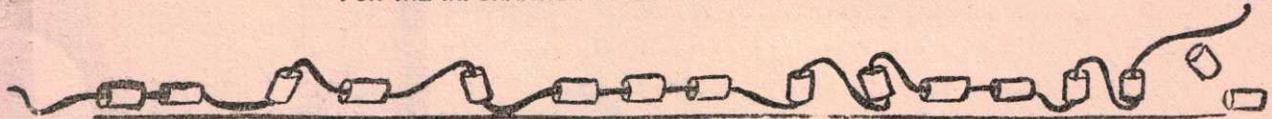


Bayhead.

BIRD BANDING NOTES

ISSUED BY THE BUREAU OF BIOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF AGRICULTURE
FOR THE INFORMATION OF BIRD-BANDING COOPERATORS



Vol. 2

Washington, D. C., August, 1931

No. 4

Remember! Band Numbers are Usually Preceded
By Series Letters, such as A,B,C,F

GENERAL INFORMATION FOR COOPERATORS

Reports of Permit Holders.—At the close of the fiscal year (June 30) great quantities of schedules and return cards were received, indicating continued success and healthy growth of the banding work. Unfortunately, however, the list of banding cooperators still includes the names of permit holders who have not reported for several years and who have not replied either to notices such as this or to special letters from the Survey requesting a statement of activities or of future intentions. The only recourse that the Bureau has in such cases is to recommend to the Secretary of Agriculture that the permits be revoked. Such action is undesirable, but the permit holder can easily avoid it by writing a brief note of explanation to the Survey once a year.

Early American Bird Banding.—P. A. Taverner, now of the National Museum of Canada, at Ottawa, has furnished the Bureau with some details of his pioneer work in bird banding. In 1904, he announced through the pages of *The Auk* his proposal to make ornithological investigations by this method. The bands he used were stamped by hand with the number and with the legend, "Notify the Auk, New York." J. H. Fleming, of London, Ont., placed band No. 1 on a robin on September 24, 1905. Others to whom his bands were issued included A. B. Klugh, Guelph, Ont.; W. E. Saunders, London, Ont.; Le Roy M. Tufts, Farmington, Maine; Charles Kirkpatrick, Keota, Iowa; F. L. Burns, Berwyn, Pa.; A. H. Howell, of the Biological Survey staff, Washington, D. C.; John F. Ferry, Lake Forest, Ill.; J. A. Weber, Fort Lee, N. J.; Roy Thompson, Cando, N. Dak.; and B. H. Swales, Detroit, Mich. The first return record resulting from this work was that of a flicker banded by Mr. Kirkpatrick, at Keota, Iowa, May 29, 1905, and killed on Christmas Day, 1905, at Many, La.

Bird Banding in Russia.—Dr. Theo. G. Ahrens, of Berlin, Germany, has supplied information about banding work being conducted in Russia, and has sent in one of the bands used. This band is about equal in size to the Survey's No. 3, and is inscribed Moskwa, 5707F, together with a series of Russian Letters that refer to the name of the "Biostation" named in honor of the late Prof. K. A. Zimirjazew. Doctor Ahrens advises the Bureau that the complete address is "Centrale Agrobiostation im Moskau, Bureau fur die Vogel-beringung, Sokolnoki, Rostokinsky 15, Moskau 14, S. S. S. R."

NOTE.—"Bird Banding Notes" is not for general distribution, but anyone using in a published paper any of the information contained in it will be expected to give credit to the person named and to the Bureau.

Causes of Bird Mortality Being Studied.--Many times birds are found dead with no visible sign of injury. For example, Dr. Lynds Jones, of Oberlin, Ohio, reports that on May 18, 1931, he found one of his barn swallows dead beneath a perch that was frequently used, and that he was unable to find any evidence of violence. Likewise, Miss Dorothy A. Baldwin, of Hardwick, Mass., states that last fall she found a robin fluttering on the ground apparently unhurt, but unable to fly or stand on its feet. After two day's care, which involved forced feeding, the bird died. Very little is known at present concerning the causes of bird mortality, but it is hoped that much information will be obtained from studies conducted by cooperators who are physicians. At the O. L. Austin Ornithological Research Station, on Cape Cod, Mass., special attention is being given to this subject by the director, Dr. O. L. Austin, Sr.

Treatment of Subspecies.--Occasionally a station operator reports the banding of a certain subspecies and asks if it is the first time that such bird has been banded. In recording banded birds and return data, all subspecies are grouped together under their respective species. Thus, when Mrs. W. H. Edwards, of Fairhope, Ala., banded some Marian's marsh wrens and inquired whether or not they were the first of this subspecies to be banded, the Bureau replied that while it was believed that they were, it could not be definitely determined, since the Marian's marsh wren is a subspecies of the long-billed marsh wren. About 300 longbills have been banded, these representing probably several subspecies. In the case of returns, the sorting machine separates the records according to the States in which the birds were banded, and this usually results in isolating the different subspecies. When station operators identify their birds subspecifically, their determinations are always preserved in the records. In preparing cards for returns of the bronzed, purple, and Florida grackles, and for the races of the white-crowned sparrow, which are readily distinguishable subspecies, a special figure is punched on the return cards (column 47) so that the records for the different races may be separated by the sorting machine.

Benjamin Shreve, of Cotuit, Mass., reports that frequently he traps grackles he is unable to classify either as bronzed or purple. They probably are hybrids, as the ranges of these two races overlap in southern New England, and in that region many intergrades are noted.

Banding Coots and Red-winged Blackbirds in the West.--At the request of the Survey, the Western Bird Banding Association is conducting an intensive campaign for the banding of coots and red-winged blackbirds, which present important economic problems in connection with the rice industry in California. In this regard it is a pleasure to cite the work of Nion R. Tucker, of San Francisco, who has banded about 1,000 coots. These birds are disagreeable to handle because they bite and scratch severely, so it will be seen that Mr. Tucker has done a very good piece of work.

Last Heath Hen Banded.--On April 1, 1931, Alfred O. Gross, of Brunswick, Me., and Thornton W. Burgess, of Springfield, Mass., captured the sole surviving heath hen and attached two bands, one on each leg. Aluminum band No. 407880 was placed on the left tarsus and copper band No. A634024 on the right. Doctor Gross reported that the day after the heath hen was banded it was back on its accustomed ground, apparently in no way alarmed at the treatment it had received.

Value of Cooperation.--As a result of the information sent to the Bureau on the questionnaire attached to the last number of Bird Banding Notes, it has been possible to estimate investments and expenditures of bird banders cooperating with the Federal Government. About 400 station operators (less than 25 per cent of the total number) report station equipment valued at more than \$20,000 and annual expenditure in time and bait exceeding \$44,000.

