hen all over the place if given a chance and never harm her, but was death on cats. One day a stray cat got in the yard and Billy saw it. Quicker than a wink he had that cat back of the head and it was the end of Mr. Cat. I tried to get it away from him and that was the first time he ever got in the least savage. Ordinarily I could roll him around, scratch his head, carry him anywhere and any way and he would never even offer to get mad, but this time he hung onto that cat with one claw and sunk the other into the calf of my leg and tried his best to bite my hand. I had to give up. He never bit or struck at me with his talons again.

It is a common belief that Owls cannot see by day, but Billy could catch a spermophile in the brightest sunlight. Occasionally I would tuck Billy under my arm and we would go out in the country to some dry pasture where I would set him on my knee and wait. Soon Billy would see a spermophile, watch it for a moment with a fierce glance then glide through the air on his 5-foot wings, and, nine times out of ten, he would bring back that 'gopher.'

Toward the latter part of August, Billy began to wander, sometimes staying away two or three days, but he never objected to being caught and would even come when I called. He was not so tame always, however. A friend of mine teased him one day. Billy stood for it awhile, but 'enough was too much.' That boy received four gashes on one arm and a finger bitten to the bone.

Unfortunately, Billy acquired a taste for Ducks and killed seven from a man's flock in the next block. The man took prompt revenge by shooting Billy.

When Billy was killed, he was almost full grown. His head still had down feathers but his 'ears' were an inch long. He had big yellow eyes the pupil of which he could dilate from the size of a pin point to that of a disc completely effacing the yellow. His throat was pure white and his 'vest' dirty yellow with penciled bars. His tail was fully developed. I did not have him mounted but have his claws, wings, and tail in my room.

And so endeth the tale of one Great Horned Owl that was gentler and more loving than almost any other pet I ever have had, and I have had a Crow, two Red-shouldered Hawks, a Blue Jay, two Screech Owls, a Yellow-bellied Sapsucker, a squirrel, a coon, and a blacksnake. I might say that I have never kept a single pet locked up nor prevented them from leaving when they so desired. Indeed, it took me three weeks to get rid of one of the Hawks. I even carried him five miles off and released him in the woods but he was home before I returned.



The Migration of North American Birds

SECOND SERIES

XVII. RUSTY BLACKBIRD AND BREWER BLACKBIRD

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

RUSTY BLACKBIRD

The Rusty Blackbird (*Euphagus carolinus*) occurs over the greater part of North America, exclusive of the western United States and the islands within the Arctic Circle. It breeds north to northern Ungava in Quebec, northern Ontario, central Keewatin, northern Mackenzie, and northern Alaska; west to western Alaska; south to southern Alaska, central Alberta, southern Wisconsin (casually), central New York, southern Maine, and New Brunswick; and east to Nova Scotia and Newfoundland. It winters north to Nebraska, Michigan, and southeastern New York, and south to the Gulf of Mexico, from Florida to eastern Texas. It occurs casually in migration west to British Columbia, Montana, and Colorado, and accidentally in California, Lower California, and Greenland.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Pittsburgh, Pa.....	3	April 6	March 29, 1913
Philadelphia, Pa.....	7	March 13	March 3, 1906
Renovo, Pa.....			April 17, 1915
Morristown, N. J.....	18	March 12	February 2, 1890
New York City, N. Y.....	11	March 29	{ March 9, 1889 { Rare winter
Shelter Island, N. Y.....	5	April 6	March 27, 1899
Geneva, N. Y.....	10	March 24	February 21, 1909
Hartford, Conn.....	9	March 14	February 8, 1888
Providence, R. I.....	12	March 26	March 17, 1918
Boston, Mass.....	26	March 21	February 8, 1879
Rutland, Vt.....	13	April 3	March 11, 1910
St. Johnsbury, Vt.....	10	April 18	March 26, 1902
Portland, Maine.....	15	April 2	March 15, 1908
Phillips, Maine.....	8	April 6	March 24, 1913
Ellsworth, Maine.....	8	April 1	March 21, 1913
Montreal, Quebec.....	4	May 4	April 24, 1910
Quebec, Quebec.....	7	April 26	April 16, 1882
Godbout, Quebec.....	2	May 3	May 2, 1883
Scotch Lake, N. B.....	11	April 8	March 27, 1917
St. John, N. B.....	10	April 4	March 23, 1898
Pictou, N. S.....	9	April 5	March 22, 1894
North River, P. E. I.....	5	April 16	March 31, 1890
St. Louis, Mo.....	8	March 7	February 26, 1911
Port Byron, Ills.....	6	March 12	March 4, 1918
Chicago, Ills.....	24	March 26	February 25, 1906
Sedan, Ind.....	15	March 18	March 7, 1893
Oberlin, Ohio.....	25	March 17	March 5, 1910
Youngstown, Ohio.....	12	March 17	February 20, 1915
Ann Arbor, Mich.....	21	March 14	February 26, 1889
Sault Ste. Marie, Mich.....	4	April 13	March 31, 1918
London, Ont.....	10	March 29	March 14, 1911
Toronto, Ont.....	3	April 6	March 30, 1904

SPRING MIGRATION, continued

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Ottawa, Ont.	28	April 20	March 19, 1894
Keokuk, Iowa.	6	March 29	February 9, 1897
National, Iowa.	10	March 24	March 8, 1919
Madison, Wis.	17	March 22	March 8, 1914
Unity, Wis.	5	April 5	March 24, 1919
Lanesboro, Minn.	7	April 3	March 26, 1889
Minneapolis, Minn.	17	April 2	March 16, 1904
St. Vincent, Minn.	2	April 9	April 1, 1897
Aweme, Manitoba.	17	April 9	March 23, 1910
Qu'Appelle, Sask.	4	April 16	April 15, 1911
Fort Simpson, Mackenzie.	3	May 10	May 3, 1861
Flagstaff, Alberta.	3	April 26	April 12, 1912

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring departure	Latest date of spring departure
Raleigh, N. C.	15	April 6	April 26, 1909
Washington, D. C.	22	April 18	May 11, 1917
Pittsburgh, Pa.	4	April 19	May 1, 1915
Philadelphia, Pa.	5	May 5	May 17, 1885
Renovo, Pa.	6	May 10	May 22, 1910
Morristown, N. J.	13	May 4	May 18, 1917
New York City, N. Y.	7	April 29	May 13, 1903
Shelter Island, N. Y.	3	May 2	May 6, 1898
Geneva, N. Y.	4	May 1	May 7, 1918
Providence, R. I.	5	May 9	May 14, 1911
Boston, Mass.	18	May 8	May 22, 1913
Rutland, Vt.	4	May 2	May 8, 1912
New Orleans, La.	7	April 27	May 10, 1899
St. Louis, Mo.	4	April 18	May 1, 1909
Port Byron, Ills.	5	April 19	May 1, 1917
Chicago, Ills.	15	April 25	May 5, 1900
Sedan, Ind.	7	April 23	May 8, 1887
Oberlin, Ohio.	22	May 9	May 20, 1917
Youngstown, Ohio.	7	April 23	May 6, 1913
Ann Arbor, Mich.	4	April 24	May 3, 1907
Sault Ste Marie, Mich.	2	May 17	May 26, 1918
London, Ont.	7	April 29	May 6, 1916
Toronto, Ont.			May 3, 1904
Keokuk, Iowa.	3	April 18	April 20, 1897
National, Iowa.	7	April 25	May 5, 1909
Madison, Wis.	12	April 26	May 7, 1909
Unity, Wis.	5	April 23	April 30, 1913
Lanesboro, Minn.	2	April 17	April 19, 1888
Minneapolis, Minn.	8	April 25	May 12, 1920
St. Vincent, Minn.			May 3, 1897

FALL MIGRATION

LOCALITY	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
St. Vincent, Minn.	3	September 5	September 2, 1896
Minneapolis, Minn.	4	September 28	September 21, 1905

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of fall arrival	Earliest date of fall arrival
Lanesboro, Minn.	4	September 24	September 8, 1888
Unity, Wis.	3	September 20	September 12, 1912
Madison, Wis.	6	October 7	September 28, 1913
National, Iowa.	8	October 14	September 29, 1918
Keokuk, Iowa.	4	October 22	September 28, 1896
Toronto, Ont.	4	September 30	September 21, 1898
Sault Ste. Marie, Mich.	3	October 9	October 2, 1918
Ann Arbor, Mich.	4	October 15	September 22, 1918
Youngstown, Ohio.	5	October 21	October 5, 1916
Oberlin, Ohio.	5	October 1	September 10, 1900
Sedan, Ind.	3	October 9	October 7, 1905
Chicago, Ills.	6	September 25	August 30, 1906
Port Byron, Ills.	5	September 17	August 30, 1919
Athens, Tenn.	4	October 20	September 29, 1909
Harvard, Mass.	8	September 23	September 16, 1916
Boston, Mass.	16	October 10	September 30, 1886
Providence, R. I.	5	October 7	September 22, 1912
Hartford, Conn.	5	September 25	August 31, 1909
Geneva, N. Y.	7	September 28	September 5, 1915
Orient, N. Y.	6	October 16	October 3, 1908
New York City, N. Y.	5	October 7	September 1, 1914
Morristown, N. J.	16	October 12	October 4, 1914
Renovo, Pa.	9	October 8	September 14, 1903
Washington, D. C.	13	October 21	September 16, 1885
Raleigh, N. C.	11	October 26	October 14, 1895
Autaugaville, Ala.	2	October 29	October 19, 1913

FALL MIGRATION

LOCALITY	Number of years' record	Average date of fall departure	Latest date of fall departure
Flagstaff, Alberta.	3	October 16	November 9, 1909
Fort Simpson, Mackenzie.	2	October 6	October 13, 1859
Aweme, Manitoba.	14	November 5	November 22, 1919
St. Vincent, Minn.	3	November 12	November 29, 1896
Minneapolis, Minn.	3	November 8	November 10, 1899
Lanesboro, Minn.	6	November 13	December 3, 1886
Unity, Wis.	3	November 9	November 28, 1914
Madison, Wis.	10	November 8	November 26, 1911
National, Iowa.	8	November 4	November 13, 1915
Keokuk, Iowa.	4	November 16	November 24, 1896
Ottawa, Ont.	25	October 17	November 5, 1890
Toronto, Ont.	2	October 31	November 5, 1904
London, Ont.	2	November 16	November 27, 1901
Sault Ste. Marie, Mich.	3	October 20	October 31, 1920
Ann Arbor, Mich.	3	November 11	November 16, 1913
Youngstown, Ohio.	6	November 19	December 25, 1916
Oberlin, Ohio.	5	November 5	November 19, 1906
Sedan, Ind.	6	November 5	November 25, 1891
Chicago, Ills.	8	November 8	November 28, 1907
Port Byron, Ills.	4	November 13	November 18, 1914
Athens, Tenn.	4	November 16	November 21, 1908
North River, P. E. I.	2	October 2	October 4, 1887
St. John, N. B.	3	October 26	November 10, 1889
Scotch Lake, N. B.	10	October 15	December 27, 1907
Godbout, Quebec.			November 9, 1900

FALL MIGRATION, continued

LOCALITY	Number of years' record	Average date of fall departure	Latest date of fall departure
Montreal, Quebec.....	9	October 24	November 8, 1908
Ellsworth, Maine.....	3	October 30	November 4, 1913
Rutland, Vt.....	4	November 10	November 21, 1918
Boston, Mass.....	11	November 9	December 2, 1912
Providence, R. I.....	2	November 18	November 25, 1899
Geneva, N. Y.....	2	October 21	November 7, 1915
Orient, N. Y.....	4	November 13	November 25, 1909
New York City, N. Y.....	2	November 10	Rare winter
Morristown, N. J.....	10	November 9	November 21, 1909
Renovo, Pa.....	6	November 4	November 16, 1897

BREWER BLACKBIRD

The Brewer Blackbird (*Euphagus cyanocephalus*) takes the place of the Rusty Blackbird in the western United States. It ranges in western North America from southwestern Canada to Guatemala. It breeds north to central Manitoba, central Alberta, and central British Columbia; west to southwestern British Columbia, western Oregon, and western California; south to northern Lower California, southern New Mexico, and central western Texas; and east to central Texas, western Kansas, eastern Nebraska, eastern Minnesota, and casually to Wisconsin. It winters north to southern British Columbia, southern Montana, and Kansas; east to Louisiana and Arkansas; and south through the western United States to southern Mexico and Guatemala. It migrates east to Iowa, and casually to Illinois; and occurs accidentally in southeastern Ontario and South Carolina.

SPRING MIGRATION

LOCALITY	Number of years' record	Average date of spring arrival	Earliest date of spring arrival
Heron Lake, Minn.....	6	April 24	April 7, 1889
Elk River, Minn.....	4	April 23	April 18, 1917
St. Vincent, Minn.....	3	April 29	April 26, 1899
Onaga, Kans.....	23	April 10	Feb. 20, 1906
Vermilion, S. Dak.....	3	March 24	March 9, 1911
Grand Forks, N. Dak.....	4	March 27	Feb. 23, 1914
Charlson, N. Dak.....	3	April 22	April 17, 1913
Aweme, Manitoba.....	19	April 9	March 28, 1910
Indian Head, Sask.....	7	April 22	April 8, 1905
Eastend, Sask.....	7	April 20	April 11, 1916
Beulah, Colo.....	18	April 25	April 16, 1917
Denver, Colo.....	9	April 27	April 9, 1899
Yellowstone Park, Wyo.....	2	May 3	April 27, 1915
Rupert, Idaho.....	3	April 6	March 29, 1913
Terry, Montana.....	9	May 1	April 15, 1894
Great Falls, Montana.....	11	April 23	April 7, 1910
Flagstaff, Alberta.....	6	April 23	April 16, 1913
Edmonton, Alberta.....	4	April 29	April 10, 1910
Okanagan Landing, B. C.....	9	April 6	March 23, 1908

FALL MIGRATION

LOCALITY	Number of years' record	Average date of fall departure	Latest date of fall departure
Okanagan Landing, B. C.....			November 22, 1919
Big Sandy, Mont.....	3	October 6	October 19, 1905
Rupert, Idaho.....	2	November 13	November 24, 1909
Yellowstone Park, Wyo.....	3	October 17	November 1, 1917
Beulah, Colo.....	7	October 14	November 3, 1908
Eastend, Sask.....	2	October 28	October 30, 1910
Aweme, Manitoba.....	14	November 2	November 13, 1901
Forestburg, S. Dak.....	3	November 21	December 25, 1905
Onaga, Kans.....	22	November 13	November 27, 1898
St. Vincent, Minn.....	3	October 14	October 20, 1897

CASUAL RECORDS

Mount Carmel, Ills.....	December 4, 1866
Delavan, Wis.....	April 14, 1910; June 5, 1904
Freistatt, Mo.....	March 1, 1885; November 7, 1886
Chester, S. C.....	December 9, 1886; December 10, 1886

Notes on the Plumage of North American Birds

SIXTY-SECOND PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

Rusty Blackbird (*Euphagus carolinus*, Figs. 1-4). The common name of this Blackbird is based on its winter plumage which is broadly tipped with rusty brown, largely concealing the black base of the feathers.

In nestling plumage the sexes are alike, both being dull slate-color slightly washed with rusty. The postjuvinal (first fall) molt is complete and by it the birds pass into the first winter or 'rusty' plumage. As shown by Figs. 3 and 4 the sexes are then superficially alike, but examination shows that the male is blacker than the female. The difference between them becomes more marked as the season advances and the rusty tips gradually wear off, until, in April, the male, without gaining new feathers, has become glossy black (Fig. 1), and the female (Fig. 2), slate-color with usually some trace of rusty.

Brewer Blackbird (*Euphagus cyanocephalus*, Figs. 5, 6). In Brewer's Blackbird the rusty tips, which so strongly characterize the winter plumage of the Rusty Blackbird, are too small to affect the appearance of the bird in nature, and at all seasons the male, after the postjuvinal molt, appears glossy black with the head and neck much bluer black than in the Rusty Blackbird.

Even in the winter female the rusty color is not sufficiently pronounced to create a marked difference between winter and summer birds, and at all seasons the female differs from that of the Rusty Blackbird, much as our plate indicates.

Bird-Lore's Twenty-second Christmas Bird Census

BIRD-LORE'S Annual Bird Census will be taken as usual on Christmas Day, or as near that date as circumstances will permit; *in no case should it be earlier than December 23 or later than the 27th*—in the Rocky Mountains and westward, December 20 to 25. Without wishing to appear ungrateful to those contributors who have assisted in making the Census so remarkably successful, lack of space compels us to ask each census taker to send only *one* census. Furthermore, much as we should like to print all the records sent, the number received has grown so large that we shall have to exclude those that do not appear to give a fair representation of the winter bird-life of the locality in which they were made. Lists of the comparatively few species that come to feeding-stations and those seen on walks of but an hour or two are usually very far from representative. A census-walk should last *four hours at the very least, and an all-day one is far preferable*, as one can then cover more of the different types of country in his vicinity, and thus secure a list more indicative of the birds present. Each report must cover *one day only*, that all the censuses may be comparable.

Bird clubs taking part are requested to compile the various lists obtained by their members and send the result as one census, with a statement of the number of separate ones it embraces. It should be signed by all observers who have contributed to it. When two or more names are signed to a report, it should be stated whether the workers hunted together or separately. Only censuses that cover areas that are contiguous and with a total diameter not exceeding 15 miles should be combined into one census.

Each unusual record should be accompanied by a brief statement as to the identification. When such a record occurs in the combined list of parties that hunted separately, the names of those responsible for the record should be given. Reference to the February numbers of BIRD-LORE, 1901-21, will acquaint one with the nature of the report that we desire, but those to whom none of these issues is available may follow the form given below. The date is important, and the species should be given, *in the order of the A. O. U. 'Check-List'* (which is followed by most standard bird-books), with, as exactly as practicable, the number of *individuals* of each species recorded.

Yonkers, N. Y. (to Bronxville and Tuckahoe and back).—Dec. 25; 8 A.M. to 4.30 P.M. Clear; 5 in. of snow; wind west, light; temp. 38° at start, 42° at return. Eleven miles on foot. Observers together. Herring Gull, 75; Bob-white, 12 (one covey); (Sharp-shinned?) Hawk, 1; . . . Ruby-crowned Kinglet, 1. Total, 27 species, about 470 individuals. The Ruby-crown was studied with 8 x 8 glasses at 20 ft.; eye-ring, absence of head-stripes and other points noted.—JAMES GATES and JOHN RAND.

These records will be published in the February issue of BIRD-LORE, and it is *particularly requested* that they be sent to the Editor (at the *American Museum of Natural History, New York City*) by the *first possible mail*. 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.—J. T. NICHOLS.

Notes from Field and Study

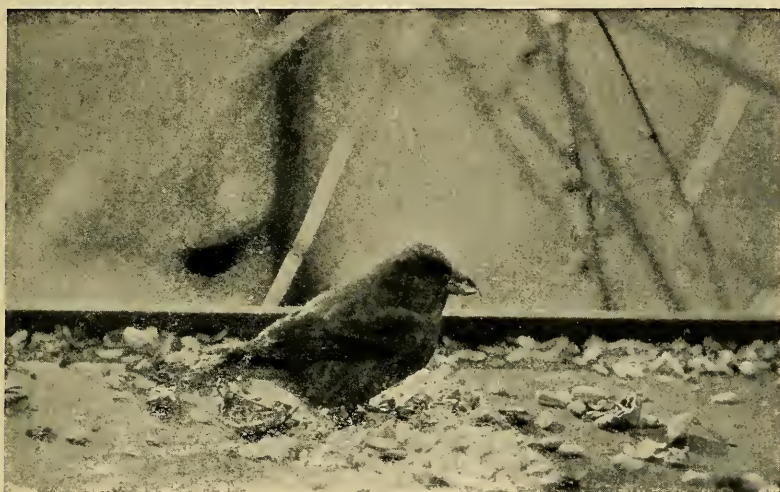
Ontario Notes

Located on the Canadian side of the Detroit River, we have maintained a feeding-station for birds for the past three winters. The first and second seasons we had only the Black-capped Chickadee, Downy Woodpecker, and the White-breasted Nuthatch. The winter of 1919-20 we had, in addition, Juncos, the Cardinal Grosbeak, Blue Jays, and five American Crossbills, two males and three females. The Crossbills showed practically no fear, and came intermittently for a month, gorging themselves on sunflower seeds.

age. The Warblers among them were utterly fearless, alighting on our hats, shoulders, and hands, pecking at the stone of my ring and accepting flies from our hands.

Among the birds was a bat (they seem to migrate), and a Sparrow Hawk flying with the ship made frantic efforts to catch the birds on the deck. As we approached within several miles of land, they all left hurriedly.

Last summer from one to three Sparrows would trail the numerous Robins on our lawn. Nearly every worm secured by a Robin would be instantly seized by the Sparrows



RED CROSSBILL

They remained feeding on our shelves for longer periods than any other birds we have ever observed, frequently over an hour at a time. We succeeded in taking a number of photographs of them, one of which is presented herewith.

In September, several years ago, on board the ore steamer *J. A. Farrell*, in Lake Superior, over 30 miles from any land, we awoke to find the decks of the vessel alive with birds, several hundred of them. We identified thirteen species, not including any doubtful young birds which were in all stages of plum-

age and made off with while the Robin would patiently hunt another one. This was while the Robins were feeding their young, who must have suffered in consequence.

The Sparrows follow the Cardinal to our feeding shelves, seeming to know they are immune while he is there. As he cracks grain, corn or sunflower seed, they seize upon every piece he drops and sometimes seize pieces from his mouth, which he does not resent.

We have tried, unsuccessfully, to decimate the Sparrows.—MARY D. PERLEY, *Ojibway, Ontario.*

Some Bird Observations During a Mild Winter in Central Oklahoma

The unusually mild weather of most of the past winter may have had something to do with the presence, in January, of three Sparrows that formerly we have seen only as spring and fall migrants, namely, on January 13, 1921 a White-crowned Sparrow, and three days later, a White-throated Sparrow and Vesper Sparrow. Most surprising of all was a Western Lark Sparrow, for these birds are normally summer residents here, arriving the last of March or first of April and leaving in September. On January 6, a warm summer-like day, I first discovered him, apparently in the best of spirits, but a week later, after a 4-inch snow, he looked rather forlorn, cuddling one little foot in his feathers while he ate grass seeds. On February 23, I again saw him near the same place, and this time he was singing the unmistakable song of his kind.

There were two snows in February, and they were the occasions of many bird guests coming to our feeding-stations, which until then had been patronized only by Plumbeous Chickadees and one male Downy Woodpecker. Texas Bewick Wrens surprised us by eating suet, bread-crumbs, and nuts; bird seeds were enjoyed by Juncos, Field Sparrows (perhaps the western subspecies), and a Lincoln Sparrow, while Cardinals liked all the eatables. It was a treat for our whole family to watch these fascinating visitors within a few feet of the window. One of the Juncos was curiously mottled with white spots on her head, back, and throat. We saw 'Speckles' February 7, 8, 15, 18, 19, 20, and 22. The Lincoln Sparrow came February 7, 8, 22, and 23; it was rather bellicose and drove the gentle Field Sparrows away. These last were the tamest, dearest little birds, and they paid for their feasts by singing most enchantingly on our grounds from February 12 till the middle of March.

Some of the migrants arrived this year as much as three weeks ahead of the dates last year, notably the Brown Thrasher, Vesper Sparrow, and Purple Martin. Others were about a week early, for instance, the Cowbird and Bronzed Grackle; but cold weather the

last of March seems to have delayed some species. As to nesting, a curious thing happened with a pair of Bluebirds and two pairs of Texas Wrens, for they built their nests in late February instead of the middle of March as usual, but they did not lay for several weeks, the first Bluebird's egg being found March 24, and as the Wrens still have eggs April 6, their date of laying could not have been much earlier. The Crows and English Sparrows we have observed are slightly later this year than last, for in 1920 we found four downy young of the former on March 28, and this year, five blind and naked young on April 4; while the first brood of half-grown English Sparrows was discovered March 20, in 1920, and not until April 3, in 1921. One pair of Western Mourning Doves are unusually early, having a full set of eggs about March 20. Last year we found no Robin nests till April, but this year two Robins were seen on nests March 23, and no less than six were incubating eggs the last day of this month.—MARGARET M. NICE, *Norman, Okla.*

Minnesota Migration Notes

Possibly an item in regard to date of fall migration in this vicinity may be of interest.

On August 20, the annual migration of Nighthawks occurred. I have noticed this on two previous years as occurring about August 15, when thousands went around this end of Lake Superior during the afternoon; all these noticed were within three-quarters of a mile of the Lake shore.

On September 18, the Blue Jays went south in force, hundreds flying through my yard.

On October 2, small unidentified birds went south in numerous flocks, edged about by hundreds of Hawks. This seemed to be the main migration of the smaller birds.

My home is about three-quarters of a mile from the lake, on the edge of the city, and all the birds above observed were seen between the house and the lake shore. Probably they had followed the northeast shore to avoid a long flight across the lake.—HOMER COLLINS, *Duluth, Minn.*

American Egrets in New Jersey

The appearance, in early September, of six American Egrets on the marshy banks of the Shrewsbury River has aroused an interest in water-birds among the bird students here, and their conspicuous size and white plumage did not fail to make them noticed by the children playing along the shore and by those rowing up the river.

We were watching from the opposite bank a Great Blue Heron cautiously walking along the shore lined with cattails, then wading in the water for fish, when, at a short distance, we could plainly see several large white birds. The little Italian boys, who have their playground here, informed us that they had been here for more than a week and that they were 'White Cranes.'

The following day we again watched carefully through our glasses and concluded, from the size, yellow bill, and dark legs, that the birds could be nothing but the American Egret, which doubtless have wandered north after the breeding season.

The six birds stood quiet on the shore, flying to a safer distance only as some boat passed by. Then we watched one walk up to the Great Blue Heron, and it seemed an association pleasing to both.

At this time of the year the birds are, of course, seen without their prized aigrettes, but their size and white plumage make them very striking.—ARLINE B. HOOKER, *Red Bank, N. J.*

Scarcity of Nighthawks

A note on the above in *BIRD-LORE* of July and August, by Mr. Fred J. Pierce, drew my attention to the deplorable fact that it is not only in this district of the Arrow Lakes, B. C., that Nighthawks are becoming scarcer.

I came to this country in May, 1913. That year Nighthawks were especially abundant. In the evenings, and even during hot summer days, one could hardly look at any point of the sky without seeing several represented by small specks, floating high up in the azure vault. On June 27 of that year, I spent the night in Whatshan Valley. After dark the air seemed alive with these birds. One heard their cries proceeding from every direction,

accompanied by a continual drumming—the noise emitted by the bird swooping downward. That fall a vast number of them migrated south, and we looked forward to seeing them return in strength the following spring, but were wofully disappointed. In 1914, very few visited these parts, and the same may be said of subsequent seasons. In the evenings three or four might be seen.

Here the falling off in numbers was both very marked and very sudden. Appearing in vast numbers in the spring and summer of 1913, in 1914 they had almost reached the vanishing point, and this scarcity has continued. Perhaps there were a few more of them here this summer than in 1914 and the following lean years, but it is a very slight increase, if any.

What caused this sudden diminution. I have proof that forest fires cause great havoc with the eggs and young, and the smoke hanging about a district during and after a fire causes the birds to temporarily leave the neighborhood, but forest fires cannot entirely account for the great reduction in numbers of this graceful and attractive bird.—J. E. H. KELSO, M.D., *Edgewood, Lower Arrow Lake, B. C.*

Olive-sided Flycatcher on Long Island

On Saturday, September 3, 1921, I had the good fortune to see an Olive-sided Flycatcher. It came to our telephone wire, not 10 feet from our piazza, and stayed from twenty minutes to half an hour. We studied the bird well, even using our field glasses, though it was so close. The fluffy feathers on the flank were very conspicuous. There were wing-bars. I am positive of our identification. I saw the bird again the next day, but not since.—(Mrs.) C. M. LOWERRE, *Southold, N. Y.*

A Friendly Wood Pewee

A friend and I had been for a cross-country walk and were coming down a hillside, watching the birds, when my attention was suddenly attracted by a Wood Pewee, which flew to a dead twig, not 3 feet above my head. I called my companion's attention to it, and as I spoke the bird darted at my head, coming

so close that I instinctively swerved. He flew back to his perch, and in a minute made another dart, almost brushing me with his wings. This time we realized that he flew at us purposely and for a second feared we might be stepping on a little bird. We moved, however, and the Pewee moved also, this time alighting on the ground almost at our feet. He seemed utterly unafraid, gobbling a green bug or two as though showing his accomplishments and cocking his head to look at us in most friendly fashion. Again and again he circled around us or flew to our feet, until, finally, I knelt, and, talking to him gently, held out my hand with one finger outstretched as a perch. For a few seconds he fluttered around me, then made a dart and pecked my finger with his sharp little bill. Three times this happened, and each time he alighted not more than a foot or two from me. After more advances he flew to a high tree farther down the hill and we thought he had gone. While we stood watching a Warbler, however, he returned and this time brushed my finger with his wings. Our little flirtation (he really did flirt, always keeping near me and yet never perching on my finger as I coaxed him to do) must have lasted fully fifteen minutes, and it was only the fact that

I could not stay longer that ended our 'affair.' He was still watching me when my companion and I separated and I continued my way down the hill.—BEATRICE SAWYER
ROSSELL, *Albany, N. Y.*

Robin and Snake

A few weeks ago my attention was attracted by the actions of a female Robin, apparently having difficulty in the killing of a large worm. On my approach she flew up in a neighboring apple-tree, carrying a *snake* in her bill! She soon flew down onto the lawn again when, after some vigorous blows of her bill, the snake was killed. It proved to be a common garter snake and measured a trifle over 10 inches in length, with body well matured. Its neck had been broken. Is this unique? While I handled the snake the Robin perched on a fence about 10 feet away, intently watching me.

Being much interested, I had proposed awaiting further developments, but was unavoidably called away, and on my return, some time afterward, the snake could not be found. Query—Did the Robin take away the dead snake for food purposes?—W. A. MARSHALL, Rear Admiral, U. S. N. (Retired), *Jamestown, R. I.*

THE SEASON

XXVIII. August 15, 1921, to October 15, 1921

BOSTON REGION.—Evidences of the beginning of an unusually early autumn migration were apparent at the end of the period covered by the summer report from this region. During the last two months the birds have continued to pass through in an almost uninterrupted stream, many species arriving before their average dates and some species appearing in numbers far above normal. Perhaps the most striking event of the migration was the enormous number of Blackpoll Warblers that, day after day, during September, passed southward, making leisurely, but steady progress through whatever country afforded food and protection. A Blackpoll migration of such prominence has

not been noted here for several years, and its magnitude is especially surprising this autumn because the bird was poorly represented in its passage northward last spring. On four days in September, the 18th, 19th, 20th, and 24th, the Blackpolls sang freely, an occurrence of sufficient rarity to merit mention. It has often appeared to me that unusual behavior of this kind is not a local departure from the normal, but has its origin in some condition at work over a wide area.

Juncos and White-throated Sparrows came early and are still well represented. In mid-September a flight of Towhees appeared in remarkable numbers and surpassed any migration of this bird in recent years. During

the first half of October, Yellow-bellied Sapsuckers were unusually common. Promptly, on October 1, the Myrtle Warbler replaced the Blackpoll, and the migrating Bluebirds began to fly overhead in the early morning, giving their soft call which is as characteristic of October as is the 'wink' note of the Bobolink in the early hours of daylight in August.

There has been *no killing frost* to October 18.

On October 16, in the town of Belmont, Mr. George Nelson and I had an experience which I wish we might have shared with bird-lovers. The morning was a favorable one for observing birds—warm and sunny, with no wind—and twenty-five to thirty species came almost immediately under notice, but it was soon apparent that the bird most numerous represented was the Ruby-crowned Kinglet, a bird which is usually met with singly, or at most, not over two or three together. But here were half a dozen in the same tree and twice as many more within hearing, many scolding all about us and several singing a short variation of their song. We estimated, quite conservatively, that there were a hundred Ruby-crowns within a few hundred yards of each other, and even then we did not determine the limits of the gathering. Mr. Brewster says in 'The Birds of the Cambridge Region,' p. 382, "the . . . little birds are seldom very numerous, it being unusual to meet with more than three or four in the course of a single day; on exceptional occasions, however, I have known as many as a dozen or fifteen to be noted." I have never heard of an exception to this statement before.—WINSOR M. TYLER, *Lexington, Mass.*

NEW YORK REGION.—Up to about September 20, south-bound land-birds were recorded from near New York at very early dates. The height of the Blackpoll Warbler wave came about September 14, and a few Juncos, White-throated Sparrows, and Brown Creepers had appeared here and there before the 20th. On about the 20th, however, the pendulum swung in the other direction, thereafter birds being late rather than early. Migration was slack from September 20 to October 3, but between the 3d and the 8th a

wave of birds of unusual magnitude passed through, perhaps reaching its crest on the night of October 4 to 5, when many Thrushes arrived. Although their advance guard was so early, the main flight of late Sparrows had yet to reach us in mid-October, White-throats and Juncos having only just become common.

Except for casual occurrences, the Henslow's Sparrow at Bridgehampton, L. I., September 11, and Least Bittern at Shinnecock, September 12 (C. Johnston); the Yellow Warbler and Yellow-breasted Chat in Central Park, October 5 (L. Griscom); four Rose-breasted Grosbeaks, Van Cortlandt Park, October 10 (L. N. Nichols), appear to establish latest dates for the New York region.

As regards the abundance of various species, Tree Swallows were much in evidence throughout this period, not occurring in very large flocks for the most part, but streaming steadily overhead for hours. Sapsuckers were unusually numerous, after the early October flight. Both species of Kinglets seemed more than normally numerous, so the scarcity of Golden-crowns, extending over several years, may be considered at an end. Myrtle Warblers became abundant on the morning of October 7; Red-breasted Nuthatches were universally distributed, but the writer observed no great numbers anywhere, and failed to find them in a favorable Long Island locality on October 16.

On September 22, Mr. F. Kessler secured a Hummingbird which had flown into one of the laboratories of the American Museum of Natural History. It squealed angrily and continuously while he held it in his hand, and when liberated at an open window lost no time in taking its departure with the direct, rhythmical, slightly undulatory flight which migrating Hummingbirds employ.

The extent and character of the Blue Jays' migration is not fully known. Beyond a question, this bird is migratory, and yet certain individuals in this latitude are strictly resident. Some years ago a pair nested early, close to the writer's house in Englewood, N. J., which he is convinced were among several birds that had been fed regularly under his window during the preceding

winter. The species does not ordinarily occur at Garden City, Long Island, which is an isolated stand of shade trees, surrounded by open plains unsuitable for them. Blue Jays do occur, however, in wooded areas some mile or two to the north and to the south. On the morning of October 3, and again on October 8, two or three straggling Blue Jays were seen flying over, headed South, unquestionably migrating birds.

A Mockingbird was observed at Garden City on October 9. The peculiar status of this bird on Long Island has been worked out from past records as follows. Casual transient in May (May 10); rare but generally distributed early fall transient, August 10 (1920, Napeague Beach, W. T. Helmuth) to September 9 (1917, Mastic, J. T. Nichols); less rare local winter resident October 1 (1890, Thurston, 'Warbler' for 1913) to March 25 (1917, Garden City, J. T. Nichols).—J. T. NICHOLS, *New York City*.

PHILADELPHIA REGION.—The weather for the period under consideration has been anything but seasonable, unusually hot days prevailing. The temperature for September averaged warmer than for twenty-one years. October has been quite fall-like to date (October 15) and the wooded sections are putting on their autumn dress, though many trees still are green. The first frost occurred October 13.

About the usual number of Gulls, Terns, and shore-birds were observed at Stone Harbor, N. J., August 14. Among the latter were 2 Piping Plovers, 1 Knot, and 20 Willets. Two weeks later, at the same point, with Mr. Pumyea, this bunch of Willets had apparently been reduced to one bird, and that one was crippled. The rest of the birds no doubt had 'passed on' via the shotgun route, as the Yellow-leg season opened on the 15th. Two Turnstones were noted on this occasion. Of course, the comparative abundance of the shore-birds cannot be judged by two trips, so it may be well to state that Dowitchers, Yellow-legs, Willets, and Curlews have been reported to have been exceptionally plentiful.

During September there seemed to be uncommon scarcity of birds, especially War-

blers and Sparrows. On September 11, at Fish House, N. J., no native Sparrows were seen, but 1 Red-eyed Vireo, 1 Black-and-White Warbler, and 1 Black-throated Green Warbler; at Cape May, N. J., September 18, (an all-day trip), 2 Chipping Sparrows, 1 Song Sparrow, 1 Towhee, 1 Myrtle Warbler, and 1 Maryland Yellow-Throat; at Cape May, N. J., September 25, 4 Savannah Sparrows, 2 Song Sparrows, 1 Towhee, 4 Yellow Palm Warblers, and 1 Maryland Yellow-throat. Hawks, which are quite certain to be numerous at Cape May by the last week of the month, were also absent. In fact, the only refreshing sight of the day was a flock of perhaps 10,000 Tree Swallows which swarmed along the wires and over the tops of the bayberry bushes. Where were the birds? Had they sought out the more quiet and shady nooks to avoid the excessive heat? It is quite probable, and so, many were overlooked.

