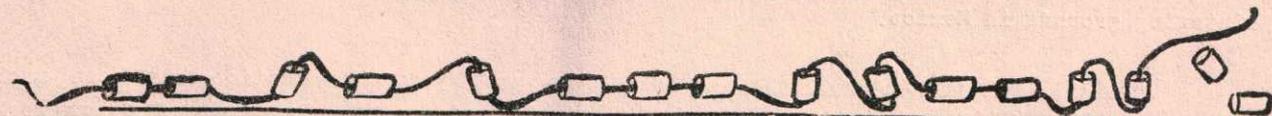


BIRD BANDING NOTES

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



Vol. 2

Washington, D. C., December 1, 1937

No. 15

Band numbers are correctly written as B 342749; 38-517397

GENERAL INFORMATION TO COOPERATORS

The fiscal year that ended June 30, 1937, was another period of intense activity throughout the Biological Survey, and the Division of Wildlife Research was no exception. As has been the case for several years, pressure of work made it impossible to issue Bird Banding Notes, though there was no lack of material. The annual report herein given shows that the banding work has continued to grow during the year.

As usual there are several matters that should be brought to the attention of all cooperators, even at the risk of repetition.

For several years the condition of waterfowl and other game species has necessarily received principal consideration throughout the Bureau. Four "flyway biologists" in the Section of Distribution and Migration of Birds are now giving their entire time to this problem. The present set-up is as follows:

Atlantic Flyway.--Harold S. Peters (appointed February 16, 1937), headquarters, Washington, D. C.

Mississippi Flyway.--Charles E. Gillham, headquarters, Edwardsville, Ill.

Central Flyway.--George B. Saunders (appointed March 1, 1937), headquarters, Denver, Colo.

Pacific Flyway.--Luther J. Goldman, headquarters, Berkeley, Calif.

These men, assisted by game management agents, have spent most of the summer studying conditions on the waterfowl breeding grounds in Canada. Mr. Goldman left April 15 for British Columbia to study the spring migration as well as breeding conditions. Dr. Saunders was in charge of the two parties working in the Prairie Provinces, with headquarters at Edmonton and MacMurray, Alta., and at Prince Albert, Sask. A trip was made to Lake Athabaska. Mr.

Gillham, after making surveys about Lake Athabaska, left by airplane for the Arctic coast. He established headquarters at the village of Aklavik, and made observations from the Mackenzie Delta to Coronation Gulf. Mr. Peters spent a month investigating conditions in the Maritime Provinces and in Newfoundland. He then accompanied Commander Donald B. MacMillen on the Arctic Expedition to northern Labrador and Baffin Island. During the winter of 1936-37 Messrs. Gillham and Goldman, with assistants, investigated waterfowl conditions on the wintering grounds in Mexico.

Notification of returns delayed.—During the past year the Section has been much hampered by inability to obtain sufficient clerical assistance. Pressure of other work and the increased volume of the banding activities have made it impossible to send promptly the notices of recovered birds. Progress is being made, however, and it is hoped that before long this phase of the work will be brought to date and that it will be possible to send out such reports more promptly.

Requests for supplies.—Do not put requests for bands or other supplies on banding schedules. If such requests are enclosed with schedules, they should be made on separate sheets.

Transfer of bands.—Persons transferring bands to other cooperators should notify the Bureau at once, of the numbers of the bands and the name and address of the person to whom transferred. Failure to do this causes confusion and delay when a recovery is received and frequently the banding record can not be located.

Return cards.—Return cards for birds retrapped at the original station should be filled in as completely as possible, the age of the bird at the time of banding being given if known. If not known, it should be indicated by a dash. This is important in longevity studies, and the lack of any indication makes it necessary to look up the original banding record, a tedious job. Some station operators still make the mistake of giving the age at the time of recapture instead of at banding. Station operators capturing a bird with a "foreign" number should fill out the card with number, species, and return data.

Where several stations are close together, operators trapping birds not their own should follow the practice of making inquiries of neighboring stations. When this is done, it is often possible to complete the record before sending it to the Bureau and obviates delay in learning the origin of the bird.

Schedules.—Schedules should be used as fully as possible. Do not start a new sheet for a species so long as there is one not completely filled, even though records for more than one calendar or fiscal year are on the same sheet. The back of the schedule should be used as well as the front. All species should, however, be reported at least once a year regardless of the number of records to a schedule. When birds are banded at other than the home station, this should be indicated on the face of the schedule or opposite the date, not under remarks on the back. When the records for a species cover more than one sheet, either total each schedule separately or put the grand total for all sheets on the first schedule, leaving the others blank. Ordinarily schedules should be sent in twice a year. Schedules for species that still remain around the station at the time the report is sent in should be forwarded only if completely filled. Completely filled sheets may, however, be sent at any time.

Cooperators carrying on banding work in large colonies of birds, such as gulls, terns, and herons, and those banding ducks before or during the hunting season are urged to sent in their reports of such operations as soon as possible. Recoveries of such birds are received in large numbers, and failure on the part of the bander to forward original data doubles the work in this office. Every recovery for which the banding record is not in the files must be looked up twice, once to find that the record is not there and again after it has been received. This of course delays not only the report of that band but other work as well.

Special notice.--The series designation on bands indicates the fiscal year when they were made. It has nothing to do with year of use. For example, the Survey is still issuing some sizes in the "34" series. Cooperators having on hand bands of any series issued previous to the present (38) series should use them before ordering new supplies.