Banding Activities During Last Fiscal Year.--The annual report of the bird-banding work shows the following figures for the fiscal year ended June 30, 1931:

Bands purchased	275,000	Returns received	12,329
Birds banded	169,279	Number of cooperators.	1,869

The total number of birds banded since the work has taken over by the Survey in 1920 is considerably more than 900,000, and it is hoped that the million mark will be passed in 1931-32.

Following the custom of the last few years, the Bureau here presents a summary showing the numbers of birds banded at different stations and reported on schedules received at the office before 4:30 p.m., June 30, 1931. If it seems to a cooperator, therefore, that his station is in a lower group than it should be, it probably is because the last lot of records from his station was not received until after June 30. Records received late will be included in the tabulation for the present fiscal year, to be issued after June 30, 1932. Only stations reporting records for more than 100 birds are included. The Survey, however, again wishes to emphasize the fact that the value of a station can not be judged solely by the number of birds banded. Some stations that may band less than 100 birds apiece a year are nevertheless making interesting and important local studies. But, since the number of returns received is more or less in proportion to the number of birds banded, a little healthy competition to get a station into a higher production class is for the general benefit of the work.

The Survey is frequently asked whether or not some of the large totals are not due to the banding of colonial birds. Generally this is the case. For example, Doctor Green's total of more than 13,000 birds represents chiefly chimney swifts; and the large totals attained by Messrs. Lyon, Farley, and Floyd result from their work with gulls and terns. On the other hand, totals such as those of Messrs. Weakley, Wharton, and Magee, Doctor Brenckle, and many others represent the usual run of smaller birds, probably with special concentration on certain species that were locally abundant. The first group includes those cooperators who reported more than 1,000 birds banded during the year, with their records also given:

Prof. Wyman R. Green, Chattanooga, Tenn.	13,427
Austin Ornithological Station, North Eastham, Mass.	6,385
Wm. I. Lyon, Waukegan, Ill.	5,949
T. E. Musselman, Quincy, Ill.	4,830
Frank L. Farley, Camrose, Alta.	4,004
Chas. B. Floyd, Auburndale, Mass.	3,300
Geo. M. Benson, Voltage, Oreg.	3,049
E. Milby Burton, Charleston, S. C.	2,909
Mr. and Mrs. F. W. Commons, Crystal Bay, Minn.	2,670
E. A. McIlhenny, Avery Island, La.	2,608
Dr. J. F. Brenckle, Northville, S. Dak.	2,467

C. E. Holcombe, Zion, Ill.	2,446
S. H. Weakley, Fort Smith, Ark.	2,044
A. D. Trempe, Sault Ste. Marie, Mich.	2,033
S. Prentiss Baldwin, Gates Mills, Ohio.	1,953
Dr. Winsor M. Tyler, Boston, Mass.	1,700
Verdi Burtch, Branchport, N. Y.	1,660
Frank Schader for L. H. Barkhausen, Chicago, Ill.	1,632
Albert K. and Daniel Smiley, Mohonk Lake, N. Y.	1,582
Mrs. Florence K. Daley, Olivera, N. Y.	1,554
Mrs. Marie V. Beals, Elmhurst, N. Y.	1,534
Frederick E. Ludwig, Lansing, Mich.	1,481
Harold C. Wilson, Ephraim, Wis.	1,445
David J. Davis, Wilmette, Ill.	1,291
Miss Louise J. Miller, Zion, Ill.	1,284
Prof. O. A. Stevens, Fargo, N. Dak.	1,240
R. J. Middleton, Norristown, Pa.	1,206
Mrs. Ethel M. Crowell, Franklin, Mass.	1,150
Prof. J. W. Stack, East Lansing, Mich.	1,123
James Wm. Stiles, Houston, Tex.	1,059
Nion R. Tucker, Burlingame, Calif.	1,045
Richard D. Gordon, Abbeville, La.	1,032
Dr. H. A. Burns, Ah-gwah-ching, Minn.	1,030

The following cooperators reached a total score of between 800 and 1,000:

Reeve M. Bailey, Toledo, Ohio	Mr. and Mrs. J.A. Gillespie, Glenolden, Pa.
Henry P. Baily, Philadelphia, Pa.	Archie Hull, Brigham, Utah
Dr. Henry S. Bartholomew, Lansing, Mich.	James P. Melzer, Milford, N. H.
Maurice Broun, Lenox, Mass.	Olin S. Pettingill, Jr., Middleton, Mass.
Ted G. Delang, Wilmette, Ill.	Dr. Miles D. Pirnie, Lansing, Mich.
E. W. Ehmann, Piedmont, Calif.	Dr. Wm. A. Wellemeier, Vassar, Mich.
Frank B. Foster, Phoenixville, Pa.	

The following cooperators reached a total score of between 500 and 800:

Edwin C. Anderson, Dell Rapids, S.Dak.	Edward C. Hoffman, Cleveland, Ohio
Dorothy A. Baldwin, Hardwick, Mass.	Frank Hopkins, Campbellsport, Wis.
Glenn W. Bell, Mount Berry, Ga.	Stanley W. Hyde, Yarmouth, Me.
Glenn Berner, Jamestown, N. Dak.	Arthur R. Lundquist, Webster, S. Dak.
B. S. Bowdish, Demarest, N. J.	Geo. W. Luther, De Tour, Mich.
Oscar M. Bryens, McMillan, Mich.	Mr. and Mrs. T.T. McCabe, Barkerville, B.C.
Louis W. Campbell, Toledo, Ohio	Horace D. McCann, Paoli, Pa.
Ernest D. Clabaugh, Berkeley, Calif.	Chas. J. Mercer, Southampton, N. Y.
Dr. R. V. Dillingham, Lansing, Mich.	R. Owen Merriman, Kingston, Ontario
Mrs. Helen M. Edwards, Fairhope, Ala.	Wm. Pepper, Jr., Wyncote, Pa.
Wm. H. Farrar, Zion, Ill.	Carl Richardson, Trail, Oreg.
Christian J. Goetz, Cincinnati, Ohio	F. W. Robl, Ellinwood, Kans.
Chas. O. Handley, Richmond, Va.	Chas. J. Spiker, Canastota, N. Y.
Henry O. Havemeyer, Mahwah, N. J.	Profs. Louis Agassiz and Frederick H. Test,
Richard M. Hinchman, Milton, Mass.	W. Lafayette, Ind.

W. Bryant Tyrrell, Bloomfield Hills, Mich. George, Harold, and Leonard Wing,
Prof. Geo. Wagner, Madison, Wis. Jackson, Mich.
Mrs. Kenneth B. Wetherbee, Worcester, Mass. Harry E. Woods, Huntington, Mass.