With October came the great rush of later fall birds, some appearing in greater abundance than normally. The Ruby-and Golden-Crowned Kinglets, the erratic Red-breasted Nuthatches, and the Brown Creepers were among these. On October 3, a Brown Creeper worked on the trunk of a poplar tree here in the city for a half hour, never going farther up than the lowest branches, then dropping to the foot to repeat the operation. After the Creeper left, investigation proved the bark of the tree to be infested with a dark-colored aphid. Every day since, Brown Creepers have been seen hitching their way up the trunk of this tree. Evidently, the aphid is considered a delicate tidbit.

A number of birds have been somewhat late passing South: Green Heron, October 11; Indigo Bunting, October 12; Redstart, October 12; Tree Swallows, October 16; Ovenbird, October 16 (all at Camden); Ruby-throated Hummingbird, October 9 (Cape May).

Raptors were abundant at Cape May October 9; Turkey Vulture, 40; Marsh Hawk, 1; Sharp-shinned Hawk, 10; Cooper's Hawk, 1; Broad-winged Hawk (?), 25 (too high to positively identify); Sparrow Hawk, 3; Osprey, 6; Bald Eagle, 2; Duck Hawk, 1. Two Pectoral Sandpipers were noted the same day.

The fall wild fowl migration is well under way. On September 25, 2 Pintails were seen and on October 9, long lines of Scoters streamed down the coast. On October 15, a newspaper reported a thousand Canada Geese on the beach at Cape May. Twenty-five Pied-billed and one Horned Grebe were noted at Fish House, N. J., on October 15.—JULIAN K. POTTER, *Camden, N. J.*

WASHINGTON REGION.—Ornithological interest about Washington during August and September, 1921, centered chiefly around an unusually early migration of northern birds. The chief autumn migratory movements in this vicinity take place during the period extending from the middle of August to mid-October, and while the general time of this migration has been practically the same this year, many of our transients and winter visitors have been earlier in their first southward movements. This was particularly observable among the Warblers, for some of these came in August, far ahead of their normal appearance. Such were the Chestnut-sided and Golden-winged Warblers, noted at Chevy Chase, D. C., August 13, by Dr. A. Wetmore and Mr. B. H. Swales; and the Canadian Warbler, observed at Plummer Island, Md., on August 14, by Dr. Wetmore. Furthermore, one Warbler broke all former records for early appearance—the Bay-breasted Warbler, found by Mr. B. H. Swales at Chevy Chase, D. C., on August 17, the previously earliest autumn arrival of which is September 1, 1896. Still another, the Myrtle Warbler, seen on August 14, at Alexandria, by Miss Katharine H. Stuart, was a full month in advance of its previously earliest arrival, September 14, 1918, except for a single record of August 7, 1859.

Two other species were reported earlier than ever before in the autumn: the Lesser Yellow-legs, seen August 15, at Hunting Creek, Va., by Miss Katharine H. Stuart, the hitherto earliest record of which is August 21, 1894; and the Philadelphia Vireo, found on September 4, by Dr. A. K. Fisher, at Plummer Island, Md., this being three days ahead of its formerly earliest record of September 7, 1919, made also by Dr. Fisher.

Induced perhaps by the very warm weather

of September, at least three summer residents tarried longer than ever before. These were the Barn Swallow, seen on September 23 by Mr. F. C. Lincoln along the Anacostia River, advancing by two days its hitherto latest record of September 21, 1920; the Purple Martin, noted also on September 23 by Mr. Lincoln in the same locality, the latest previous occurrence of which is likewise September 21, 1920; and the Yellow-breasted Chat, reported by Mr. C. H. M. Barrett, from Anacostia, D. C., on September 29, one day later than its very latest previous record, September 28, 1906.

The Pileated Woodpecker, always a rare species about Washington, was seen on September 11, by Dr. A. K. Fisher, on Plummer Island, Md. This locality is one of the few in our region from which this bird has been reported during the last twenty-five years, and indications point to its breeding in the neighborhood of this island.

The American Egret was reported by Dr. A. K. Fisher, on the Potomac River, near Washington, on August 29. This Heron is apparently less frequent of late years than formerly, although seen at least once practically every summer. The Little Blue Heron was noted on the Potomac River, in the vicinity of Washington, by Dr. A. K. Fisher, on August 5, but did not appear to be as common this summer as usual. The Red-breasted Nuthatch, which was practically absent from Washington during the autumn and winter of 1920-21, has already put in an appearance, and, it is hoped, will be normally numerous this winter.

The Bobolink, here regarded as one of the most popular autumn game-birds, was present in exceptionally large numbers during the first two weeks of September, and several thousands were observable almost every day on the marshes of the middle portion of the Anacostia River. By the 25th of the month, however, they had practically disappeared, leaving only a few scattered individuals to represent the former great flocks.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

OBERLIN, OHIO REGION.—An exceptionally dry summer was followed by an excep-

tionally wet August and September, so that the vegetation took on a fresh growth. Frost held off until the night of October 12. Even this was not a killing frost, so that at the end of the period covered in this report there was no thinning of the foliage.

The first marked influx of migrants occurred about September 1. Warblers of many species were present during the interval between this first wave and the beginning of the storm period which culminated in the frost of October 12. On the 9th, they were especially numerous. A few White-throats and White-crowns and Hermit Thrushes arrived about the 7th, but the bulk of these species came on the front of the storm which began on the 10th and ended on the 12th. One of the interesting features of this storm, which was accompanied by high wind and some pellet-snow, was that it seemed to drive the smaller birds away from the lake-shore woods and thickets well inland. Many of the Sparrows and most of the Warblers, except the Myrtle, and the Hermit Thrush were driven out of the region entirely. But no new migrants came in. Chimney Swifts survived the storm, and were in their usual numbers after it had passed. In the two preceding years the Swifts have gone south by the middle of September. This year most of the Swallows had left the region by the middle of September, only stragglers remaining.

On the whole the birds have reflected the weather—remaining later than is their custom, very likely because they have found food abundant in the dense foliage, and because they have not felt the pinch of cold. But the dense foliage has made bird-study difficult.—
LYNDS JONES, *Oberlin, Ohio.*

CHICAGO REGION.—This region can report three nesting records, even at this late date. Mr. B. T. Gault writes, on August 21, "Saw a female Cardinal feeding a young bird just out of the nest. An old and apparently abandoned nest just shortly afterward caught my eye and thinking it might have been occupied by the Cardinals, out of pure curiosity I inspected it, and in doing so flushed a female Towhee from her two fresh eggs." Dr. R. D. Paul reports a Mourning Dove's nest with young at Palos Park on September

11. Every year I hear of one or more late Dove's nests, and for this reason believe that the opening of the hunting season on these birds should be extended until at least September 15; it now opens September 1 in Illinois.

Among the shore-birds the most important record is that of the Buff-breasted Sandpiper. Mr. G. P. Lewis observed two at the Lincoln Park beach on August 23 and September 4, 5, 11, and 15; Mr. B. T. Gault also studied a bird at close range on September 9; and the writer took a female at Beach, Ills., on October 2. These appear to be the first records for this state since 1898.

Other shore-birds reported from Lincoln Park by Messrs. Gault and Lewis are: Red-backed Sandpiper, September 4; Knot, September 11 and 13; Golden Plover, September 13, 18, and October 2. Pectoral, Least, Semipalmated, and Spotted Sandpipers, Black-bellied and Semipalmated Plover, Turnstones and Sanderlings were seen here during the latter part of August and all through September. Solitary Sandpipers were reported twice from the Desplaines River and Upland Plover from Palos Park. A flock of Black-bellied Plover has been at Beach since August 28, when two males in summer plumage were seen. On September 17, I crawled behind a log and watched twelve of these birds, three adults and the rest birds of the year. They were last seen on October 9. Besides the Buff-breasted Sandpiper, Sanderlings were the only migrant shore-birds noted here. Two Semipalmated Plover and a small flock of Semipalmated Sandpipers stayed on a mud flat behind a breakwater in Evanston from August 21, to September 13. Other birds were occasionally found with them, some Spotted Sandpipers, once a Sanderling and again a Green Heron in the grass nearby.

The first Warblers were reported August 21, from River Forest, nine species being seen, including one Golden-winged Warbler. The 28th at Beach the writer found Baybreasts, Blackpolls, and Redstarts common, with a few Black and White and one Magnolia. August 31, Tennessee, Blackburnian, and Wilson's were added to the list from Glen Ellyn. September 4, a Prairie Warbler was seen at Willow Springs (G. P. Lewis). They

continued to pass through during September in fairly even numbers, and October 16 found a few Myrtle and Palm still lingering. A Warbling Vireo was reported in Humbolt Park August 30 and 31, and Philadelphia and Blue-headed Vireos there September 23 (B. T. Gault); also a Blue-headed at Palos Park on the 25th.

The rest of the migration moved along as usual. A little cold snap started some of the Ducks flying but at this writing the weather is warm again and no more are coming in. The third week in September saw Kinglets, Brown Creepers, Juncos, and Hermit Thrushes here and the next week White-throated and Tree Sparrows and Yellow-bellied Sapsuckers appeared. The Red-breasted Nuthatch, which is an irregular migrant, is rather common this fall. A large migration of Sharp-shinned Hawks appeared on September 24, seen at Beach by Dr. C. W. G. Eifrig and by the writer at Evanston. There were probably a few Pigeon Hawks among them; one found dead at Beach, October 16. Numerous Short-eared Owls seen at Beach during October, also one at Lincoln Park.

More uncommon species reported are: Caspian Tern, Lincoln Park, September 5; Harris's Sparrow, near Jackson Park, September 22 (G. P. Lewis); Bicknell's Thrush, Highland Park, September 22 (H. K. Coale); Barn Owl, Palos Park, September 22 (Dr. R. D. Paul); Tufted Titmouse, River Forest, September 12; Montana Junco, September 23 Humbolt Park; Double-crested Cormorant and Duck Hawk, October 2, at Lincoln Park (B. T. Gault); Purple Finch, August 28, and Short-billed Marsh Wren, October 2, at Beach (C. C. Sanborn).

The northern birds seem to be coming a little earlier this year; Crossbills were seen at Beach on August 21 by Mr. S. S. Gregory and on October 2 by the writer; also Pine Siskins there on October 9. The Red-headed Woodpecker generally stays all winter when the acorns are plentiful, as they are this year, and they are reported from the dunes to be busily storing them under the bark and in the cracks of the trees.—COLIN CAMPBELL SANBORN, *Chairman of Report Committee, Chicago Ornithological Society.*

ITASCA STATE PARK REGION, MINN.—August 15 to September 13. The weather throughout this period continued unusually warm, and no severe frost occurred as is usual here at this time of year. There were only two or three really cool days and only one cold night, August 20, when the temperature fell to 34°. However, by September 1, in spite of the absence of frost, a black ash tree here and there along the shore of the lake showed a tinge of yellow, early for this tree, which is usually one of the last to turn; the long-beaked hazel bushes were shedding their russet leaves; the giant brakes, so abundant in the undergrowth of the forest, were yellow and brown; and an occasional vivid patch of brilliant scarlet revealed the Virginia creeper in its autumnal glory. The last days of August and early September brought the usual gorgeous display of wild asters of many kinds and many hues, so we come just at this time when most of the other wild flowers are passing away. An especially beautiful and densely flowered violet-blue species filled all the open places, while the forest shades harbored the large-leaved aster, the great sterile leaf-clusters of which are such a conspicuous feature of all the woodland undergrowth in this region. The dainty rose-colored gerardia and the bright blue lobelia were in full bloom in mid-August on the sandy shores of De Soto Lake in the southern part of the Park. They, with a few other late-flowering plants, form a beautiful fringe just above the water line. The wild rice was ripe and falling by August 30, and the abundant yield this year promised a goodly feast for the birds.

By August 15 all the local breeding Black Terns had gone. Several through migrants were seen a little later, the last on the 22d—all in the white plumage. Crested Flycatchers so common here, were to be encountered in mid-August in little parties of six or seven, evidently broods that had kept together, wandering through the woods and being partly cared for by the parents. A male Connecticut Warbler was seen on August 15. We were too late this year to resume our hunt for the nest of this elusive bird which may be found in June breeding in nearly every tamarack and spruce swamp. On

August 16 Chimney Swifts and Tree Swallows were migrating, the latter in flocks feeding over the rushes and rice along the lake-shores. Red-eyed Vireos were still feeding broods of young, out of the nest, as late as August 19. On the latter date, Sapsuckers, old and young, and one Hummingbird were seen drinking sap from borings in several birch trees in the same grove where they were found similarly engaged two years ago. The trees then in use, large birches tapped 25 feet from the ground where the first limbs were given off, are all dead now.

The first advance couriers of the great southward movement of Nighthawks that annually takes place through the Park arrived on August 20. From that date until the 29th they were passing daily in even greater numbers than usual, and on several days there were almost unbroken flights from early morning until dark. On the evening of the 24th a gathering of several hundred assembled over the larger part of the lake and until dusk the air was filled with the great, whirling mass of birds.

About August 22, Ducks began to appear on Itasca Lake, where there had been none since our arrival, August 1. From this time they increased in numbers, chiefly Wood Ducks and Mallards with a few Blue-winged Teal, but were at no time numerous. They, in common with flocks of Red-winged Blackbirds that came about the same time, fed in the fringe of wild rice that encircled the lake. Loons were much less frequent this year than formerly. The first seen on the lake was an old bird accompanied by a half-grown young one on August 17. An immature Red-necked Grebe was seen on the 23d, the first record for this species in the Park.

A single Yellow Warbler was seen on August 19, the first time that it has been found in the Park during the summer months. It occurs sparingly in the spring migration, and it is a surprising fact that a bird so abundant everywhere in the state should be entirely absent during the nesting season from this large area where there are many places well suited to its wants. The Chestnut-sided Warbler, so similar in habits, is a regular breeder.

On August 24, a family of four Ospreys were seen at Elk Lake, the young birds evidently having only recently taken wing as they occasionally returned to the nest to rest there awhile. On the same date, a lone Great Blue Heron was fishing on the lake shore, probably a migrant from farther north, as the inhabitants of the two considerable heronries in the Park had all left before August 1.

One day late in August, sixteen Turkey Buzzards were seen soaring in company, which number about represents the total late summer population of this bird for the Park. Year after year the count varies but little. They are very local and sociable in their habits at this time of year, and though scattered somewhat during the day they assemble nightly to roost together in the trees on one particular point.

On the last day of August came the first migrating flocks of Robins and from this time until we left, September 13, the Park was full of them. After September 6 they were joined by countless Flickers, which, as they too fed on the ground, were often mingled with the Robins as though flocking together.

Four belated Martins were seen flying about over the lake on September 7.

MINNEAPOLIS REGION.—September 14 to October 15. The fall thus far has been mild, with no killing frost in this locality. From October 3 to 11, the temperature fell at night almost to the freezing point and there were fairly heavy white frosts sufficient to kill outside of the city such sensitive garden flowers as dahlias and scarlet sage, but the weather since has been warm and almost summer-like.

Circumstances have prevented the writer being much afield this fall, but reports from others indicate that the migration has continued, as it began, ten days or more ahead of the normal. Two Blackburnian Warblers at Minneapolis, on July 31, reported by Mrs. Judson L. Wicks, could be accounted for only as early south-bound migrants, as this bird breeds in Minnesota only in *Canadian* associations. She also reported newly hatched young Song Sparrows as late as August 13.

Local Ducks, mostly Mallards and Blue-winged Teal, were plentiful on the opening days of the season and limit-bags were made by hunters all over the state. But after the first two or three days' widespread bombardment, most of the Ducks not killed left, and since that time the shooting has been rather poor. A few Canvasback Ducks have been at Heron Lake recently but for the most part the northern birds have not come down yet. Mr. Alfred Peterson, a correspondent at Pipestone, in southwestern Minnesota, wrote October 10: "This is a remarkable year for Widgeon in South Dakota. I never saw so many of them before." There are no recent records of this bird nesting in Minnesota and it is commonly regarded here as a transient.

On October 11, the first White-crowned and Harris' Sparrows and Golden-crested Kinglets were seen at Lake Minnetonka by Mr. F. W. Commons. White-throats had been abundant for some time.—THOS. S. ROBERTS. *Zoölogical Museum, University of Minnesota, Minneapolis, Minn.*

KANSAS CITY REGION.—Terns, Pied-billed Grebes, two Cormorants (Double-crested), numerous shore-birds, together with a few straggling Pintails and Blue-winged Teal, were recorded by William Andrews during early and middle August. From his favorable station in the Eton Bend of the Missouri River, below Kansas City, he was able this year to record an unusual invasion of Little Blue Herons, a southern species seen here only for a limited period between August 15 and September 15. Greater numbers than usual of both mature birds and the pure white juveniles were seen. The first to appear were a few of the immature white birds on August 10, followed during the next week by both old and young in some numbers. This early date was also marked by a flight of Least Terns (happily increasing), and numbers of Great Blue Herons, eighteen being seen feeding on a bar at one time. Between August 11 and 17 Kingbirds were numerous, and though insect prey was varied and abundant, these birds preferred the dogwood berries beloved of most of our common song-birds. Mr.

Andrews states that this flight of Kingbirds devoured the entire crop of dogwood berries on the wooded bluffs between Courtney and Eton, leaving the hordes of later-arriving Robins to seek elsewhere for their favorite fruit or eat less desirable fare. From August 19 to 24, mixed flocks of Terns were numerous on the river. Mr. Andrews knows these birds well and identified the Caspian, Common, Black, and Least, and thinks it likely that Forster's were among them. Between August 25 and September 9, small Grebes, several Terns, Herring Gulls, Pintails, Blue-winged Teal, Bank and Barn Swallows, Martins, Blue Jays, and Bluebirds formed the procession, and on the last named date migrating Hawks of several species passed. On the 11th, Mr. Andrews noted 78 flocks of Blue-winged Teal of from 10 to 100 birds to a flock. On the 18th, the Pelicans (White, of course), nearly a thousand strong, arrived about on schedule. The first few Mallards and a flight of Marsh, Pigeon, and Red-tailed Hawks were noted on the 18th. During the next ten days there were numerous flights of all the more common water- and shore-birds and Hawks.

Mr. Andrews states that on September 29 there were rafts of Blue-winged Teal in sight of his cabin, which he estimated to contain 10,000 birds. Knowing the habitual and safe conservatism of this observer it can well be imagined that many more than this number were present.

The first flocks of Mallards of any size came in on October 1, and the first Canada Geese and Widgeon (Baldpate) were noted on the 8th. Mr. Andrews states further that he has never before seen such great companies of migrating Blue Jays as during late September and early October of the present year; and that the Ruby-throat remained later this fall than for many years past.

Notes for the current period other than those furnished by Mr. Andrews are indeed meager. The writer noted that the persistent Dickcissel was not heard singing after the second week in August. This seems early but records for previous years are not available. It was also noted that the last bird of the prairie regions to become silent is Bell's Vireo, in song until late September.

On only one night this fall were conditions favorable for hearing night migrants. The evening of September 4 was warm and still with low-hanging rain-clouds, and about 9 o'clock the piping of shore-birds and the squawking of Herons began, with occasional notes of other birds interspersed at long intervals. The passing throngs were traveling over the prairie regions and were heard until long after midnight.

From September 16 to 19, the usual heavy migration of Nighthawks, Robins, Meadowlarks, Bluebirds, and other common species occurred, with the Robins singing and cackling as in spring.

The first migrant Sparrows noted were several flocks of Song Sparrows on October 10. This is about an average date. The fine weather continues in this region, and the early cold storms in the North have caused no unusual or noticeable effect on migration this far south.—HARRY HARRIS, *Kansas City, Mo.*

DENVER REGION.—The past eight weeks have given the writer some pleasant surprises in the bird line in this region.

A Red-naped Sapsucker was seen in a park adjacent to his home on October 8 and 9. This subspecies is more or less common between the foothills and timber, but is seldom seen on the plains early in October, hence the surprise over finding it here at this time. The writer has never before detected this bird within Denver, and knows of no previous record of its occurrence in the city. The Creeper (Rocky Mountain form) is not common in Colorado, and, as a rule, comes down from the 'hills' only in extremely cold weather. The writer's records show that he has noted it in this region only during the winter months, December, January, and February. Nevertheless, one was seen in Cheesman Park (Denver) on September 27, another on October 9 and two on October 12, all in the same park. While watching the bird of October 9, the writer was astonished to hear it sing, the song being somewhat similar to that of the Ruby-crowned Kinglet. He had never before, in more than forty years' experience, heard this species sing. The song heard this fall was somewhat similar to that described by Brewster.

Waxwings are Colorado's most erratic visitors. The writer has seen the Cedar Waxwing in Colorado on but four different occasions since 1893, to wit, in 1906, 1919, and 1920. On September 25, six individuals of this species were seen in his yard, where they lingered a few minutes and disappeared, and have not yet reappeared. All were young of the year. On the same date, two Poorwills were flushed in Cheesman Park. This is noteworthy because the writer has never before seen the species in Denver during the fall migration.

Each fall the Robin migration through this region has been more and more impressive in demonstrating that this species passes over the area in successive great waves. On August 26, most of our local Robins had apparently departed. The striking scarcity of Robins noted at that date continued until September 1, when the species appeared in large numbers over night, especially in our city parks. In this wave there were a great many individuals patently to be classified as of the eastern subspecies, though the western form was, naturally, in the majority. Then, for a few days (until September 7), Robins were again relatively scarce, but from the 7th to the 10th, each day brought many more. Near the writer's home there is an old neglected cemetery, located on one of the highest points in the city; from it one has an unobstructed view for miles to the south, the west, and the north, in fact; the eye here can follow a chain of mountain peaks from Pike's Peak to Long's Peak, a line more than one hundred miles in length. In the late afternoon and up to evening twilight Robins in flocks, never very large, can be seen passing constantly over this eminence, winging as true a south course as though compass-controlled. During each Robin wave this fall this highly interesting sight has been spread before the eye. The days of September 21, 23, 25, 29, and 30 saw great assemblages of Robins feeding in our parks during daylight, with the usual southward departure at twilight.

In these last Robin waves none of the eastern form was noted. October 1 brought decidedly lower temperatures; no Robins were seen where there had been hundreds.

The Yellow Warbler must travel on a very rigid schedule; for many years past its latest date in Denver has been August 29, or 30; this year it was August 31. The Black-headed Grosbeak is often seen here as late as September 10; this year all seem to have left by August 28.

Warblers have been very scarce here this fall: the Pileolated was seen on August 29, and on September 4, and 25; Townsend's on September 30; Virginia's on September 8; Orange-crowned on September 24; Audubon's on several days during the last week of September and today (October 15). All these individuals were seen in our parks, and on October 8, the writer saw an Audubon's Warbler in the heart of the city on some trees opposite the U. S. Mint. And a single Ruby-crowned Kinglet was noticed in the same trees on September 26, attention being attracted to it by its weak attempt at its summer song.

Our Thrushes have been irregular in appearing in the region; the Olive-backed arrived on September 8 and was again seen on October 1, while Audubon's Hermit Thrush was noted on September 25 and on October 14.

Single individuals of the following species or subspecies were detected in or about Denver as follows: Cassin's Vireo on September 8; Rock Wren on September 10; Green-tailed Towhee on September 11; and Townsend's Solitaire on September 8.

The Gray-headed Junco arrived here for its usual winter residence on September 24, and the Pink-sided Junco not until October 8; these two being the only winter Juncos which have reached us so far. A Slate-colored Junco was seen on October 9; this species is more or less a straggler in Colorado.

The House Wren was last noticed on September 13, the Plumbeous Vireo on September 21, the Wood Pewee on September 23, the Western Tanager and the Warbling Vireo on September 10.

Bronzed Grackles were seen feeding on the fruit of the so called 'russian olive,' much to the writer's surprise, as this fruit is passed over by most, if not all of our other birds.

The season has been one of unbroken clear weather, with cool nights, and with no

precipitation except a slight fall of snow on the night of October 6; all traces of this had disappeared by the following night. The writer has seen more different species here during the past eight weeks than he expected to encounter considering the mild weather, but fewer individuals of all sorts except Robins.—W. H. BERGTOLD, *Denver, Colo.*

SAN FRANCISCO REGION.—The withdrawal of summer birds seems practically complete; only an occasional Allen's Hummingbird contests the right of the Anna's to corner the supply of nectar. The Pileolated Warbler was last seen September 5, the Russet-backed Thrush, September 12, and the Black-headed Grosbeak and Western Flycatcher, September 21. There is still a possibility, however, that the Flycatcher and the Warbler may be recorded again.

The winter birds so far noted are Townsend's Warbler (September 13, Dr. Grinnell), Golden-crowned Sparrow (September 28), Audubon's Warbler (September 29), Hermit Thrush (September 29, Mrs. Kelly), Intermediate Sparrow, Sierra Junco, Ruby-crowned Kinglet, and Sharp-shinned Hawk (October 1, Mr. Storer), and Fox Sparrow (October 2).

Among the transients seen were the Lewis's Woodpecker (October 1, Mr. Strong), Western Tanager (September 4), and Western Gnatcatcher (September 29). Unusual birds seen on the campus of the University of California were the Barn Swallow (August 24), and the Western Belted Kingfisher (August 20 and September 7).

Mrs. Kelly's notes on the shore birds in Alameda show that the main migration of Curlews and Semi-palmated Plovers began July 19 and ended about August 29. Willets, seen first on July 24, are still plentiful on October 11, the flocks running up to sixty. Marbled Godwits came in about July 29, but were most abundant during September. Dowitchers were seen first on July 31 and were numerous until September 26. Western Sandpipers have the longest season. They were seen first on July 19 and continued abundant throughout the period. The first Red-backed Sandpiper was noted on October 8, and the Black-bellied Plover, which

was rare from July 31 to September 6, is becoming more abundant. On September 25, Phalaropes were abundant on the bay, and on October 9 both Northern and Red Phalaropes were taken by Mr. Strong at Richmond.—AMELIA SANBORN ALLEN, *Berkeley, Calif.*

LOS ANGELES REGION.—Mid-August showed some southward movement among land-birds, a few Flycatchers, Lutescent (Dusky?) Warblers, and one young Robin with spotted breast appearing in a Pasadena garden on the 15th. August 14, 18, and 22 brought reports of Dusky Poorwills in abundance in several foothill cañons. August 18, three Purple Martins and twenty Violet Green Swallows, apparently weary from long flight, rested at Echo Park. A pair of Western Bluebirds that have returned for several seasons to a certain feeding-table on the 18th, this year delayed their coming until the 20th. August 28, Purple Martins were again seen about the building at 535 Broadway. Very large numbers of Cliff, Barn, and Bank Swallows were gathered in marshes near the coast September 5.

Costa's Hummingbirds were recorded for the last time on September 5; Orioles, September 6, and Western Kingbirds, September 12.

Chickadees descended to Eatons Cañon and other localities about Pasadena early in September. A Green-tailed Towhee and a Russet-backed Thrush were among the migrants that made a brief stop in a garden there. Lawrence and Willow Goldfinches visited the sunflower patches with the Green-backs. Gambel's Sparrows established an early record for return, appearing on September 9, 14, and 16. By the 21st they were abundant. Pipits were first recorded September 12, the Kinglet and the Hermit Thrush September 30. Audubon's Warblers and Fox Sparrows October 2. Violet-Green Swallows were again seen September 21, and on the same date a wave of Warblers was recorded, Townsend's being most numerous among those noted. Western Tanagers and Phainopeplas were also abundant. Tanagers were again seen, with many Warblers on October 3.

A correspondent reports from Bear Valley,

San Bernardino Mountains, in late August, the great abundance of Chipping Sparrows, Robins, and Western Bluebirds. California and Cassin Purple Finches and the Green-tailed Towhee were abundant, and large flocks of roving Piñon Jays were also encountered. Brewer's Sparrows were seen only on the north or desert slopes of the mountains. A list from another mountain locality includes the Black-chinned Sparrow.

About twenty Piñon Jays were noted at Upper San Antonio Cañon September 18. Pileolated and Lutescent Warblers and the Warbling Vireo were still there. Many Thurber's Juncos and Chickadees were about, and one Sierra Creeper was observed.

The migration of shore birds began early, and most of the common species have been abundant. Marbled Godwits and Black-bellied Plover seem to be increasing under protection. Ten observation trips have been made to various points along our shores during the period covered. Dowitchers and Long-billed Curlews have appeared on but two of the lists, and in very small numbers. Twenty-two Avocets were seen near Ocean-side September 5. Small numbers have been seen at several other points. On the same date, 20 White Pelicans were at Lake Elsinore. Large numbers of Black-necked Stilts were found at Castaic and Crane Lakes August 27 and 28, where also 50 Northern Phalaropes were noted. Small flocks were seen on the ocean September 3 and 5, and on the 12th a very large number were observed at Playa del Rey. October 6, a small number were seen at the same place.

On August 30, at Anaheim Landing, 2 Sabine's Gulls were seen by Mrs. F. T. Bicknell, Mrs. C. H. Hall, and Mrs. Arthur Mix. They seemed very weary and exhausted and allowed approach to within 30 feet, where complete identification was secured. One bird wore the dark hood of summer plumage. The day was also marked by an immense flight of Terns, mainly the Forster's, but it was thought there were considerable numbers of Common Terns among them. A few Black Terns also were noted. Two Jaegers harried the Terns. This has been observed on four later dates when the Terns have been found fishing. An animated spectacle was

presented along shore on September 22, with scores of Terns and 8 Pelicans fishing close in, the spray flying high at every plunge, but one's enjoyment of the scene was marred by the behavior of 3 Heerman's Gulls, that coursed among them, robbing the Pelicans of their catch.

A Caspian Tern was observed at Bolsa Chica September 9, and again a few days later. About 20 Yellowlegs were seen on both these dates. About 25 White-winged Scoters were seen on September 12.

A few Least Terns remained at Playa del Rey until September 22, when one was observed to feed a full-grown young Tern that stood upon the upper beach among Snowy Plover and about 200 Sanderling. On October 6, the young Tern was again seen among the same companions, but the parents were not in evidence. Whether the young bird was disabled or it was simply a case of late nesting which delayed the time of departure beyond the usual date was not determined.

A Knot was recorded on September 5, by Mrs. C. H. Hall. Horned Grebes were noted on the ocean October 3 and 6, in company with Western Grebes. On the latter date an Osprey visited the lagoons at Playa del Rey, and a Loon was noticed on the ocean.

Black Turnstones returned in July and August to their regular winter haunts among the rocks of White's Point. No Wandering Tattlers have been recorded. Young Western Gulls, birds of the year, were first seen September 12. September 22, large numbers of Ringbills, both adult and immature, were noted, and on October 6, the young birds of the year were numerous. A few California and Bonaparte Gulls were noted October 3.

October 10, a member reports 17 Phalaropes near the pier at Playa del Rey, 5 of which she listed as the Red Phalarope. Her list includes 3 Horned and 3 Western Grebes, 2 Baird's Sandpipers, a Loon and a number of Surf Scoters. Brown Pelicans were described as passing southward in long files at frequent intervals throughout the day.

From September 1 to date, every group visiting the shores has reported enormous flights of Ducks passing southward well off shore. On October 6, at Playa del Rey, a large proportion of the vast flocks hurrying out of the north turned inland on sighting the inner lagoons flushed with the water of a very high tide, but scattered out on meeting the fusillade from the gunners, or rising higher, headed away for the south shores, keeping inside the Palos Verdes hills.—FRANCES B. SCHNEIDER, *Los Angeles, Calif.*



ANNUAL CONGRESS OF THE AMERICAN ORNITHOLOGISTS' UNION

The thirty-ninth Annual Congress of the American Ornithologists' Union was held in Philadelphia, November 8 to 10, at the Academy of Natural Sciences.

There was a large attendance and an excellent program, while to the factors which have contributed to the growth of the Delaware Valley Ornithological Club may evidently also be attributed the success attending the scientific meetings and social gatherings of the Congress. The following officers were re-elected: President, Witmer Stone; Vice Presidents, George Bird Grinnell and Jonathan Dwight; Secretary, Theodore S. Palmer; Treasurer, W. L. McAtee.

The following Members were elected Fellows: Glover M. Allen, Boston, Mass; W. H. Bergtold, Denver, Colo.; Allan Brooks, Okanagan Landing, B. C.; James P. Chapin, New York City.

Five associates were elevated to the rank of membership, four Honorary, and fourteen Corresponding Fellows, and some 250 Associates were elected. A list of papers presented and of photographs exhibited is appended.

PROGRAM

TUESDAY MORNING, NOVEMBER 8, 10 O'CLOCK: (1) Observations on Some Water-Birds of the New Jersey Coast. Illustrated by lantern-slides. (15 min.) J. Fletcher Street, Beverly, N. J. (2) In Memoriam—Charles Barney Cory. W. H. Osgood, Chicago, Ill. (3) Notes on the Habits and Sex Plumage of the Florida Burrowing Owl. (15 min.) C. J. Pennock, Kennett Square, Pa. (4) Ten Summers' Observations of Birds near Slide Mountain in the Catskills. (15 min.) Miss M. W. Daley, Sleighton Farm, Pa. (5) On Some of the Breeding Birds of the Saskatchewan. Illustrated by lantern-slides. (20 min.) George H. Stuart 3rd, Philadelphia, Pa. (6) In Memoriam—William Palmer. Charles W. Richmond, Washington, D. C. Presented by Harry C. Oberholser.

TUESDAY AFTERNOON, 2.30 O'CLOCK: (7) Notes on Edwin Carter, a Prominent Naturalist of Colorado. (10 min.) F. C. Lincoln, Washington, D. C. (8) The Wild Life School at McGregor, Iowa. George Bennett, Iowa City, Ia. (15 min.) Presented by Harry C. Oberholser. (9) Bird Life of the Chaco. Illustrated by lantern-slides. (20 min.) Alex. Wetmore, Washington, D. C. (10) Bird-Collecting in Panama. Illustrated by lantern-slides. (45 min.) R. N. Davis, Scranton, Pa. (11) The Andean Condor as a Coastal Bird. Illustrated by lantern-slides. (10 min.) Robert Cushman Murphy. (12) The Status of Cory's Shearwater. Illustrated by

lantern-slides. (15 min.) Robert Cushman Murphy. (13) The Distribution of Bird-Life in Ecuador. Illustrated by lantern-slides. (20 min.) Frank M. Chapman.

WEDNESDAY MORNING, NOVEMBER 9, 10 O'CLOCK: (14) Progress in Bird-Banding. (20 min.) F. C. Lincoln, Washington, D. C. (15) Bird-Banding Notes of 1921. (30 min.) S. Prentiss Baldwin, Cleveland, Ohio. (16) In Memoriam—Joel Asaph Allen. Frank M. Chapman, New York. (17) The Problem of Field Identification. With discussion. (20 min.) Ludlow Griscom, New York. (18) Experience in Bringing up a Family of Bluebirds. Illustrated by lantern-slides. (15 min.) Miss M. W. Daley, Sleighton Farm, Pa. (19) An Appreciation of William A. Werner, a Little-Known Pennsylvania Naturalist. Illustrated by lantern-slides. (15 min.) H. Severn Regar, Norristown, Pa. (20) Identifying the Ducks of the Eastern United States at Long Range. Illustrated by specimens and charts. (30 min.) Ludlow Griscom, New York.

WEDNESDAY AFTERNOON, 2.30 O'CLOCK: (21) (All papers illustrated by motion pictures.) A New Use for Motion Pictures of Birds. (40 min.) Arthur A. Allen, Ithaca, N. Y. (22) Bird-Life in Holland (40 min.) Adolph Burdet, Overveen, Holland. (23) Studies of Some Familiar Birds in Motion Pictures. (40 min.) Thomas S. Roberts, Minneapolis, Minn. (24) Views of Western Bird-Life, by Wm. L. Finley. (20 min.) T. Gilbert Pearson, New York.

THURSDAY MORNING, NOVEMBER 10, 10 O'CLOCK: (This session was devoted entirely to technical papers and discussions.) (25) Discontinuous Distribution as Illustrated by the Species of the Genus *Diglossa*. Illustrated by map-slides. (20 min.) Frank M. Chapman, New York. (26) The Classification of the Woodpeckers and Their Allies. (30 min.) W. DeW. Miller, New York. (27) The Distribution of the House Wrens of the Genus *Troglodytes*. (20 min.) Frank M. Chapman and Ludlow Griscom, New York. Presented by Mr. Griscom. (28) (a) A New Family of Neotropical Birds, the Ramphocænidae; (10 min.) (b) A Suggestion as to the Origin of Diastataxy. (10 min.) W. DeW. Miller, New York. (29) Yellow-leg Skeletons. Illustrated by Chart. (15 min.) J. T. Nichols, New York. (30) Suggestions in regard to Vernacular Names. (20 min.) Charles H. Rogers, Princeton, N. J. (31) Our English Nomenclature. (15 min.) A. D. DuBois, Springfield, Ill. (32) Check Lists Abroad. (15 min.) Harry C. Oberholser, Washington, D. C.

THURSDAY AFTERNOON, 2.30 O'CLOCK: (33) Some Remarks on the Avifauna of Matto Grosso, Brazil. (20 min.) Mrs. Elsie M. B. Reichenberger, New York. (34) Some Observations on the Coast of Brazil. (20 min.) George W. Field, Washington, D. C. (35) Notes on Nesting Habits of Some Massachusetts Duck Hawks. Illustrated by lantern-slides. (10 min.) S. Waldo Bailey, Pittsfield, Mass. (36) Distributional Notes on American Water-Birds. Motion pictures and other illustrations. (40 min.) Robert Cushman Murphy. (37) Bird-Life in American Zoological Gardens. Illustrated by motion pictures. (45 min.) Arthur H. Fisher, Washington, D. C.