The following cooperators reached a total score of between 300 and 500:

Oscar P. Allert, McGregor, Iowa	Lester Reid Marland, Ware, Mass.
Clark R. Allison, Swarthmore, Pa.	Arthur Milliken, North Andover, Mass.
Edward M. Arnos, Toledo, Ohio	Joseph R. Morton, East Kildonan, Man.
Geo. T. Baker, Bemidji, Minn.	Mrs. Margaret M. Nice, Columbus, Ohio
Geo. H. Beatty, Jr., Merion Sta., Pa.	J. C. Nielsen, Battle Creek, Mich.
Rev. G. C. M. Bierens, Fairmount, N. Dak.	Mrs. Arthur Newton Pack, Princeton, N.J.
Edward M. Brigham, Jr., Battle Creek, Mich.	Herbert Parker, Boston, Mass.
Herbert Buckalew, Milford, Del.	J. A. M. Patrick, Yorkton, Sask.
Agness and Susie Callaway, Fairbury, Nebr.	Dr. W. M. Pepper, Philadelphia, Pa.
John R. Carter, Muscow, Sask.	Mr. and Mrs. A. F. Satterthwait, Webster Groves, Mo.
R. H. Carter, Jr., Muscow, Sask.	Prof. Frank Smith, Hillsdale, Mich.
Dr. Karl Christofferson, Blaney, Mich.	C. L. Snyder, Fort Bayard, N. Mex.
Russell S. Davis, Clayton, Ill.	Paul A. Stewart, Leetonia, Ohio
Chas. H. Feltes, Modesto, Calif.	Lony B. Strabala, Leetonia, Ohio
Reed W. Ferris, Beaver, Oreg.	W. B. Taber, Kansas, Ill.
J. Alfred Flett, Duncan, B. C.	Miss Cora M. Teot, New Haven, Conn.
Geoffrey Gill, Huntington, N. Y.	Mrs. Georgia B. Thomas, Indianapolis, Ind.
Dr. Harold H. Hayes, Hubbard Woods, Ill.	Mrs. Hildegard C. Thorpe, Amherst, Mass.
Vernon Haskins, East Durham, N. Y.	Mr. and Mrs. Francis Valentine Crane, Needham, Mass.
Paul W. Hoffman, Milwaukee, Wis.	Joseph Wendle, Barkerville, B. C.
Dr. Edmund Jurica, Lisle, Ill.	H. D. Whellams, Winnipeg, Man.
Geo. Lang, Indian Head, Sask.	Mr. and Mrs. Chas. L. Whittle, Peterboro, N. H.
Dr. W. Bruce Large, Rochester, N. Y.	Geo. S. Wolfram, Canal Winchester, Ohio
Dr. Harrison F. Lewis, Ottawa, Ont.	
Edward Lovell, Chilliwack, B. C.	
Joseph Mailliard, San Francisco, Calif.	
Mrs. Robert N. Malloy, Corsicana, Tex.	

The following cooperators reached a total score of between 200 and 300:

Robert Allison, Athol, Mass.	Prof. Allan C. Fraser, Ithaca, N. Y.
Dr. Chas. H. Bastin, Vancouver, B. C.	W. Earl Godfrey, Wolfville, N. S.
Morton P. Bates, Camden, Mich.	E. O. Grant, Ashland, Me.
Beecher Beery, Pleasant Hill, Ohio	Samuel A. Grimes, South Jacksonville, Fla.
Carl W. Buchheister, Hewlett, N. Y.	Harry S. Hathaway, So. Auburn, R. I.
Henry Bunting, Madison, Wis.	Hugh R. Israel, Palo Alto, Calif.
Mrs. Geo. E. Burbank, Sandwich, Mass.	G. Vendle Knepper, Medina, N. Y.
Ralph G. Carpenter, Wolfeboro, N. H.	Herman F. Koerber, Chino, Calif.
Prof. O. B. Christy, Muncie, Ind.	Carl Livingston, Redlands, Calif.
Mr. and Mrs. Ben L. Clary, Coachella, Calif.	M. J. Magee, Sault Ste. Marie, Mich.
Norman Criddle, Treesbank, Man.	Prof. Raymond R. Marsden, Hanover, N.H.
Mrs. Frederick M. Cutler, Amherst, Mass.	Mrs. Albert G. Mathers, Danbury, Conn.
Mrs. Marie Dales, Sioux City, Iowa	Grace C. Meleney, White Plains, N. Y.
W. M. Davidson, Silver Spring, Md.	Arthur Morley, Swampscott, Mass.
A. F. Eichelsdoerfer, Rock Island, Ill.	John T. Nichols, New York City.
	Mrs. Emily C. Peabody, Appleton, Wis.

W. Rodman Peabody, Milton, Mass.
Samuel E. Perkins, III, Indianapolis, Ind.
L. C. Pettibone, Dawson, N. Dak.
Wright M. Pierce, Claremont, Calif.
James V. Porter, Glenwood, Minn.
R. R. Reppert and Dr. Fred W. Jensen,
College Sta., Tex.
Clarence H. Sanderson, Sherrill, N. J.

Lewis O. Shelley, Westmoreland, N. H.
D. K. Stephenson, South Bend, Ind.
Edgar L. Stephenson, Youngstown, Ohio
Eric M. Tait, Summerland, B. C.
Mrs. John A. Thompson, Minneapolis, Minn.
John Vernon, Kenosha, Wis.
E. C. Weeks, Sanbornton, N. H.
Leroy Wilcox, Speonk, N. Y.

The following cooperators reached a total score of between 100 and 200:

Mrs. Nellie B. Abraham, Wauwatosa, Wis.
Mrs. Effie A. Anthony, Bar Harbor, Me.
Lloyd C. Atwell, Lake Villa, Ill.
Amos P. Balsom, Milwaukee, Wis.
S. M. Batterson, Mohler, Oreg.
Leslie D. Beadle, Platteville, Wis.
John L. Beal, Gastonia, N. C.
Marion A. Boggs, Waynesville, N. C.
Mark A. Borkey, Auburn, Pa.
Henry A. Bowden for J. W. Titcomb,
Litchfield, Conn.
J. A. Briggs, Regina, Sask.
Charles Livingston Bull, Oradell, N. J.
Emily H. Butterfield, Farmington, Mich.
Lowell E. Carter, Russiaville, Ind.
Mrs. Rachel E. Caughey, Antrim, N. H.
Floyd B. Chapman, Columbus, Ohio
Victor H. Coles, Cincinnati, Ohio
Durward E. Danby, Santa Cruz, Calif.
E. A. Doolittle, Painesville, Ohio
Donald W. Douglass, Ann Arbor, Mich.
John Stanley Douglass, Columbus, Ohio
Richard J. Eaton, Boston, Mass.
John T. Emlen, Germantown, Phila. Pa.
Geo. D. Eustis, Vineyard Haven, Mass.
Mrs. Estella C. Feser, Chicago, Ill.
Rudolph S. Fried, Katonah, N. Y.
Mrs. Harriet A. Frothingham, Brookline,
Mass.
Mrs. Blanche M. Getty, Sioux River, Vt.
Elizabeth C. Gilliland, Carlisle, Ind.
Clarence L. Hawthaway, Boston, Mass.
A. W. Higgins, Rock, Mass.
Mrs. Frank D. Hubbard, New Haven, Conn.
N. L. Huff, Minneapolis, Minn.
Mary A. Ingraham, Poughkeepsie, N. Y.
Mrs. Esther L. Jackson, Ohio, Ill.
Donald Johnson, Garden Prairie, Ill.
Egbert Jones, Ceres, Calif.
Thomas N. Jones, Union, Ont.
Clarence S. Jung, Milwaukee, Wis.
Karl W. Kahmann, Hayward, Wis.
Mr. and Mrs. Russell D. Kilborne,
Hanover, N. H.
Mrs. Lulu M. Lincoln, Takoma Park, Md.

John Long, Edwards, Miss.
Seth H. Low, Quincy, Mass.
James R. McGreal, Somersworth, N. H.
Dr. Geo. E. McPherson, Belchertown, Mass.
Roy B. Miller, Sheboygan, Wis.
A. A. Misk, Valparaiso, Nebr.
Allan Moses, North Head, Grand Manan, N.B.
Charles Naeser, Janesville, Wis.
A. G. Niss, Fairmont, Minn.
Chas. E. Northcutt, Columbia, Mo.
Mrs. L. B. Payne, Chester, Calif.
Theed Pearse, Courtenay, B. C.
Miss Pearl E. Post, Prescott, Ariz.
Thomas F. Power, Worcester, Mass.
Chas. H. Preston, Danvers, Mass.
John B. Price, Stanford University, Calif.
James Rintoul, Bardonia, N. Y.
Prof. John B. Rishel and R. J. Niedrach,
Denver, Colo.
Mr. and Mrs. Frank J. Roubal, Eugene, Oreg.
Dr. Edward G. Rowland, Norwich, Conn.
Philip Siemens, Hepburn, Sask.
Lester W. Smith, Babson Park, Mass.
Roland W. Smith, Wolfville, N. S.
Wendell P. Smith, Wells River, Vt.
James Spear, Wallingford, Pa.
Leo Speth, Platteville, Wis.
G. D. Sprot, Cobble Hill, B. C.
Stanley M. Stagg, Frankfort, Ky.
Miss Edna N. Stevens, Blue Rapids, Kans.
E. L. Sumner, Berkeley, Calif.
Allen Swope Montgomery, Owosso, Mich.
Mrs. E. B. Tucker, Batesville, Ark.
R. W. Tufts, Wolfville, N. S.
J. Van Tyne, Ann Arbor, Mich.
Frank J. Vejtasa, Fairdale, N. Dak.
Miss Blanche Vignos, Los Angeles, Calif.
Henry E. Wagner, Detroit, Mich.
J. Carl Welty, Fairfield, Iowa
Francis Beach White, Concord, N. H.
Samuel W. Witmer, Goshen, Ind.
Dr. Harold B. and Merrill Wood,
Harrisburg, Pa.
Carlo Zeimet, Vienna, Va.
Chas. W. Ziegler, Logan, Ohio

PHOTOGRAPHS

Mention has already been made of the series of photographs sent in by Alfred O. Gross, of Bowdoin College, Brunswick, Me., of the last surviving heath hen. Other photographs received by the Bureau since the last issue of Bird Banding Notes are as follows:

Paul W. Hoffman, of Milwaukee, Wis., 6: Three of a blue goose, and one each of a red-tailed hawk, a green-winged teal, and a female red-winged blackbird at its nest.

Dr. Carl Christofferson, of Blaney, Mich.: A least bittern banded by him on May 29, 1931, at Lake Anne Louise.

Mrs. Effie A. Anthony, of Bar Harbor, Me., 10: Young birds, such as woodcock, robins, and cedar waxwings, banded at her station.

C. G. Goetz, of Cincinnati, Ohio, 2: Young barn owls banded by him during May, 1931.

S. H. Weakley, of Fort Smith, Ark.: Series of pictures of his traps, showing the way in which they are grouped for increased efficiency.

R. Clark Richards, of Clyde, Ohio, 5: Four illustrating progressive stages in the installation of a trap for chimney swifts; the fifth a picture of Mr. Richards.

Albert Harris, of Kindred, N. Dak., 2: A captured snowy owl that exhibits little resentment at being petted by Mr. Harris.

Williard Ferguson, of Muskegon, Mich., 1: Eight Canada geese captured in a small water-lily-leaf trap.

Carl Welty, of Fairfield, Iowa, 2: Showing one of his government sparrow traps, which contains ten birds; the picture was taken in winter, the snow scene being particularly attractive when viewed during the torrid weather of mid-July.

Mrs. W. H. Edwards, of Fairhope, Ala., 1: Her husband holding a dead cat that was caught in one of the cat traps manufactured by W. I. Lyon. Mrs. Edwards states that this was the largest cat she has ever seen, and that it was so wary it could not be shot or poisoned.

E. C. Weeks, of Sanbornton, N. H., 1: A group of nest boxes made from gourds. As an added protection against weather, Mr. Weeks puts roofs on these boxes, and he reports that birds take to them readily.

James Moffitt, of San Francisco, Calif., 4: Adult and immature Canada geese caught and banded by him in Honey Lake Valley, Lassen Co., Calif.

WORK AT BANDING STATIONS

Henry O. Havemeyer, of Mahwah, N. J., in transmitting records of birds banded by him last winter at Mountain Lake, Fla., states that he had never before seen so few birds as were present during that season. He believes that this may have been due to the extremely cold weather that prevailed, but it is probable that the scarcity was owing to the unfavorable conditions existing in many parts of the country during 1930. Mr. Havemeyer forwarded records for 172 new birds, representing 16 species.

Frank F. Gander, of East San Diego, Calif., reported a new substation on a feeding shelf on a small balcony at one end of an exhibition hall of the San Diego Museum of Natural History, Balboa Park. Several species of birds, including house finches, black-headed grosbecks, wren-tits, bush-tits, and hooded orioles, have been fed there.

Mrs. Inez M. Haring, of Woodland, N. Y., has also reported a scarcity of birds. From the first of January to the first of May, 1930, she banded 41 birds, whereas during the same period in 1931 she captured only 7 notwithstanding the fact that she had six traps in operation. She stated that the same birds came daily, but that no new ones were noted.