Book News and Reviews

LIFE HISTORIES OF NORTH AMERICAN GULLS AND TERNS, ORDER LONGIPENNES. By ARTHUR CLEVELAND BENT. Bull. No. 113, U. S. Nat. Mus., Washington, 1921. x+345 pages, 77 half-tones, 16 colored plates.

Mr. Bent's volume on the life histories of the diving birds (Bull. U. S. Nat. Mus. No. 107) having acquainted ornithologists with the wide scope and importance of his great undertaking, it is safe to say that this addition to the series will receive an even heartier welcome than was accorded its predecessor. Doubtless no one is better prepared to produce this monograph of our Gulls and Terns than is Mr. Bent. His years of definitely directed field-work have permitted him to study in their haunts a large part of the species treated, and this experience has not only given him much original material but has enabled him to quote with discretion from the work of others. The whole makes a fully adequate and authoritative presentation of his theme. We wish we could speak with equal enthusiasm of the form in which it is presented, but the typography is not attractive, the paper employed is so thin that the print shows through it, giving the page a 'messy' appearance, and the use of the book title instead of subject-matter heading for every right-hand page is greatly to be regretted. Doubtless these are matters over which Mr. Bent has no control, but we believe that he could improve upon the arrangement of his text. Under the general, center heading of 'Habits,' for example, is included, under side, subheadings, paragraphs on 'Plumages' and 'Eggs,' and near the end of the biography a section on 'Behavior' is given wherein is often repeated much that has already been stated under 'Habits.'

The work is illustrated with a large number of photographs from nature and admirable plates of eggs in color.—F. M. C.

The Ornithological Magazines

THE AUK.—The July number of *The Auk* begins with a discussion of some

philosophic interest by H. Mousely, in which he concludes that by selecting a singing station where the female later joins him and near which the nest is built, a male bird in the majority of cases really selects or establishes the general site of the nest. An exhaustive paper by Horace W. Wright summarizes the occurrence of the Mockingbird in New England and Canada, that is to the northeastward of its range of abundance, with special reference to the Boston region. This paper was completed by its author at the very time of his death in June, 1920, and has been edited by G. M. Allen. Conclusions are that this species is pushing northward the limit of its range along the coast to a considerable extent by resident individuals. A comparative frequency with which birds are observed in fall and winter may be explained by their seeking shelter at those seasons in park and village shrubbery, where they are likely to be encountered by bird students.

'Impressions of Bird Life in France,' by E. L. Poole, is presented in the form of an annotated list and illustrated with a half-tone plate of sketches by the author (the Aquatic Warbler, Spotted Flycatcher, and the Garden Warbler.) There seems to be possibility of error with some of the identifications. Otherwise it is very surprising that *Larus melanocephalus*, not the abundant *Larus ridibundus*, was the Black-headed Gull observed. And whereas the Carrion Crow which is listed should have been present, contrary to what is said, it differs but slightly from the Rook in size, and its voice is said by other observers to resemble somewhat that of our American Crow. 'Notes on the Winter and Early Spring Birds of Southeastern Arkansas,' by Chreswell J. Hunt, gives an annotated list of 98 species and races, prefaced by several pages of excellent readable descriptive discussion. The early dates at which certain species arrive and nest near Tillar, Ark., are interesting.

'The Birds of Lake Poopó, Bolivia,' by William Ray Allen, is a general discussion of

bird-life about this shallow lake, in a flat plain at a high altitude, with relation to physiographic conditions. "The southerly shores of Lake Poopó are *par excellence* the abode of shore-birds. Several species of Plover were taking full advantage of the situation. The writer estimated that for each mile of shore line there were well in excess of ten thousand birds. By all evidence they were chiefly winter residents."

A considerable proportion of the general articles deal with matters of rather technical interest. Kennard discusses moulds and bacteria in egg collections at length, a paper which will doubtless be of much practical interest to egg collectors. Swann reports on a collection of Hawks from Venezuela; Bishop divides the Common Loon into two races, the birds nesting in the West being smaller; Bangs and Penard give the eastern Hermit Thrush a new subspecific name, and Peters reviews the tropical Grackles of the genus *Holoquiscalus*.

The seventeen pages of 'General Notes' contain the usual variety of material, including faunal contributions from Alabama, Kentucky, Connecticut, Vermont, and scattering. F. C. Lincoln reports on a Common Tern banded by Dr. Phillips in Maine and recovered in West Africa. In provisionally referring four Swans observed along the Hudson to the Whistling Swan, S. C. Bishop is apparently unaware of the flock of feral Mute Swan there resident. A. C. Gardner describes a Kingbird's nest on the top of a street electric light reflector, the light being in use every night. C. A. Urner adds several birds to species recorded as imitated by the Starling.

A printers' strike caused the late appearance of this number—J. T. N.

THE CONDOR.—Students of life history and habits of birds will find much of interest in the July number of *The Condor* in three articles on the food-storing habits of Woodpeckers, and one on the flock-behavior of the Bush-Tit. In 'The Storage of Acorns by the California Woodpecker,' Henry W. Henshaw, writing from his experience in the West and summarizing the observations of others, concludes that "the boring of holes, the

search for acorns, the carrying them to the holes and the fitting them in, bear no resemblance to work in the ordinary sense of the term, but are play." Gignoux gives an interesting account of the storage of almonds by the California Woodpecker in Butte County, Calif., where the bird has taken advantage of a new source of food-supply. Among the 'Field Notes,' Morton E. Peck records the fact that a related species in British Honduras frequently fills holes in trees with acorns. 'The Flock Behavior of the Coast Bush-Tit' is described in detail by R. C. Miller in a paper which is styled a contribution to the 'new Science of field psychology.'

An article on 'Genera and Species' by McGregor is brief but to the point in stating clearly that "Names are for the use of people who talk or write about things, and names whose meanings are frequently changed are unfitted for any purpose."

In a 'Synopsis of California Fossil Birds' by Loye Miller, the leading authority on the subject, it is interesting to note that the total number of fossil birds now known from the state is sixty-five, of which sixty-four are from the Pleistocene and only one from the Miocene.

Contributors to *The Condor* apparently sometimes find difficulty in expressing their ideas in ordinary words, and in the effort to convey their meaning accurately indulge in picturesque terms or coin words which are not only additions to the vocabulary of ornithology, but also to the English language. In the present number we are told that while the ornithologist has been engaged with problems of distribution and *speciation* (p. 121), the study of birds from a *behavioristic* standpoint has been neglected (p. 122); that Bush-Tits are *netural agoraphobiacs* (p. 125), meaning simply that the birds avoid open places; and that in British Honduras Woodpeckers drop acorns in '*acornaries*' (p. 131). Those who find nomenclature dry reading will be relieved to learn (p. 127) that the subject of generic subdivision only '*erupts*' periodically, while on p. 130 they will find that the name *Pleistogyys rex* applied to a species long ago extinct, has proved to be a synonym and is "hereby officially cremated."—T S. P.

Bird-Lore

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Bird-Lore's Motto:

A Bird in the Bush Is Worth Two in the Hand

IN reviewing the life-work of the late Dr. J. A. Allen, one is impressed by the fact that this leader in the more technical phases of systematic ornithology was for thirty-six years actively identified with the cause of bird-protection. The leading article in the first 'Bulletin' of the American Ornithologists' Union's Committee on Bird Protection, published in 1886, was from his pen and was a logical exposition of the importance of bird conservation. He was one of the members of this committee, later was a director of the New York State Audubon Society, and from the time of its organization until his death he was a director of the National Association of Audubon Societies.

Further inquiry would show that most of Dr. Allen's associates in the work of bird-protection were, like him, technical ornithologists and members of the American Ornithologists' Union. Indeed we should learn that the organized movement for the preservation of our birds originated in that body, and that from the beginning it has had the support and active coöperation of the ornithologists of this country.

Under the wise guidance of William Dutcher, the Union's Committee on Bird Protection, of which he served for years as Chairman, became, in effect, the father of the National Association of Audubon Societies.

The debt of bird conservationists to the A. O. U. does not, however, end here. The Union was also the parent of the Division of Economic Ornithology of the United States

Department of Agriculture (Now Bureau of Biological Survey), and everyone familiar with the history of bird-protection in this country knows that the success of this movement is in no small measure due to the accurate information concerning the economic relations of birds, which was made available by the researches of this Bureau. The day is dawning when a plea for the conservation of bird-life may be based on sentiment alone, but the pioneers in this field found legislators deaf to arguments which were not severely practical in their nature; and it was the economic ornithologist to whom one turned for convincing facts in regard to the dollars and cents value of birds.

At all times there have been associated with the professional ornithologists in the fight to save our birds, numbers of men and women who, actuated by humane motives and love of the most beautiful of animate forms, deplored their wanton destruction. Between these groups, whom we may designate as scientists and sentimentalsists, there has existed the utmost harmony and the strength of the bird-protection movement in this country owes much to the united front which has ever been presented by bird-protectors.

May we suggest to the friends of birds in England that they draw a moral from the history of the movement in this country. They have far to go before English birds receive the protection which American birds now enjoy; but they will not, we fear, make haste on the road unless science and sentiment travel hand in hand.

BIRD-LORE again expresses its obligations to the contributors who have made 'The Season' so important a part of this magazine. This bi-monthly survey of conditions in the bird world by authorities situated at stations distributed from the Atlantic to the Pacific forms a source of condensed information of current interest and increasing reference value as the accumulating series of observations affords material for comparison. We hope that students living in the districts whence our reports come will coöperate with their authors in making them as representative as possible.

The Audubon Societies

SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

CONCEALING COLORATION OF BIRDS

In the last issue of BIRD-LORE we discussed the general coloration of birds and planned to consider the principles of concealing or protective coloration at this time.

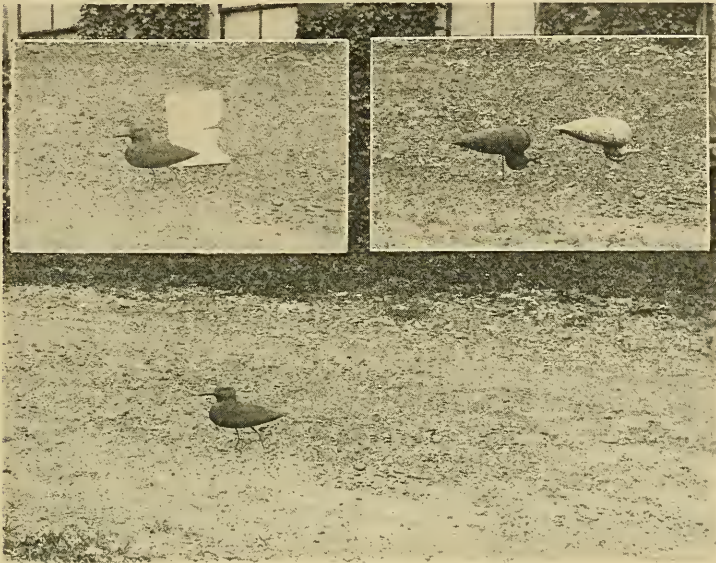
There is one principle which underlies the coloration of all protectively marked birds which does more than anything else toward rendering them inconspicuous, and that is the principle of 'counter-shading', as it was named by its discoverer, the late artist-naturalist, Abbot Thayer. It had long been known by artists that to make objects appear solid and conspicuous on the canvas, one must paint in their shadows, but it remained for Thayer to apply the reverse of this practice, and to point out that the way to make solid objects appear flat and inconspicuous was to paint out their shadows. He applied this principle to the coloration of animals and recognized that protective coloration is brought about largely by the lightest colors being placed on the throat and belly, which parts are thrown into the deepest shadow, and the darkest colors on the top of the head and back, which receive the greatest light. Between the back and the belly there is a gradual change to lighter, exactly counter-matching the amount of shadow, so that the apparent solidity of the bird is thus destroyed or 'painted out.'

This principle has been admirably illustrated by the celebrated bird artist, Louis Agassiz Fuertes, with the two bird models here shown. Two blocks of wood were cut out in the general form of a bird and colored uniformly dark. He placed them out of doors on a gravel walk in good light and then, with his brush, proceeded to paint out the shadows on one of them by adding touches of white paint so as to balance the shadows exactly, with the result that, to the amazement of onlookers, this one gradually disappeared from view.

The principle of 'counter-shading,' like other great discoveries, is very simple. The human eye, and probably all eyes, judge the solidity of an object by the shadows which it casts, and an object which throws no shadows upon its underparts has no solidity. Through 'counter-shading,' then, the bird loses its solidity, appears flat, and being so, it falls off into the background and becomes a part of it. If, in addition, its color pattern is similar to its haunts, it becomes practically invisible. And so we find the Grouse and the Woodcock, living on the forest floor, with a color pattern of spots and patches of light and dark brown; the Sparrows and Meadowlarks of the fields are

streaked with buff and rufous, like the dead grasses; Owls are irregularly marked like the rough bark of trees, and Sandpipers and Plovers are speckled like the sand of the seashore or streaked like the drift.

With insects this simulation of color pattern is often carried to the extreme. There are butterflies and moths whose markings imitate exactly the dead leaf or the bark upon which they rest. Furthermore the shape of the wing is often modified to make the simulation more complete. 'Dead leaf' butterflies, walking sticks, and measuring worms, are familiar examples of insects in which



FIND THE COUNTER-SHADED MODEL

It stands at the right of the uniformly colored one; the insert with white card behind the models will help you to find it. The other insert shows how conspicuous the counter-shaded model becomes when inverted

Models made by L. A. Fuertes; photographs by H. D. Reed

the shape has been modified as well as the color, and this device of nature for giving protection has been called 'mimicry.' If we define mimicry as the simulation of shape, as well as color, of animals to their environment, we will find it of rather rare occurrence among birds and never as perfect as with insects. The Screech Owl, with its feathers drawn close and its ear-tufts erect, however, certainly 'mimics' a broken piece of bark, and the Nighthawk, sitting lengthwise on a limb, simulates the broken stub of a branch in shape as well as color. The Bittern, standing among the dead cat-tails, with its bill pointing toward the zenith, and the Least Bittern on its nest in the pose shown in the accompanying photograph, are, likewise, examples of mimicry, for they resemble in shape, as well as in color, a projecting snag or a broken reed.

In the plumages of certain birds that are normally very difficult to see when at rest, we find a very different color pattern which seems at variance with all

that has been said. Instead of there being a gradual transition from the dark to the light areas, there is a sudden, abrupt change, often heightened by a black border. On the head of the Wood Duck, for example, the white of the throat extends up on the cheeks in the form of crescents. These, together with the white stripes through the crest and the black-and-white bars on the sides, would seem to make it most conspicuous. Similarly the Killdeer has its



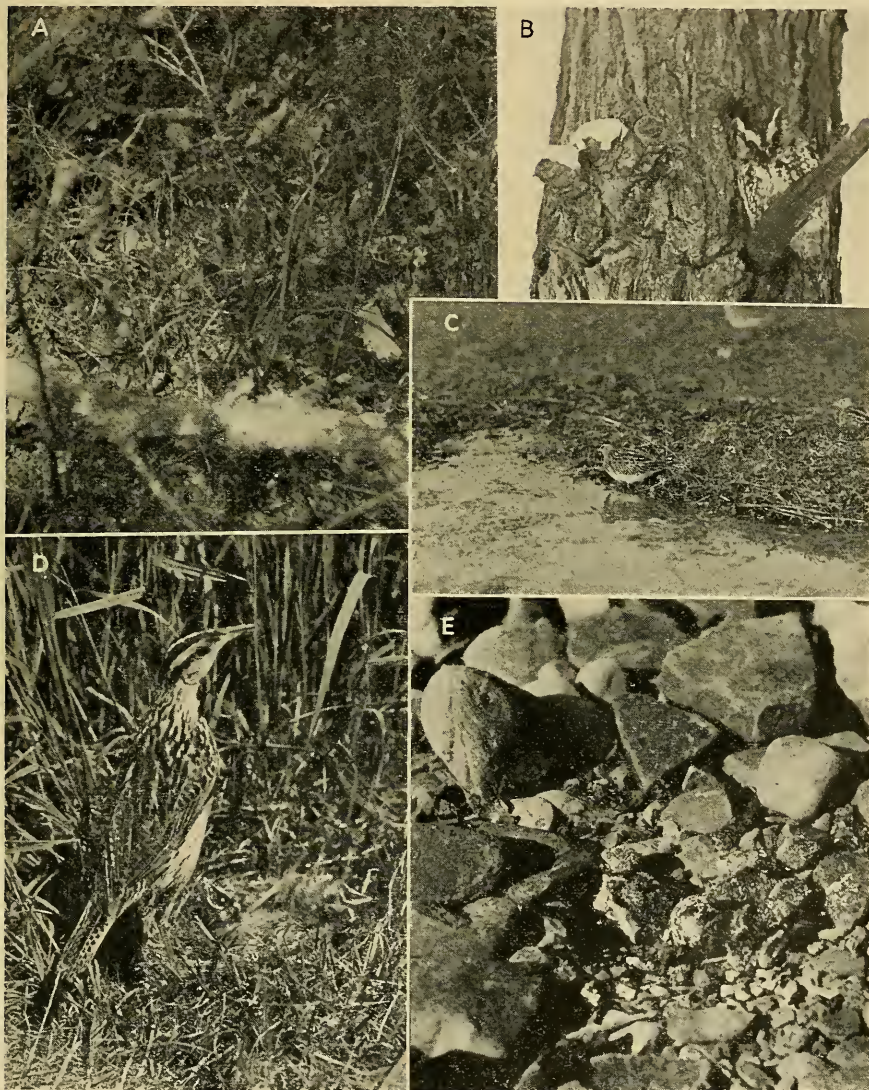
A CASE OF MIMICRY

The Least Bittern, when alarmed, simulates a broken reed in shape as well as in color

brown head separated from its similarly colored back by a conspicuous white ring, and its snowy breast is crossed by two coal black bands. In spite of these marks, one finds that both the Wood Duck and the Killdeer in their natural environments, are very inconspicuous, and we are led to believe that these 'ruptive marks', as they are called, serve apparently to split up the bird into several pieces, destroy its continuity of form, and thereby conceal it by making it unbirdlike. Those who followed the development of 'camouflage'

in the world war will recognize in counter-shading and ruptive marks two of the principles that were utilized as much as any to conceal battleships, large guns, ammunition trains, and even small buildings.

One other class of markings we might consider here since they are similar to the ruptive marks in being themselves extremely noticeable. I refer to the



WHERE 'COLOR PATTERN' COUNTS

- A. Ruffed Grouse on nest showing dead leaf and twig pattern
- B. Bark pattern of Screech Owl
- C. Drift pattern of Pectoral Sandpipers
- D. Grass pattern of Meadow Lark, startled while at its nest
- E. Pebble pattern of young Killdeers

so-called 'flash colors' or 'banner marks.' The white tail of the deer and the cottontail, which are raised and made as conspicuous as possible when the animal is fleeing; the white outer tail-feathers of the Junco and the Meadowlark; the white patch on the rump of the Flicker, and the striking black-and-white wings of the Willet, all fall into this class. These marks were at one time supposed to serve as signals to the young or to others of the species to keep the flock together, but Dr. C. Hart Merriam has suggested a still better use for them by explaining how they may serve to give protection from their enemies. When the animal or bird is fleeing, the eye of the enemy naturally fastens upon the very conspicuous flash color and when the Meadowlark, for instance, drops



• RUPTIVE MARKS OF THE KILLDEER

Note how the white ring around the neck and the black bands across the breast destroy the shape of the bird by breaking up the continuity of surface. Now notice the same thing with the young Killdeer in front of the old bird

into the grass, or the Flicker claps up against the side of the tree, the banner mark suddenly disappears. But the eye of the enemy, through the persistence of vision, follows on in the same direction in which the bird was going before realizing that it has stopped and, in the interval elapsing, the bird slinks off a few feet further or slips around to the other side of the tree and is nowhere to be seen. The Willet, upon alighting, often lifts its conspicuously marked wings high over its back as if to attract attention to the very spot where it has alighted, but always, upon closing them, it runs along the beach a few feet so that the eye of an enemy can search in vain for the conspicuous quarry that it marked so carefully a moment before.

These then are the five main principles underlying the concealing coloration of birds. Some authorities have gone so far as to claim that all birds are pro-

tectively colored, but the majority feel that the colors of some birds cannot be explained by any of the foregoing principles, that they may even be conspicuously marked. A Crow on the snow or against the sky, or anywhere except in a coal-hole, is bound to be visible from any angle. But the Crow has been endowed with an intelligence and a wariness which need no concealing color-



FLASH COLORS OF THE WILLET

When at rest the Willet is an inconspicuous gray bird, but in flight it displays a strikingly conspicuous black-and-white pattern on the wings and tail. How can this be a 'protective coloration'?

tion to supplement them. Dr. Chapman has suggested that one can usually tell from the actions of the birds whether they consider themselves conspicuous or not, for the protectively colored species always permit of a close approach while those that are conspicuously marked fly at the first intimation of danger and never rely upon concealment even when wounded.

SUGGESTIONS TO TEACHERS

The principles of protective coloration, although quite simple, usually require some sort of a demonstration before they are fully comprehended by youthful observers. Once they are fully understood, however, a new world of thought is opened, and it is surprising to discover the numberless ways in which

they may be applied. In making demonstrations, one should be careful always to stage them out of doors where the light comes from above and from all sides, otherwise one is doomed to disappointment. It is not difficult to imitate Mr. Fuertes' demonstration with the counter-shaded model by substituting tennis balls or blocks of wood for the carved models. The advantages of ruptive marks and of color patterns simulating the environment can likewise be demonstrated.

In studying the birds of the open fields like the Meadowlark, female Bobolink, Vesper and Savannah Sparrows, etc., attention should be called to the predominance of streaks corresponding in pattern, if not always in color, to the lights and shadows among the grasses. Comparisons should be drawn with such woodland birds as the Grouse and the Woodcock, or even the woodland Warblers which though often brightly colored, have irregular blotched patterns simulating either the forest floor or the light filtering through the leaves. If one has access to a museum or a collection of mounted birds, he can readily demonstrate many different types of color patterns in terms of the birds' habitats or places where they spend most of their time. Of course, there are many uniformly colored birds and others that defy any theory of protective coloration to explain, but these are the exceptions rather than the rule.

Children often bring insects to the schoolroom and many of them demonstrate the principles of protective coloration far better than do birds. Counter-shading, color pattern, ruptive marks, flash colors, and mimicry are abundantly illustrated by various species of moths, caterpillars, grasshoppers, walking sticks, etc., and a collection of insects might well be made to demonstrate the different principles.

QUESTIONS

1. What is meant by 'counter-shading'?
2. Name five birds in which counter-shading is an important feature of the bird's coloration.
3. What is the importance of having the color pattern of a bird's plumage similar to that of its environment?
4. Name five different types of color patterns and a bird on which each is found.
5. Explain 'ruptive marks.'
6. Name five birds which have ruptive marks.
7. Explain 'flash colors' and tell how they are of advantage to the bird possessing them.
8. Name five birds which possess flash colors.
9. What is meant by 'mimicry'?
10. Name five birds that mimic their surroundings.

FOR OR FROM YOUNG OBSERVERS

A TEACHER'S EXPERIENCE IN BIRD-STUDY

To enjoy life one should be in touch with nature. I find that little extra time need be spent in studying birds compared with the real enjoyment obtained. When I was a child I saw and knew several of the most common birds but I find since I have been teaching children that it takes only a short time for a normal child, if he is properly encouraged, to know all the common local birds and become interested in the rarer ones.

The first year I taught I was rather timid about starting my pupils in bird-study but found, later, that it was very easy and pleasant work. That year one of my pupils and I learned eighty birds that, with the exception of about fifteen, were new to us. You see I was just starting, too. The next year even the primary pupils learned to distinguish from twenty-five to forty-five birds, and the parents became interested. I have taught three years in the country schools and find I have a wonderful field of work. This last year I organized an Audubon Society of twenty-five in my school. Besides the pamphlets of the Audubon Society I use the small bird pictures put out by the Church and Dwight Co., New York City, and some small pictures put out by Brown & Co., Beverly, Mass., which I find a great help, especially when I need a wide variety of illustrations with small expense. They aid in studying the Audubon Leaflets and I found my pupils enjoyed having smaller pictures to refer to in place of soiling their larger pictures from the Audubon Society by frequent handling.

This year I have found many interesting species of birds and my pupils have found even more than I. After our spring vacation we found a Flicker had built a nest in the roof of our schoolroom. From our windows we saw many different birds. We did not need to search for them as there were many trees near the schoolhouse. This year I have noticed many more of the same kind of birds than ever before. It may be that with better education the birds are protected. I have not searched for nests this spring but have found many without effort.

I still expect to enlarge my bird list this year and hope that I may again become acquainted with the Warblers and birds which stay here only through the migratory period and which I missed this spring because I was unable to spare time enough when they were here.—RUTH H. MARTIN, *Canton, Ills.*

[Teachers who have never tried bird-study in their schools little know the results that can be obtained with little effort. It is not necessary to know many birds in order to make a beginning. Miss Martin's experience is almost sure to be theirs. A. A. A.]

A BIRD TRAGEDY

The rain came down in torrents, drowning out all other sounds. It had been storming for nearly half an hour, when suddenly came a blinding flash of

lightning, a terrible crash of thunder, a moment of silence, and the thunder rumbled away into the distance.

Mother, my sister, and I were all alone on this stormy evening. We hurried to the window, thinking the barn might have been struck. One glance proved that it was not the barn, but a large tree had fallen in the orchard—the one with the Flicker's nest.

To me the Flicker has always seemed out of place. He would fit better in a fairy story. Before we knew his name, we called him 'the golden-winged bird.'

The rain soon stopped and the sun came out from behind the clouds low in the west, giving a golden tint to all of the fresh earth.

I ran to the tree in the orchard. At the sight of it, I stopped suddenly. The tree was broken at the Flicker's hole, and the mother bird lay there motionless. I'll never forget the way I felt.

She was wedged in so tightly that I could not get to her, but with a neighbor boy's help, I managed to pull the bark away and lifted her out. Her eggs were broken, but her body was still warm, and I could not believe she was dead.

When I carried her to the house, Mother said she was lifeless, but I was positive I felt her heart beating. All night long I held her in my hands, hoping she would revive, but morning brought the truth.

A tiny grave under the apple tree and a golden wing among my choicest possessions are all that mark the memory of that stormy evening.—VIRGINIA JUNE RATLIFF (age 14 years), *Dover, Del.*

THE LONG-TAILED CHAT

He's a jolly fellow,
And he chats all day.
His breast is yellow.
He swings and sings in the glorious ray
Of the sun, so bright.
He is frolicsome and gay,
And he sings by night
As well as by day.

—By PHILO WOOD (age 8 years), *Hopland, Calif.*

A CORN-EATING WOODPECKER

Down on my Grandpa's farm, at Loveland, Ohio, a Red-headed Picker-bird eats the corn. He comes to the corn-house and sticks his head through the cracks and picks up the corn. Then he goes to a post and puts it on top while he sits on the side. He puts his head over the top and cracks up the corn and eats the pieces. If any little pieces fall on the ground he does not go after them but goes back to the corn-house for more. Out in the garden there is one big stalk with an ear of corn on it. He sits on this too and picks away the corn.—

DENNING J. PEASLEE (age 7 years), *Norwood, Ohio.*

The Audubon Societies

EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City.
Telephone, Columbus 7327

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Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership
\$100 paid at one time constitutes a Life Membership
\$1,000 constitutes a person a Patron
\$5,000 constitutes a person a Founder
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

SEVENTEENTH ANNUAL MEETING

The seventeenth annual meeting of the National Association of Audubon Societies was held in the American Museum of Natural History, New York City, October 24 and 25, 1921. Many members were present and took part in the various discussions that arose.

At the public meeting on Monday night an audience of over 600 greeted the Association's speakers. The session was formally opened by Dr. Frederic A. Lucas, Director of the American Museum of Natural History, who extended a welcome to the Audubon Societies. This was responded to by the President of the Association who also spoke briefly on the Association's activities the past year and the extent of the membership today. He reported that there were active paying members of the Association in every state in the Union but Nevada, and also in half a dozen foreign countries. He then introduced Dr. Frank M. Chapman who sketched the great development that had taken place in wild-bird protection since the Audubon Society began its work. He read a list of the various song-birds that he had seen on women's hats on 14th Street, in New York City, at the time when these birds were so extensively worn, before the Au-

dubon laws were passed by the various state legislatures.

Dr. Theodore S. Palmer, representing the United States Biological Survey, told of the Government's work for wild-life conservation and the coöperation it had always received from this Association. Louis Agassiz Fuertes, the eminent American bird artist, then delighted the audience by drawing on an easel situated on the rostrum a series of colored pictures of wild birds, at the same time imitating the songs and calls as each bird took its final form and tints. The evening was concluded with 2,000 feet of motion-picture films of wild birds and animals taken by William L. Finley, the Association's agent for the Pacific Coast States.

On Tuesday morning, at 10 o'clock, the members and delegates gathered for the annual business meeting. The reports of the President and Treasurer were given. These will be found printed in full in this issue of BIRD-LORE.

Miss Heloise Meyer and Theodore S. Palmer, whose terms of office as members of the Board of Directors had expired, were reelected. Dr. Robert Cushman Murphy, of New York, was elected to fill the vacancy caused by the death of Dr. Joel A. Allen

Then followed reports given in person by the following field agents: Edward H. Forbush for New England; Winthrop Packard for Massachusetts; Herbert K. Job, in charge of the Department of Applied Ornithology; Miss Frances A. Hurd of Connecticut; and Mrs. Mary S. Sage for Long Island. These reports and others provoked discussion on a variety of topics in connection with the Audubon Society movement and its work.

At 1 o'clock the meeting adjourned for luncheon in the Museum restaurant. The afternoon session, which convened at 2 P. M., was under the leadership of Edward H. Forbush. Reports from various affiliated organizations were heard and further discussions took place. Dr. G. Clyde Fisher gave a most entertaining talk on the life and work of John Burroughs, illustrating his statements with a remarkable series of stereopticon slides from photographs he had made of Mr. Burroughs under various conditions.

Several branch societies and affiliated organizations were represented. Among the personnel of these were:

Mrs. Baker Hull, President of the Maryland Audubon Society; Dr. Frank M. Chapman, President of the Englewood (N. J.) Bird Club; Dr. T. S. Palmer of the District of Columbia Audubon Society; John

Dryden Kuser, President, and Beecher S. Bowdish, Secretary of the New Jersey Audubon Society; R. H. Howland, President of the Montclair (N. J.) Bird Club; Mrs. Kingsmill Marrs, representing the Florida Audubon Society; Mrs. George M. Cumming, Secretary of the Audubon Society of Irvington-on-the-Hudson (N. Y.); Mrs. Henry E. Mereness of the Dana Natural History Society of Albany (N. Y.); Mrs. L. J. Frankie of the Bird Club of Long Island; Miss Mary E. Knevels, Secretary of the Forest Hills Gardens (N. Y.) Audubon Society; and Mrs. Francis H. Coffin, President of the Scranton (Pa.) Audubon Society.

At the meeting of the Board of Directors, held at 2 P. M., the following officers were reelected: T. Gilbert Pearson, President; Theodore S. Palmer, First Vice-President; Frederic A. Lucas, Second Vice-President; William P. Wharton, Secretary; Jonathan Dwight, Treasurer; and Mrs. F. A. Donohue, Assistant Secretary.

The budget as submitted was adopted. Detailed reports were heard of the year's work and plans laid for the activities to be engaged in during the next twelve months.

These yearly gatherings of bird-students and bird-lovers are annually becoming more largely attended and increasing interest is manifested in the Association's work.

ADVISORY BOARD OF DIRECTORS

At the annual business meeting of the Association on October 25, 1921, the following were elected members of the Advisory Board of Directors for the coming year:

John H. Sage Connecticut
 Ralph Hoffman California
 David Starr Jordan California
 Robert W. Williams... District of Columbia
 Harry Harris..... Missouri
 George M. Chamberlin..... Florida
 John E. Thayer..... Massachusetts
 Richmond Talbot..... New York
 Ruthven Deane..... Illinois
 Albert F. Ganier..... Tennessee
 H. P. Attwater..... Texas
 Carleton D. Howe..... Vermont
 Witmer Stone..... Pennsylvania

Joseph Grinnell..... California
 Edward H. Forbush..... Massachusetts
 H. L. Madison..... Ohio
 Barton W. Everman..... California
 Howard Eaton..... Wyoming
 Thomas S. Roberts..... Minnesota
 Frederic A. Walcott..... Connecticut
 Gifford Pinchot..... District of Columbia
 Frank Bond..... District of Columbia
 Clinton G. Abbott..... California
 Donald Scott..... New York
 Mrs. Anna B. Comstock..... New York
 Mrs. Alice Hall Walter..... Rhode Island
 H. H. Brimley..... North Carolina
 H. Tullsen..... Texas
 Mrs. B. H. Johnson..... Connecticut
 Walter Barrows..... Michigan

MORE FEDERAL BIRD RESERVATIONS

Two new Federal Bird Reservations were recently created. These are to be known as the 'Pablo Reservation' consisting of the North and South Pablo Reservoirs and the 'Ninepipe Reservation' consisting of the Ninepipe Reservoir. Both are in the state of Montana and situated within the boundaries of the Flathead Irrigation Project.

The executive orders creating these bird reservations were signed by President

Harding on June 25, 1921. On the same date the President also issued an order enlarging the boundaries of the Indian Key Reservation in Tampa Bay, Fla., in order to include other islands.

Through the kindness of Frank Bond, Chief of the Federal Land Office, a friend and member of the Association, the office has been supplied with copies of the above orders and maps which accompany them.

PLEASE READ THIS!

In most of the cities of the United States, and particularly in New York, the plumes of the Bird-of-Paradise are displayed for sale and may be seen in common use on women's hats. Frequently their sale is advertised in newspapers. The traffic in these feathers seems to have been on the increase the past year. Our office receives numerous inquiries from people who tell us of these things and state, "The law is being flagrantly violated. Why do you not do something." As a matter of fact, in so far as the sale and wearing of these plumes is concerned, the law is not being violated, for the law does not prohibit these things. It is against the law to sell aigrettes, the plumes of the white Egret, but once they are in private possession there appears to be no enforceable law against their being worn. In the case of Paradise plumes, however, the only restriction is the United States law embodied in the Tariff Act of 1913, which *prohibits the importation* of the feathers of any wild birds into the United States for commercial purposes. This is the law that is being "flagrantly violated."

Undoubtedly the stock of Paradise feathers on hand when the law went into effect on October 3, 1913,—over eight years ago,—has long ago been exhausted, and the plumes we now see sold and worn are most certainly feathers that have been smuggled. Inspectors of the Custom Offices have made a large number of seizures, and in these columns we have from time to time reported the taking of some of these illegal goods and the disposition made of them.

This Association planned to ask the present session of Congress that is revising the Tariff to amend the law in such a way as to prohibit absolutely the sale of Paradise plumes. Just before the date set by the Chairman of the Ways and Means Committee for the President of the Association to appear before the Congressmen having this matter in charge, it was learned that the United States Millinery Chamber of Commerce had a bill to propose, and after a conference and much deliberation it was decided to back their bill, and this was done, not only formally before the Ways and Means Committee on February 11, 1921, but subsequently by other means. This bill makes it illegal to sell the plumes of Birds-of-Paradise or other smuggled feathers unless the seller can produce evidence to satisfy the courts that the feathers were brought legally into this country before the Tariff Act of 1913 became effective. This is now under consideration in Congress, and if it becomes an item of the Federal statutes it will virtually mean that the last battle of the war waged by the Audubon Societies since 1886 against the legalized feather traffic shall have been won.

Of course, regardless of how stringent the laws may be made, it is probable that feathers for millinery decoration will continually be smuggled into the country. Despite the Association's warden-force, Egrets in the southern swamps will continue to be killed because there will persist a certain type of feminine mind that wants the plumage.



MRS. KATHERINE TIPPETS, PRESIDENT OF THE FLORIDA AUDUBON SOCIETY, STANDING BY SIGN LATER PLACED ON THE MUNICIPAL PIER AT ST. PETERSBURG, WHERE THERE ARE NUMEROUS BROWN PELICANS

Report of the National Association of Audubon Societies and Affiliated Organizations for the Year Ending October 19, 1921

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REPORTS OF FIELD AGENTS

EDWARD H. FORBUSH, FOR NEW ENGLAND; WINTHROP PACKARD, FOR MASSACHUSETTS; WILLIAM L. FINLEY, FOR THE PACIFIC COAST STATES; HERBERT K. JOB, APPLIED ORNITHOLOGY; ARTHUR H. NORTON, FOR MAINE; MRS. MARY S. SAGE, FOR LONG ISLAND (N. Y.).

REPORTS OF STATE AUDUBON SOCIETIES

CALIFORNIA, CONNECTICUT, DISTRICT OF COLUMBIA, FLORIDA, ILLINOIS, MARYLAND, MASSACHUSETTS, MISSOURI, NEW HAMPSHIRE, NEW JERSEY, NORTH DAKOTA, OHIO, OREGON, RHODE ISLAND.