Charles E. Northcutt, of Columbia, Mo., submitted a sketch of the area included in his banding station. The grounds measure 160 x 60 feet, and seem to be abundantly provided with shrubbery and other attractions for birds. Studies of the birds that visit such definite areas are frequently of unusual interest.

L. C. Nielson, of Battle Creek, Mich., reports banding 91 birds of 13 species during the first six months of 1931. He says that he was somewhat disappointed in not being able to band a large number of warblers, but they for some reason were not so plentiful as they had been in past years. This is additional evidence that the climatic or other conditions of the last year or two have not been favorable for the increase of our small birds.

S. H. Weakley, of Fort Smith, Ark., banded 2,224 birds, representing 19 species, during the first six months of the calendar year. The banding of more than 1,000 bronzed grackles and 600 rusty blackbirds contributed greatly toward attaining this total. Mr. Weakley states that during the period covered he did not observe a single starling, fox sparrow, or Harris's sparrow.

Frederick E. Ludwig, of Lansing, Mich., is among the operators who were successful in 1930-31 in materially increasing their totals of birds banded during the fiscal year. During the fiscal year 1930, Mr. Ludwig was in the group that banded between 300 and 500 birds, while this year he is listed among those banding 1,000 his total being 1,481. If his final schedules had been received by June 30, 1931, his total for the year would have been 1,762 birds. He says that two returns of common terns banded by him and taken in the southernmost part of Mexico are records of exceptional interest.

Allen S. Montgomery, of Owosso, Mich., a new cooperator, has established what appears to be a most productive station. Under date of July 2, he informed

the Bureau that he had banded 258 birds since starting operations. All station operators will join in wishing him continued success.

E. C. Weeks, of Sanbornton, N. H., banded 69 birds of 15 species during the first 6 months of the calendar year, and during that period he obtained 10 returns. On July 6, he reported the capture of a most unusual bird for his latitude, a parrot, which had escaped from a boy's camp about 5 miles distant from his station. The bird was not banded but was returned to its owner.

Oscar M. Bryens, of McMillan, Mich., states that during the last fiscal year he banded 292 birds of 26 species, and obtained 38 returns. Of special interest are the banding of 57 snow buntings and the recapture of 11 banded in previous seasons.

Henry P. Baily, of Overbrook, Pa., reports that during the past year he banded 882 birds of 31 species, and that 27 returns were obtained. Robins have become quite plentiful in the vicinity of his station; he noted four occupied nests at one time. He states that one female raised four young, after which she was found nesting with another mate, her former mate taking up with another female and raising four additional young. This question of mating is of decided interest and should receive more attention at banding stations.

Russell S. Davis, of Clayton, Ill., says that last winter was the most unusual one that he has ever experienced. There was practically no snow, nor were there any periods of zero temperatures. More birds wintered at his sanctuary than ever before, but open weather made trapping difficult. He captured 361 birds, and was particularly pleased at his success in trapping goldfinches. He reports that one goldfinch taken had badly diseased feet, and that a junco had lost one foot at the middle of the tarsus.

Mrs. Katherine R. Hegeman, of Montclair, N. J., reporting her observations on the plumage of three robins banded at her station this past season, says that the robins, apparently normal at the time of banding, later showed albinistic tendencies by developing a large number of white feathers. Some of the local birds, such as a robin and a catbird that nested in the vicinity of her station, so dominated the traps that they kept many other birds away. Frequently problems of this kind are somewhat irritating, but they do present some interesting features of bird psychology.

David J. Davis, of Wilmette, Ill., had a successful season with blue jays, banding 92 as compared with 15 in 1930. He reports that of the 575 white-throated sparrows banded by him last fall, none returned in the spring, an experience that has been shared by many other station operators, and indicates the unusual nature of the migration of this bird.

A. K. and Daniel Smiley, Jr., of Mohonk Lake, N. Y., have forwarded detailed accounts of their operations at that point and at Haverford College, Pa. These operators have obtained much important information, which we hope will be made available for the use of others through the medium of "Bird Banding." During the year they banded at these two stations a total of 1,550 birds and received 135 re-

turns. Their grand total, covering operations during three years, is 3,388 birds banded and 196 returns.

Prof. O. A. Stevens, of Fargo, N. Dak., who, it will be recalled, has been making a special study of Harris's sparrow, has transmitted a report on conditions affecting this species. Last spring he found that these birds were exceptionally scarce at Fargo, although apparently they were abundant at Jamestown, a short distance farther west, at which place Glenn Berner banded more than 300. It is interesting to note that in spite of the large number of birds taken at Jamestown by Mr. Berner, he did not capture any of those banded by Doctor Brenckle at Northville, S. Dak., which would seem to be on the same migration flyway.

Professor Stevens, who banded 532 birds of 23 species, has submitted his report showing the distribution of captures according to the different substations on the grounds of the State Agricultural College.

Donald W. Douglass, of Ann Arbor, Mich., while at Sand Point, Huron County, Mich., from April 10 to June 2, 1931, making observations on bird migration, devoted some time to banding work. He operated five sparrow traps and two false bottom traps, which were strung along the wooded shore of Long Lake, an elongated pond situated between two long sand ridges near the end of Sand Point. He had fair success with sparrows, but found that warblers paid no attention to two traps baited with water. He plans to be in that region again this fall and also next spring, at which times he will carry on further banding operations.

Roger L. Slocum, of Humbird, Wis., is making a detailed study of the bank swallow. In the colony at which he has been working he estimates that there are more than 100 adults of this species, and he has had no difficulty in capturing the birds with hair nets. He would doubtless be glad to hear from other cooperators who have had experience with these swallows.

Miss Ida L. Reveley, of Aurora, N. Y., recently kept an owl unconfined in a large basement storeroom for a few days while she experimented to ascertain its food preferences and the time required for the formation of pellets. She later released the owl but it appeared to like the basement retreat, as it kept coming back until it was almost a nuisance.

Prof. William Rowan, of Edmonton, Alta., plans to continue his investigations concerning the general biology of the crow, and as migration data will form an important part of his studies, he has asked that all bird-banding operators in Canada band crows at every opportunity. A circular letter requesting this cooperation has been sent to the Canadian bird banders by Commissioner J. B. Harkin, National Parks of Canada, Ottawa.

Harry S. Hathaway, of South Auburn, R. I., in a letter dated May 25, said that he anticipated a busy summer as he had five traps in operation. Mr. Hathaway, it will be recalled, is making a special study of song sparrows of the Atlantic Coast. He is particularly interested in their plumage variations, and doubtless would be glad to hear from other station operators who may have notes to contribute on this subject.