REPORTS OF OTHER AFFILIATED ORGANIZATIONS

AUDUBON ASSOCIATION OF THE PACIFIC (CALIF.).—AUDUBON CLUB OF NORRISTOWN (PA.).—AUDUBON SOCIETY OF BUFFALO (N. Y.).—AUDUBON SOCIETY OF GENESSEE (N. Y.).—AUDUBON SOCIETY OF IRVINGTON-ON-HUDSON (N. Y.).—AUDUBON SOCIETY OF WESTERN PENNSYLVANIA.—BIRD LOVERS' CLUB OF BROOKLYN (N. Y.).—BROOKLINE (MASS.) BIRD CLUB.—BURROUGHS JUNIOR AUDUBON SOCIETY OF KINGSTON (N. Y.).—CANANDAIGUA (N. Y.) BIRD CLUB.—CHAUTAUQUA (N. Y.) BIRD AND TREE CLUB.—COCOANUT GROVE (FLA.) AUDUBON SOCIETY.—COLUMBUS (OHIO) AUDUBON SOCIETY.—CRAWFORDSVILLE (IND.) AUDUBON AND NATURE STUDY CLUB.—CUMBERLAND COUNTY (MAINE) AUDUBON SOCIETY.—DANA NATURAL HISTORY SOCIETY OF ALBANY (N. Y.).—DOYLESTOWN (PA.) NATURE CLUB.—ELKADER (IOWA) AUDUBON SOCIETY.—ENGLEWOOD (N. J.) BIRD CLUB.—FOREST HILLS GARDENS (N. Y.) AUDUBON SOCIETY.—GREYSTONE PARK (N. J.) BIRD CLUB.—HAMILTON (ONT.) BIRD PROTECTIVE SOCIETY.—HARTFORD (CONN.) BIRD STUDY CLUB.—JACKSON COUNTY (MICH.) AUDUBON SOCIETY.—JOHNSTOWN (N. Y.) BURROUGHS NATURE STUDY CLUB.—LOS ANGELES (CALIF.) AUDUBON SOCIETY.—MANCHESTER (N. H.) BIRD CLUB.—MERIDEN (CONN.) BIRD CLUB.—MERIDEN (N. H.) BIRD CLUB.—MIAMI (FLA.) AUDUBON SOCIETY.—MONTCLAIR (N. J.) BIRD CLUB.—NEIGHBORHOOD NATURE CLUB OF WESTPORT (CONN.).—PASADENA (CALIF.) AUDUBON SOCIETY.—PROVINCE OF QUEBEC (CAN.) SOCIETY FOR THE PROTECTION OF BIRDS.—RHINEBECK (N. Y.) BIRD CLUB.—ROCKAWAY (N. Y.) BIRD CLUB.—ST. LOUIS (MO.) BIRD CLUB.—ST. PETERSBURG (FLA.) AUDUBON SOCIETY.—SARATOGA (N. Y.) BIRD CLUB.—SAVANNAH (GA.) AUDUBON SOCIETY.—SCRANTON (PA.) BIRD CLUB.—SEATTLE (WASH.) AUDUBON SOCIETY.—SOCIETE PROVENCHER D'HISTOIRE NATURELLE DU CANADA.—SOUTH BEND (IND.) HUMANE SOCIETY.—STANTON BIRD CLUB (MAINE).—STATEN ISLAND (N. Y.) BIRD CLUB.—SUSSEX COUNTY (N. J.) NATURE STUDY CLUB.—VIGO COUNTY (IND.) BIRD CLUB.—WASHINGTON STATE FEDERATION OF WOMEN'S CLUBS.—WATERBURY (CONN.) BIRD CLUB.—WEST CHESTER (PA.) BIRD CLUB.—WYNCOTE (PA.) BIRD CLUB.—WYOMING VALLEY (PA.) AUDUBON SOCIETY.

LIST OF AFFILIATED ORGANIZATIONS

REPORT OF TREASURER

REPORT OF AUDITING COMMITTEE

REPORT OF T. GILBERT PEARSON, PRESIDENT

INTRODUCTION

The seventeenth year of this Association's corporative life has come to a close, and today we pause to look back over the results of the year's efforts before turning to the duties that await us on the morrow. It has been a year of progress, and the increase of interest on the part of the public for the cause of wild-life protection has been continuous. There is much for which we may rejoice, but, naturally, some things have taken place which we would wish had not occurred. Victories achieved for wild-life protection have given cheer and encouragement, while certain defeats, and, at times, the inadequacy of the financial support, have necessitated calling upon our reserve of courage and fortitude.

While heartily regretting the discontinuance of the excellent educational conservation work built up in the state of New York under the leadership of our Life Member, George D. Pratt, and the failure of the legislatures of North Carolina and Florida to establish game commissions, we can take comfort in the defeat of certain congressional efforts to establish the principle of exploiting our National Parks for individual gain. It is a pleasure to chronicle the creation of many new bird sanctuaries and reservations, as well as the enlarging membership of this Association and that of many of the state and local groups associated with it. Also, the increasing respect shown by American gunners for the Federal bird-protective laws augurs well for the future wild-fowl supply.

The Association has passed through a year of exacting activities, some of which I shall attempt briefly to set forth. Through the warning of friends at the right moment, we were able to play a part in inducing President Wilson to veto a bill which passed Congress for the purpose of turning over to private interests an important wild-fowl range in one of the western states. Timely warning from another member traveling in the West enabled us to bring pressure to bear upon the governor of another western state, who, acting within his legal rights, appeared to be on the point of granting permits to kill 100 prong-horned antelope, a species which has almost disappeared from our western plains. As a result, the permits were not granted.

We have been in active coöperation with the United States Treasury Department in the matter of enforcing the law prohibiting the importation of plumage. The Government, continuing its policy of turning over confiscated plumage to this Association for educational purposes, has presented us with three more contraband shipments of Paradise and aigrette plumes.

FIELD AGENTS AND OFFICE FORCE

The work of the Association's Field Agents has been all that could be expected of an earnest, energetic, and loyal group of men and women.

The educational effort of E. H. Forbush, General Agent for New England, is well known by all who follow the activities of bird-protection in this country. During the summer your President had the pleasure of visiting with him the various Gull and Tern colonies along the Massachusetts coast, which, under his watchful eye, have prospered for so many years.

Winthrop Packard, Agent for the state of Massachusetts, from his headquarters at 66 Newbury Street, Boston, has been energetic and effective, as usual, in all the phases of the Association's endeavor within his territory.

The work of William L. Finley, Agent for the Pacific Coast States, has been largely in the field of making and producing additions to his remarkable series of motion pictures of wild bird life studies, chiefly in California and Oregon. One hundred and eighty of his films, representing nine subjects, have been in constant circulation in the moving-picture theatres throughout the country.

Herbert K. Job's work in applied ornithology has continued in the dissemination of information regarding the propagation of birds by artificial methods. He has done much lecturing and for several weeks the past summer was engaged in making still and motion pictures of wild birds in Connecticut, Maine, and eastern Canada.

Arthur H. Norton, Field Agent for Maine, had much to occupy his time in combating adverse legislation at the capital of his state, and, in coöperation with state and Federal authorities, inspecting the great sea-bird colonies guarded by this Association along that rocky coast.

Dr. Eugene Swope, Field Agent for Ohio, enjoyed the greater part of his sabbatical year studying the bird-life of Florida. He is again engaged in his regular duties in Ohio.

Miss Frances A. Hurd, in Connecticut, who for a time was inactive in the Audubon work because of the temporary scarcity of funds in the Junior Department, recently took up active duties again in her field of effort.

Mrs. Mary S. Sage spent the entire year lecturing on Long Island, in coöperation with the Bird Club of Long Island. The reports received would seem to indicate that there is hardly a school building on the entire island which has not been visited by her Ford coupé.

Miss Katherine H. Stuart represented the Association in conducting a course in bird-study at the Summer School at the University of Virginia, and the same work was carried forward by Miss Edna L. Johnson at the University of Colorado.

Reports of some of these representatives have been made and will be published with this general report. The work of these various agents should never be underestimated. I wish it were possible in this connection also to enumerate the scores of volunteer workers, who, throughout the country, so greatly aid in spreading the principles for which the Audubon Society stands.

I doubt if our membership generally appreciates the earnest and often self-sacrificing spirit of the Association's office force. The earnest desire to produce the best results and the splendid spirit of coöperation and loyalty which runs through this group of twenty men and women is a matter constantly commented upon by those in intimate touch with the home office. No one man or woman can accomplish much in this world by his or her individual effort. The widely expanding influence of the Audubon Societies is due to the combined efforts of many workers. The officers and directors of the Association have given their best thought and endeavor to the building up of the Association's work, but their efforts are at best only a fractional part of this growing nation-wide organization.

AFFILIATED ORGANIZATIONS

During the World War, and for some time afterward, the work of many of the Audubon Societies and Bird Clubs naturally suffered. The past year has seen a strong revival of activities on the part of the 155 state and local societies and clubs affiliated with the National Association. A listing of their principal activities, even without comment, would be quite beyond the space allotted for this report. These societies, therefore, have been invited to submit summaries of their work, and a large number of these will be printed with this report. It has been the pleasure of the home office to coöperate with many of these organizations in their local problems, and in return we have received most splendid support from various clubs and societies, not only in supporting Federal and State legislation, but in many cases financially.

There has been an increased number of publications by the affiliated groups. Among these may be mentioned the bulletins of the Massachusetts Audubon Society, New Hampshire Audubon Society, Illinois Audubon Society, Florida Audubon Society, and the Indiana Audubon Society. *The Gull*, published by the Audubon Association of the Pacific, has continued to appear punctually. Attractive reports and yearbooks have been issued by the Bird Club of Long Island, the Junior Audubon Society of Brunswick, Maine, the West Chester Pennsylvania Bird Club, as well as by the Vermont Bird Club, the Oregon Audubon Society, the Ohio Audubon Society, the New Jersey Audubon Society, and others. The most handsome publication was by the Société Provencher of Quebec. This consists of 88 pages with covers. It contains 9 full-page colored plates of birds by Hennessey and 28 half-tone illustrations. There is great opportunity for constant coöperation, and all societies interested in wild bird and animal life are invited freely to make use of such facilities as the National Association may be able to offer them. To give some idea of the extent of the Audubon Society organization among adults it may be stated that these 155 active branches are distributed as follows: There is one each in Arizona, Georgia, Kansas, North Carolina, Montana, Oklahoma, Oregon,

Utah, and Vermont. There are 2 in Colorado and the same number in Kentucky, Maryland, Minnesota, Missouri, Louisiana, North Dakota, Rhode Island, Tennessee, and West Virginia. Iowa has 4; and Florida, Indiana, Ohio, and Washington, each has 5. Six are in Illinois and Michigan; 7 in New Jersey; 8 in Connecticut; 12 in Massachusetts; 14 in Pennsylvania, and 29 in New York state. Also there is one in the District of Columbia and 4 in the Dominion of Canada.

A complete list of affiliated organizations, together with the names and addresses of the president and secretary will be found published elsewhere in connection with this report.

WARDENS AND RESERVATIONS

The idea of designating areas of land or water in which wild birds may find sanctuary apparently had its distinctive beginning when, on March 14, 1903, some of the founders of this Association induced President Roosevelt to declare Pelican Island, Florida, a United States Bird Reservation. Today there are more than seventy Government bird reservations, some of which are very extensive in area. In the neighborhood of eighty other breeding colonies of water-birds are guarded by wardens of this Association. There are now many state bird reservations, embracing within their boundaries several millions of acres of forest and swamp-lands. Various Audubon Societies and bird clubs have their bird sanctuaries. City parks, cemeteries, hospital grounds, and numerous other territories have been dedicated to the untrammled use of wild-bird life. Many of these, of course, are sanctuaries only in so far as they protect the birds from hunters, for to be in reality Cities of Refuge for wild feathered life, they should be free from the presence of the domestic cat. The bird-reservation idea has gathered greater momentum in this country than in any other region in the world, unless it be in areas of India where for religious reasons the natives regard it advisable to leave the birds undisturbed. The Birdcraft Sanctuary at Fairfield, Conn., still maintains the lead as the most perfect exemplification of the bird sanctuary idea.

During the year, three additional Federal reservations have been established, and the boundaries of the one at Indian Key, Fla., have been extended. The greatest addition to the reservations cared for by this Association unexpectedly came to us as a present from the Legislature of the state of Texas. In 1919 and 1920 your President engaged in making some observations of the bird-life of the lower coast of Texas. As a result of this, and of friendly connections made with some of the citizens of Texas, the Legislature of that state, at a recent special session, passed as an 'emergency measure' a bill authorizing the leasing of six islands in Laguna Madre to the Association, without cost, for a period of fifty years. The water-birds resorting to these islands are estimated to be not less than 100,000. Here are found, not only Snowy Egrets, Ward's Herons, Louisiana Herons, Laughing Gulls, Brown Pelicans, and four species

of Terns, but an extensive colony of the rare Reddish Egret and the only nesting colony of White Pelicans known to exist in the waters along the Atlantic shores of North America.

The Association employed about the same number of wardens as last year. These men guarded great colonies of sea-birds situated chiefly along our coast from Maine to the mouth of the Mississippi River. Interiorly they operated also at Moosehead Lake, Maine; in the Great Lakes; and at many of the Heron and Egret colonies along the coastal plain of our southern country from central North Carolina to western Louisiana.

In May your President visited twenty-one colonies of Egrets, Herons, and Ibises in central Florida and was distressed to find that, largely on account of the destructive forces of the Fish Crow, these colonies have much decreased of recent years.

Little killing of birds for the feather trade has been reported except in Florida, where the bush-whacking of Egrets probably will continue as long as any are to be found in the southern part of the state. There have been some raids by eggers on a few of the sea-bird islands, but the losses from this source have been more than offset by an unusually favorable breeding season, owing to the absence of storms and high tides at the critical nesting-period.

LEGISLATION

At the last session of Congress, before the incoming of the present administration, two bills, intended to exploit the Yellowstone National Park for commercial interests, were introduced in the United States Congress and pushed with great vigor by their supporters. This Association joined with other National organizations in a campaign of opposition. Thousands of letters and telegrams from our members and affiliated organizations throughout the country aided in the defeat of these bills. Members of the Association contributed a fund of over \$6,000 with which the expenses for publicity, sending of agents to Washington, and other defensive measures were met. We were also able to contribute financially to the park work of the American Civic Association and the National Parks Association, thus aiding them in the publication of their bulletins of propaganda.

During the present session of Congress attempts have been made by our enemies to revive these bills. Thus far, however, little progress has been made. In this connection I may draw your attention to the fact that upon the occasion of our annual gathering, one year ago, the Association directed by resolution that telegrams be sent to Warren G. Harding and James M. Cox asking of each the question, whether in the event of his being elected President of the United States his policy would be to guard the National Parks and bird reservations against commercial attempts to exploit them, and whether he would favor the enforcement of our treaty with Canada for the protection of

migratory birds. Allow me on this occasion formally to report the prompt receipt of the following telegram from Mr. Harding:

"Thank you for your telegram of October 26. If you care to do so you may use the following message and release to the press: 'I am fully in favor of a policy which will guard the integrity of our National Parks and our Bird Reservations. I favor the enforcement of the Treaty with Canada for the protection of valuable migratory birds.' Please accept my greeting to your Association."

It need only be added that Mr. Harding has kept his word, and when the attack on the National Parks was renewed last spring, and we filed protest with the Secretary of the Interior, we received a reply from that gentleman to the effect that we need have no fear as to the result of these bills in Congress, as President Harding had already given this Association his word that he would defend these great natural museums of scenery and out-of-door life.

Several bills are now before our National law-makers in which the Association is greatly interested. One was drawn for the purpose of requiring a license of \$1 from all people who desire to hunt migratory game-birds. The funds thus collected are to be used for the payment of additional Federal game-wardens, and for the purchase of areas of territory suitable for breeding or feeding places of migratory birds, particularly Wild Ducks and Geese.

Many reports have reached us of the destruction of bird-life caused by pouring into the harbors and along the coast crude oil from vessels reaching our shores. We are actively supporting two bills in Congress looking to the abolishment of this evil.

Despite the provision in the Tariff Act of 1913, which prohibits the importation of feathers of wild birds into the United States, immense quantities of high-priced plumes have entered the country, to be displayed, sold, and worn in all our large centers of population. The plumage one most often sees is that of the Minor Bird-of-Paradise. With a view of amending the law in such a way as to put an end to the sale of these smuggled goods, your President asked for and received permission to appear before the Ways and Means Committee drafting the new Tariff Act. Shortly before the date set for his appearance it was learned that the United States Millinery Chamber of Commerce had the same idea in view, and had already prepared a bill looking to this end. After conference in Washington with the representatives of this Chamber of Commerce it was decided by your President and First Vice-President, who were present, to support the measure as it had been drafted by the milliners' attorney. It happened, therefore, that on February 11, 1921, representatives of the Audubon Society and of our ancient enemies, the wholesale milliners, met in our Capital City in support of a measure which we both hoped to see enacted into law.

As I sat in the committee-room that day, and looked about at the faces of men who on various occasions during the past twelve years we had opposed in legislative committee-rooms in different parts of the country, I could but

reflect on the vast changes in sentiment which the years have brought. Here sat men who for many years had expended time and money seeking to retain their ancient privilege of dealing in the plumage of wild birds, but now, when at last it had become illegal to handle the feathers, these same men, being honest, were interested in securing a law which would force dishonest men to observe its provisions.

The new Tariff Act is still pending in Congress, but we have strong hopes that when it is enacted, the display of Paradise feathers in our city stores will come to an end. Our Association also advocated the placing of an import duty on song-birds brought into this country. The Tariff Bill now pending contains this provision for which we asked.

JUNIOR DEPARTMENT

In a letter received from Miss Ada B. Copeland, principal of the Riverside School at Grand Junction, Colo., the writer said:

"Our school for four years has had its Junior Audubon Club. During this period over forty species of birds have been identified and studied on the



JUNIOR AUDUBON SOCIETY OF GRAND JUNCTION COLO. MISS ADA B COPELAND
TEACHER AND LEADER

school-grounds and many more in the immediate vicinity. The older people, as well as young, of the neighborhood have become real bird-lovers, and much has been done for the protection of bird-life and to encourage birds to build near our homes. The past year, interest aroused by the Junior Audubon Club in behalf of bird-life resulted in the raising of a fund for the erection of an Audubon bird-fountain and bath in Riverside Park. This was dedicated in June, 1920, with exercises by the entire school. It is the first bird-bath in the city, or even in the county."

A large number of similar letters have been received from principals and teachers throughout the United States and Canada. At hundreds of



BIRD-BATH, ERECTED BY THE JUNIOR AUDUBON SOCIETY OF GRAND JUNCTION COLO.

schools bird-boxes were built and erected. Programs on Bird Day and at other periods were rendered by Junior Clubs in thousands of communities. Parents naturally are interested in what their children are doing, and so an immense missionary work is constantly being carried on among the adults of the country through the interest aroused among pupils by our Junior Department.

Owing to the difficulty in securing funds and the high cost of printing, it was found impossible again the past year to supply all those who sought Junior membership, and the 10-cent membership fees were returned to many disappointed groups of little children. Chiefly by the aid of the \$20,000 contributed by our unnamed Benefactor, we were able to form 5,851 bird-study clubs in the schools, with a total membership of 229,784. The coming year it will be possible to supply a greater number as more funds have been made available and there has been a slight drop in the cost of printing. Educational leaflets, colored bird pictures, outline drawings, and Audubon buttons

have been manufactured to the extent of 300,000 sets, and the present demands for material would seem to indicate that there will be calls for this great stock of bird literature before the schools close next June. To those actively engaged in the handling of this important phase of the Association's activities it is a source of unending regret that sufficient funds are not in hand to push this organization among the children to the maximum extent.

We have the experience, the organization, the good will of the school authorities, and the enthusiasm of the children sufficient to enroll one million or perhaps two million annually if we could only meet the necessary 50 per cent of the expense. The children's fees, it will be remembered, cover the remainder of the cost.

In the work of placing the subject before the teachers of the country and in the distribution of the literature, the Association has enjoyed, as heretofore, the active coöperation of a number of the State Audubon Societies and local affiliated organizations. Some, also, have aided financially. For example, the Bird Club of Long Island supplied funds sufficient to pay 70 per cent of the entire expense of employing Mrs. Mary S. Sage as a lecturer in the schools of Long Island throughout the year, and in supplying the Island children with literature. The Massachusetts Audubon Society has contributed generously. In Oregon, Indiana, and some other places, literature has been distributed by the State Societies, which also bore the expense of the necessary clerical assistance and postage. The New Jersey Audubon Society again coöperated in the Junior organization work in that state. Many others have provided speakers to go into the schools and present the subject. The organized co-operative work of various societies and clubs is constantly increasing, with good results to the cause.

The following table shows the distribution of the Junior Clubs in the various states and Canada during the school year ending June 1, 1921.

ANNUAL SUMMARY OF JUNIOR AUDUBON CLUBS AND MEMBERS UNDER THE CHILDREN'S EDUCATIONAL FUND

Summary Ending June 1, 1921

States	Clubs	Members	States	Clubs	Members
Alabama	12	559	Georgia	18	856
Arizona	4	219	Idaho	10	412
Arkansas	18	738	Illinois	320	13,457
California	142	5,862	Indiana	181	6,700
Colorado	51	2,301	Iowa	123	4,106
Connecticut	184	6,977	Kansas	44	1,543
Delaware	38	1,552	Kentucky	25	1,023
District of Columbia	2	50	Louisiana	7	219
Florida	176	5,963	Maine	42	1,471

ANNUAL SUMMARY OF JUNIOR AUDUBON CLUBS AND MEMBERS, continued

States	Clubs	Members	States	Clubs	Members
Maryland.....	58	2,482	Pennsylvania.....	607	25,086
Massachusetts.....	497	18,231	Rhode Island.....	12	652
Michigan.....	146	5,840	South Carolina.....	16	508
Minnesota.....	202	8,183	South Dakota.....	36	1,184
Mississippi.....	5	164	Tennessee.....	9	518
Missouri.....	110	4,081	Texas.....	42	1,697
Montana.....	27	1,115	Utah.....	26	992
Nebraska.....	79	2,897	Vermont.....	25	1,052
Nevada.....	8	313	Virginia.....	41	1,838
New Hampshire.....	40	1,404	Washington.....	114	5,392
New Jersey.....	243	10,689	West Virginia.....	33	1,384
New Mexico.....	4	182	Wisconsin.....	159	6,139
New York.....	843	33,664	Wyoming.....	8	274
North Carolina.....	11	339	Canada.....	358	1,1571
North Dakota.....	37	1,288	British Guiana.....	1	26
Ohio.....	616	22,562	Japan.....	0	20
Oklahoma.....	9	377	Totals.....	5,851	220,787
Oregon.....	32	3,635			

MISCELLANEOUS AND FINANCIAL

Within the year our Supply Department sold at cost 518 stereopticon slides, as well as several thousand dollars' worth of leaflets, bird-books, field-glasses, bird-charts, and other helps to bird students. We issued 2,060,000 Educational Leaflets, and other circulars to the extent of 210,000. During the year there were enrolled 152 Life Members at \$100 each. From the estate of Betsy S. Beal, of Boston, Mass., we received a bequest of \$100. The sum realized from these sources, together with \$770 in gifts, totaled \$16,070 added to the permanent Endowment Fund. The Sustaining Membership (fee \$5 annually) has this year numbered 4,527, the largest yet attained. The total income for the year was \$152,304.93.

CONCLUSION

It is with deep sorrow that we record the death of one of our most beloved directors, Dr. Joel Asaph Allen, of the American Museum of Natural History, who passed from this earth on August 29, 1921, at an age of more than 83 years.

He was one of the founders of this Association and had been an active and deeply interested member of the Board since its first organization. He was a scholar and scientific investigator of rare and unusual ability and possessed at all times a spirit of great modesty and unselfishness. In the councils of this Association his services were invaluable, and he was always so kind and sympathetic in his attitude toward others that it was a great privilege to be associated

with him. By his death this Association has lost one of its most loyal, earnest, and devoted friends.

Recently, by direction of the Board of Directors, there was made and erected in the home office of the Association a bronze tablet bearing this legend:



The cost of the tablet was borne by a few of Mr. Dutcher's old personal friends, and chief among those who showed deepest interest in this memorial was Mrs. Kingsmill Marrs, a loyal member of the Association and friend and admirer of our lamented first President and founder.

REPORTS OF FIELD AGENTS

REPORT OF EDWARD HOWE FORBUSH, FIELD AGENT
FOR NEW ENGLAND

There is much to be said about the protection of birds in New England during the past year, but for lack of space this report must be devoted to two important topics: (1) The danger that menaces the Gulls and Terns of New England; (2) the increasing destruction of small birds by gunners.

It is well known that the greatest nurseries of sea-birds in New England are located on certain islands off the Maine coast. There the Gulls and Terns are protected by wardens employed by the National Association of Audubon Societies, and there these birds have increased largely within recent years. In that region there are many islands well offshore, so situated that the protection of the birds breeding upon them is not difficult. On some of the islands Petrels may have been decreased or extirpated by dogs and cats, and the Eider Ducks are barely holding their own, but, on the whole, the protective work there has been eminently successful. One colony of Herring Gulls on the New Hampshire coast, which is continually raided by eggers, will be exterminated if it is not protected soon by a warden.

On the Massachusetts coast, Gulls and Terns have been increasing under protection for years, but now they have reached their height, and this year they have begun to decrease. Here many of their breeding-places are on islands close to the coast in bays or harbors or even on the mainland. In such locations protection becomes difficult. The National Association has but one warden on the Massachusetts coast. Other protection that has been given the birds in the past has been either by local authorities or by the Massachusetts Conservation Commission. Recently protection has been extended to only five colonies, and this year there has been no caretaker for the Least Terns on the south coast of Martha's Vineyard.

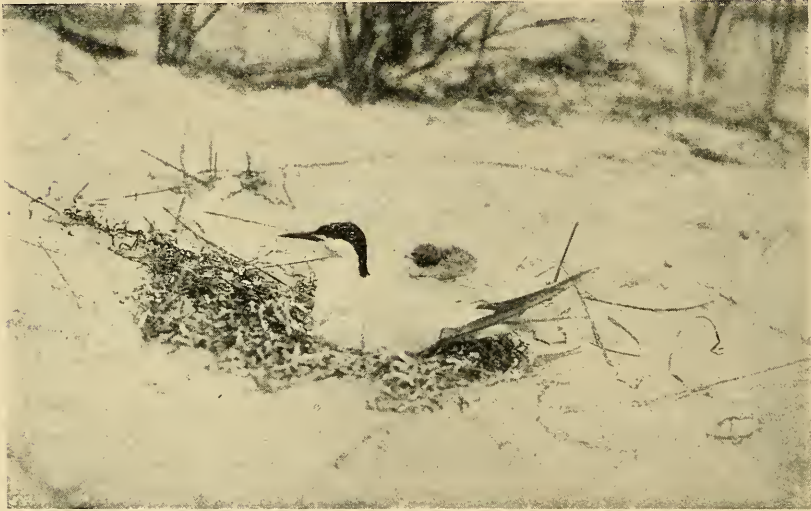
Arctic Terns are not known to breed anywhere south of Massachusetts. The lovely Roseate Terns nest nowhere else in the Northeast, with the exception of a few birds which may still breed on some of the islands of Maine and Nova Scotia. Massachusetts is believed to be the last stronghold of Least Terns north of Virginia. Elsewhere in the East they are believed to have been extirpated. Probably the number now breeding in Massachusetts is less than 200. Only the strictest protection can possibly save them.

Herring Gulls have been breeding for several years in two localities in Massachusetts, but their numbers are small. They are so situated that very little protection can be afforded them, and probably they will be unable to maintain themselves long.

Common Terns are breeding on Muskeget, Penikese, Gull, the Wepeckets, Pine, and several other small islands, as well as on Martha's Vineyard and Nantucket and along the shores of Cape Cod. This year, however, their

numbers have decreased. It is doubtful if more than 100 pairs bred successfully this year on the Wepeckets. The great colony on Muskeget has decreased considerably. The colonies on the outer beaches of Nauset and Chatham have practically disappeared. The colony at Monomoy has been decimated. The colony at Truro was raided by eggers, and the other colonies show really no signs of increase. The Nauset colony is the only prosperous one visited by me in 1921.

Roseate Terns have been breeding this year in greater or lesser numbers at Penikese, Muskeget, Chatham, Monomoy, and Nauset, the largest colonies



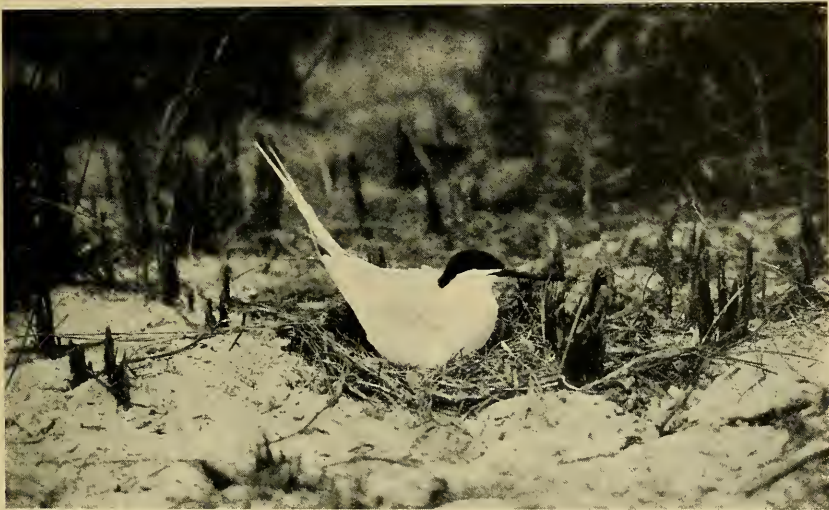
COMMON TERN ON NEST WITH YOUNG IN BACKGROUND. NOTE LONG WINGS AND THE COMPARATIVELY SHORT TAIL

Photographed by Edward Howe Forbush

being at Muskeget and Chatham. At Chatham and Muskeget there was great mortality among the young birds, and at Chatham many adult birds were killed by rats. Elsewhere they do not seem to be increasing now. A small number of Arctic Terns bred at several of the colonies last year. This year only one colony was located—that on the north beach at Chatham, which was wiped out. It was first swept by a high tide and later raided by cats and skunks, which destroyed both eggs and young and drove the parent birds away. Only a few pairs were known to breed anywhere on the Massachusetts coast this year.

Very few occupied nests of Least Terns were noted. On the south shore of Martha's Vineyard, where for several years about 200 Terns of this species have bred, less than 20 nests were reported. There were a few on Monomoy, and a small number bred at other places on Cape Cod and on the mainland. Not one was found on Nantucket where they formerly were reported. The

south shore of Martha's Vineyard is the safest and best breeding-place for the Least Tern in New England. If by reason of persecution by man or natural enemies they once leave that shore, extirpation from New England will inevitably follow unless strict protection can be given them wherever they settle. On Martha's Vineyard there are no raccoons, skunks, or foxes, few minks, and very few other inimical mammals. The greatest natural enemy there, as well as on the mainland, is the domestic cat run wild. These animals roam the Vineyard in considerable numbers. If the birds are to exist there, wardens will be required to destroy wandering cats and rats on that part of the island. Elsewhere though the birds nest from time to time, they will be driven away



ROSEATE TERN ON NEST. NOTE, THE COMPARATIVELY SHORT WINGS AND THE LONG WHITE TAIL

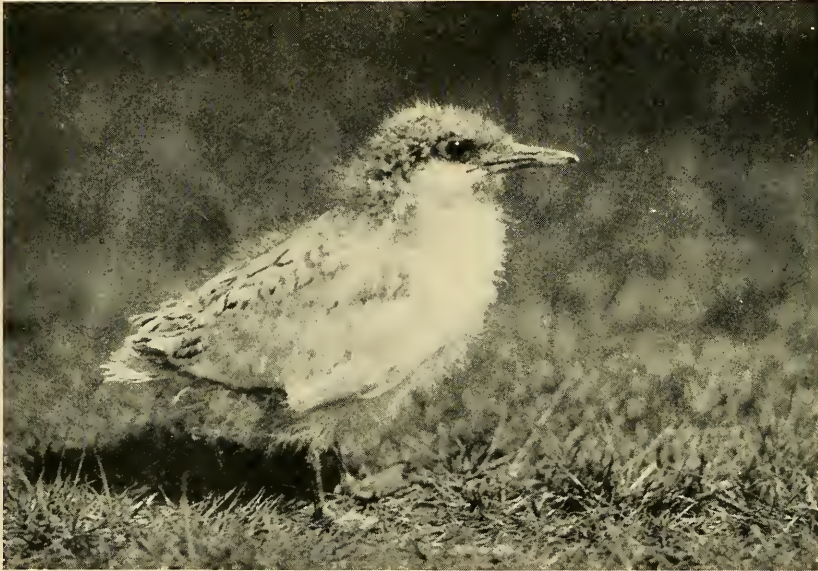
Photographed by Edward Howe Forbush

by their natural enemies and molestation by summer people on the beaches. There is no safety for them anywhere in Massachusetts unless strictly protected during the breeding-season by resident wardens. Even if so guarded, all beaches on which these Terns are likely to breed are by law open to the public. As the beaches become more and more frequented, there will always be danger that the eggs and young, the colors of which resemble that of the sand on which they lie, will be trodden under foot.

Many Tern colonies now lie near popular beaches and are visited by many summer sojourners and tourists. The birds are constantly disturbed and driven from their nests. Such disturbance increasing will in time drive them from any locality. The old notion that Terns leave their eggs to be hatched by the heat of the sun is an error. The eggs must be constantly incubated and the newly hatched young must be brooded to preserve their lives. If exposed

long to the sun's heat, they die. Along the New England coast, in summer, there are many southerly or southwesterly gales, when the dry sand of the beaches blows over the breeding-grounds. If the Terns are driven from their nests at such a time, especially when the young are hatching, the sand is blown on the little chicks while their feathers are still wet, it adheres to them, and they are soon buried. Eggs also are thus buried. Someone should be at hand to see that the birds are never disturbed on such days.

Foreigners, fishermen, and eggers take every opportunity to raid colonies of nesting birds, taking the eggs or the young, which they use for food or for



HALF-GROWN YOUNG OF ROSEATE TERN

Photographed by Edward Howe Forbush

bait. Every part of the mainland upon which the birds can breed is continually overrun by cats, dogs, skunks, and other natural enemies of the birds. As soon as a colony is established, these enemies concentrate upon it. Many people who summer in New England leave cats along the shore which run wild, and numberless skunks seem to thrive on the beaches. There are a few small Tern colonies on the coasts of Rhode Island and Connecticut, and all that has been said about better protection in Massachusetts would apply also to these colonies.

Penikese Island is now the property of the Commonwealth of Massachusetts, but since the leper colony has been removed from the island, the state authorities have had offers from intending purchasers. This island, the property of the Commonwealth, should be preserved for all time as a breeding-place for birds. It is one of the best strongholds of the Roseate Terns, and thousands

of Common Terns nest there. They have been decimated from time to time by cats kept on the island, but the cats can be eliminated. If, during the breeding season of the Terns, an efficient guard could be placed on Penikese to keep down the natural enemies of the birds and to forbid landing, no doubt the Terns would continue to occupy it indefinitely. It is far from shore, no steamers stop there, and no better location could be desired. On this island Louis Agassiz maintained his famous School of Natural History. If the state of Massachusetts will not retain Penikese, it should be placed in charge of the National Association of Audubon Societies for all time.

INCREASING DESTRUCTION OF SMALL BIRDS BY GUNNERS

In all his experience in New England, your Agent never has received so many complaints regarding the destruction of small birds by gunners as during the past year. The number of gunners is increasing rapidly. When Massachusetts first began to issue hunters' licenses, the number issued was about 30,000. In a few years it has increased to over 100,000. As soon as the shooting season for shore birds opened in August, reports began to come in to the effect that gunners were shooting Gulls, Terns, and small shore-birds, Swallows, Sparrows, and birds of many kinds protected by law. When the Duck season opened, these complaints increased, and when the general hunting season began, there were more reports of the killing of Robins, Flickers, and other small land-birds. Much of this destruction, it is said, was done by automobile parties which scour the country in all directions. Government and state wardens have apprehended some of these people, but the number of wardens is insufficient to cope with this element, and they are not provided with adequate means for transportation. With the constantly increasing number of gunners, if the song-birds are to receive any adequate protection, the National Association may be obliged to secure the appointment of additional wardens for this purpose.

REPORT OF WINTHROP PACKARD, FIELD AGENT FOR MASSACHUSETTS

In summing up the activities of the past year, your Massachusetts agent is pleased to find that, in spite of hard times, total receipts of the office have actually exceeded disbursements by a modest sum. Through lectures and other personal activities, many newspaper articles and a very vigorous and persistent use of the mails, the work and needs of the National Association of Audubon Societies have been continually kept before the people of the state. Seventy-three new Sustaining Members and three Life Members have been added to the rolls, and 18,231 Juniors joined the bird-study classes in the public schools. The demand for the Junior Class leaflets thus used exhausted the supply early in May. Notice was sent immediately to superintendents

and teachers, but before the rush could be stopped 2,331 applicants came in and had to be denied the privilege. Your Agent immediately started a state-wide inquiry to increase the funds for leaflets for the coming year. To date, \$836 has thus been received and a correspondingly increased number of leaflets will be printed, thanks to the generosity of several hundred friends of the birds.

The work of the year has been far too varied for detailed mention. Two specimen items may be given, however. As a part of Worcester's April Bird Festival, your Agent, accompanied by the Rev. Arthur E. Wilson, toured the outlying schools of the city, giving a brief talk to the children on Junior work. Mr. Wilson spoke also, giving some of his excellent whistling reproductions of bird music. In the afternoon the grades of the nearby schools assembled in the high school auditorium where a more elaborate program was given, an illustrated talk, bird movies, and whistling. Nearly a thousand children were present. In the evening this program was repeated to an adult audience. It was a busy day but a useful one for the work. Again, during a part of June and all July your Agent spent one day a week at the International Scout Leader's Camp at Plymouth, teaching birds to Girl Scout leaders from all over the country as well as some from abroad. Here again the opportunity was seized to make the work of the National Association clearly known to Scout leaders in nature work from many distant states as well as to those of Massachusetts. Your Agent finds the gospel of bird-protection everywhere received gladly.

REPORT OF WILLIAM L. FINLEY, FIELD AGENT FOR THE PACIFIC COAST STATES

Our field-work during the past year has been mostly in various parts of California, especially through the southern part of the state, where we worked through the winter and up to June 1. An attempt was made to find the home of the California Condor, in order to get a life series of motion pictures of this rare bird. We were unsuccessful because the birds have been exterminated in the locality where we had found them in 1906. We secured an interesting series of motion pictures of some of the desert birds that live in the last area of the desert country remaining in the region east of Los Angeles. Where we photographed Least Terns in 1906, the colonies were entirely gone. Because of increased settlement along the coast and the exploitation of oil-fields in these localities, it will be but a comparatively short time until the Least Terns will be exterminated in southern California, their last nesting-place on our western borders. But a few small colonies remain. Some remarkable motion pictures were taken of various species of Hummingbirds, Cactus Wrens, California Thrashers, Bush-tits, Barn Owls, several species of bats, and the opossum which, introduced some time ago, has become quite abundant in certain parts of California.

In conjunction with field-work, a series of motion picture lectures was given during the winter under the auspices of school institutes, schools, clubs, and other organizations in southern California.

In order to secure wider publicity for the protection of wild birds and animals among people who give these matters little or no attention, nine of our moving-picture stories have been released during the past year through the



MOTHER OPOSSUM AND ONE OF HER THIRTEEN YOUNG
Photographed by William L. and Irene Finley

Goldwyn Exchanges by the Bray Pictures Corporation. From twenty to thirty copies of each story were made, and each of these is having wide and continuous use in moving picture theatres in the United States and foreign countries. The subjects released were as follows:

(1) 'Tree-top Concert Singers;' (2) 'Paradise for Birds,' a story of Malheur Lake Reservation with an appeal to prevent its destruction; (3) 'Adopting a Bear Cub;' (4) 'Chumming with Chipmunks;' (5) 'Gipsy Scientists,' showing a pack trip through northern Washington with pictures of different birds and animals; (6) 'Hoot, Mon,' a study of different kinds of Owls; (7) 'No Reg'lar Bird,' a series of life pictures of the Hummingbird; (8) 'Hooters and Honkers,' illustrating Grouse and Geese; (9) 'Song Birds as Citizens,' showing the economic value of insect-eating birds.

Each of these stories has been released with the name of the National Association of Audubon Societies in its beginning title. Some of them relate especially to Audubon work, such as encouraging children to put out food and baths for birds, the value of wild-bird reservations, and the last release in particular showed how children in the public schools may attract and protect birds by building bird-houses and renting them for a song. These pictures have created a popular interest and another series of reels is now being released to fit into the programs of moving-picture theatres whose patrons are asking for nature studies as well as plays.

We are now making up a series of motion-picture reels to be used by the National Association of Audubon Societies for educational purposes. The plan is to make up a film library from the best negatives which we have secured during the past eight years, showing interesting traits in the lives of wild birds and animals, illustrating various wild-fowl reservations and all the phases of Audubon work. When completed, this will make a series of 20,000 or 30,000 feet of choice film, or a motion-picture library that can be used for exhibition purposes.

Malheur Lake Reservation, our greatest wild-fowl nursery in the West, is likely to be saved from the scheme of promoters who have been trying to drain



LAKE MERRITT, OAKLAND, CALIFORNIA. A SUCCESSFUL WILD FOWL RETREAT
IN THE MIDST OF THE CITY

Photographed by William L. and Irene Finley

or dry up the lake. After the reservation was created by special proclamation of Theodore Roosevelt, on August 18, 1908, there arose a conflict of interest in the land and water between the state of Oregon and the Federal Government. An effort was made last year to settle this matter by popular vote of the citizens of Oregon whereby the state relinquished its rights on Malheur Lake, but this failed. However, such interest has been aroused in the Reservation that the Solicitor's Office of the Department of Agriculture has made a thorough investigation during the past year, and the diversion of the water from Malheur Lake and the rights and title of the United States to the land within the meander line of the Reservation have been found to be substantial. It is likely that action in the Federal court will be taken shortly to prevent further drying up of Malheur Lake and the consequent destruction of its great bird colonies.

Eternal vigilance is the price that lovers of the out-of-doors have to pay to prevent the continued extermination of wild birds and animals. During the

past year, the Oregon Fish Commission, at the request of commercial fishermen, secured a special sea-going boat and equipped it for the purpose of exterminating the Steller sea lions in all the colonies along the Oregon Coast. This has been done because the fishermen claim that these animals are destroying large numbers of young salmon. Scientific investigation carried on under the coöperative direction of the California Fish Commission and the United States Bureau of Fisheries showed that these animals live largely on squids or octopus and other sea-food of no value. Yet, in the face of this, the sea lion colonies off the Oregon coast have been raided, with the exception of those on Three Arch Rocks Reservation. Opposite these a large warning has been posted by the Biological Survey and the reservation has been guarded to prevent the useless destruction of these creatures.

REPORT OF HERBERT K. JOB, DEPARTMENT OF APPLIED ORNITHOLOGY

Seven years of effort have brought the Department to a point where the whole subject and work of Applied Ornithology, with its various ramifications, is well systematized, the material thoroughly in hand, and an ever-growing constituency being aided and instructed. In fact, the work has very far outstripped its original conception.

Though the cost of publication has made it still inexpedient to put out new bulletins and leaflets incorporating the later results of our research work, the former ones, which were very carefully prepared, still answer in the main for practical needs. A steady volume of inquiries and requests for help continue to come in. A recent one is from an agency for the sale of bird-houses, for various details of information about habits and requirements of birds, with the request that they may refer their customers to our Department for instruction—which, of course, we are glad to grant.

This Department, as one of the pioneer agencies in encouraging a broad view as to propagation methods with so-called 'game' species and wild waterfowl, has now lived to see this side of wild-bird conservation established as a nation-wide industry, with invested capital in the millions of dollars and large and increasing output. This movement has now a recognized 'trade magazine' in *The Game-Breeder*, under the able leadership of our friends and allies, Dwight W. Huntington and his son, John C. Huntington, with whom we work in friendly coöperation, as well as with the other organizations interested in such work. Not a small part of our work is in helping the many beginners who have been taking up these practical and widely varied lines of effort.

One practical detail of our work has attracted much attention, which is the method used at our Amston Experiment Station for wintering wild Ducks by means of our model aquatic house—original, but not patented! Frequently we are called upon to furnish plans and specifications for building similar

houses in different public parks or private preserves over the country. As the latest of these, we have just revised the blue-prints for one being built by Mr. Chester K. Brooks on his estate near Cleveland, Ohio, where he is going extensively into the cultivation of wild water-fowl.

The lecture calls, as usual, have been interesting. For instance, the tour of Maine cities last year created the demand for more, and a more extended itinerary, including most of the original places, was carried through last April. Lectures were given in three colleges—Bowdoin, Bates, and Colby. At Portland, five school lectures were given in one day, with the Bowdoin College lecture that evening—quite a full day's work! At Bangor we had the large Bangor Opera House for our lecture with motion pictures, which was jammed to the doors with some 2,000 auditors, about 800 more, according to the theatre manager, being turned away. Another good tour was in Canada, including Montreal, Hamilton, and Ottawa, the latter being under the auspices of the Government Department of National Parks, at the Victoria Memorial Museum. At Hamilton the opening was delayed for about half an hour, till the crowds which blocked the sidewalks could get in.

The past summer was devoted to a tour of the northern coasts, to secure new motion pictures of northern wild-bird life for the educational purposes of this Association. This was in continuation of the joint publicity arrangement with the C. L. Chester Productions, mentioned in last year's report. Everything went off as planned on a long trip including the Magdalen Islands, the Bird Rocks, northern Nova Scotia, and the coast of Maine. Among the scenes secured was one series of a pair of Least Sandpipers cuddling their young on the palm of the outstretched hand, with various other spectacular things. In all we secured over a mile and a half of first-class film, which will compose about six new subjects, and will be used for the national and international trade channels under the name of this Association, to interest the public in wild birds and in our work, as well as for the direct lecture work of this Association.

To accomplish this it was necessary to omit for this season our usual Summer School session at Amston, Conn., yet visitors and individual learners were received there as usual, and, with a resident keeper in charge, the work for and with the birds went right on. The nesting-boxes, as usual, were fully occupied, many having three nestings, leaving most boxes this fall crammed full. Of the various propagation work it may be mentioned that from the Redheads, Pintails, Black Ducks, and Wood Ducks young were again raised, and of these and others we are establishing valuable breeding strains.

The work at Amston has developed to a pass in which we need opportunity for enlargement of scope and of building for all time. A movement is now on foot to obtain backing to take over, under full control in the near future, this beautiful lake and environs on long lease, with option to purchase, making it permanently a wild-life sanctuary, a link of the National chain of wildfowl refuges and our Audubon Society Experiment Station in Applied Ornithology,

to which lovers of birds and nature may ever continue to resort for enjoyment and instruction. As this is one of the scenic 'high-spots' of this part of the country, such a consummation would be abundantly worth while.

REPORT OF ARTHUR H. NORTON, FIELD AGENT FOR MAINE

The winter was one of unusual mildness. The regular winter resident birds found much bare ground and shores free from ice, with open coves and bays. Hence no particular effort was demanded to relieve species sometimes threatened with hardship or starvation. A session of the State Legislature, lasting from January 1 into April, required attention. The movement, perennial since 1907, to make Mount Katahdin a state park and wild-life reservation assumed imposing proportions and shape, only once more to meet defeat, notwithstanding great effort on the part of the Audubon Societies and other organizations and individuals.

A bill to allow the "killing of Sea Gulls" was introduced. It was shown the Committee, evidently ignorant of the fact that these birds came under the protection of the Federal Migratory Bird Act, and that the state could not take such action; and further shown that by an act of the previous Legislature, the State had full power to act in coöperation with the Federal authorities in giving relief from actual damage done by these and other wild birds. The bill, however, passed but was vetoed by Governor Baxter.

Through our effort, the local Audubon Society and the local Association for the Protection of Fish and Game had a large poster printed, giving the provisions of the Federal Migratory Act, with maximum penalty in its relation to this state. This was sent through the state by the resident U. S. Game Warden under frank. Postmasters responded by posting the notice, thus reaching thousands of people. At the request of Federal Game Warden, Bertrand G. Smith, I went as pilot on a trip by water along the coast, among the islands and ledges where sea-fowl are shot. Nearly a hundred gunning-places were thus visited.

In June, with the coöperation of the Commissioner of Inland Fisheries and Game, Hon. Willis E. Parsons, in the state boat and with State Warden Capt. Herbert L. Spinney, a trip of inspection of the colonies of breeding sea-birds from Small Point to the westerly side of Penobscot Bay was carried out. On these trips it was found that in early May many Eider Ducks were bedded near past and present breeding-places of the species, and in June several scattered birds were found at places well to the west of their last-known breeding-stations. The colony of Laughing Gulls was found to be in excellent condition and now numbers several hundred birds. They are commonly seen at Bath, a distance of twenty-five miles from their breeding-ground.

Herring Gulls have increased enormously, and during the past ten years

have extended their breeding-range on our coast nearly 60 miles to the westward, with many large colonies. The great increase and expansion of a powerful pugnacious species, probably of all of our large birds with the possible exception of the Common Crow best adapted to respond and exist under human invasion of the land, has had a marked effect on other species. It is believed that it has given confidence and encouragement to the Eider Duck to linger at long-abandoned places formerly occupied by these two species, and it is hoped and to be expected that the Eider may slowly return to some of its old haunts.

On the other hand, Terns have suffered extensively by the change, and the welfare of the only colony of Laughing Gulls is threatened. Metinic Green Island, once the home of one of the largest colonies of Terns in Maine, is now occupied by an even larger colony of these Gulls, and the Terns, except about a dozen persistent birds, have been forced to find other quarters. But since other breeding-places of the species have been taken by the Gulls, the Terns have been forced to occupy many small inlets and ledges, often very near the mainland where they are liable to the depredations of brown rats and mink, and much more exposed to the vandalism of the sagacious Crows which have always found these rocks excellent feeding-grounds. By a conservative estimate, it seems probable that *upwards* of 60,000 pairs of Gulls bred this year on the coast of Maine. With the normal increase of these large numbers of Gulls during the next few years under the absolute protection which they enjoy, we shall probably see a much greater invasion of the territory once available to the weaker birds. Economically the Gulls are a much greater factor, both for good and for ill, than the Terns and Laughing Gulls.

The Laughing Gull gives but scant attention to garbage, resorting to the estuaries and long creeks where vast areas of flats are exposed, feeding on the marine forms, worms, many of which are carnivorous, and the lesser crustaceans, and probably small fishes. Though the Terns are to a considerable extent insectivorous, their part as scavengers is very small, their food consisting largely of sand eels and shrimp, with small squid and small fishes of various kinds, which, with the exception of the carnivorous squid, are chiefly important as food for larger fishes. The Herring Gull is omnivorous, acting a most important part as a scavenger, and preying on a long list of carnivorous marine animals; they also eat many insects. Their destruction of food fishes is no doubt far outweighed by their destruction of carnivorous worms, echinoderms, and mollusks which form, with garbage, the constant and staple part of their diet throughout the year.

Against their good services, where fish or other garbage is used to dress land, they flock there and undo the work of the farmer who neglects to plow under the animal dressing used. It is claimed, no doubt with truth, that they devour the eggs and young of smaller birds which would breed in their vicinity. The claim that in certain sections they are destructive to crops of berries is probably true. The situation with the Herring Gull has reached that stage

where the most careful attention is due. Since the cessation of spring shooting, which has endured for about twenty years, Black Ducks have increased greatly, and these fine birds are again breeding throughout the state in large numbers and in places where they had long been banished as breeding birds.

Various breeding-places of the Wood Duck are yearly coming to light, and other species of Ducks are now found breeding, which were previously unknown, or only to be found in remote parts of the state. It is gratifying to be able to report the discovery of a heretofore unknown colony of considerable size of Great Blue and Black-crowned Night Herons on the coast, which is in good condition. The conditions existing in this state today show that the prophecy of twenty years ago, that the regulations now in force would do much to restore the then rapidly diminishing wild birds, is being realized in an absolutely conclusive manner.

REPORT OF MARY S. SAGE, FIELD AGENT FOR LONG ISLAND, N. Y.

To show the work done on Long Island during the past year, I will quote from the annual report of the Bird Club of Long Island, Mrs. Richard Derby (Ethel Roosevelt), Secretary:

"During the months of the school year of 1919-20 Mrs. Sage spoke to more



MRS. MARY S. SAGE, FIELD AGENT FOR LONG ISLAND, AND HER CAR PRESENTED BY
THE BIRD CLUB OF LONG ISLAND

than 10,000 children. During the year just closing her audiences have totaled more than 20,000. In 1919-20, 102 Junior Audubon Classes, with a membership of 3,023 were formed for six to ten weeks' study in the schools, because of the interest created by Mrs. Sage in her talks to the pupils. This year 142 classes have been organized, with a membership of 4,269. A great number of talks have been given, by request, in private houses to groups of members, to clubs and associations such as the Home Bureau, the State Institute of Applied Agriculture at Farmingdale, at the Children's Home in Mineola, to the Women's Club in Great Neck, and in a number of the parochial schools.

"Gratifying as this increase in numbers is, even more so is the increased interest shown by all sorts of people, and which can only be known to the officers who receive the requests for information of every kind and the expressions of appreciation for service rendered. Much information has been sent out in regard to planting for the attraction and protection of birds, directions for the placing of nesting-boxes and winter feeding. Several hundred placards have been issued stating the law concerning the sale and carrying of weapons and the list of protected birds. These have been welcomed by the schools and game wardens, and have been hung in post offices and railway stations."

Since the annual meeting of the Bird Club in June I have given six more talks, which makes a total, since the last meeting of the Association, of 180 talks and lectures.



REPORTS OF AFFILIATED STATE SOCIETIES AND OF BIRD CLUBS

REPORTS OF STATE SOCIETIES

California.—The fifteenth annual meeting was held in Los Angeles in June, 1921. A luncheon in the Men's City Club was followed by speeches from members who represent different phases of bird- and nature-conservation. Audubon Societies of three cities were represented, and the Chairman of Birds and Wild Life in the Los Angeles District, California Federation of Women's Clubs, Nature-Study Department in public schools, and the Wild Flower Club of the Southwest Museum were heard from. All these organizations work together. The Secretary's report gave a backward look of fifteen years, recalling the fact that in 1906, "of all our song-birds, only the Meadowlark was given protection." Now we have very good laws, though in some parts of our big state education is still badly needed.

In legislative work, undesirable bills are becoming less frequent, thus indicating a more intelligent public than formerly when destructive bills were common. The poor Roadrunner still needs to be understood, and not have bounties aimed at him, also the Western Red-tailed Hawk. There was an attempt to abolish the Fish and Game Commission, placing the control of wild life under the State Department of Agriculture, and making it depend upon the State Legislature for funds. This Society sent letters of protest far and wide and the Commission still functions. The Society also helped "save the redwoods" besides giving true publicity to the water-power projects in Yellowstone and other National Parks.

The usual number of leaflets were distributed. Lecture work with slides and pictures and skins, also with field-study trips, are going on from the monthly 'trail trips' of local societies in tens and hundreds, to the 'Nature Guide Service' in Yosemite, where thousands on field-trips gain first-hand information. Over 26,000 persons attended camp-fire talks and illustrated lectures in Yosemite, according to the report of the *California Fish and Game*. In laying down her work of twelve years, Mrs. Harriet Williams Myers promises not to give up her interest or her lecture work for the Society.—(Miss) HELEN S. PRATT, *Secretary*.

Connecticut.—The work of the Audubon Society, state of Connecticut, has progressed evenly upon much the same lines as heretofore. Instead of creating new libraries we have rebuilt many of those in circulation, being guarded in the choice of books by the written reports of the teachers of the schools through which the libraries are circulated. Notebooks for comment go with each library. The State Board of Education, which handles the lectures, libraries, charts, etc., reports an increasing interest in all lines. A new set of slides of 'Wild Flowers and Berries' was sent out early in the year, illustrating the

interdependence of birds, flowers, and insects. The text for these slides is varied to suit the audience.

An innovation has been the separating of the annual Business meeting, in October, from the social gathering usually held on the same day. This year, in June, the social function took the form of a Field Day, with luncheon served at Birdcraft Sanctuary. The morning session of brief addresses was held under the trees, where Mr. Avis also gave his rendition of bird-songs. A pleasing feature was the gathering in the nearby trees of a chorus of Wood Thrushes, Grosbeaks, Orioles, and Catbirds, evidently attracted by his imitation of their songs and utterly unafraid. The afternoon was spent in strolling about the Sanctuary and vicinity.

It is proposed to make this Field Day an annual affair, and various groups of nature-lovers will be asked to meet with us, the Connecticut Federation of Nature Clubs having already accepted our invitation for next year.

Warden Novak reports an unabated interest in the Sanctuary and Museum, 6,000 having visited the Museum this year, among them 29 classes of school children. He also reports no less than 26 species of birds and 131 nests located in the Sanctuary this year. The first year's record gave 17 species of birds and but 71 nests.

Some confusion having arisen since the small Sandpipers, etc., have been moved to the protected list, not a few novices have fallen into the game warden's net by mistaking these birds. Warden Wilbur F. Smith showed some fine slides of game and other birds on an out-of-door screen—the night being fine. In writing of the last meeting, Deputy Warden Williamson expressed a sentiment with which we should all agree: "We are sure these affairs bind the sportsmen and the Audubon Society close together for the better protection of all bird-life."

Another progressive feature is an annual 'Sportsman's Evening' held at the Museum before the opening of the hunting season. On September 27, upwards of 75 members of the Fairfield County Fish and Game Protective Association met there for an exchange of views, and that the inexperienced among them might see, by the plainly marked specimens, the birds that may be shot and those protected at all seasons.—(Miss) CHARLOTTE A. LACEY, *Secretary*.

District of Columbia.—Our great drive this year has been to interest more children, and the work has been going forward, though not as rapidly as we should like. We appropriated \$25 to place as many copies of BIRD-LORE in the seventh grade schools as we could. Of the 867 nesting-boxes made and put up by the children, they reported that 662 had been occupied. This year they began their work earlier, the boxes being exhibited from January 17-21, and it would have been a real pleasure to own many of them. Many members of our Society had the pleasure and profit of attending the meetings of the American Ornithologists' Union last fall.

Our annual meeting, on January 26, was held in coöperation with the National Park Service. The lecturers were Dr. H. C. Bryant, on 'Nature Guiding in a National Park,' and Dr. L. H. Miller, on 'Bird Music in the Yosemite,'—both were illustrated and listened to with much interest. Even though Mrs. Florence Merriam Bailey is away we still have our Bird-Study Classes. These were followed by six delightful Field Meetings which were well attended in spite of rain on several occasions.—HELEN P. CHILDS, *Secretary*.

Florida.—During the past year the Society made important advances in organizing Junior Classes in the public schools and in bringing about the establishment of municipal and private bird sanctuaries. A school secretary was kept in the field for a period of four months, resulting in an increase of Junior Classes from 13 to 176, and an increase of Junior Members, as reported by the National Association, from 431 to 5,963. This does not include the



SIX PINELLAS COUNTY (FLORIDA) SANCTUARY SIGNS, ERECTED BY THE FLORIDA AUDUBON SOCIETY

Junior membership at St. Petersburg, where the work is carried on by the local Audubon Society, and which reports an additional Junior membership of 750. Florida now has the largest Junior membership in the South and is exceeded in this showing by only ten States in the Union, all of much greater wealth and population. If our means had been sufficient to extend this school work over a longer period of the year, our showing would probably have been doubled, as less than one-third of the state was covered during the campaign.

The Society has given much attention to the establishment of municipal

and private bird sanctuaries, and with very encouraging results. These sanctuaries now number twenty, fourteen of which are sanctuaries by municipal action and six are established by private owners of land. Eleven of these sanctuaries are in Pinellas County, forming a chain across the county, and these were brought about mainly by the efforts of Mrs. Katherine B. Tippetts, our President, and some of her co-workers in the State Federation of Women's Clubs. The Federal sanctuaries in Florida now number eleven, and a very important addition has recently been made to the Indian Key Reservation near St. Petersburg.

The annual meeting in March, at St. Petersburg, was one of the most encouraging ever held by the Society, bringing together a very large audience, both afternoon and evening. At the evening session an especially interesting program was given, the principal feature of which was a bird-lecture by Clifton W. Loveland, illustrated by beautiful lantern slides from photographs made by himself. During the year the President gave many bird-talks before clubs and civic organizations. For this work she seems to be in almost constant demand and through her efforts and the work of our school secretaries in their campaign of four months, Florida people, young and old, were given a great amount of information, both printed and spoken, about our wild birds, their benefits to man and the great need of their better protection.

The Society has coöperated with the Federal Wardens working in the state and has systematically followed up all reports of violations of the bird laws. A good deal of printed matter was circulated during the year. Only two numbers of the Bulletin were issued as our funds were not sufficient for the printing of the four numbers planned. Our President made persistent efforts for improvement in the game laws and a state game commissioner, spending a large part of the session at Tallahassee, but failed of the desired results. Political combinations against our bill were too strong to be overcome. A few minor improvements were made in the game laws and there was an unfortunate tendency to drift back to county legislation. The sportsmen, it was apparent, could not agree on a general law. The non-resident hunting license was increased from \$15 to \$25 for each county.—W. SCOTT WAX, *Secretary*.

Illinois.—It is difficult to check satisfactorily the results of a year's work, as there is always a lack of knowledge of definite accomplishment and how many new converts have been enlisted for bird-protection and conservation.

The lecture course in March was more than usually successful, both in the character of the lectures and in the attendance. The first lecture was given by T. Gilbert Pearson, and was of more than ordinary interest to us, because of the fact of the work of the National Society being presented by the man who was directly responsible for its planning and execution. The Illinois Society was very glad for this opportunity of meeting the Chief of bird-conservation work.

The second lecture, given by Robert Cushman Murphy, was an intensely

interesting story of the bird life of the west coast of South America and its enormous value in the production of commercial fertilizer. Mr. Murphy made a very fine impression on a very critical audience. The third and last lecture was given by an old friend of the Society, Norman McClintock. He had the largest attendance, which does not prove that the lecture was better than those preceding it, but that the interest in the course increased after each lecture.

Following the lectures, a campaign for new members was inaugurated, which resulted in an increase of over 40 per cent in membership and a list of over 1,000 live prospects from which it is hoped to secure a large number of active and contributing members. There is a constantly increasing demand for buttons and leaflets from public schools and an apparently widespread and growing popularity for bird-study throughout the state of Illinois. The Audubon Society has been invited to join the Wild Flower Preservation Society and the Microscopic Society in a joint exhibit to be given in the Art Institute of Chicago, December 17-January 15. Last year's exhibit of the Wild Flower Society was attended by over 100,000 people. The joint exhibit will have three rooms adjoining and there is no question as to the tremendous boost that will result from this exhibit to the Audubon Society from this very popular holiday attraction.—ORPHEUS M. SCHANTZ, *President*.

Maryland.—During the season of 1920-21, the Society gave thirteen lectures on ornithology, illustrated by colored lantern-slides, mounted birds, and bird-nests. There was arranged, also, at the Maryland Academy of Sciences, where our evening meetings are held, a case of mounted birds, showing the birds to be seen in Maryland during the current month. This case is changed each week during the spring migration. These two features, together with the field trips, of which we had seven, were of great value to students, teaching them to identify birds on the wing, and a chart record of birds seen by our members is kept at the Maryland Academy of Sciences. One of our members has organized 150 children as Junior Audubon Members.

The Society gave sixteen prizes in a nesting-box building competition which it inaugurated in the manual training classes of the public schools and hung 275 of these boxes in the Loch Raven watershed which the State Conservation Commission maintains as a bird sanctuary and breeding-grounds. The President gave five talks to women's clubs on bird conservation, with the result that three neighborhood sanctuaries have been established and several others are being organized. The membership of the Society increases from week to week, which, with the requests to us for lectures about birds, from organizations of various characters, shows that interest in the subject of conservation of bird-life is thoroughly aroused.—(Mrs.) LOUISE HULL, *President*.

Massachusetts.—Our State Audubon Society reports a prosperous and, we believe, an effective year. Five hundred and eighteen new Sustaining Members



MRS. BAKER HULL
President of the Maryland Audubon Society

and 28 Life Members were added to our roll. We have continued the publication of *The Bulletin*, which goes to all Life and Sustaining Members monthly. The Inter-Ocean Film Corporation has contracted for the foreign rights of our film 'The Birds of Killingworth,' while the Community Motion Pictures of 46 West 24th Street, New York City, have undertaken its distribution throughout the United States. This should ensure a world-wide showing of this picture which so entertainingly teaches its great lesson of the value of birdlife.

The Society's Moose Hill Bird Sanctuary now embraces over 600 acres. The varied bird-life here and the lesson of the value of conservation and protection which is so fully exemplified in the work of the resident warden, makes this the Mecca of thousands of bird-lovers annually. The attendance this year has been greater than on any previous year, and the story of the work has carried far, not only in this country but abroad. Recently several distinguished Japanese, seeking knowledge of our methods for use at home, were interested visitors.

The usual varied activities of the Society, traveling lectures, libraries and exhibits, publication and distribution of bird-charts, calendars, leaflets, bird-books and bird literature of all kinds, have been carried on as usual. The Symphony Hall Annual Lecture Course was well attended and financially successful.

The office at 66 Newbury Street, which is also that of the Massachusetts agent of the National Association, has established itself as headquarters for New England in all matters pertaining to bird-study and bird-protection. Groups and individuals throughout the section are continually calling upon us for advice and encouragement. These, it gives always without stint. The chief aim of the work is service and the office force is always eager to make this more effective still.—WINTHROP PACKARD, *Secretary*.

Missouri.—A matter of great interest to the Audubon Society of Missouri during the year past was the proposal to submit to the State Legislature a bill for the conservation of wild life in the state. The movement originated among members and officers of the Audubon Society, St. Louis Bird Club, Missouri Fish and Game League, representative lumbermen, and others. Meetings throughout the winter resulted in the framing of a conservation bill, proposing a commission form of administration and provisions for the protection of the wild life of the state. The bill is to be introduced at the next Assembly.

Our Society has been in coöperation locally with the work of the state and Federal wardens and with the National Association in supporting its recommendations on National legislation affecting wild life. There has been a slight increase in membership, and the affiliation of one additional nature-study club. Officers of the Society have delivered lectures on wild life conservation before the St. Louis Academy of Science, Wednesday Club of St. Louis, and elsewhere.—R. J. TERRY, *Secretary-Treasurer*.

New Hampshire.—The past year has been one of prosperity for our Society, judging from the interest manifested in the work and the number of new members gained, which has somewhat exceeded any previous year's record. The work for the year has been the usual large amount of correspondence, the distribution of bulletins and other literature, and general publicity work for the Society, including an Audubon exhibit at the annual exhibition of the Institute of Arts and Sciences held in May in the city of Manchester.

We have also begun this year the publication of a quarterly bulletin dealing with bird topics that relate more especially to the local field in our own state. By this means the Society hopes to extend its usefulness by having an organ to keep its members and friends informed of what is going on in the bird world and enlist the interest and support of more of our people in the great cause of bird-protection.—GEORGE C. ATWELL, *Secretary*.

New Jersey.—During the past year, while it has been, on account of the prevailing retrenchment and economizing, difficult to maintain anything approaching adequate membership of the Society, with the financing plan that was put into effect two years ago, and by practising very strict economy, it has been possible to avoid any financial crisis. The total receipts for the year, including the \$3,027.99 balance from last year, amounted to \$8,259.70; total disbursements, \$5,802.26, leaving a balance of \$2,457.44. There was, therefore, a gain in receipts (including previous year's balance) of \$265.41 over last year and an increase in expenditure of \$835.96.

Doubtless the outstanding feature in the Society's general accomplishments was the passage of the bill in the State Legislature removing the Bobolink, or Reedbird, from the game-bird list to its proper place with song and insectivorous birds, enjoying permanent protection. This bill faced an opposition, the power of which only those who actively participated in the battle realized. Its enactment can be ranked as only second to that of the plumage bill with which the Society inaugurated its career in 1911.

In Junior Audubon Club work the Society again coöperated with the National Association, 243 Clubs being organized in the schools of the state, with 10,689 members, New Jersey again ranking sixth among the states in which the work was carried on. The various educational and coöperative lines of the Society's activities showed very satisfactory development. The eleventh annual meeting in Newark, October 11, was generally conceded to be the most successful yet held. The business session was again held at the Newark Free Public Library. Several interesting communications were presented, including a telegram of felicitation and good wishes from T. Gilbert Pearson on behalf of the National Association of Audubon Societies. Dr. Henry van Dyke, on the invitation of the President, made some informal remarks regarding bird-protection, and interesting discussion of several pertinent subjects was had. The incumbent Board of Trustees was reëlected, with the exception of John T.

Nichols, resigned, whose place was filled by the election of Charles H. Rogers, of Princeton.

The meeting of the Board of Trustees immediately followed that of the Society. Editorial, Legislative and Membership Committees were provided for, with a view to the increasing of the Society membership and effectiveness. The incumbent officers were re-elected. At the evening public session, held in the auditorium of the Newark State Normal School, Dr. Frank M. Chapman delivered a most delightful and comprehensive lecture on 'Birds and Seasons in New Jersey,' illustrated with stereopticon, to a large and appreciative audience.—BEECHER S. BOWDISH, *Secretary*.

North Dakota.—A reorganization of the Society was undertaken on plans suggested by its president. The principal features of this were support by voluntary contributions instead of annual dues, and appointment of directors in different parts of the state to represent the Society in their respective sections.

There seems to be difficulty in securing sufficient active interest to maintain a live organization. It is hoped that reports from the directors, compiled and published in the press at frequent intervals during the season, may greatly increase such interest. Reports of several directors have been received this year and plans are being made for a systematic compilation for next season.

During the spring migrations this year a series of articles was prepared by the Secretary for one of the leading daily papers. These appeared semi-weekly and dealt with the distribution and migration of certain birds. Accompanying these, a large map and specimens of the birds were displayed in the window of a department store. Such display would seem an excellent idea, but it appears doubtful whether suitable space could be secured as a rule. For this particular period it was obtained through the kindness of the manager, Mr. A. J. Clark, who is one of our members.—O. A. STEVENS, *Secretary*.

Ohio.—The most interesting event of the past year was the affiliation with our Society of the University Bird Club, an organization of more than fifty actively interested young members. Our Society, to live at all, must have an influx of young members to carry on its traditions, when those who have built it up shall no longer be able to do so. Mr. E. H. Baynes entertained the members and friends at an evening lecture on March 25 and spoke before large groups of children in the high school of our city.

There is little of novelty to report. The same few able and enthusiastic lovers of birds gave of their ample store of knowledge to entertain the less gifted of us, and we owe them unstinted gratitude. Mr. Cramer, our tireless President, Charles Dury, our Nestor and most authoritative speaker, Miss Dora Hargett, whom we so gladly welcome into our midst again, have won new laurels through their inspiring talks on various occasions. Our new Vice-

President, Irwin Krohn, and our new Corresponding and Financial Secretary, Mrs. Charles Gingrich have done much to entertain and stimulate the Board of Directors to new ventures for the coming year.—(Miss) KATHERINE RATTERMAN, *Secretary*.

Oregon.—Our Malheur Lake Bird Reservation fight of last fall was lost in the election by a small majority. However, the Reservation still remains in the hands of the Federal Government, and may remain so indefinitely. Outside of this, the year's work was mainly along educational lines: Junior work, and bird-talks in schools.

The Bird-Study Committee, under W. A. Eliot, continues very active; the weekly Saturday-evening talks in the lecture hall of the Public Library on various outdoor subjects, including birds and the preservation of wild flowers, are at all times well attended. These are to be continued through the coming year; also the annual exhibit of water colors of native flowers and birds. Our President, Mr. Finley, having returned to Oregon, we are looking forward to the enjoyment of some of his delightful pictures.—(Dr.) EMMA J. WELTY, *Corresponding Secretary*.

Rhode Island.—The work of the Audubon Society of Rhode Island, which consists of lectures, traveling libraries, Junior Classes, and legislation, has continued as in the past. The traveling libraries find a good field in the rural districts. In March, Enos Mills lectured in Providence, under the auspices of the Society, to a very interested and appreciative audience. The Society has suffered a loss in the resignation of Mr. Harold L. Madison as Secretary and Treasurer. Mr. Madison has gone to Cleveland, Ohio, to assume the duties of Curator of Education in the Cleveland Museum of Natural History.—(Miss) MARIE E. GANDETTE, *Acting Secretary*.

Audubon Association of the Pacific (Calif.).—This Association is completing a rather uneventful year in its history, but its routine work has progressed steadily and we believe that its influence is spreading. The membership list shows constant growth and the monthly meetings are well attended, not only by members but by others. An arrangement has been made whereby the meetings will hereafter be held in the Assembly Hall of the San Francisco Public Library, in the Civic Centre, which is expected not only to redound to the advantage of the Association, but, as well, to enhance the usefulness of the Library. The California Academy of Sciences will likewise hold its meetings at this place, and other scientific societies whose meetings are marked by lectures open to the public, will doubtless be added to the list, forming what must be recognized as a felicitous combination of kindred activities.

The monthly field trips cover the interesting ornithological localities within the radius practicable for one-day excursions, and have always been popular.

The attendance runs from ten to thirty, averaging about twelve members and six guests. During the yearly cycle some 140 different species are encountered in highly diversified habitats—fields, gardens, chaparral, coniferous and deciduous forests, artificial lakes, tidal marshes and flats, open ocean and land-locked bay. Only twice in fifty-four consecutive months has rain interfered with the trip. The exceptionally abundant rains of the winter of 1920-21 effected a marked readjustment of the bird population throughout our district, not only among the visitants, but as well with the resident species, and we are all looking forward with interest to developments of the coming season.

The joint committee of the Cooper Ornithological Club and this Association has worked perseveringly with the oil companies to the end that all those operating tankers have undertaken to discharge their water ballast into receiving ponds at their loading points around San Francisco Bay, thus obviating the pollution of the ocean surface and the needless slaughter of multitudes of water birds. We are justified in stating that a material betterment of conditions has been effected. The Association has continued the publication of its monthly bulletin, *The Gull*, carrying notices and reports of its activities and other data pertinent thereto.

Junior work, under the immediate auspices of the Association, has languished for lack of leaders, a deficiency which we share with every other organization looking to the development of our boys and girls. It is upon our school teachers that we are depending for direction of the minds of children to consideration of the sentimental and economic relations of our feathered friends to man, and for the spread of bird-lore. Our teachers furnish a large proportion of the active membership of the Association and they are responding finely, as ever, to this need.—A. S. KIBBIE, *President*.