S. A. Eliot, jr., of Northampton, Mass., makes a valuable suggestion for those operators who may do work with petrels. It is not known whether these birds regularly return in successive seasons, to the same burrow, so Mr. Eliot suggests what when banding is done in a colony, the band numbers be printed on stakes to be driven into the ground beside the burrows. Then, if the colony is visited in a following season and returns are obtained, the operator would be able to contribute information as to whether or not the birds return to the same burrows.

Herman S. Koerber, of the State Game Farm, at Chino, Calif., has furnished supplementary data relative to his banding of barn owls. In the last number of Bird Banding Notes (page 33), he was credited with banding 20 of these birds, but under date of April 13 he advised the Bureau that he had banded a total of 93, all in about three months. This is believed to be a record for any species of the birds of prey.

Dorothy A. Baldwin of Hardwick, Mass., reports that during the past season her interest was centered on the chickadee. Her station was visited regularly by 44 of these birds, 32 of which were new birds and 12 returns from previous seasons. Next winter she plans to make a special study of them through the use of colored bands. (See reference to celluloid bands under the heading "Bands".)

BANDS

Because of the important investigations conducted by such station operators as Mrs. Margaret M. Nice, of Columbus, Ohio, and Dr. Wilbur K. Butts, now of Decatur, Ill., through the use of colored celluloid bands, the Bureau is considering the desirability of obtaining similar bands in limited quantities for the use of other station operators who are making special studies of certain species. The matter is being taken up with manufacturers of bands and if the Bureau is able to obtain satisfactory bands, announcement to that effect will be made through the pages of Bird Banding Notes.

It seems desirable again to caution station operators regarding the correct size of bands to be used on the different birds. To a considerable extent this matter must be left to the judgment of the individual operator, but the table showing comparative sizes of birds and bands on pages 97 and 98 of the Manual for Bird Banders will at least give a general idea of the sizes to be used. Certain corrections in this table, however, should be noted. The green heron is listed as taking Size 4, whereas it requires Size 5, and the chimney swift is specified to taken band No. 1A, but it has been found that Size 1 is preferable.

It should be borne in mind that bands of Sizes 1 and 1A are made of soft aluminum, and that therefore they should never be used on blackbirds or on some of the powerfully-billed finches and grosbeaks. Size two is the smallest of the bands that are given full temper. This matter of using the correct size of band can not be stressed too strongly. Occasionally the foot of a bird is sent in to the Bureau with the complaint that because of improper banding the bird's foot had been seriously injured. In a few cases this charge has been found to be correct. It therefore behooves every station operator to use all precautions to see that the banding work does not in any way injure our native birds.

James P. Melzer, of Milford, N. H., says that he has had some difficulty in keeping from seriously bruising the heavy No. 6 bands when attaching them to herring gulls. Injuries to the bands were caused by the milling on the jaws of the pliers. It usually is desirable to remove the milled faces of the jaws of the pliers which may be done either with a file or an emery wheel. Some operators use opticians pliers (See "C", Fig. 54, Manual for Bird Banders) which have the jaws smooth and highly polished.

Benjamin Shreve, of Cotuit, Mass., commenting on the correct sizes of bands to be used on different birds, says that he finds No. 4 better for blue jays and grackles than No. 3. Sometimes individual birds may be found with a tarsus larger than the average, but in using a larger band it should be carefully tested to see that it is not so large that it is likely to slip down over the bird's toes and prevent them from being opened. Mr. Shreve also advises the Bureau that he has sometimes noted that the front of a banded bird's tarsus was somewhat rough, a condition apparently due to friction caused by the band. Seemingly this has not resulted in injury, but it might be well for other operators to keep this matter in mind.

Dr. Karl Christofferson, of Blaney, Mich., recently reported that he found No. 5 bands too small for such ducks as the pintail and the wood duck. Upon investigation it was discovered that he was using bands made in 1924, at which time the No. 5 bands were somewhat smaller than those now in use. Doctor Christofferson also expressed his belief that the No. 6 band is too large for these same ducks. It is too large for the wood duck, but Mr. Lincoln states that he has attached it to pintails without difficulty. This band is suitable for all of the larger species of ducks with the possible exception of scoters and eiders, which up to the present time have not received much attention from bird banders. In attaching a No. 6 band to a duck, it is of the utmost importance that the band be slightly flattened so that its shape is elliptical rather than round. If this is done, it will then conform in general shape to the bird's tarsus. A band should always be flattened or slightly crushed when the bird's tarsus is of the flattened type, found chiefly on waterfowl.

TRAPS

Station operators who usually make their own traps and other equipment and who prefer the hexagonal mesh wire netting will be interested to know that the Biological Survey has been advised that the Economy Steel & Wire Fabric Co., 132 East First Street, Mount Vernon, N. Y., is handling cut rolls of wire fabric in meshes and gauges required for making various kinds of bird traps. To the best of our knowledge this is the only firm in the United States that handles cut rolls of this hexagonal netting in the meshes, gauges, and widths desirable for the manufacture of traps. One cooperator recently purchased as small a piece as 10 lineal feet of 18 guage, 3/4-inch hexagonal mesh, 36 inches wide. A letter from the sales manager, Kenneth A. Bussey, states that on request the company will be glad to mail price lists to any cooperator.

John P. Wetherill, jr., of Philadelphia, Pa., has furnished the Survey with two photographs of a Higgins' three-door trap that he has altered to operate with an electrical control. The strings from the doors are led through a central guide

to a ring which fits over a pin above a magnetic spring. When electric contact is made, the coil pulls down the spring and releases the doors. With this trap Mr. Wetherill uses a 45-volt radio B battery taking out 22 1/2 volts. He states that it has worked several hundred times without a miss, and he believes that coils complete for setting in almost any trap can be made for less than \$5, not including the cost of wire or batteries.

Dr. W. A. Wellemeyer, of Vassar, Mich., says that he has employed a trap of the type described by Mrs. Ben L. Clary, of Coachella, Calif., in the last issue of Bird Banding Notes. Doctor Wellemeyer used a common flat trap with a trench dug to the center. He found it successful in taking bronzed grackles, and stated that the principal employed is that of the old time wild-turkey trap.