Audubon Club of Norristown (Pa.).—The Club has held four evening meetings during the year at the Regar Museum of Natural History. On September 2, 1920, Edward Avis gave a very delightful lecture recital, 'Bird-land,' imitating the birds by whistling and also reproducing their notes on his violin. December 2, Ernest Harold Baynes gave a very interesting lecture on 'Birds in Their Nesting Season,' illustrating his talk with beautiful lantern-slides. One of the best lectures ever given here was that of Dr. G. Clyde Fisher, Assistant Curator, American Museum of Natural History, on March 3, 1921. He spoke on 'John Burroughs and His Favorite Haunts,' and illustrated the lecture with extraordinary motion pictures and beautiful lantern-slides, giving intimate personal glimpse of this beloved naturalist who so shortly afterward passed on.

Another address, remembered with delight, was the one given by T. Gilbert Pearson on June 3, 1921. He spoke in a very interesting way of his travels along the coast from Nova Scotia to Key West, following the flight of the birds as they migrate from one extreme to the other and showing just what is being done to protect them. Motion pictures of exceptional educational value have

been a feature of each meeting, two reels, at least, being thrown on the screen after the lecture. These have dealt with bird-protection, bees making honey, growth of mushrooms, toads, and habits of birds and insects, to the great delight of the children, whose attendance is encouraged at the meetings and membership solicited. The Club now has a membership of 228, a gain of 30 new members during the year. Visiting school teachers to the town during Institute Week are always invited to attend the Audubon Club meeting, and I have had inquiries for the names and addresses of our lecturers in order that they might secure them for their own meetings. So the work goes on, and the Audubon Club hopes to be an ever-increasing force for good in developing a love for birds, and their protection in the community.—(Miss) ISABELLA WALKER.

Audubon Society of Buffalo (N. Y.).—During the past year the Society held a regular meeting each month. Bird-talks were given either by a member or a local lecturer. 'Bird Personalities' was the title of one given by Professor Alexander of the Buffalo Society of Natural Sciences. A resolution was adopted and letters sent to the leading moving-picture houses asking their coöperation in showing pictures of animal and bird-life helpful in the education of bird-protection and condemning cruelty and wanton destruction. Besides the monthly meeting, fourteen spring and fall bird-walks were taken.

Twelve hundred 'Bird Almanacs' were printed. A few leftover ones were sent to local institutions. The Society was actively interested in obtaining the territory for a State Park, now known as the Alleghany State Park, formally opened July 30. Membership in the Society is steadily increasing. Many letters of inquiry show the growing interest of the public in bird-protection which is our great work.—(Mrs.) CHARLES M. WILSON, *Secretary*.

Audubon Society of Genessee and Lima (N. Y.).—Our Club was founded in March, 1917, with a membership of thirty-one. Its history since then has been a record of increasing activity and helpfulness. A meeting is held on the first Thursday night of each month during the school year. The first part of the meeting is devoted to a business session after which a program is given. This consists of discussions by the members of various birds, their usefulness and means of protecting them. The bird slides furnished by the State Education Department are freely used during the program. Between the regular meetings, trips are taken by small groups into the surrounding country and reports of these trips made to the club. Permanent records are kept of the departure and arrival of migratory birds with the name of the club member who last saw the bird before departure and who first saw the bird on arrival.

During the past three years, a contest has been held each year between two sections of the Club for the purpose of observing the first arrivals of birds. Counts were given not only for the observation of early arrivals, but also for

the finding of nests containing eggs or young birds, pictures of nests and birds, destruction of bird enemies, attendance at meetings, field-trips, and the reading of bird books and leaflets. During the contest last year eighty-eight different varieties of birds were reported. The losing side furnished a free picnic dinner to the Club. At the time of the founding of the Club very few birds appeared on the campus. This was due to the presence of many bird enemies and no thought or care on the part of anyone for the protection and feeding of the birds. During the past season there were nests of several varieties in the trees and about the buildings. The number has increased steadily year by year. Last winter a large number of our feathered friends were attracted by the food placed for them day by day. One regular meeting has been held this school year and the prospects for the coming season are exceedingly bright.—C. C. EDGETT, *Chairman*.

Audubon Society of Irvington-on-the-Hudson (N. Y.).—The Society has begun its second year under encouraging circumstances with a membership of about 130. During the first year the Society directed its efforts chiefly toward creating and sustaining a public sentiment in the community favorable to its objects and purposes. We were greatly aided by the trustees of the village, the officials of the public schools, and the public library, as well as the clergymen, the Sisters in charge of the parochial school, the Boy Scouts, and the local newspaper.

An illustrated lecture by Herbert K. Job, of the National Association of Audubon Societies, was arranged. Weekly articles were published in the village newspaper. Audubon outings were conducted and addresses were delivered in the public and parochial schools. Junior Audubon Clubs, formed by the National Association, being already in existence in the public schools, similar classes were organized in the parochial school with a membership of about 100. Books, periodicals, and pictures relating to bird-life were added to those already in the public library. Feeding stations for the birds were established and maintained during the winter at several places in the village, and a large bird-fountain was erected on a conspicuous site in the beautiful grounds of one of the village churches. It will be cared for by the Boy Scouts.—(Mrs.) JOHN B. CALVERT, *President*.

Audubon Society of Western Pennsylvania.—Our Society is only five years old, yet it already has some 300 members. The reason for this is Penn's Woods. In every direction from the city stand remnants of those glorious old trees which have sheltered birds since the land was young, and, under the protection of today, the birds are increasing and coming closer to the city. We have records of Bluebirds nesting on the campus of the University of Pittsburgh, not twenty minutes' ride from the heart of town. As the birds increase, so does the interest in them, and those interested come into the Society for information.

Our year began in the spring with a banquet, after which we were delighted with Norman McClintock's moving pictures of bird-life. Mr. McClintock's keen interest in his work gives his talks a fascination such as is found in the finest Irish fairy tales; grey-haired lawyers, young people, teachers, doctors, all sit like children listening to the story-teller.

During the spring and summer months we have held fifteen field-trips to the environs of the city. On our annual visit to the home of one of our members in Butler County there were seventy people. This trip always brings out a large number of members because there are many northern birds up there which we do not have near the city. A new district to some of us was Bethel Township on the south, where we noted fifty-five species in one day. The Society is much interested in the book 'Birds of Pennsylvania,' which W. E. C. Todd, ornithologist of Carnegie Museum, has written. When published it will be a splendid reference book on birds for the people of the state. We are planning to lease a site in the State Forest near Ligonier, which will give us a camping-place from which to study the birds of the Alleghanies. We are also planning to keep bird records for the district. The Society is interested in and has contributed toward the National Association of Audubon Societies' organization of Junior Audubon Clubs. This is the finest kind of conservation.—(Miss) HELEN BLAIR, *Secretary*.

Bird-Lovers' Club of Brooklyn (N. Y.).—The Bird-Lovers' Club of Brooklyn began its fourteenth year of activity with the fall season of 1921. A number of the members have selected various bird-regions in the vicinity of New York City as their special districts for observation. As this work has been carried out consistently for several years, the Club hopes to publish, in the near future, a list of the birds that one may expect to find in and around New York City. Posters to stimulate interest in bird-life have been placed in the parks, due to the hearty coöperation of the Department of Parks. At each meeting of the Club a lecture is given or lantern-slides are shown, with suitable remarks by one of the members.

At the meeting in June, 1921, the following officers were elected for the coming season: President, George B. Wilmott; Vice-President, Lester L. Walsh; Secretary, Miss Elise Tiplin; Treasurer, Mrs. C. L. Derry. The regular meetings are held in the Library of the Children's Museum at 8 P. M. on the first Tuesday of each month, October to June inclusive. Visitors are always welcome.—GEORGE B. WILMOTT, *President*.

Brookline (Mass.) Bird Club.—Our Club is a live organization of over 400 members and is growing continually. It is completing a most successful year. Interest centers largely in the bird-walks conducted regularly by the Club throughout the year, except between the middle of June and the second Saturday in September. Parties go out to shore or country each Saturday after

noon and on holidays. During the migration season, in May, early morning walks are conducted in two city parks. On Wednesday afternoons in May, the Club enthusiasts combined picnic suppers and round-table talks while they looked for birds. Our trips have been so well attended this year that on several occasions we have had two or even more on the same day. Our meetings have been well attended. The list of speakers for the year and their subjects follows: Judge Charles F. Jenney, of the Supreme Court of Massachusetts, 'The Birds of Arizona;' Dr. John B. Brainerd, 'The Birds of California and the Northwest;' Dr. R. C. Achorn, 'A Canoe Trip through Northern Maine and New Brunswick;' L. R. Talbot, 'Autumn Birds in New Hampshire' and 'Bird-Walks on European Highways and Byways;' and Charles B. Floyd, 'Winter Water-Birds.'

We have also held frequent round-table talks of a more informal nature, at which members have recounted their experiences with the birds and compared notes. April 29 and 30, the Club entertained the New England Federation of Natural History Societies at its annual meeting. A natural history exhibition was open to the public during the Federation meeting and throughout the following week, and was attended by 1,900 persons. Some of our members have become greatly interested in bird-banding. One has banded seventy-five birds of fourteen species during the past season. While the Brookline Bird Club works primarily along the lines of popular interest in bird-observation, we want also to help as far as possible in more technically scientific lines of work.—L. R. TALBOT, *President*.

Burrough's Junior Audubon Society of Kingston (N. Y.).—Our Society was reorganized with a large attendance on October 5, 1920, and the following officers were elected: Honorary President, Miss Mauterstock; President, Elizabeth Burroughs; Vice-President, Francis Lennox; Secretary, Ethel Schafer; Treasurer, Agatha Flick.

A regular meeting of the Society was held on the first Tuesday of every month. The Society celebrated Bird Day on April 8, 1921, in the high school auditorium, when a number of its members gave an interesting program appropriate to the day. The Society secured Edward Avis who gave a most pleasing recital on the evening of April 29, which was largely attended by the many bird-lovers of Kingston. The Society, at the request of the National Association, wrote to some of the United States Senators opposing bills intended to infringe on our National Parks. On March 5, 1921, the Society held its annual bird party and all present had a very enjoyable time.—(Miss) ETHEL SCHAFFER, *Secretary*.

Canandaigua (N. Y.) Bird Club.—The Club was organized in July, 1918, but did not become active until the following October. Dr. Burgess was elected President. The next month he was called to service in the Medical Corps;

U. S. A. Mrs. Edwin P. Gardner was elected his successor and she has served since that time. Since its formation, the Club has been affiliated with the National Association of Audubon Societies as a Sustaining Member, and Junior work, under the direction of Miss Ruby Fearey, has been conducted with 250 or more members annually. The monthly programs have been definitely outlined and at most of the meetings slides from the visualization department at Albany have been used. With an occasional paper, personal experiences, discussions, bird records with dates, the meetings have proved interesting, profitable, and successful. The Club owns its own electric stereopticon.

Soon after organization, H. B. Ferguson, secretary of the Woodlawn Cemetery Association, offered the gully in the cemetery to the Club to equip as a sanctuary for the birds. Interested members of the Club, Dr. and Mrs. George D. Wood, gave a food-station and another was purchased with funds solicited for the purpose. These were placed in sheltered locations and that they are appreciated is shown by the constant procession of the birds after the food which is placed in them by their faithful and unfailing friend, James D. Park, a member of the Club. Last year the Club lost Edward H. Hawkins, who, just two or three days before his sudden death, purchased and gave to the Club over one hundred pounds of different kinds of seeds liked by the wild birds. Suet is also supplied. Another member, Mrs. George T. Thompson, supplied a 28-apartment Martin-house, which was erected in the lakeside park at the foot of Main Street.

Lectures for the public have been given by Guy A. Bailey, of Geneseo; A. A. Allen, of Cornell University, Ithaca; E. H. Eaton, of Hobart College, Geneva; and Herbert K. Job, of the National Association of Audubon Societies. In April, 1920, a Koster's Colorado blue spruce tree was planted by the Club, with appropriate exercises, at the entrance of Woodlawn Cemetery, hoping that it would afford shelter to the birds, and, in time, "wear a nest of Robins in her hair." In February, 1921, a committee was appointed to confer with representatives of other city organizations to arouse interest in a community tree-planting, with the hope that it might become an annual event. On State Arbor Day, April 22, 1921, a pin oak tree was planted on the academy campus in memory of Dr. Noah T. Clarke, for forty-one years (1841-82) connected with the famous 'old' Canandaigua Academy. For twenty-nine years he served as its president.

A part was taken in the National Tree-Voting Campaign conducted by the American Forestry Association. The Forestry Association awarded two blue ribbons to members of Troop 2, B. S. A., for the best food device and for the best bird-house in a contest at which members of the Club were the judges. Protests were made against the Smith of Idaho bill and against the Fearon bill and similar legislation.

In 'A List of the Birds of the Royal Palm Hammock, Florida,' by A. H.

Howell, in the April, 1921, *Auk*, are included notes made there by our member, Dr. Burgess. A shelf is maintained in the public library. The President of the Club has, for ten years, been conducting a weekly 'bird column' in one of the city papers. The Club is not large in numbers, but the members have interest and enthusiasm. At the ten meetings held last year there was an average attendance of twenty-one. Plans have been laid for the 1921-22 season, which, if they materialize, will show that it is going forward and is taking its rank among similar organizations that are 'doing things.'—(Miss) RACHEL PACKARD *Secretary*.

Chautauqua (N. Y.) Bird and Tree Club.—The eighth birthday of our Club was celebrated in July. Its purposes, as stated in the by-laws, include the preservation of birds and trees, nature-study, and civic improvement. Through its activities at Chautauqua, the Club has assisted in creating public sentiment toward the newer ideals of conservation, the preservation of natural resources and wild life, and has laid great stress upon the inter-dependence of birds and trees. Although its interests are primarily local, inasmuch as it is a summer organization, nevertheless its members, being migratory in character, carry the inspiration of their summers into many parts of the country.

During the past years the work of the Club has been varied. Competent lecturers have been secured for its weekly meetings. Among these have been Dr. Schmucker, Mr. Oldys, T. Gilbert Pearson, and Professor Retan. Aside from its program work, the Club has planted avenues of shade trees, memorial trees, and groups of shrubs. It has maintained an arboretum, and has placed bird-boxes on the grounds in an effort to attract certain species, such as the Martin. It has offered prizes to the boys' and girls' clubs and to the children of the public schools for the best bird-boxes made. One of its members framed a series of excellent plates of birds to be used as a loan collection. For many years the Club conducted a Junior branch.

It has reached out in other organizations and other fields. The New York Bird and Tree Club was an outgrowth of the Chautauqua Club. It is best known for its work of planting orchards in France, for which it was decorated by the French Government. Every year, at the close of the summer season, a letter containing recommendations is sent by the Club to the Board of Trustees of Chautauqua Institution. In this manner, two years ago, an active campaign was begun to secure the services of an expert forester, and to arouse interest in creating a bird sanctuary at Chautauqua. The forester, Professor Retan, is a member of the Summer School's faculty and his classes were attended by members of the Club. The bird sanctuary is still a dream. However, Chautauqua being a private institution, there exists more than the usual interest in the wild life of the neighborhood.—(Mrs.) H. B. NORTON, *Corresponding Secretary*.

Cocoanut Grove (Fla.) Audubon Society.—We can report more birds this year than ever, and less shooting of game-birds out of season. The Society will this year try to make a chain of bird sanctuaries through the county. Already Cocoanut Grove, Silver Bluff, Miami, and Miami Beach are officially bird sanctuaries, as are also many large private estates and the Royal Palm State Park. The Cocoanut Grove Library Association has added a large room to the Library which we will use as a meeting-place and which will be known as 'Audubon Hall.' A scrapbook of 'War Birds' has been compiled by one of the members.

The Society has no debts, a good bank balance, a large membership, and a library of bird books. Interesting programs are being prepared for the season's meetings, which begin in November. Members of the Society have been making notes concerning our summer birds' doings, including the activities of a pair of Mockingbirds that built and raised a brood in August. Three were hatched, but only two survived the first three days out of the nest. Both promise well.—(Mrs.) KIRK MUNROE, *President*.

Columbus (Ohio) Audubon Society.—Only three public meetings have been held during the year. The annual meeting of the Society in October, after the preliminary business was transacted, was addressed by Mrs. Denig Tower, of Boston. Mrs. Tower, who has been wonderfully successful in attracting birds about her summer home at Port Clyde, Maine, has the faculty of giving 'close-up' pictures of these experiences. In December, 'Bird-Life in Motion Pictures' was shown by Norman McClintock, of Pittsburgh. 'Ever Watch a Bird Think?' was the way a newspaper put Mr. McClintock's description of the picture of a bird rearranging her nest after it had been disturbed. A collection of 600 mounted birds were given to the Society, which, in turn, placed them in the hands of the Supervisor of Nature-Study in the public schools. Forty of these, in individual boxes, are circulated among the pupils; the others are on permanent exhibit.

In March, E. S. Thomas lectured at the Public Library, showing pictures of the birds to be found in March, creating much interest as the field-trips were just beginning. These trips were kept up each Saturday until June. Many Boy Scouts joined the Society to go on these trips. On one particular morning, starting at 5.30, the members watched the birds getting their breakfast and then adjourned to the house of a fellow member where *they* were treated to a breakfast. Besides the money spent on caring for the mounted birds and for lecturer's fees, \$5 was sent to the John Burroughs Memorial Association and \$5 contributed by individual members toward the leaflets printed by the National Association of Audubon Societies.—(Miss) LUCY B. STONE, *Secretary*.

Crawfordsville (Ind.) Audubon and Nature-Study Club.—Beginning with the advent of the first Robin and the first pair of Bluebirds in the garden on St.

Valentine's Day, each week we published in the papers short articles calling attention to the spring migrants as they appeared. From March 29 to June 4, a period when bird-life is at its best, we had on our schedule eighteen field-trips. Ten of these were the early Tuesday morning hikes. In April, there were two half-day trips on Tuesday mornings and two, also, on Saturday mornings—these last for the convenience of those who were in school on Tuesday.

Two Tuesday morning trips were arranged for those who wished to study trees and two Saturday afternoons were given to wild flowers. At other times, a flower division was formed to meet the demand. Saturday afternoon, April 30, about fifty members enjoyed a trip to the State Game Experiment Station at Deer's Mill. We had another bird-house competition for the school children in March, in which many of the boys participated. The boxes were on exhibition in the assembly hall of the high school, and the presentation of prizes followed an illustrated lecture. This year the prizes were bird-books. Our Club furnished several illustrated lectures for the school children during the spring months. We also secured some of the Finley motion pictures for them.

About February 20, a copy of our 'Spring Program,' including evening meetings and field-trips, was sent to all the members and to about 200 other persons who are interested in some form of outdoor life. The program was also printed in the daily papers. These are some of the means we have employed to keep the cause of conservation of bird-life and plant-life before the minds of the people. Our membership has increased about 50 per cent, but, like many other Audubon Clubs, we have had difficulty in finding dependable workers. We find that members want to be entertained and hesitate to assume responsibility.—(Mrs.) DONALDSON BODINE, *Secretary*.

Cumberland County (Maine) Audubon Society.—Bird Day we celebrated appropriately, and some of the members of the Society gave instructive lectures in the schools. Several field-trips have been taken and bird-boxes were established at Westbrook Seminary, South Portland woods, and at Riverton. Our library has increased in books and pamphlets, which we have loaned to both members and non-members. Several BIRD-LORES have been subscribed to by individuals and after being read have been placed in the schools.

We have sent several important letters to Senators, other societies, and influential groups, advocating measures which have seemed desirable, for we believe there is strength in numbers when all pull together. We have been especially fortunate in securing Herbert K. Job, who lectured before the pupils of the city, and Dr. May, who spoke at an open forum meeting. Our membership has materially increased and we have a fine working force for the new year.—(Miss) AMY P. WISWELL, *Secretary*.

Dana Natural History Society of Albany (N. Y.).—During the long life of this Society, organized in 1868, every aspect of natural history has been included in its programs. Numberless opportunities have been seized to further interest, secure protection and advance education along the line of wild life in general. The papers given at the monthly meetings of the Dana are always allied to some phase of natural history, and the following subjects in the program of the current year deal exclusively with birds and animals: 'Birds as Conservators of the Forest;' 'Deer, Native and Foreign;' and, for the third paper on 'The State Reservation for Wild Life in Louisiana,' the Dana member presenting it gathered much of her information directly from the Director of the Reservation.

Dana members signed a petition sent from the Dana to the Congressmen of this district, urging their support for a legislative bill for the protection of national streams and forests, which may be called a most important factor in the salvation of all wild life. The large effort of the Dana, in a public sense, is yearly concentrated upon its annual Bird-Day lecture, given on the first Friday in each April at Chancellor's Hall, and open to the public. Some years ago, through the efforts of the Dana, this date was set apart for special Bird-Day observation in the schools, and this lecture was primarily planned by the Dana for the benefit of the school children of Albany. We have been able to present fine speakers and rare pictures, among the men of past years being Louis Agassiz Fuytes, Jack Miner, Dr. Robert C. Murphy, Dr. John M. Clarke, John M. Cook, and Prof. Barnard M. Bronson. In April of this year, Howard H. Cleaves spoke to standing room only on 'Hunting Birds with a Camera,' showing a large collection of very unusual pictures of his own making. As one slight evidence of the effect of his lecture may be mentioned a copy of an original bird-house constructed on an old straw hat, which he described and which was immediately after shown in a public exhibition of Scout handicraft on display in Albany.—THEODORE HORTON, *President*.

Doylestown (Pa.) Nature Club.—While the activities of the Club have varied somewhat during the past year, we still hold a keen interest in the preservation of bird and animal life. In the early spring we take our annual sunrise walk to see the wild flowers and study bird migration. Our bird sanctuary, situated on the outskirts of the town, includes a tract of land about 15 acres which is covered with trees and a great deal of underbrush. This forms a protection for our birds and the small animals found in this locality. Gunning at all times is strictly forbidden. None of the fruit, nuts, etc., which grow on these grounds is harvested, but they are left for the exclusive use of the birds and squirrels. In extremely cold weather, when natural food is unavailable, the feeding-stations, of which we have a number, are constantly kept replenished with grain and suet.

We hold numerous meetings here. Among the most interesting was one when our Junior Members planted nut trees, shrubs, and wild flowers, and we

now have a wild-flower reserve as well as a reserve for animals and birds. Dr. H. C. Mercer, a staunch friend of the Nature Club, and on whose estate the sanctuary and museum are situated, has recently made many improvements to the grounds in the way of having paths cut and rustic seats placed about the drinking-fountains and along the brooks. During the past season the sanctuary and museum have been visited by numerous persons, many of whom went inspired to do similar work in their own community.—(Mrs.) MINNIE H. HADDEN, *Secretary*.

Elkader (Iowa) Audubon Society.—This year we chose to study Warblers, selecting those that visited this vicinity during their migration. During this period we took hikes so that we might study these dainty creatures in their natural environment, and this added much interest to the papers read by our members later. During 1920 we held a very successful bird-house contest and at that time decided to make it a yearly occurrence. We were more than delighted with the results this year, as more houses were entered. Three were by girls, and showed excellent workmanship, both from the artistic as well as the practical standpoint. We had a class for boys who had had manual training and one for those who had not, also one for girls. Two prizes were awarded in each class.

We had a delightful Audubon picnic, a program being given out-of-doors, after the picnic supper was over. It proved to be the most pleasant meeting of the year. As usual, we postponed our August meeting so that all members who could might go to the Wild Life School at McGregor, Iowa. Two were present for the first week and one for the entire session of two weeks. Our September program consists of a report of the activities of this unique school.—(Miss) KATHLEEN M. HEMPEL, *Secretary*.

Englewood (N. J.) Bird Club.—Our Club, organized in 1915, enters the sixth year of its activities with a membership of 275. Regular meetings were discontinued during the war period, from November, 1917, to April, 1920, but its members, individually, were ever mindful of the welfare and needs of our feathered companions of field and roof-tree. The Club has been unusually fortunate in having Dr. Frank M. Chapman, a resident of Englewood, as its mentor and leader. The informal talks and walks afield with him are a much appreciated privilege. Regular monthly meetings of the Club were held from October to April, with the addition of a series of early morning bird-walks in April and May, conducted by Waldon DeWitt Miller of the American Museum of Natural History.

Among the talks and discussions may be mentioned the following: 'Birds in Design and in Art,' 'Fauna and Flora in Florida,' 'Bird Banding and Observation,' 'Spring Migrations and Fall Migrations,' and 'Protection of Wild Birds in New Jersey,' by Dr. Chapman; 'How Birds Show Their Feelings'

'Travels in Bird-Land,' and 'Protecting and Attracting Wild Birds about the Home,' by Clinton G. Abbott; and 'Our Animal Allies in the World War,' by Ernest Harold Baynes. The Club also arranged for a matinee lecture for the school children of Englewood by Mr. Baynes, which was of great interest.

To further awaken the interest of the community in birds, a public exhibition of feeding-devices and a later exhibition of nesting-boxes are planned. The Club has active Committees on Publicity, Protection, and Field-Study. The membership is increasing. The Treasurer's report shows net assets of \$488, as of September 30, 1921.—(Miss) AMY C. PARKHURST, *Secretary*.

Forest Hills Gardens (N. Y.) Audubon Society.—Our seventh annual report, June 8, 1920, to June 8, 1921, shows plenty of good work done in an educational way for both Juniors and seniors. Two first-rate free lectures were given by T. Gilbert Pearson and Louis Agassiz Fuentès, and Mrs. Mary S. Sage of the National Association of Audubon Societies was loaned to the Gardens Society by the Bird Club of Long Island to speak to the children in the Forest Hills schools. The Society has always given the Gardens the best it could find in the way of lecturers. It believes that it is not enough merely to instruct children in the hope that a future generation will do the things that we ought to do.

The routine work of the Society, such as protection and winter feeding, has gone on as usual. Aside from the intensive work, the Society has before it the big ideal of making Long Island 'A singing island.' With this aim in view, its representatives met the representatives of the Bird Club of Long Island and took the first steps towards bringing about a definite program for making the cemeteries, parks, country clubs, and golf clubs of Long Island into a chain of bird reservations extending the length of the Island. It was decided that the Gardens Society should work within the city limits and the Bird Club of Long Island over the remainder of the Island, and that the method of approach to the country clubs and golf clubs should be preferably a direct personal request to the officers of the club by a member of either the Gardens Society or the Bird Club, that at a regular meeting each Club adopt the following resolution and carry out the action it implies, setting out in detail what this would mean.

"RESOLUTION: It is recommended that the——Golf Club or Country Club, coöperate with the Forest Hills Gardens Audubon Society and the Bird Club of Long Island in taking such measures for the protection of birds as will include the planting for shelter and winter feeding, bird-pools or water-hazards, the placing of nesting-boxes on the grounds, and posting the property with sufficiently emphatic signs."

A resolution on paper is a long way from the realization of anything, but back of this effort on the part of the two organizations are the leadership and experience of Mrs. Townsend, the president of the Bird Club of Long Island, and the belief of the Gardens Society that the plan will succeed.—(Miss) MARY EASTWOOD KNEVELS, *Secretary*.

Greystone Park (N. J.) Bird Club.—Interest in the Bird Club has continued consistent throughout the year, the chief item of news being that nearly 100 new bird-houses, some of them of very ingenious and attractive design, have been placed about the grounds of the institution. Most of them have been occupied. One has been taken over by a chipmunk, and one of the largest houses has been used for residential purposes by an Owl. It is observed that there has been a marked decrease in the number of gray squirrels during the last three years, but this year shows an increase in their number and tameness. The same is true of the English Pheasants which have been introduced by the State Fish and Game Commission, and which were formerly very plentiful. Feeding has been pretty regularly practised on the lawn of the Industrial Building, in winter as well as in summer, though there is no notable increase in the number of wild birds, except in the case of Starlings and the Robins, of which the latter were so numerous on the golf-course in the early summer that one was killed by a golf ball. Sick and wounded birds have been nursed and cared for by a female patient in the Industrial Building.—ALFRED E. THISTLETON.

Hamilton (Ont.) Bird-Protective Society.—During the past year the Society held seven very successful meetings which were attended by members and friends, including a number of our enthusiastic Junior Members. Lectures were given by ornithologists from the United States and Canada. The Society is affiliated with the National Association of Audubon Societies, New York City, and the Ottawa Field Naturalist Club, Ottawa, Canada. We have ten honorary game wardens, who have done valuable work during the year for bird-protection. The membership increased over 70 per cent. Jack Miner was made an honorary member on account of the distinguished services he is rendering the cause of bird-protection.

Several field-days were held in the spring, when nature-lovers rambled along the mountainside, eager to report the earliest migrants. The Society was again able to compile for the Biological Survey a list of 120 species seen. The work with our Junior members we consider the most important of all. Clubs were formed, as in the previous year, under the National Association's plan of work. In the early spring a bird-box competition was held, when many handsome and practical houses were made by Junior members and displayed at one of our regular meetings and also in the Juvenile room of the Public Library. Prizes of bird-books and sets of tools were awarded.

Harrison F. Lewis, Chief Federal Officer for Ontario and Quebec for the protection of birds, visited the city schools and gave the boys and girls valuable information concerning birds. A splendid program has been arranged for the winter months when we hope to further stimulate and maintain an interest that will be lasting for bird-protection. There is much to be done.—(Miss) RUBY R. MILLS, *Secretary*.

Hartford (Conn.) Bird-Study Club.—The Club has proceeded on the even tenor of its way during the past year, with about the usual number of indoor and field meetings, and working along the same lines as in previous years. We have to report, however, a 'forward movement' in the inauguration of a series of Saturday morning educational lectures, with slides and motion pictures, for the school children. Three of these were given during the season in the local motion-picture houses. At the first one, Clinton G. Abbott and Dr. Grenfell were the double attraction. Dr. Robert C. Murphy, of the American Museum of Natural History, gave the second lecture, on the 'Bird Colonies of the South American Coast,' and it was our good fortune to secure Donald MacMillan for the third, with his pictures of Arctic life, flora, and fauna.

The children were intensely interested in all these lectures, and while they were undertaken purely for educational purposes, a very small admission fee being charged, financial returns were sufficient so that we were able to set aside a fund as the basis of similar work in the future. It is proposed to give another course during the coming winter, but on account of business conditions it will probably be wise to cut down the number of lectures originally planned. Several of our members who are teachers are also doing splendid bird- and nature-study work in the schools, so we feel that the educational end of our work is making good progress and justifying our existence as an organization, while we are also as individuals deriving continued pleasure and instruction from our talks and walks.—(Miss) HELEN C. BECKWITH, *Secretary*.

Jackson County (Mich.) Audubon Society.—On July 5, 1921, this Society entered into the following agreement: That the Board of Directors be and hereby are authorized to coöperate with H. L. Brown and the adjoining land-owners in the northeast corner of Parma Township, Jackson County, and the adjacent portions of Springport, Tompkins, and Sandstone Townships, in establishing a bird- and game-reservation on said lands; and provided that should such a reservation of at least 2,000 acres be established by agreements signed by the owners for a period of three to five years, then the Board of Directors are authorized to contribute in behalf of this Society, toward the expense of providing signs, a sum not exceeding \$50, but said sum is not to be taken from the principal of the Kate Palmer legacy. This agreement was signed by fifty-four land-owners, covering a tract of 15,000 acres, extending 5 miles north and south, and 4 miles east and west. Three hundred signs have been placed in the hands of said owners of this reservation. Large signs are to be placed on public highways leading into said reservation. They read:

AUDUBON RESERVE

No hunting. Trespassers will be prosecuted. This Reserve, comprising 15,000 acres, extends along this road for 5 miles.

There are lakes and marshy ponds on this land that make it a favorite resort for several thousand Ducks. There are hundreds of Prairie Chickens and

Partridges, and numerous coveys of Quail. Pheasants are to be introduced from the State Game Reservation. There are many varieties of song-birds, including Cardinals. Said reservation is 15 miles from the city of Jackson, where the Jackson County Audubon Society has its home. One of its successful ventures has been the establishing of a cat ordinance, whereby all cats must wear a tag and pay a license fee besides staying in the house at night.—(Miss) JENNIE LOVAN GREEN, *Secretary*.

Johnstown (N. Y.) Burroughs Nature-Study Club.—Our program for the year was marked by a departure from the usual order of papers and readings by the members. Four of the meetings were given over to illustrated lectures on subjects of interest to nature-lovers and were as follows: 'Through the Wilds of Canada in a Canoe,' by John T. D. Blackburn, of Albany, N. Y.; 'Adirondack Forests,' by Clifford R. Pettis, State Superintendent of Forests; 'Wild Life in the Adirondacks,' by Clinton G. Abbott, Editor of *The Conservationist*; and 'Adirondack Wild Flowers,' by Homer D. House, State Botanist. In order that the privilege of attending these lectures might be freely shared by others, the use of the Colonial Club ballroom was given for the purpose. The numbers who availed themselves of this opportunity and the enthusiasm displayed made it evident that no more effective means of arousing widespread interest in the conservation of our wild life could have been devised.—(Miss) MARGARET E. RAYMOND, *Secretary*.

Los Angeles (Calif.) Audubon Society.—This Society, with a membership of 162, has had a very favorable year. In June, 1920, there was dedicated, with impressive ceremonies, Griffith Park, second largest park in the United States, covering 3,400 acres, as a bird sanctuary. The specimen of India's world-famous *Cedrus deodora*, or Himalayan cedar, planted on Arbor Day in honor of the sailor and soldier boys represented on the Society's service flag, has been recorded in American Forestry Association's Honor Roll of Memorial Trees. Our speakers have worked among the clubs, schools, and church societies, illustrating their talks with bird-skins and slides. We have assisted the State Fish and Game Commission in some of its legislative efforts.

Our Educational Chairman, Mrs. G. H. Schneider, has presented to the Society, at its indoor meetings, lists of the migratory birds to be seen in this locality at that time. She also sends migratory bird data of Los Angeles and vicinity to each issue of BIRD-LORE. Mrs. C. H. Hall, Chairman of Birds and Wild Life, was the originator of the Audubon trail trips which are primarily for teachers, tourists, and beginners. It is through this channel that new interest is created and our membership increased. Trail trips to the number of 136 have been taken this year, with a list of 187 species of land-birds and 93 species of water-birds, and a total of 86,290 individual birds. This report is entirely independent of the regular monthly field-day trips. All dead birds

found in good condition by the Audubon members are presented to the Museum of History, Science, and Art, where they are made into study skins to which our members have free access. The Extension Chairman, Miss Helen S. Pratt, has had charge of nature lore in the Los Angeles Municipal Playground Camps, San Bernardino Mountains, for the last three seasons. She has been specially honored by having a new department of nature-study created for her in the Eagle Rock city schools.

Our Librarian, Mrs. M. C. Barton, has demonstrated some bird's nests at our regular program meetings and has been Nature Guide at Camp Radford this season. The President, Mrs. F. T. Bicknell, furnished a selected list of nature books on trees, birds, flowers, and butterflies to be found in Yosemite National Park, for those who attended the California State Convention of Women's Clubs held there in May. This was widely copied. Our Chairman of Programs, Mrs. Robert Fargo, secured the following able speakers on a variety of subjects this last year: 'Lantern Slides of Birdcraft Sanctuary,' Fairfield, Conn., by Wilfred Smith, President of California Audubon Society; 'Wisconsin Birds,' illustrated with lantern slides of bird-houses, by Mrs. F. T. Bicknell; 'Distribution and Migration of North American Birds,' by Mrs. G. H. Schneider; 'Some Members of the Hawk Family,' by L. E. Wyman; 'Social Order of Insects,' by Dr. John Comstock; 'Among the Birds of Layson Islands,' by Dr. William Alanson Bryan; and 'Courtship of Birds,' by Alfred Cookman.

We donated bird-books to the Soldiers Home and McKinley Industrial Home for Boys, and contributed to the Junior Audubon work and John Burroughs Memorial Funds. The Society indorsed the National Association of Audubon Societies in its petitions and resolutions to preserve our National Parks and to prevent drainage of lakes and destroying of breeding-grounds of our water-birds. We have chronicled the deaths of several valuable members, among them Mrs. R. E. deNormandie, who was both a charter and life member and was the inspiration of our annual May pilgrimage.—(Mrs.) F. T. BICKNELL, *President*.

Manchester (N. H.) Bird Club.—This Club was organized in May, 1921, and has already a membership of over 100. We had four talks on various phases of bird-life and, during the early summer, groups of members made many interesting trips afield. Shelters and feeding-stations have been erected by some members about their homes, and the birds have quickly shown their appreciation of the accommodations provided. The Executive Committee is planning an active season with probably six strong talks relative to the subject. It is our aim to organize other committees for more active work, such as the establishment of a Junior membership wherein is a field of wide usefulness. A second committee will work to materially increase the membership, and a third committee is now at work on the program for the coming season. A Committee on Publicity has been named. It seems that in so short a time since organi-

zation we have laid a foundation for much good work in the future to which we look forward with eagerness.—(Miss) DAISY FLANDERS, *Secretary*.

Meriden (Conn.) Bird Club.—During the past year, evening meetings in winter and hikes in summer have been planned as usual. We belong to the State Federation of Bird and Nature Clubs and work locally and statewide to promote the object of our Club: 'Bird Study and Protection.' We have a feeding committee of twenty-five persons, selected to cover every section of town, who, by precept and example, establish many winter feeding-stations. The Meriden Grange and our farmer members take a decided interest in winter-protection and feeding. Some of our members belong to the Meriden Sportsmen's Association and induce them to feed the birds, when out on their winter feeding-trips. We also interest the Boy Scouts and Scoutmasters in joining our Club, and they are very helpful at our picnics and in bird-feeding. Our many school-teacher members are very active in training the children in bird knowledge and protection.—(Miss) ESTHER R. HALL, *Secretary*.

Meriden (N. H.) Bird Club.—The activities of our Club have been carried forward during the year with special reference to the development of the museum of bird conservation, which was opened in September, 1920. A number of additional exhibits have been received, and the museum has thus proved an added attraction to the many people who annually visit the bird sanctuary. The seventh annual Bird Sunday was observed August 14, with service in the sanctuary, at which Rev. John T. Dallas, rector of St. Thomas' Church, Hanover, was the preacher.

On the afternoon and evening of August 23, under the management of the Bird Club, the Marie Ware Laughton Players of Peterboro, N. H., presented a program of plays, pantomimes, and dances at the outdoor theatre in the sanctuary. The performances were an artistic success and drew a large number of guests from the summer colonies in the vicinity. As usual, the office of the Secretary has been made use of by bird-lovers everywhere as an information bureau of all matters pertaining to the attraction and protection of birds. The ten years of the life of the Club have proved that organizations for bird-conservation are more than an experiment and perform a real service in the world's work.—(Miss) ELIZABETH F. BENNETT, *Secretary*.

Miami (Fla.) Audubon Society.—The Society has had the most successful year's work of its history. Most interesting and instructive meetings have been held each month. In December a 'Cardinal' Program was given. In January, besides the interesting program, measures were taken and later successfully carried through, to have introduced into Miami's new city charter a clause making Miami a bird sanctuary. At the February meeting a wonderful collection of bird-photographs, mostly of Florida birds, were displayed. They

were the work of E. H. Matern. The program consisted entirely of bird songs and poems. On the following morning, for the benefit of school children, pictures of Florida birds were shown at one of the movies.

The March meeting was a bird party given by Mrs. R. D. Maxwell and Mrs. W. V. Little in the Maxwells' garden. It was the most distinctive and beautiful affair given last season. The talk, music, and dances were given by Miami's most noted talent. The fact that forty new members were added to our Audubon Society at this meeting speaks for its success. The Miami Society gave to many worthy things, among them \$5 paid to Royal Palm State Park to aid in bird-protection and also \$5 toward their piano fund. We gave \$5 for the best poster made by school children, and also offered \$5 for the best constructed bird-house in the schools.—(Mrs.) R. D. MAXWELL, *Secretary*.

Montclair (N. J.) Bird Club.—Our Club was organized in April, 1920. The original membership of sixty has been more than doubled during the year and a half of the Club's existence, and while a conservative program has been pursued, the nucleus of a lasting organization has been built. Interest in birds and conservation has been fostered through publicity and by public lectures given by Howard H. Cleaves, B. S. Bowdish, and Clinton G. Abbott. These lectures were enthusiastically attended by several hundred people. An elaborate and practical feeding-station was erected by Boy Scouts for location in one of the parks, and a bird-house contest among public school children resulted in fifty houses being constructed. These were placed on exhibit in the window of one of the principal stores. Additional prizes were given for occupied houses. Further contests will be held, and additional measures taken to interest school children in birds.

Montclair was the pioneer town in establishing a cat ordinance, but after a good beginning the law became ineffectual through nonenforcement. The Club has succeeded in having the ordinance revived, and its request that the town purchase cat-traps was granted by the Commission. Occasional meetings are held for discussion. At one of these a practical talk on the identification of certain bird families was given by the President and the Field Secretary. Frequent field excursions have been held. A list of the birds of the locality is being compiled for publication. Members have so far noted 184 species found within a radius of six miles of the town center.—(Miss) LUCY N. MORRIS, *Secretary-Treasurer*.

Neighborhood Nature Club of Westport (Conn.).—Our Club during the year has studied land- and water-birds, provided food and bird-houses for them, and the President of the Club raised a number of Pheasants which have been given their freedom. The subjects under discussion other than birds have been shell-fish, wild flowers, ferns, and lepidoptera. Free lectures have been given to the public, especially the school children. Although the above record

does not show wonderful results accomplished, yet we are a live and interested Club.—(Miss) MARY H. BURR, *Secretary*.

Pasadena (Calif.) Audubon Society.—The Society continues to grow in membership, as well as in varied and helpful activities. In the past year, emphasis has been placed on the Society's educational value. Lectures and talks on birds have been given by competent members in our public schools. These have been greatly appreciated by the school authorities, who are desirous of their continuance, and arrangements to that effect have already been made for the current year. Much literature in the form of leaflets, magazines, descriptive pictures, etc., have been distributed among Junior members, Boy Scouts, and other young people.

Our public aviary, so generously contributed to the city of Pasadena last year, is a source of great interest to the community and can boast of many fledglings during the past year. A valuable collection of lantern-slides has recently been purchased from the Oregon Audubon Society, by which the Society expects to learn much of the birds of the Northwest. It is planned to have short illustrated talks, aided by these slides, at each of the Society's meetings during the present season. Bird-walks have been regularly and intelligently conducted, and have been the means of bringing into the Society many new and enthusiastic workers.—(Miss) ALICE W. PITMAN, *Secretary*.

Province of Quebec (Can.) Society for the Protection of Birds.—The year has been marked by two outstanding facts: the increased coöperative power of the Society and the greatly increased membership. This increase has proved a great support, both morally and financially. The yearly public lecture was given by Edward Avis, in the Ritz-Carlton Hotel, and was a great success. In addition, Mr. Avis gave two school lectures, while a third was given in behalf of the Junior membership of the Society in the Imperial Theatre—about 3,000 children attended. It is intended to make this exclusively children's lecture an annual affair. Moving pictures were taken of the happy children leaving the theatre after the lecture and shown in all the leading cities of Canada.

Under the able administration of the Educational Committee, over 2,000 children joined the Society since the annual meeting last January, making a total Junior membership of about 6,000. Eight interesting monthly lectures were given during the year in the Windsor Hotel, as usual, and at their close discussion was invited on all subjects relating to wild life and its conservation. The speakers of the year were L. M. Terrill; I. Gammell, Principal of the High School, Montreal; H. Mousley, Naturalist of Hatley, Province of Quebec; Harrison F. Lewis, Federal Game Warden for Provinces of Quebec and Ontario; Hoyes Lloyd, Dominion Ornithologist; Wallace H. Robb, Chairman of the Society's Membership Committee; and Miss Louise Murphy, W. A. Oswald and A. F. Winn, naturalist members of the Society.

Summer lectures were given as usual at both boys' and girls' camps, including the Scouts. Work in coöperation with the Dominion Parks Commission continues. The honorary game wardens send in reports from time to time. The appointment of a Federal game warden for Quebec has given an added impetus to this work. The Society is pleased to record a great increase in the various species of birds throughout the Province owing to the great improvement in wild-life conditions due to the Migratory Bird Convention Act.—(Mrs.) W. E. L. DYER, *Honorary Corresponding Secretary*.

Rhinebeck (N. Y.) Bird Club.—The Club at present has the following membership: Life, 10; Sustaining, 13; Active, 76; Associate, 18; Junior, 379. The Junior list is particularly gratifying, as it is by far the largest since the founding of the Club and represents Junior Audubon Classes in every one of the twelve schools in the township.

Only one public lecture has been given this year, for which we are indebted to Dr. Robert Cushman Murphy, all available funds having been used in the publication of a year-book to cover the years 1918, 1919, 1920. This is a 40-page pamphlet containing articles and photographs by members and a preliminary list of the birds of Dutchess County, briefly annotated and enumerating 229 species.—MAUNSELL S. CROSBY, *President*.

Rockaway (N. Y.) Bird Club.—The Club has held monthly meetings except in the summer. The November meeting consisted of an exhibit of nearly all the well-known books on American birds which are suitable for Christmas gifts. These were reviewed briefly and lists of the books, giving publisher, price, etc., were distributed to all members and printed in the local papers. There was also an exhibit of these books in the local library. The Club worked for the prevention of the passage of the Smith bill for granting to private parties irrigation privileges in the Yellowstone National Park. Mr. Charles Hewlett lectured on the subject at the March meeting, using stereopticon views borrowed from the American Museum of Natural History. Prizes were given by the Club to members of the Junior Societies for the best report on the spring migrants of the vicinity. The prizes offered were a subscription to *BIRD-LORE*, a folder containing the set of colored plates illustrating the 'Birds of New York,' and any one of the 'Pocket Nature Guide' series.

Miss Broomall's Junior Audubon Society makes a feature of its 'Book of Nature,' and several numbers were prepared during the year. This consists of written accounts of the personal observations of the class, anecdotes, stories, etc., as well as crayon, water-color, and pen drawings by the more artistic members of the class. In January, Miss Broomall discovered the haunt of a Saw-whet Owl and members of both the adult and juvenile bird clubs made frequent visits to him during the two weeks he remained in the vicinity. He obligingly posed for his photograph on numerous occasions. Our teacher-

members have done especially fine work in the schools, a plan being outlined and followed throughout the year. Coöperation and advice has been asked and given to the Children's Haven, the Staten Island Bird Club, the Village Beautiful Association, and the Progressive Society. The early morning bird-walks have become a feature of the Club's work. Our annual membership in the National Association has been continued, and members were urged to keep



SAW-WHET OWL.—A RECENT GUEST OF THE ROCKAWAY (N. Y. BIRD CLUB

and send to the Bureau of Biological Survey the bird record for which the Bureau furnishes blanks. Members have done field-work, maintained feeding-stations on their home-grounds, and have supplied the stations at the Club's Bird Sanctuary during the winter. Mrs. Lord's estate 'Sosiego' still remains a paradise for the Black-crowned Night Herons and they are rapidly multiplying. The Club is also pleased to report the addition of a number of new members.—(Miss) MARGARET S. GREEN, *Secretary*.

St. Louis (Mo.) Bird Club.—Our Club continued its program of previous years in regard to bird-walks in the parks and suburbs, winter feeding of resident birds, and the taking of a Christmas census. Observations of scientific interest were made by individual members on the time of departure of Swifts

from St. Louis and on the presence of the Chuck-wills-widow in St. Louis County. Successful prosecution of alien hunters for shooting protected birds in St. Louis County received support from the Club and obtained wide publicity in the state. Legislative matters (Smith of Idaho bill, Missouri Wild Life Conservation bill, ordinances on local park regulations) occupied a large part of the work of the Executive Committee.

Through the kindness of Miss Eunice Smith, the Bird Club and its guests were entertained by the lecture on the buffalo by E. H. Baynes. In the St. Louis Bird Sanctuary there has been erected a bird-fountain in memory of Mrs. Blanche Turner White, late secretary of the Club. This, which was a gift to the city by the Club and many friends, was dedicated in a public ceremony May 3, 1921. It is a weathered granite boulder from Iron County, Mo.—Mrs. White's home. A rough basin has been cut out, water connection made, and an inscription carved on one side. A special keeper for the sanctuary was appointed at the beginning of the summer.—(Miss) JENNIE F. CHASE, *Secretary*.

St. Petersburg (Fla.) Audubon Society.—After twelve years of enthusiastic, intelligent bird-protective work, our Society has begun to reap its reward. This year has seen the completion of a chain of bird sanctuaries throughout our whole county (peerless Pinellas), probably the first of its kind in the United States. These sanctuaries were created by municipal action where cities and towns were incorporated, or by women's clubs or parent-teacher associations where the villages were remote, and the conservation of bird-life has reached such a high pinnacle that numerous requests come for membership cards and for instruction for method in making privately owned land sanctuaries. Sanctuary signs, with the birds in their habitats and the penalty for violations painted on them, have been placed to mark all of the sanctuaries in this long chain in Pinellas County.

The Audubon Society has carried on the Junior Audubon work in the schools most successfully through the Secretary, Mrs. S. E. Barton, and the Treasurer, Mrs. M. G. Foster, over a thousand members having been enrolled last year.

Three prizes are given each year. The first is \$5 in gold to the boy or girl who so builds a bird-house that it will attract nesting birds and within which a family is raised. The second is a field-glass for the best list of birds made in a single hike. The third is a bird-book for the best paper on the value of bird-protection. These prizes have been in vogue so long that the first winners have children now who will soon be old enough to compete. The Audubon field and water excursions are always so popular that a long list is kept of those waiting for a place on same. This has done much to create public sentiment for bird-protection. But the crowning honor came on June 25, 1921, when President Harding signed Order No. 3052, which added certain keys to Indian Key Reservation, through the recommendations of the St. Petersburg Society to

Chief E. W. Nelson of the Biological Survey. In the letter of notification, Dr. Nelson paid tribute to the St. Petersburg Audubon Society, which had succeeded in its efforts to have these additional refuges set aside.—(Mrs.) KATHERINE B. TIPPETTS, *President*.

Saratoga (N. Y.) Bird Club.—The Club has held ten meetings through the past year at the homes of its different members—with one exception. In March we gave the public a great treat in a lecture by Clinton G. Abbott, of the State Conservation Commission, which was held in the auditorium of the Saratoga Springs High School. There is never any sale of tickets for such lectures—our Club bears all the expenses. The subjects for reading and study this past year have been mostly the wild birds and the game-birds. One evening was devoted to the study of bird-nests and the birds that use them—and those that do not. At the final business meeting the officers of last year were re-elected. Our Club is a small but generous one. We are hoping to add new members to help toward making it an enjoyable winter.—(Miss) CAROLINE C. WALBRIDGE, *Secretary*.

Savannah (Ga.) Audubon Society.—Our Society is flourishing under the able management of H. B. Skeele, the President, and is engaged in many activities conducive to the betterment of bird-life. Eight field-meets were held during the spring. These meets called for early rising, almost getting there before the birds were up, and were most instructive as well as delightful, particularly as they were conducted by one or the other of our ornithologists. On the evening of March 8, Norman McClintock gave a splendidly illustrated lecture on bird-life. The Audubon Society regretted exceedingly it had not secured the auditorium, for the Savannah theatre was packed to the doors with an audience of nearly all young people. Crowds of children were turned away for lack of space.

Audubon Bird Charts have been purchased and loaned in turn to the various schools. In addition, some of our most progressive members have visited the county schools, trying to interest the pupils in birds. These talks sometimes included the Parent-Teacher's Association, thereby reaching the grown-ups as well as the little folk. On June 22, the Society presented three prizes for the first, second, and third best posters on birds and bird-life. We are most fortunate in having on our roll the names of four ornithologists, Professor Hoxey, Mr. Erichsen, Mr. Gilbert Rosignol, and Mr. Asendorf, all of whom are untiring in their efforts to help, and there is always some one of them who will conduct a field-meet. One of our plans for the fall and winter will be the study of bird-skins or of stuffed birds. In this way we can observe at leisure the sizes, colors, and various little differences in our feathered friends—then when seen in life they will be more familiar to the eye.—(Mrs.) B. F. BULLARD, *Secretary*.

Scranton (Pa.) Bird Club.—This Club, during its sixth year, proved indeed this vicinity's growing interest in bird-study, bird-protection, and general bird-lore. A September out-of-doors meeting, with an excellent opportunity for bird observation, following an interesting program, and an Arbor Day sale of perennials comprised the fall work. The winter's special efforts were many. Among them, the 'Birds' Christmas Tree,' in Nay Aug Park, conducted by Miss Helen Hay's Junior Club members, from the Audubon School, under the direction of Miss Elizabeth Rice, the Christmas Day Census, the turning of thirty-three used kindergarten Christmas trees into bird-feeding stations, the contributing to the Yellowstone Park Fund, the planning, in connection with the Boy Scouts, for Norman McClintock's motion-picture lecture on 'Wild Birds and Their Habits,' and the finishing of the first year's census.

In February, the census list was completed and beautifully prepared copies, appropriately framed, were presented to the Everhart Museum and to the public library. These have been conspicuously placed and are of great reference value. In the spring there was the annual bird-house competition, the giving, by the President, Mrs. Francis Hopkinson Coffin and the Vice-Presidents, Rev. L. R. Foster and Prof. R. N. Davis, of several helpful talks, in the interest of bird-study, to organizations in and near the city, the bird-naming contests for Girl and Boy Scouts, the Arbor Day meeting, the Merit Badge Examination, conducted by our President, Mrs. Coffin, Mrs. J. T. Angwin, and Prof. R. N. Davis, when badges were recommended for ten girls and two boys, and the climax of the spring's work, the bird-study walks conducted from April 25 to May 26.

Amid more or less uncertainty the plan for 6.30 A. M. walks was announced—those in charge hardly daring to believe that more than the most ardent bird-students would respond. It was most gratifying, therefore, to the group leaders to find the list of people and the list of birds growing with each morning's effort until the great climax of the fourth week when eighty-one people were able to record 63 birds, 23 of these being new arrivals. Club activities end with the June meeting, but activities in behalf of the birds never cease, as shown by the active interest of William Anneman, game warden, who has never failed to coöperate with the Bird Club in following up infringements of the law and seeing that those guilty are properly punished.—(Miss) ELEANOR P. JONES, *Secretary*.

Seattle (Wash.) Audubon Society.—The work of the Society for the past year has been very similar to that of the previous year. We have continued the Junior Audubon Societies in the branch libraries and responded to many calls for bird lectures in the public schools, Boy Scouts' meetings and women's clubs in the city. Regular monthly meetings have been held in the Chamber of Commerce for the general public. Mr. S. F. Rathbun and other speakers have been very generous in giving us their time on these occasions. Field-

trips have been enjoyed throughout the year. We have distributed bird literature whenever practical. Mrs. Dean Terry, one of our active members, ran a series of bird articles and a bird identification contest in one of the local papers, and we have published a few bird articles in other local papers during the year. The changing exhibit in the glass case at the public library has been much appreciated by the public. Our most important acquisition this year is a set of beautiful slides of western birds purchased from the Oregon Audubon Society. They are to be congratulated for their success in accomplishing so fine, and to us western bird students, so important a piece of work. We are thankful to have real western bird pictures at last.—(Mrs.) C. N. COMPTON, *President*.

Société Provencher d'Histoire Naturelle du Canada.—Our Society believes that the best means of arriving at its goal is to imitate the National Association of Audubon Societies by creating a great National movement through our educational institutions. Our young Society, still under organization, has had to act in several emergency cases, and has to its credit practical work that has produced good results. We have sent personal letters to 300 hunters, explaining the provisions of the Migratory Bird Treaty. We have distributed illustrated leaflets on the Canada Goose, furnished us by the Dominion Parks Branch. We have made an investigation on the spot regarding the war being carried on against the Eider Duck and have posted extracts from the law in public places—railroad stations, post offices, churches, etc. We have also reported infractions of the game laws and distributed much interesting literature on natural history to over 4,000 children in the schools. Our recent report in the form of prospectus has been printed in English and French. It contains many half-tone illustrations and nine colored plates of birds containing two subjects, each painted by Hennessey.—JOSEPH MATTE, *Secretary*.

South Bend (Ind.) Humane Society.—The Society held a poster contest in the spring in which 2,000 school children participated. A number of the posters were entered in the National contest. We awarded thirty-two prizes, a large proportion of which dealt with the protection of the birds. We also presented in public, a number of times, our bird pictures, together with short talks.

We are erecting a large bulletin board 7 feet square on one of the most prominent highways of the city, with the words: 'Be Kind to Animals and Birds,' printed in prominent artistic type. We believe we are the first Society to inaugurate a bulletin board of this character.—H. A. PERSHING, *Secretary*.

Stanton Bird Club (Maine).—In the past year we have held eight regular meetings at which talks were given by speakers with special knowledge of their subjects: Three picnic suppers, several Sunday afternoon winter walks, and twenty-eight morning bird-walks from March to June. We have fifty-four

new members, including as an honorary member, the Governor of our state. A public lecture by Herbert K. Job, a lecturer of the National Association of Audubon Societies, drew a large and enthusiastic audience. Our President, Mr. Kavanaugh, gave several books as prizes for the best nature work done by pupils in the public schools, and also gave books as prizes for the best lists of birds seen by Club members from January to June. We had a guest night in November, with Arthur H. Norton, of Portland, as speaker. We have corresponding members in other towns. We are fortunate in having as Club Forester a graduate of the Harvard School of Forestry, while the services of a state game warden, one of our active members, is invaluable.

In April we had our first exhibit, which filled the Auburn Chamber of Commerce rooms. There were bird-houses made by members, feeding and bathing devices, cat-guards, a sparrow-trap, bird-nests, and many other things. Mounted birds of special economic value, loaned by the college, fronted an array of their enemies. The walls were hung with pictures of birds, game laws, lists of birds seen by the Club individually and collectively, posters relating to bird conservation, etc. Besides this there was a collection of native shrubs, berries, and tree branches attractive to birds; a display of pamphlets, books, and leaflets, relating to birds. Five-minute papers on 'Bringing Children and Birds Together' were read by our school-teacher members. On the following day the exhibit was removed to Lewiston School, where it remained a week and was seen by nearly a thousand children from the public schools.

Bird Day, this year, fell on April 8. In the early morning, fifty-four Juniors and seniors followed the President of the Club on a bird-walk. Later in the day hundreds of children in the public schools listened to talks on bird conservation by speakers from the Bird Club. Nearly every school had special Bird-Day exercises. The following week a morning bird-walk and picnic breakfast was enjoyed. We are rapidly getting an increased interest in birds, a growing membership, and an evident increase in the number of birds that are coming into our streets and gardens.—(Mrs.) DAISY DILL NORTON, *Secretary*.

Staten Island (N. Y.) Bird Club.—In addition to further increasing its membership (now 227), continuing its monthly bird-walks, its lectures in the public museum and schools, and maintaining its winter feeding-stations, our Club has made, during the past year, a strong effort to combat illegal shooting on Staten Island. To this end, a petition asking for the enforcement of the law prohibiting the use of firearms on the Island, signed by several hundred citizens, was forwarded through the National Association of Audubon Societies to the Conservation Commission and subsequently to the New York City Police Department. It has resulted in renewed restrictions being sent to each officer. Recently, in a case in Magistrate Court, the officers of the Club furnished identification of the bird, a Green Heron, as an aid to the offender's conviction. In several other instances, Mrs. Trench has furnished help to the

game warden, and the Club's officers are now coöperating with the Police Department by notification of violations of the law.

The lectures given by the Staten Island Bird Club have included: 'Bird-land,' by Edward Avis; 'Protection of Wild Animals and Birds,' by Herbert K. Job; 'Wild Birds and How to Attract Them,' by Ernest Harold Baynes; 'Bird-Life along the Gulf Coast,' by T. Gilbert Pearson; 'Conserving the Forests, Fish and Game of New York State,' by Clinton G. Abbott; and 'Staten Island Birds,' by Carol Stryker. The last named has been repeated in several public schools and church affairs, and constitutes an introduction to our birds.—CHARLES W. LENG, *Secretary*.

Sussex County (N. J.) Nature-Study Club.—As the name of our organization implies, we are interested in the various phases of nature-work, but birds hold first place. This year the especial efforts of the Club (numbering twenty-five, and holding meetings once each month) have been devoted to bringing to the attention of the public the danger of extinction of a number of species of useful birds and urging the need of better protection. This has been done largely by carefully prepared articles, published by the local press, and results have been extremely gratifying, interest in the birds throughout the county being greatly increased and stimulated. All communications of both the National and State Audubon Associations are given prompt attention, and, so far as possible, their suggestions are followed by the Club.—(Miss) F. BLANCHE HILL, *Secretary*.

Vigo County (Ind.) Bird Club.—During the year we tried to secure police protection for the tow-path, a river fringe strip where birds come in great numbers, especially during the season of migration. Our work was mainly educational. In our regular meetings we studied Chapman's 'Bird Life,' or went on field-trips. We obtained lantern-slides and gave illustrated lectures on birds in five schools in the city. We had school children build bird-houses. These were put on sale and the children given the full price received for the houses. We are hoping to do greater things in the future for the protection of our feathered and furred friends.—(Miss) SARAH J. ELLIOTT, *Secretary*.

Washington State Federation of Women's Clubs.—The Bird Division of the Conservation Department has sent out a letter to all the federated clubs asking them to have at least one bird program during the year, to observe Bird Day along with Arbor Day, to encourage the local bird authorities in their effort to stimulate interest in bird neighbors and in the economic aspects of this study. In connection with the Conservation Department, the Committee made a small exhibit at the State Fair, showing the protected birds which the State Sportsmen's Association was asking permission to shoot. The protests of the clubwomen at the Wenatchee meeting evidently was effective

as the clause taking protection from the Water Ouzel, Blue Heron, Crow, Hawks, and Owls, was not included in legislation.

A questionnaire sent out to the clubs brought answers from seventy-six. Nineteen clubs had had bird programs during the year. Thirty-five different cities had observed Bird and Arbor Day, though some had emphasized the trees rather to the exclusion of the birds. Thirty-three clubs had encouraged the building of bird-houses and seven other clubs reported that members as individuals had given this encouragement. Through the kindness of clubs the Committee came into possession of several interesting lists of birds found in different sections of the state. A number of clubs reported interest in bird-study and asked for information. A number of programs for Bird Day were suggested in response to requests. The chairman has also tried to encourage interest by personal talks before several of the clubs nearer by.—(Mrs.) J. V. ELLIS, *Chairman Bird Committee*.

Waterbury (Conn.) Bird Club.—Our Club numbers 156 members. During the year we held sixteen field meetings which were led by members, and those on pleasant days were most successful. Unfortunately, several were scheduled for rainy days and had to be given up. During the year our composite list of species found numbered 117. This is lower than usual, but many members were not able to hunt as much as in former years. We were fortunate in having Dr. A. A. Allen, of Cornell University, give us a very interesting lecture in April, on 'Birds in Relation to Man.' This was well attended and proved most stimulating.

The Club has been organized only five years, but during that time, through the generosity of William E. Fulton of this city, we have been able to acquire and develop a bird sanctuary. Work on this at first was somewhat delayed because of the war, but the last two years have seen great strides in its development. We have a number of acres of varying country which includes a lovely pond and brook and some swamp land, also a dry hillside. In this sanctuary we have set out several hundred berry-bearing shrubs, which are already beginning to bear fruit. We are also trying out a small quantity of wild rice in a bit of swamp land for the birds and have created one large barberry tangle. There are three Audubon food-houses placed in desirable locations and numerous bird-houses. We have done a small amount of educational work in the schools and hope this next year to be able to arrange for lectures and exhibits for the benefit of the public.—(Mrs.) BESSIE L. CRANE, *President*.

West Chester (Pa.) Bird Club.—During the year the Club held fifteen regular meetings at which programs of a high order were given. On January 3, Charles Pennock, of Kenneth Square, spoke on 'Looking into an Eagle's Nest.' On February 14, J. Fletcher Street, president of the Delaware Valley Ornithological Club of Philadelphia, gave an illustrated lecture on 'A Trip in the

Laurentian Mountains of Canada.' The remaining meetings were conducted by members of the Club. Again, efforts were made to further legislation for the conservation of bird-life and the beauty of our great National Parks. Influence was also exerted to have Bob-Whites placed upon the list of protected birds. Individual members, as well as the organization, have done much to further interest in bird-life.

Miss Susan Rutledge formed a Junior Audubon Society in the Model School. The several hikes taken by them have resulted in a growing interest among the children. The third 'Bird Club Bulletin' was published in August. It contains twenty-five pages of original material descriptive of Club activities and was illustrated by photographs taken on the field-trips. Many original poems also appear on its pages. It is felt that much has been done to further a spirit of love for the open and of bird-life in this community.—(Miss) LILIAN W. PIERCE, *Secretary*.

Wyncote (Pa.) Bird Club.—The year has been a successful one in many ways. The usual indoor meetings have been well attended and several very successful tramps and bird-walks were conducted. Many bird-houses were made and occupied by Wrens and Bluebirds, and several members have succeeded in taking good photographs of these. Mrs. S. Louise Pattison gave us her very excellent lecture on 'My Bird Neighbors,' and delighted her audience as usual with her experiences in attracting birds about her home.

Mr. Ernest Harold Baynes also gave us his splendid lecture 'Our Animal Allies in the World War.' Details of the animals' part in winning the war were given in graphic language and interwoven with eloquent and dramatic stories of particular Pigeon and dog messengers that died that man might live. The debt we incurred was forcibly brought home and the speaker pleaded that we pay it to animals, not in "sloppy sentimentalism," but in kindness and consideration worthy of the highest manhood. An innovation this year in the Club's meetings has been the showing of moving pictures of wild bird and animal-life taken by William L. and Irene Finley, of the National Association of Audubon Societies. These are very fine films and are distributed by the Goldwyn Corporation for a nominal fee and we recommend them to all bird clubs.—(Miss) ESTHER HEACOCK, *Secretary*.

Wyoming Valley (Pa.) Audubon Society.—Our Society has only twenty-four members, and all busy people, so meetings have been few and results discouraging. One thing of interest has been the arrest and prosecution of a city (Wilkes-Barre) police officer for shooting a Screech Owl in one of our public parks. Before the shooting the officer was warned by a member of the Audubon Society that the bird was protected. In spite of the warning, he shot it in full view of many people, was arrested, and tried before an alderman, the evidence sent to Harrisburg, where our State Game Commission judged

him guilty and recommended that he be fined. The local press gave the affair considerable publicity.

In February, a bird-census was started by placing a bulletin board, prettily decorated with bird-pictures from the Junior Educational Leaflets, in the Osterhout Library at Wilkes-Barre. Then an invitation was sent out to everybody to send in the names of birds seen, with date of their arrival. Much interest was shown, twenty observers responded, and a list of seventy-six birds resulted. A bird-house contest was held at our neighboring town, Plymouth, early in the spring, for which our organization furnished part of the prizes. Much field-work is done by some of our members, who bubble over with enthusiasm and talk birds all of the time to whoever will listen and at least one member has had the pleasure of 'talking birds' on many occasions to schools, Boy Scouts, civic bodies, and social clubs. We hope that it all tends to help the good work along.—(Mrs.) MABEL H. TREMBATH, *President*.

ORGANIZATIONS FORMALLY AFFILIATED WITH THE NATIONAL ASSOCIATION OF AUDUBON SOCIETIES, OCTOBER 19, 1921

STATE AUDUBON SOCIETIES

ARIZONA:

President, Thomas K. Marshall, Tucson, Ariz.
Secretary, Mrs. Harriet B. Thornber, Tucson, Ariz.

CALIFORNIA:

President, Wilfred Smith, Altadena, Calif.
Secretary, Miss Helen S. Pratt, 245 Ridgeway, Eagle Rock, Los Angeles, Calif.

COLORADO:

President, E. R. Warren, 1511 Wood Ave., Colorado Springs, Colo.
Secretary, Miss Hattie E. Richardson, 2337 Dexter St., Denver, Colo.

CONNECTICUT:

President, Mrs. Mabel Osgood Wright, Fairfield, Conn.
Secretary, Miss Charlotte A. Lacey, Southport, Conn.

DISTRICT OF COLUMBIA:

President, Hon. Job Barnard, Falkstone Courts, Washington, D. C.
Secretary, Miss Helen P. Childs, Chevy Chase, Md.

EAST TENNESSEE:

President, Rev. Angus McDonald, 1322 Tremont St., Knoxville, Tenn.
Secretary, Miss Magnolia Woodward, Chestnut Hill, Knoxville, Tenn.

FLORIDA:

President, Mrs. Katherine Tippetts, St. Petersburg, Fla.
Secretary, W. Scott Way, Winter Park, Fla.

ILLINOIS:

President, O. M. Schantz, 10 South LaSalle St., Chicago, Ills.
Secretary, Miss Catherine A. Mitchell, 10 S. LaSalle St., Chicago, Ills.

INDIANA:

President, Prof. M. L. Fisher, Lafayette, Ind.
Secretary, Frank C. Evans, Crawfordsville, Ind.

MARYLAND:

President, Mrs. Baker Hull, The Washington Apts., Baltimore, Md.
Secretary, Miss Margaretta Poe, 1204 N. Charles St., Baltimore, Md.

MASSACHUSETTS:

President, Edward Howe Forbush, 136 State House, Boston, Mass.
Secretary, Winthrop Packard, 66 Newbury St., Boston, Mass.

MINNESOTA:

President, Rev. J. N. Taylor, St. Paul, Minn.
Secretary,

MISSOURI:

President, Dr. Hermann von Schrenk, St. Louis, Mo.
Secretary, Robert J. Barry, 5315 Delmar Ave., St. Louis, Mo.

NEW HAMPSHIRE:

President, Gen. Elbert Wheeler, Nashua, N. H.
Secretary, George F. Atwell, Strafford, N. H.

NEW JERSEY:

President, John Dryden Kuser, Bernardville, N. J.
Secretary, Beecher S. Bowdish, 164 Market St., Newark, N. J.

NORTH CAROLINA:

President, Dr. R. H. Lewis, Raleigh, N. C.
Secretary, Placide Underwood, Raleigh, N. C.

NORTH DAKOTA:

President, Prof. Freeman, Care of Fargo College, Fargo, N. Dak.
Secretary, O. A. Stevens, Fargo, N. Dak.

OHIO:

President, Prof. Wm. G. Cramer, 1619 Lincoln Ave., Cincinnati, Ohio.
Secretary, Miss Katherine Ratterman, 510 York St., Cincinnati, Ohio.

OREGON:

President, William L. Finley, Jennings Lodge, Ore.
Secretary, Dr. Emma J. Welty, 321 Montgomery St., Portland, Ore.

PENNSYLVANIA:

President, Witmer Stone, Academy of Natural Sciences, Philadelphia, Pa.
Secretary, Miss Elizabeth W. Fisher, 2222 Spruce St., Philadelphia, Pa.

RHODE ISLAND:

President, Dr. H. E. Walter, Brown University, Providence, R. I.
Acting Secretary, Miss Marie E. Gandette, Park Museum, Providence, R. I.

UTAH:

President, J. H. Paul, Salt Lake City, Utah.
Secretary, Mrs. A. O. Treganza, 624 E. 6th St. S., Salt Lake City, Utah.

WEST TENNESSEE:

President,
Secretary, C. C. Hanson, Box 1043, Memphis, Tenn.

WEST VIRGINIA:

President, Miss Bertha E. White, 160 Latrobe St., Parkersburg, W. Va.
Secretary, Walter Donaghho, Emerson Ave., Parkersburg, W. Va.

CLUBS AND OTHER ORGANIZATIONS

AUDUBON ASSOCIATION OF THE PACIFIC (CALIF.):

President, A. S. Kibbie, 1534 Grove St., Berkeley, Calif.
Secretary, C. B. Lastreto, 260 California St., San Francisco, Calif.

AUDUBON CLUB OF ARDMORE (OKLA.):

President, Mrs. Sam. H. Butler, 18 7th Ave., N. E., Ardmore, Okla.
Secretary,

AUDUBON SOCIETY OF IRVINGTON (N. Y.):

President, Mrs. John B. Calvert, Irvington-on-Hudson, N. Y.
Secretary, Mrs. George M. Cumming, Irvington-on-Hudson, N. Y.

BALL BIRD CLUB (MAINE):

President, Mrs. Charles Alexander, 27 Pleasant St., Hallowell, Maine.
Secretary, Miss Elsie M. Stebbins, 43 Melville St., Augusta, Maine.

BEDFORD (N. Y.) AUDUBON SOCIETY:

President, William Borland, Bedford Hills, N. Y.
Secretary, Miss Mary Clark, Bedford Hills, N. Y.

BIRD CLUB OF WASHINGTON (N. Y.):

President, Mrs. Susan D. Sackett, Millbrook, N. Y.
Secretary, Mrs. Harry S. Downing, Millbrook, N. Y.

BIRD CONSERVATION CLUB (MAINE):

President, Mrs. J. C. Buzzell, 11 Hudson St., Bangor, Maine.
Secretary, Miss Alice Brown, Court St., Bangor, Maine.

BIRD-LOVERS' CLUB (N. Y.):

President, Miss E. E. Mattison, Box 1453, Middletown State Hospital, Middletown, N. Y.
Secretary, Miss H. Pearl Beyea, 113 Monhagan Ave., Middletown, N. Y.

BLAIR COUNTY (PA.) GAME, FISH AND FORESTRY ASSOCIATION:

President, John H. Winters, 1609 11th Ave., Altoona, Pa.
Secretary, Dick Heverly, 1609 16th St., Altoona, Pa.

BRITISH COLUMBIA (CAN.) NATURAL HISTORY SOCIETY:

President, Hon. A. R. Sherwood, 410 Jones Block, Victoria, B. C., Can.
Secretary, Hon. J. R. Anderson, 410 Jones Block, Victoria, B. C., Can.

BROOKLINE (MASS.) BIRD CLUB:

President, Dr. J. B. Brainerd, 57 Monmouth St., Brookline, Mass.
Secretary, Mrs. Geo. W. Kaan, 162 Aspinwall Ave., Brookline, Mass.

BROOKLYN (N. Y.) BIRD-LOVERS' CLUB:

President, Lester L. Walsh, 11 Walther Ave., Ridgewood, N. J.
Secretary, George B. Wilmott, 1138 E. 37th St., Brooklyn, N. Y.

BUFFALO (N. Y.) AUDUBON SOCIETY:

President, Edward C. Avery, 114 Mariner St., Buffalo, N. Y.
Secretary, Mrs. C. M. Wilson, 503 Lafayette Ave., Buffalo, N. Y.

BURROUGHS-AUDUBON NATURE STUDY CLUB (N. Y.):

President, William B. Hoot, 203 Monroe Ave., Rochester, N. Y.
Secretary, Miss Harriet Ganung, 57 S. Washington St., Rochester, N. Y.

BURROUGHS JUNIOR AUDUBON SOCIETY (N. Y.):

President, Miss Elizabeth Burroughs, Kingston High School, Kingston, N. Y.
Secretary, Miss Ethel Shaffer, Kingston High School, Kingston, N. Y.

BURROUGHS NATURE STUDY CLUB (N. Y.):

President, Judge T. Cuthell Calderwood, 111 S. Market St., Johnstown, N. Y.
Secretary, Miss Margaret E. Raymond, 200 Fon Claire St., Johnstown, N. Y.