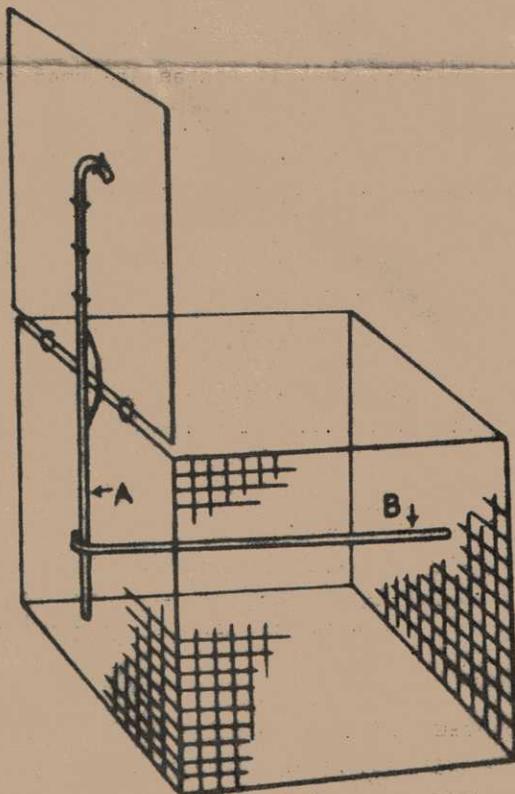
Lewis O. Shelley, of East Westmoreland, N. H., in an interesting letter commenting on various activities and observations at his banding station, reports that he has had excellent success using the Baldwin woodpecker trap as a pull string. He also has found the automatic trip-door trap most satisfactory, because of its small size and the ease of transporting it. He has not, however, had much success with the Chardonneret water-drip trap, although, it will be recalled, this has proved useful at some other stations. Mr. Shelley has worked out a new method of handling birds. He covers the gathering cage with a cloth, which causes the bird to face the door, the only source of light. The bird then can be taken in hand ready for banding, and one of the positions frequently used, is eliminated.

James F. Rhoads, of Everett, Wash., who has been carrying on experimental work with traps, reports that he was able recently to capture a blue heron in a coyote trap, the jaws of which were well wrapped with burlap to prevent injury to the bird's leg. Live goldfish were used for bait. Mr. Rhoads says that he wore an iron-welder's hood while banding this bird, probably a wise precaution as these birds are really dangerous. They strike with their bill with lightning speed, and they invariably aim at the eyes.

Frank J. Vejtasa, of Fairdale, N. Dak., also used steel traps in his work with snowy owls. Last winter and spring he caught and banded 23 of these birds. To prevent any injury or freezing of the captured bird, he pads the jaws of the traps with cotton and further prevents them from completely closing by tying leather lace around one jaw.

Mrs. Mary A. Ingraham, of Poughkeepsie, N. Y., furnishes the sketch and description of the following top-entrance trap, which she says has proved most satisfactory at her station. During the past winter she used it to capture

chickadees, nuthatches, juncos, and kinglets, all of which entered it readily. Mrs. Ingraham suggests that it may prove valuable in trapping warblers, as it can readily be used with a drip pan. It is of the Chardonneret type, but is simpler in construction; a small one can be made in a few minutes. The trap shown in the figure is 10 inches long, 5 inches wide, and 9 inches deep. The cage is constructed of galvanized wire hardware cloth of 1/3-inch mesh. Two pieces of No. 5 heavy wire, lettered A and B, are used for the operating device. A rubber band is attached directly to the door and to the back of the trap so that the door will fall more rapidly. Wire A is fastened firmly to the door before it is hinged to the trap. Wire B is a straight piece of No. 5 wire with a slight bend or partial hook at one end. It is important that this bend be made correctly. It should not be a right-angle bend. This rod is not attached to the trap in any way and may be placed at any height or angle depending upon the species of bird the operator wishes to capture and the appropriate sensitivity of the trigger. When the trigger is properly adjusted, the slightest touch causes the rod to roll a little, thus liberating the rod A and allowing the rubber band to close the door.



Russell S. Davis, of Clayton, Ill., announces that his recent experiments include the manufacture of a small government sparrow trap, measuring 8 by 10 by 18 inches, for capturing small tree birds. Apparently this trap proved quite satisfactory for use on a feeding shelf placed in a tree, as Mr. Davis reports that in one catch he took 8 chickadees, 2 titmice, a nuthatch, and a pair of downy woodpeckers. Most station operators will no doubt agree that that is a large catch for any kind of trap.

Mr. and Mrs. A. A. Misk, of Valparaiso, Nebr., furnish some interesting information concerning the trap briefly described in Bird Banding Notes No. 27, page 12. They advise that of 85 birds captured by them, 29 were taken in that type of trap. These birds included the bronzed grackle, blue jay, catbird, robin, house wren, and Harris's sparrow.

Dorothy A. Baldwin, of Hardwick, Mass., has worked out a device for operating her pull-string traps from either upstairs or downstairs windows. The end of the string from the trap is attached to a smooth metal ring through which is passed a second string with one end tied at the upper window and the other at the lower window or door. Miss Baldwin says that there should be plenty of slack at each end to allow the complete closing of the trap door from either position.

The following account entitled "Taking Gulls with Horse-hair Snares," by Dr. Charles H. Bastin, of Vancouver, B. C., is printed in its entirety because the majority of American bird banders possess little information concerning the proper use of snares, and it is believed that if snares are used carefully and kept under constant supervision while set, it will be possible to take some birds by this means that can not be taken in cage traps.

Taking Gulls With Horse-hair Snares

By Charles H. Bastin

I am indebted to Mr. Alex Adams for the following hints on taking sea-gulls with horse-hair snares. I understand that he learned this in Ireland.

It is necessary to secure a supply of new horse hair, which in these days may not be easy. I got mine from a plant where dead horses are converted into fertilizer. For use on snow, white hair is used, otherwise black hair is preferable. It is an advantage to have long strands.

Select 4, 6, or 8 strands (according to the size of the birds) of about the same length, lay them together, determine the centre point, and steadying the hairs with one thumb and finger, roll them with the other finger and thumb, so as to twist them together closely. Taking care that they do not unroll, double the hairs so as to make a loop. (Fig. A.)

Grasp this loop firmly with the finger and thumb and proceed to roll the rope of hairs, beginning at the loop and taking care that the free ends do not tangle. A small comb is useful for this. Work the rope gradually to the free end, and when

it is firmly and neatly twisted let any excess twist unroll, knot the free and firmly, and trim off the ends of the hairs. The knotted end is then passed through the noose, and the snare is made. Attach the knotted end to a strong twine by means of a clove-hitch. When attached the snare should be about 3 inches in diameter. Snares made as above should be attached to a piece of twine, at intervals of 3 inches until a suitable length is obtained, 4 or 5 feet being sufficient. It is an advantage to attach the snares so that they all project at the same angle.