CANANDAIGUA (N. Y.) BIRD CLUB:

President, Mrs. Edwin P. Gardner, 140 Gibson St., Canandaigua, N. Y.
Secretary, Miss Rachel Packard, 58 Scotland Road, Canandaigua, N. Y.

- CARROLLTON (KY.) WOMAN'S CLUB:

President,
Secretary,

CAYUGA BIRD CLUB (N. Y.):

President, L. A. Fuertes, Ithaca, N. Y.

Secretary, Dr. A. A. Allen, McGraw Hall, Ithaca, N. Y.

CHAUTAUQUA BIRD AND TREE CLUB (N. Y.):

President, Mrs. Robert A. Miller, 17 W. 45th St., New York City.

Secretary, Mrs. H. B. Norton, 19 Claremont Ave., New York City.

CIVIC LEAGUE (MICH.):

President,

Secretary, Miss May Turner, 1702 Court St., Saginaw, Mich.

CLARKSTON AUDUBON SOCIETY (WASH.):

President, Lloyd Ayres, Clarkston, Wash.

Secretary, Miss Lillian Nelson, Clarkston, Wash.

CLEVELAND (OHIO) BIRD-LOVER'S ASSOCIATION:

President, Mrs. E. C. T. Miller, 620 Swelland Bldg., Cleveland, Ohio.

Secretary, Mrs. Wm. G. Pollock, 1010 Euclid Ave., Cleveland, Ohio.

COCOANUT GROVE (FLA.) AUDUBON SOCIETY:

President, Mrs. Kirk Munroe, Cocoanut Grove, Fla.

Secretary, Mrs. Florence D. Haden, Cocoanut Grove, Fla.

COLORADO MUSEUM OF NATIONAL HISTORY:

President, Frank M. Taylor, Colorado Museum of Natural History, Denver, Colo.

Director, J. D. Figgins, Colorado Museum of Natural History, Denver, Colo.

COLUMBUS (OHIO) AUDUBON SOCIETY:

President, Prof. J. S. Hine, Ohio State University, Columbus, Ohio.

Secretary, Miss Lucy B. Stone, 26 Garfield Ave., Columbus, Ohio.

COMMUNITY BIRD CLUB:

President, Mrs. G. H. McGraw, Woodsville, N. H.

Secretary, Miss Ella Munsell, Wells River, Vt.

CRAWFORDSVILLE (IND.) AUDUBON AND NATURE-STUDY CLUB:

President, Prof. Joy Leonard, Crawfordsville, Ind.

Secretary, Mrs. Emma T. Bodine, Crawfordsville, Ind.

CUMBERLAND COUNTY AUDUBON SOCIETY (MAINE):

President, Miss Mabel S. Daveis, 6 Bowdoin St., Portland, Maine.

Secretary, Miss Amy Wiswell, Portland High School, Portland, Maine.

DANA NATURAL HISTORY SOCIETY (N. Y.):

President, Mrs. Theodore Horton, 206 Lancaster St., Albany, N. Y.

Secretary, Mrs. John J. Merrill, 353 State St., Albany, N. Y.

DANVILLE (ILLS.) BIRD CLUB:

President,

Secretary, Mrs. T. W. Elliott, Hawthorne Pl., Danville, Ills.

DELTA DUCK CLUB (LA.):

President, John Dymond, Jr., Quarantine, P. O., La.

Secretary, C. A. Burthe, Cottam Block, New Orleans, La.

DETROIT (MICH.) AUDUBON SOCIETY:

President, Charles W. Bear, People's State Bank, Detroit, Mich.

Secretary, Ralph Beebe, 2920 Hillgen Ave., Detroit, Mich.

DETROIT (MICH.) BIRD-PROTECTING CLUB:

President, Mrs. J. D. Harmes, 332 Hamilton Ave., Detroit, Mich.

Secretary, Miss Agnes Sherman, 572 E. Lavin Ave., Detroit, Mich.

DETROIT (MICH.) ZOÖLOGICAL SOCIETY:

President, Edwin Denby, Dime Bank Bldg., Detroit, Mich.

Secretary, Richard E. Follett, Dime Bank Bldg., Detroit, Mich.

DOYLESTOWN (PA.) NATURE CLUB:

President, Mrs. I. M. James, Doylestown, Pa.

Secretary, Mrs. Thomas Haddon, Doylestown, Pa.

ELGIN (ILLS.) AUDUBON SOCIETY:

President, Mrs. B. F. Berryman, 3 Chicago St., Elgin, Ills.

Secretary, Cyrill Abbott, 24 S. Liberty St., Elgin, Ills.

ELKADER (IOWA) AUDUBON SOCIETY:

President, A. J. Palas, Elkader, Iowa.

Secretary, Miss Kathleen M. Hempel, Elkader, Iowa.

ENGLEWOOD (N. J.) BIRD CLUB:

President, Dr. Frank M. Chapman, Englewood, N. J.

Secretary, Miss Amy C. Parkhurst, 2 Booth St., Englewood, N. J.

ERASMUS HALL AUDUBON BIRD CLUB (N. Y.):

President, Jerome Allen, Erasmus Hall High School, Brooklyn, N. Y.

Secretary, Miss Marion Deghuee, 188 Fenimore St., Brooklyn, N. Y.

EVANSVILLE (IND.) AUDUBON SOCIETY:

President, George S. Clifford, Evansville, Ind.

Secretary, Miss Edith O. Trimble, 1040 S. 2d St., Evansville, Ind.

FOREST HILLS GARDENS (N. Y.) AUDUBON SOCIETY:

President, Mrs. George Smart, 45 Deepdena Rd., Forest Hills, N. Y.

Secretary, Miss Mary E. Knevels, 9 Station Square, Forest Hills, N. Y.

FRANCIS W. PARKER SCHOOL (ILLS.):

President,

Secretary, Miss Florence M. Hefter, Chicago, Ills.

FRIENDS OF OUR NATIVE WILD LIFE (N. DAK.):

President, Miss Bertha R. Burton, 219 3d St., Bismarck, N. Dak.

Secretary, Russell Reed, Bismarck, N. Dak.

GLENVILLE (W. VA.) NORMAL BIRD CLUB:

President, Edgar Hatfield, Glenville Normal School, Glenville, W. Va.

Secretary, Miss Pansy Starr, Glenville Normal School, Glenville, W. Va.

GENESEE AUDUBON BIRD CLUB (N. Y.):

President, Keith Pierce, Wesleyan Seminary, Lima, N. Y.

Secretary, Miss Henrietta Wills, Wesleyan Seminary, Lima, N. Y.

GREYSTONE PARK (N. J.) BIRD CLUB:

President, Robert E. Cooney, Greystone Park, N. J.

Secretary, Alfred E. Thistleton, Greystone Park, N. J.

GROTON (MASS.) BIRD CLUB:

President, Rev. Charles B. Ames, Groton, Mass.

Secretary,

HAMILTON (ONT.) BIRD-PROTECTION SOCIETY:

President, R. Owen Merriman, 96 W. 2d St., Hamilton, Ont., Can.

Secretary, Miss Ruby R. Mills, 36 Robinson St., Hamilton, Ont., Can.

HARDY GARDEN CLUB OF RUXTON (MD.):

President, Mrs. Duncan K. Brent, Ruxton, Md.

Secretary, Mrs. Harry T. Matthews, Ruxton, Md.

HARTFORD (CONN.) BIRD-STUDY CLUB:

President, Albert Morgan, 95 Raymond Rd., Hartford, Conn.

Secretary, Miss Florence Newberry, West Newberry, Conn.

IOWA CITY (IOWA) AUDUBON SOCIETY:

President, Mrs. Charles B. Wilson, Iowa City, Iowa.

Secretary, G. B. MacDonald, Iowa City, Iowa.

IRWIN (PA.) AUDUBON SOCIETY:

President, R. T. McCormick, Irwin, Pa.
Secretary, Bert H. Rylander, Irwin, Pa.

JACKSON (MICH.) AUDUBON SOCIETY:

President, John Q. Breck, 414 W. Clinton St., Jackson, Mich.
Secretary, Miss Jennie Dovan Green, Jackson, Mich.

LITTLE LAKE CLUB (LA.):

President, W. B. Spencer, Cuyamel Fruit Bldg., New Orleans, La.
Secretary, George B. Matthews, Jr., 420 S. Front St., New Orleans, La.

LOS ANGELES (CALIF.) AUDUBON SOCIETY:

President, Mrs. F. T. Bicknell, 319 S. Normandie Ave., Los Angeles, Calif.
Secretary, Mrs. George H. Crane, 1217 W. Santa Barbara St., Los Angeles, Calif.

MANCHESTER (N. H.) BIRD CLUB:

President, Dr. George S. Foster, 925 Chestnut St., Manchester, N. H.
Secretary, Miss Daisy E. Flanders, 714 Beech St., Manchester, N. H.

MANCHESTER (MASS.) WOMAN'S CLUB:

President, Mrs. Seddie L. Follett, Smiths Point, Manchester, Mass.
Secretary, Miss Mary G. Clarke, 131 Bridge St., West Manchester, Mass.

MANITOWOC COUNTY (WIS.) FISH AND GAME PROTECTIVE ASSOCIATION:

President, E. L. Kelley, Dempsey Bldg., Manitowoc, Wis.
Secretary, Fred Carus, 1402 Washington St., Manitowoc, Wis.

MERIDEN (CONN.) BIRD CLUB:

President, Judge Frank L. Fay, 510 Broad St., Meriden, Conn.
Secretary, Miss Esther R. Hall, 481 E. Main St., Meriden, Conn.

MERIDEN (N. H.) BIRD CLUB:

President, Harry B. Preston, Meriden, N. H.
Secretary, Miss Elizabeth F. Bennett, Meriden, N. H.

MERIDEN (CONN.) SPORTSMEN'S ASSOCIATION:

President, John M. Freitag, 52 Randolph Ave., Meriden, Conn.
Secretary, Louis C. Dassin, 89 Windsor Ave., Meriden, Conn.

MIAMA (FLA.) AUDUBON SOCIETY:

President, Mrs. J. T. Gratigny, Buena Vista, Fla.
Secretary, Mrs. R. D. Maxwell, 230 S. E. 1st Ave., Miami, Fla.

MILLBROOK (N. Y.) GARDEN CLUB:

President, Oakleigh Thorne, Millbrook, N. Y.
Secretary, Miss Katherine Wodell, Millbrook, N. Y.

MINNEAPOLIS (MINN.) AUDUBON SOCIETY:

President, Mrs. Charles F. Keyes, 2225 Lake of Isles Blvd., Minneapolis, Minn.
Secretary, Mrs. D. D. Webster, 1721 Irving Ave., Minneapolis, Minn.

MILWAUKEE (WIS.) WILD-LIFE PROTECTIVE SOCIETY:

President, Clarence J. Allen, P. O. Box 738, Milwaukee, Wis.
Secretary, Charles I. Foster, 534 Caswell Block, Milwaukee, Wis.

MISS HATTIE AUDUBON SOCIETY (KY.):

President, Mrs. Pierce Butler, 1303 1st St., Louisville, Ky.
Secretary, Miss Jenny L. Robbins, 505 W. Ormsby Ave., Louisville, Ky.

MISSOULA (MONT.) BIRD CLUB:

President, Mrs. Sarah E. Sumner, 416 Grand Ave., Missoula, Mont.
Secretary, Miss C. Wells, 502 S. 4th St., Missoula, Mont.

MONDAY CONVERSATIONAL CLUB (OHIO):

President, Mrs. Ada Davey, 650 Bryson St., Youngstown, Ohio.
Secretary, Mrs. E. L. McKelvy, Boardman Rd., Youngstown, Ohio.

MONTCLAIR (N. J.) BIRD CLUB:

President, Randolph H. Howland, 164 Wildwood Ave., Upper Montclair, N. J.
 Secretary, Miss Ellen Quick, 170 Inwood Ave., Upper Montclair, N. J.

NATURE-STUDY CLUB (ILLS.):

President, Mrs. Maude M. Cormack, 210 N. Avon St., Rockford, Ills.
 Secretary, Miss Gertrude M. Thomas, 1003 N. Court St., Rockford, Ills.

NATURE-STUDY CLUB (IOWA):

President, Mrs. Charles McNider, 232 2d St., S. E. Mason City, Iowa.
 Secretary, Mrs. W. F. Muse, 22 River Heights, Mason City, Iowa.

NEIGHBORHOOD NATURE CLUB (CONN.):

President, Miss Elizabeth H. Banks, Westport, Conn.
 Secretary, Miss Mary H. Burr, Southport, Conn.

NEWARK (N. J.) BAIT AND FLY-CASTING CLUB:

President, Kenneth F. Lockwood, 92 Richelieu Terrace, Newark, N. J.
 Secretary, R. Kersting, 82 Fulton St., New York City.

NEW BEDFORD (MASS.) WOMAN'S CLUB:

President, Mrs. Walter H. Bassett, 347 Union St., New Bedford, Mass.
 Secretary, Mrs. I. M. Kelsey, 53 Willis St., New Bedford, Mass.

NEWBURYPORT (MASS.) BIRD CLUB:

President,
 Secretary, Miss Helen Coffin, 120 State St., Newburyport, Mass.

NEW CENTURY CLUB of UTICA, (N. Y.):

President, Mrs. Frances W. Roberts, 253 Genesee St., Utica, N. Y.
 Secretary, Miss Ida J. Butcher, 253 Genesee St., Utica, N. Y.

NEW PHILADELPHIA (OHIO) BIRD CLUB:

President, Mrs. J. M. Smith, New Philadelphia, Ohio.
 Secretary, Miss Gertrude Kaderly, New Philadelphia, Ohio.

NEW YORK BIRD AND TREE CLUB (N. Y.):

President, Dr. George F. Kunz, 601 W. 110th St., New York City.
 Secretary, Mrs. David C. Ball, 230th St. and Hudson River, New York City.

NORRISTOWN (PA.) AUDUBON CLUB:

President, Willis R. Roberts, 800 DeKalb St., Norristown, Pa.
 Secretary, Miss Isabella Walker, 50 Jacoby St., Norristown, Pa.

NORTH EAST NATURE-STUDY CLUB (PA.):

President, N. S. Woodruff, North East, Pa.
 Secretary, Mrs. J. M. Benedict, North East, Pa.

OIL CITY (PA.) AUDUBON CLUB:

President, Miss Grace Robinson, 304 Orange St., Oil City, Pa.
 Secretary, Miss Hattie Goold, 106 W. 1st St., Oil City, Pa.

PASADENA (CALIF.) AUDUBON SOCIETY:

President, Howard W. Carter, Pasadena, Calif.
 Secretary, Miss Alice W. Pitman, 747 N. Mentor Ave., Pasadena, Calif.

PEORIA (ILLS.) AUDUBON SOCIETY:

President, Mrs. V. H. Chase, 402 Fisher St., Peoria, Ills.
 Secretary, Miss Minnie M. Clark, 514 Western Ave., Peoria, Ills.

PHILERGIAN (MASS.):

President, Mrs. Walter A. Poore, 94 Liberty St., E. Braintree, Mass.
 Secretary, Mrs. H. T. French, 353 Beacon St., Boston 17, Mass.

PILGRIM WOMEN'S CLUB (MASS.):

President, Mrs. Charlotte Gaylord, 21 Trull St., Dorchester, Mass.
 Secretary, Mrs. Alma Worthington, 116 Amandine St., Dorchester, Mass.

PROVINCE OF QUEBEC (CAN.) SOCIETY FOR THE PROTECTION OF BIRDS:

President, L. McI. Terrill, 44 Stanley Ave., St. Kamberts, Que., Can.

Secretary, Mrs. M. E. L. Dyer, 12 Willow Ave., Westmount, Montreal, Can.

RACINE (WIS.) BIRD CLUB:

President,

Secretary, Miss L. M. Collier, 1308 Main St., Racine, Wis.

RANDOLPH BIRD CLUB OF WESTFIELD (N. Y.):

President, Arthur B. Ottaway, Westfield, N. Y.

Secretary, Miss Olive R. Jones, 26 Chestnut St., Westfield, N. Y.

READ, MARK AND LEARN CLUB (R. I.):

President, Mrs. Julia A. Rich, 32 Whitmarsh St., Providence, R. I.

Secretary, Mrs. George A. Jepherson, 134 Brown St., Providence, R. I.

RESOLUTE CIRCLE OF THE KING'S DAUGHTERS (CONN.):

President, Mrs. Elizabeth Rathburn, Ivoryton, Conn.

Secretary, Mrs. L. Behrens, Ivoryton, Conn.

RHINEBECK (N. Y.) BIRD CLUB:

President, Maunsell Crosby, Rhinebeck, N. Y.

Secretary, Tracy Dows, Rhinebeck, N. Y.

ROCKAWAY (N. Y.) BIRD CLUB:

President, Arthur H. Cooper, 7 Lockwood Ave., Far Rockaway, N. Y.

Secretary, Miss Margaret S. Green, Far Rockaway, N. Y.

SAGEBRUSH AND PINE CLUB (WASH.):

President, J. Howard Wright, North Yakima, Wash.

Secretary, Miss Carrie Grosenbaugh, North Yakima, Wash.

ST. LOUIS (MO.) BIRD CLUB:

President, Dr. Robert J. Terry, 5315 Delmar Ave., St. Louis, Mo.

Secretary, Miss Jennie F. Chase, St. Louis, Mo.

ST. PETERSBURG (FLA.) AUDUBON SOCIETY:

President, Mrs. Katherine Tippetts, St. Petersburg, Fla.

Secretary, Mrs. M. G. Foster, St. Petersburg, Fla.

SARATOGA SPRINGS (N. Y.) BIRD CLUB:

President, Waldo Leon Rich, 15 Rock St., Saratoga Springs, N. Y.

Secretary, Miss Caroline C. Walbridge, 109 Lake Ave., Saratoga Springs, N. Y.

SAVANNAH (GA.) AUDUBON SOCIETY:

President, H. B. Skeele, 116 W. Gaston St., Savannah, Ga.

Secretary, Mrs. B. F. Bullard, 122 East 36 St., Savannah, Ga.

SCITUATE (MASS.) WOMAN'S CLUB:

President, Mrs. Eva L. Granes, North Scituate, Mass.

Secretary, Mrs. Mary A. Doherty, Scituate, Mass.

SCRANTON (PA.) BIRD CLUB:

President, Mrs. Francis H. Coffin, 1528 Jefferson Ave., Scranton, Pa.

Secretary, Miss Eleanor Jones, 14 Dart Ave., Carbondale, Pa.

SEATTLE (WASH.) AUDUBON SOCIETY:

President, Mrs. C. N. Compton, 6510 First Ave., N. E., Seattle, Wash.

Secretary, F. W. Cook, 1603 E. Harrison St., Seattle, Wash.

SEWICKLEY VALLEY (PA.) AUDUBON SOCIETY:

President, Mrs. Tracy W. Guthrie, Edgeworth, Pa.

Secretary, Miss E. L. Young, 405 Peebles St., Sewickley, Pa.

SKANEATELES (N. Y.) AUDUBON SOCIETY:

President,

Secretary, Miss Sarah M. Turner, Skaneateles, N. Y.

SOCIETE PROVENCHER D'HISTOIRE NATURELLE:

President, Rev. P. J. Fillion, 18 Avenue Maisonneuve, Quebec, Can.
 Secretary, Joseph D. Matte, 18 Avenue Maisonneuve, Quebec, Can.

SOUTH BEND (IND.) HUMANE SOCIETY:

President, George B. Beitner, 1833 Portage Ave., South Bend, Ind.
 Secretary, H. A. Pershing, 203 E. Wayne St., South Bend, Ind.

SOUTH HAVEN (MICH.) BIRD CLUB:

President, Mrs. A. D. Williams, South Haven, Mich., Route No. 2.
 Secretary, Miss Florence T. Gregory, South Haven, Mich.

SPOKANE (WASH.) BIRD CLUB:

President, Walter Bruce, 813 Lincoln Place, Spokane, Wash.
 Secretary, Mrs. Elizabeth Buckecker, W. 725 Chelan Ave., Spokane, Wash.

STANTON BIRD CLUB (MAINE):

President, Albert L. Kavanagh, 36 Lisbon St., Lewiston, Maine.
 Secretary, Mrs. C. E. Norton, 8 Mountain Ave., Lewiston, Maine.

STATEN ISLAND (N. Y.) BIRD CLUB:

President, Mrs. Charles M. Porter, 224 Davis Ave., W. New Brighton, S. I., N. Y.
 Secretary, Charles W. Leng, New Brighton, S. I., N. Y.

SUSSEX COUNTY (N. J.) NATURE-STUDY CLUB:

President, Mrs. Wm. G. Drake, 33 Halsted St., Newton, N. J.
 Secretary, Miss F. Blanche Hill, Andover, N. J.

TOPEKA (KANS.) AUDUBON SOCIETY:

President,
 Secretary,

TUESDAY SOROSIS CLUB (MASS.):

President, Mrs. William McQueston, 34 Marston St., Lawrence, Mass.
 Secretary, Mrs. Hiram H. Mellor, 493 Lowell St., Lawrence, Mass.

ULSTER GARDEN CLUB (N. Y.):

President, Mrs. John Washburn, Saugerties, N. Y.
 Secretary, Mrs. Charles Warren, Clinton Ave., Kingston, N. Y.

ULSTER (PA.) NATURE CLUB:

President, Mrs. Fred E. Mather, Ulster, Pa.
 Secretary, Miss Martha McMoran, Ulster, Pa.

VASSAR WAKE-ROBIN CLUB (N. Y.):

President, Miss Mary K. Brown, Vassar College, Poughkeepsie, N. Y.
 Secretary, Miss Mary Horne, Vassar Collège, Poughkeepsie, N. Y.

VERMONT BIRD CLUB:

President, Dr. Ezra Brainerd, Middlebury, Vt.
 Secretary, Mrs. Nellie Flynn, Burlington, Vt.

VIGO COUNTY (IND.) BIRD CLUB:

President, Mrs. T. W. Moorehead, 126 W. 8th St., Terre Haute, Ind.
 Secretary, Sarah J. Elliott, Union Hospital, Terre Haute, Ind.

WADLEIGH GENERAL ORGANIZATION (N. Y.):

President, Miss Frieda Finklestein, 233 W. 112th St., New York City.
 Secretary, Miss Mildred Bunnell, 235 W. 135th St., New York City.

WASHINGTON STATE FEDERATION OF WOMEN'S CLUBS:

President, Mrs. A. E. Larson, 1811 W. Yakima Ave., Yakima, Wash.
 Secretary, Mrs. W. O. Bradbury, 513 N. 2d St., Yakima, Wash.

WATERBURY (CONN.) BIRD CLUB:

President, Mrs. A. A. Crane, 300 W. Main St., Waterbury, Conn.
 Secretary, Carl F. Northrup, 144 Bank St., Waterbury, Conn.

WATERTOWN (N. Y.) BIRD CLUB:

President, P. B. Hudson, Watertown, N. Y.
Secretary, Miss Grace B. Nott, Watertown, N. Y.

WELLESLEY COLLEGE (MASS.) BIRD CLUB:

President, Miss Margaret Longaker, 451 Tower Court, Wellesley, Mass.
Secretary, Miss Helen A. Gary, 115 Tower St., Wellesley, Mass.

WEST CHESTER (PA.) BIRD CLUB:

President, Dr. Clyde E. Ehinger, 100 Rosedale Ave., West Chester, Pa.
Secretary, Miss Lilian W. Pierce, 205 S. Walnut St., West Chester, Pa.

WESTERN PENNSYLVANIA AUDUBON SOCIETY:

President, Charles B. Horton, 902 Standard Life Bldg., Pittsburgh, Pa.
Secretary, John W. Thomas, Frick Bldg., Pittsburgh, Pa.

WILLIAMSTOWN (MASS.) BIRD CLUB:

President, Mrs. Walter MacLaren, Williamstown, Mass.
Secretary, Mrs. Carroll L. Maxey, Williamstown, Mass.

WINTER PARK (FLA.) BIRD CLUB:

President, Rev. W. M. Burr, Winter Park, Fla.
Secretary, W. Scott Way, Winter Park, Fla.

WISCONSIN GAME PROTECTIVE ASSOCIATION:

President, Mark Catlin, Appleton, Wis.
Secretary, E. P. Trautman, Stevens Point, Wis.

WOMAN'S CLUB (CONN.):

President, Mrs. E. B. Hobart, 40 Maple St., Seymour, Conn.
Secretary, Mrs. L. C. McEwen, 106 West St., Seymour, Conn.

WYNCOTE (PA.) BIRD CLUB:

President, E. H. Parry, Wyncote, Pa.
Secretary, Miss Esther Heacock, Wyncote, Pa.

WYOMING VALLEY (PA.) AUDUBON SOCIETY:

President, Mrs. W. J. Trembath, 308 Maple Ave., Kingston, Pa.
Secretary, H. W. Bay, 66 Pettebone St., Forty Fort, Pa.



JOHN H. KOCH & COMPANY, Certified Public Accountants
55 Liberty Street, New York

October 21, 1921.

THE AUDIT COMMITTEE,
National Association of Audubon Societies, Inc.,
1974 Broadway, New York, N. Y.

Gentlemen:—We have completed our customary examination of the books, accounts, and records of The National Association of Audubon Societies, Inc., for the year ended October 19, 1921, and present herewith the following Exhibits together with our comments thereon:

EXHIBIT A—BALANCE SHEET AS AT THE CLOSE OF BUSINESS, OCTOBER 19, 1921.

EXHIBIT B—INCOME AND EXPENSE ACCOUNT, GENERAL FUND.

EXHIBIT C—INCOME AND EXPENSE STATEMENT, EGRET PROTECTION FUND.

EXHIBIT D—INCOME AND EXPENSE STATEMENT, CHILDREN'S EDUCATIONAL FUND.

EXHIBIT E—INCOME AND EXPENSE STATEMENT, DEPARTMENT OF APPLIED ORNITHOLOGY.

EXHIBIT F—INCOME AND EXPENSE STATEMENT, FUND FOR NATIONAL PARKS' DEFENSE.

EXHIBIT G—STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS.

All disbursements made on account of your various funds were substantiated either by duly approved and receipted vouchers or cancelled endorsed checks.

We examined all investment securities held at your safe deposit vault and found them to be in order.

Confirmations were received from your depositories, certifying to the balances as shown on your books.

Submitting the foregoing, we are,

Very truly yours,

JOHN H. KOCH & CO.,
Certified Public Accountants.

The Report of the Treasurer of the National Association of Audubon Societies, for Year Ending October 19, 1921

Exhibit A

ASSETS

<i>Cash in Banks and at Office (Exhibit G)</i>		\$43,005 83
<i>Furniture and Fixtures—</i>		
Balance October 19, 1920.....	\$1,615 40	
Additions this year.....	247 60	
	<hr/>	
	\$1,863 00	
Less—Depreciation.....	383 25	
	<hr/>	1,479 75
<i>Inventory of Plates, etc. (Nominal Value).....</i>		500 00
<i>Bird Island Purchase, Orange Lake, Fla.</i>		250 20
<i>Buzzard Island, S. C.....</i>		300 00
<i>Audubon Boats—</i>		
Balance October 19, 1920.....	\$1,936 66	
Less—Sale of "Grebe II".....	\$270 00	
Depreciation.....	127 09	
	<hr/>	397 09
	<hr/>	1,539 57
<i>Investments, Endowment Fund—</i>		
Bonds and Mortgages on Manhattan and Bronx Real Estate.....	\$407,700 00	
U. S. Mortgage & Trust Co. Bonds.....	3,000 00	
U. S. Government Liberty Bonds (Par \$45,400.00).....	45,105 00	
	<hr/>	455,805 00
<i>Investments, Mary Dutcher Memorial Fund—</i>		
Bonds and Mortgages on Manhattan Real Estate.....		7,100 00
<i>Investment, Roosevelt Memorial Fund—</i>		
U. S. Government Liberty Bonds (Par \$12,000.00).....		11,839 65
<i>Prepaid Interest on Endowment Fund Investment.....</i>		23 75
	<hr/>	
Total Assets.....		\$521,843 75

Endowment Fund—

LIABILITIES AND SURPLUS

Balance, October 19, 1920.....	\$447,329 04	
Received from Life Members.....	15,250 00	
Received from Gifts.....	720 00	
Bequest from Estate of Betsy S. Beal	100 00	
<i>Balance October 19, 1920</i>		\$463,399 04

Mary Dutcher Memorial Fund—

Balance October 19, 1921.....		7,737 70
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Special Funds—

Egret Protection Fund, Exhibit C.....	\$2,706 75	
Children's Educational Fund, Exhibit D	11,451 63	
Department of Applied Ornithology, Exhibit E.....	18 01	
Roosevelt Memorial Fund.....	14,675 16	
Fund for National Parks Defense, Exhibit F.....	2,463 93	
		31,315 48
<i>Accounts Payable</i>		9,153 00

Surplus—

<i>Balance, October 19, 1920</i>	\$7,323 72	
<i>Add: Gain for year ended October 19, 1921, from Income</i>		
Account, Exhibit B.....	2,914 81	
<i>Balance, October 19, 1921</i>		10,238 53
<i>Total Liabilities and Surplus</i>		\$521,843 75

INCOME AND EXPENSE ACCOUNT—General Fund

Exhibit B

EXPENSE

Wardens' Services and Reservations—

Salaries.....	\$525 00	
Reservation Expense.....	46 00	
		\$571 00

Educational Effort—

Administration Expense.....	\$8,302 43	
BIRD-LORE, Extra Pages Annual Report.....	2,890 24	
BIRD-LORE to Members.....	5,963 87	
Bird Books.....	1,877 65	
Colored Plates in BIRD-LORE.....	394 72	
Contribution to Florida Audubon Society.....	500 00	
Contribution to George Shiras Testimonial.....	100 00	
Contribution to American Bison Society.....	100 00	
William Dutcher Tablet.....	245 00	
Drawings.....	340 00	
Electros and Half-tones.....	22 98	
Educational Leaflets.....	3,386 81	
Field Glasses.....	2,043 47	
Field Agents' Salaries and Expenses.....	6,570 74	
Legislation.....	869 09	
Library.....	140 84	
Printing, Office and Field Agents.....	614 65	
Slides.....	1,039 80	
Summer School Work.....	62 50	
Miscellaneous, Supply Department.....	625 16	
Roosevelt Bird Refuge.....	631 49	

36,721 44

INCOME AND EXPENSE ACCOUNT—EXPENSE, continued

General Expenses—

Annual Meeting Expense.....	\$467 05	
Auditing.....	125 00	
Cartage and Expressage.....	59 04	
Depreciation on Boats.....	127 09	
Depreciation on Office Furniture.....	383 25	
Electric Light.....	32 86	
Exchange on Checks.....	20 88	
Envelopes and Supplies.....	722 60	
Insurance.....	223 45	
Legal Services.....	260 00	
Miscellaneous.....	354 60	
Multigraphing.....	68 70	
Publicity and Propaganda.....	11,401 44	
Office and Storeroom Rents.....	2,971 00	
Office Assistants.....	8,726 53	
Postage.....	1,217 37	
Supply Department Expense.....	2,267 94	
Stencils, Addressograph machine.....	68 96	
Telegraph and Telephone.....	301 74	
		29,799 50
<i>Total Expense.....</i>		\$67,091 94
<i>Balance being Net Profit for year carried to Surplus (Exhibit A) . .</i>		2,914 81
		\$70,006 75

INCOME

<i>Members' Dues.....</i>		\$22,635 00
<i>Contributions.....</i>		8,426 41
<i>Interest on Investments.....</i>		25,160 50
<i>Supply Department Receipts—</i>		
Bird Books.....	\$2,766 61	
BIRD-LORE.....	716 20	
Educational Leaflets.....	5,555 35	
Field-Glasses.....	2,986 12	
Slides.....	511 00	
Bulletins.....	149 23	
Cabinets.....	416 76	
Charts.....	683 57	
		13,784 84
<i>Total Income.....</i>		\$70,006 75

EGRET PROTECTION FUND INCOME AND EXPENSE STATEMENT

Exhibit C

Balance, October 19, 1920..... \$512 45

INCOME—

Contributions..... 4,024 15

\$4,536 60

EXPENSE—

Egret Wardens..... \$1,370 00

Legal Services..... 25 00

Reservation Expenses..... 3 00

Telegraph..... 1 00

Inspecting Rookeries..... 327 71

Traveling Expense..... 32 20

Printing..... 56 32

Motion Pictures and Prints..... 14 62

1,829 85

Balance, unexpended, October 19, 1921 per Exhibit A..... \$2,706 75

CHILDREN'S EDUCATIONAL FUND INCOME AND EXPENSE STATEMENT

Exhibit D

Balance, October 19, 1920..... \$5,130 07

INCOME—

Contributions..... \$31,692 25

Junior Members' Fees..... 22,966 20

54,658 45

\$59,788 52

EXPENSES—

Administrative Expense..... \$1,500 00

BIRD-LORE to Junior Clubs..... 4,829 68

Buttons to Junior Clubs..... 1,978 39

Colored Plates in BIRD-LORE..... 394 73

Cartage and Expressage..... 278 68

Field Agents' Salaries and Expenses..... 4,237 32

Half-Tones for Publications..... 1 81

Office Rent..... 1,008 00

Office Supplies..... 263 21

Miscellaneous..... 228 56

Postage on Circulars and Literature..... 5,861 34

Printed Circulars to Teachers..... 2,071 07

Printed Envelopes..... 519 87

Printing Leaflet Units for Junior Members..... 16,577 55

Reports and Publicity..... 3,255 21

Soliciting for Junior Funds..... 589 03

Stenographic and Clerical Work..... 4,742 44

48,336 89

Balance, unexpended, October 19, 1921 per Exhibit A..... \$11,451 63

DEPARTMENT OF APPLIED ORNITHOLOGY
INCOME AND EXPENSE STATEMENT

Exhibit E

<i>Balance, unexpended, October 19, 1920.....</i>	\$o 66
INCOME—	
Contributions.....	\$300 00
Earnings of Mr. H. K. Job—Public Lectures.....	782 85
	<hr/> 1,082 85
	\$1,083 51
EXPENSES—	
Agent's Salary and Expense.....	1,065 50
	<hr/>
<i>Balance, unexpended, October 19, 1921 per Exhibit A.....</i>	\$18 01

FUND FOR NATIONAL PARKS' DEFENSE
INCOME AND EXPENSE STATEMENT

Exhibit F

INCOME—	
Contributions.....	\$6,103 50
EXPENSES—	
Publicity on behalf of National Parks.....	\$1,600 21
Postage on Circulars and Correspondence.....	501 50
Expenses of Agent in Washington, D. C.....	140 30
Slides Illustrating National Parks.....	187 50
Contributions to National Parks Association.....	690 00
Contributions to American Civic Association.....	500 00
Telegrams.....	17 91
Miscellaneous.....	2 15
	<hr/> 3,639 57
<i>Balance, unexpended, October 19, 1921 per Exhibit A.....</i>	\$2,463 93

STATEMENT OF RECEIPTS AND DISBURSEMENTS

Exhibit G

RECEIPTS—

Income, General Fund.....	\$70,006 75
Endowment Fund.....	16,070 00
Egret Protection Fund.....	4,024 15
Children's Educational Fund.....	54,658 45
Department of Applied Ornithology.....	1,082 85
Roosevelt Memorial Fund.....	359 23
National Parks Defense Fund.....	6,103 50
Sale of Boat.....	270 00

<i>Total Receipts for Year ended October 19, 1921.....</i>	<i>\$152,574 93</i>
<i>Cash Balance, October 19, 1920.....</i>	<i>43,460 31</i>

\$196,035 24

DISBURSEMENTS—

Expenses, General Fund.....	\$66,581 60
Endowment Fund Investments.....	\$29,805 00
Endowment Fund Interest Prepaid.....	23 75

	\$29,828 75	
<i>Less: Investments Reduced.....</i>	<i>8,450 00</i>	
	<hr/>	<i>21,378 75</i>
Egret Protection Fund.....	1,829 85	
Children's Educational Fund.....	39,183 89	
Department of Applied Ornithology.....	1,065 50	
National Parks' Defense Fund.....	3,639 57	
Furniture.....	247 60	
Roosevelt Memorial Fund, Investment.....	11,839 65	
Unpaid Bills, October 19, 1921.....	7,263 00	

<i>Total Disbursements for year ended October 19, 1921.....</i>	<i>153,029 41</i>
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<i>Cash Balance, October 19, 1921 per Exhibit A.....</i>	<i>\$43,005 83</i>
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T. GILBERT PEARSON, President,
National Association of Audubon Societies,
New York City.

NEW YORK, October 24, 1921.

Dear Sir:—We have examined report submitted by John H. Koch & Company, certified public accountants, of the National Association of Audubon Societies, for the year ending October 19, 1921. The accounts show balance sheets of October 19, 1921; and income and expense account for the year ending the same date. Vouchers and paid checks have been examined by them in connection with all disbursements, and also the securities in the Safe Deposit Company.

Yours very truly,

F. A. LUCAS,
T. S. PALMER,
Auditing Committee.



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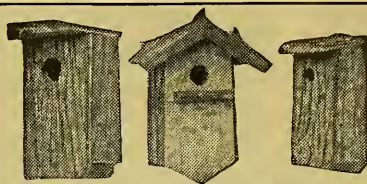
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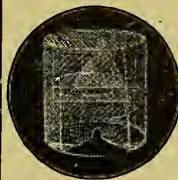
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