To use the snares it is necessary to feed the gulls at the same place, and preferably at the same time each day, using bread crusts till they are expecting the food. Attach the twine to some secure object, and lay it out so the snares all stand on edge. (Fig. B.) Then spread the food about, and walk away a short distance. As the birds feed they frequently step through a snare, and are caught by the leg. I have never known a bird to be caught by the neck. When caught they struggle very little. I lay a dark cloth over them while attaching the band. This quiets them, and protects me from their beaks, which are formidable. The operator should not leave while the snares are set, but he need retire only a short distance, if baiting has been carried out properly. Under these conditions the method does not involve any danger to the birds. Of course the snares should not be left out unless banding is actually being done.

I would not expect the snares to be successful with other species except possibly ducks or other web-footed birds, as it is the shape of the foot which makes the capture possible. Attempts to catch crows have failed, as the crows declined to come near the snares.

FIG. A

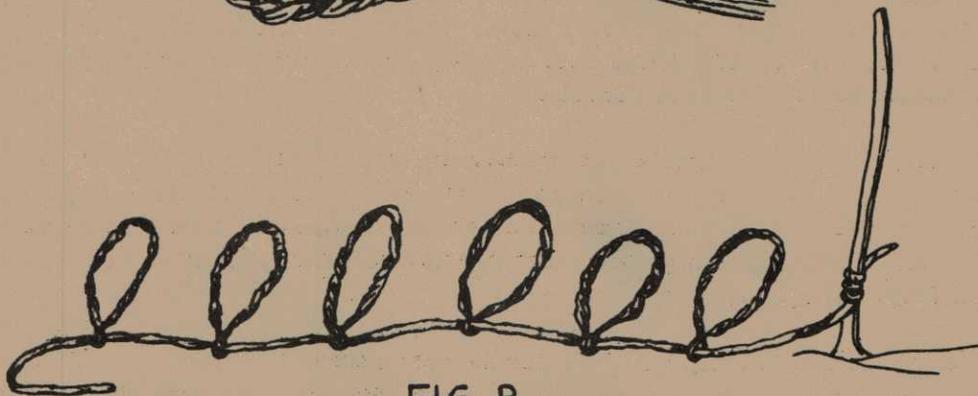
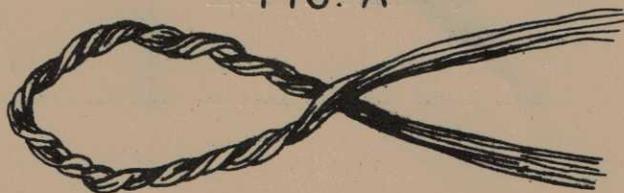


FIG. B

BAITS

Mrs. Ben L. Clary, of Coachella, Calif., obtained excellent results by baiting her traps with white wood borers found in the mesquite that was used for firewood. She points out that these grubs are white and that they squirm rather than crawl, thus attracting the attention of birds.

Lewis O. Shelley, of East Westmoreland, N. H., advises that his favorite bait for sparrows consists of soda-cracker crumbs mixed with scratch feed. He finds that the white cracker crumbs draw the bird's attention. He has had success also with ripe cucumber seeds, doughnuts, suet, English walnut meats, and oatmeal. The oatmeal, he says, is not taken readily, but, like the crackers, it serves to attract attention.

RECORDS

Carmen Beining, of Platteville, Wis., informs us that he maintains a comparative record showing by months the numbers of birds of the various species banded each year. This is similar to the method advocated by the Inland Bird Banding Association. A record of this kind might prove very useful to all station operators, in providing an index to the relative abundance of the various species in different seasons.

RETURNS

Mrs. Katherine R. Hegeman, of Montclair, N. J., reports capturing robin No. 547231 on April 15, 1930. When banded at her station on May 8, 1928, this bird was an adult in normal plumage, and when recaptured it was found to have a pure white color. Its mate, No. A340419, also was a partial albino. Another robin, No. 669198, which when banded by her on September 21, 1929, was in normal plumage, returned on April 7, 1931, marked with white wing coverts, white secondaries, a narrow white collar, and with white spots on the breast. A third albinistic robin, No. A340434, was banded by her on April 28, 1931.

Mr. and Mrs. A. A. Misek, of Valparaiso, Nebr., on April 16, 1931, captured bronzed grackle No. 619690, which had been banded at Mont Belvieu, Tex., on March 10, 1928, by Dr. A. R. Shearer.

Among other interesting returns received during the past few months the following are particularly noteworthy:

Purple finch No. A124752, banded April 23, 1930, at Katonah, N. Y., by Wm. E. Wheeler and purple finch No. C69545, banded August 17, 1930, at Sault Ste. Marie, Mich., by M. J. Magee, were trapped at Milton, Mass., on February 14, 1931, by R. M. Hinchman.

Robin No. 592804, banded May 20, 1928, at Bridgetown, Nova Scotia, by John W. Piggott, was recaptured on February 17, 1931, at Columbia, N. C.

Blue jay No. A346309, banded May 13, 1930, at Hubbard Woods, Ill., by Dr. Harold H. Hayes, was found dead about February 24, 1931, at Bluevale, Ontario.

Marsh hawk No. A673917, banded June 26, 1930, at Madison, Wis., by Prof. Geo. Wagner, was killed February 11, 1931, at Santa Rosa, Tex.

Crow No. 228307, banded January 2, 1923, at Stillwater, Okla., by C. E. Sanborn, was found dead about February 20, 1931, at Sioux City, Iowa.

Purple finch No. 135603, banded June 21, 1924, at Northeast Harbor, Me., by Mrs. Eleanora S. Morgan, was retrapped on April 10, 1931, at "Great Head," Bar Harbor, Me., by Mrs. Effie A. Anthony.

Purple finch No. 182287, banded March 23, 1926, at New Haven, Conn., by Mrs. Frank D. Hubbard, was found injured on July 4, 1931, at Deep Brook, Digby County, Nova Scotia.

Cooper hawk No. 309046, banded June 29, 1924, at Willoughby, Ohio, by C. M. Shipman, was killed on May 14, 1931, at Cuyahoga Falls, Ohio.

White-throated sparrow No. B108353, banded October 6, 1930, at Northville, S. Dak., by Dr. J. F. Brenckle, was found injured in April, 1931, at Portage la Prairie, Manitoba.

Tree sparrow No. 63279, banded December 29, 1926, at Westfield, Mass., by Mrs. Herbert F. Salmond, was retrapped January 25, 1931, at the same place.

Chimney swift No. F110, banded September 30, 1930, at St. Elmo, Tenn., by Dr. Wyman R. Green, was retaken about June 25, 1931, near Drummondville, Quebec.

Chimney swift No. C27976, banded September 13, 1929, at Charleston, W. Va., by I. H. Johnston, was captured on June 2, 1931, in a house at London, Ontario.

Baldpate No. A659017, banded January 20, 1930, at Lake Merritt, Oakland, Calif., by E. W. Ehmann, was found dead about May 15, 1931, at Peterson, Saskatchewan.