Who Has these bands?--Bands numbered 34-601701 to 34-602000, inclusive, were issued to Dr. Harrison F. Lewis, of Ottawa, Ontario, on October 9, 1933. Dr. Lewis returned all these to the Biological Survey and they were reissued, but in some way a record was not made of the name of the cooperator to whom they were sent. A return for 34-601750 was received from Lyman, Miss. The report was from J. H. Roney, who stated that he shot a bird bearing this band on January 18, 1936. Who received these bands?

Herring gull study.--The Linnaean Society of New York, The Northeastern Bird Banding Association, and the National Association of Audubon Societies have undertaken a cooperative study of the Herring Gull colonies from Massachusetts to Canada. Colored celluloid bands are used in addition to the numbered Survey bands. The color combinations of the celluloid bands indicate the colony where, and the year in which, the birds are banded. It is hoped that through publicity it will be possible to get many reports on the live birds in addition to the reports of dead or injured birds such as are now received, and that, through this means, over a series of years, much will be learned about the distribution and habits of these gulls, especially whether they return to the colony where they were hatched and the age at which they begin to breed.

WORK DURING THE YEAR

Final tabulation of the banding work for the fiscal year 1937 shows that there has been no diminution of interest. Most of the older stations have continued active and several new ones have shown by their first year's work that they are valuable additions. Many new waterfowl banding stations were established during the past year, the majority on Federal refuges. It is expected that banding stations will be located on all the refuges where Bureau personnel are resident. It is also hoped that before long banding operations will be begun in Mexico, and possibly in other Latin-American countries.

Correction.--In spite of the great care exercised in tabulating the records of work done during the fiscal year 1936, several errors occurred in the report. It is greatly regretted that the names of some cooperators who had done commendable work were omitted. The following should have been included in that tabulation: Prof. O. A. Stevens, Fargo, N. Dak., 1,877; and Martin K. Nelson, Thief Lake, Minn., 1,249.

On June 30, 1937, the list of bird-banding cooperators numbered 2,129. In the list, however, are the names of many who have been inactive for several years. During the year letters will be sent to these and it is quite probable that many will be dropped.

Table 1 shows a comparison of the banding operations in 1937 with those of the previous year, and gives the grand totals of birds banded and returns received since the work was begun in 1920. This year for the first time the number of birds banded passed the 300,000 mark.

Table 1.--Banding work during 1936 and 1937

	<u>1936</u>	<u>1937</u>
Banded birds reported.....	2,74,695	300,894
Returns received.....	18,268	17,011
Grand total of birds banded since 1920..	2,181,150	2,482,044
Grand total of returns since 1920.....	135,953	152,964

Birds banded.--In accordance with the practice of recent years, in Table 2 are listed by species the numbers of birds banded during the past year. The arrangement is that of the A. O. U. Check-List of 1910, the order in which the records are kept in the files. An asterisk (*) indicates a species new to the list of birds banded, nine having been added during the year--the Paraquet Auklet, the Parasitic Jaeger, the Bridled Tern, the White-bellied Booby, the Great White Heron, the Hudsonian Curlew, Worthen's Sparrow, Swainson's Warbler, and the Hermit Warbler.

All subspecies are included in the total for the species, and the name used is that of the typical species; for example, the Olive-backed Thrush (Hylocichla ustulata swainsoni) does not appear in the list as it is a subspecies of the Russet-backed Thrush (Hylocichla ustulata ustulata), under which the olive-backed bird is grouped. In all such cases the English name is followed by the technical specific name and the word "group".

Table 2.—Number of individuals of each species of bird banded and reported during the fiscal year 1937

Holboell's Grebe.....	5	Pintail—Wild.....	11,248	
Horned Grebe.....	15	Hand reared.....	519	
Eared Grebe.....	9	Total.....		11,767
Pied-billed Grebe.....	11	Wood Duck—Wild.....	458	
Loon.....	1	Hand reared.....	430	
Atlantic Puffin.....	4	Total.....		888
*Parquet Auklet.....	1	Redhead—Wild.....	817	
Black Guillemot.....	79	Hand reared.....	110	
Atlantic Murre.....	304	Total.....		927
Razor-billed Auk.....	9	Canvasback—Wild.....	185	
Dovekie.....	2	Hand reared.....	41	
*Parasitic Jaeger.....	1	Total.....		226
Glaucous-winged Gull.....	74	Greater Scaup.....		66
Great Black-backed Gull.....	35	Lesser Scaup—Wild.....	919	
Western Gull.....	264	Hand reared.....	50	
Herring Gull.....	16,304	Total.....		969
California Gull.....	292	Ring-necked Duck.....		951
Ring-billed Gull.....	2,808	American Goldeneye.....		3
Laughing Gull.....	874	Bufflehead.....		43
Franklin's Gull.....	1,004	Pacific Eider.....		2
Caspian Tern.....	1,582	Ruddy Duck.....		36
Forster's Tern.....	39	Snow Goose.....		9
Common Tern.....	25,354	Blue Goose.....		96
Arctic Tern.....	104	White-fronted Goose.....		1
Roseate Tern.....	4,416	Canada Goose.....		386
Least Tern.....	491	White-faced Glossy Ibis.....		3
*Bridled Tern.....	1	Bittern.....		29
Black Tern.....	99	Least Bittern.....		5
Black Skimmer.....	158	*Great White Heron.....		2
Leach's Petrel.....	380	Great Blue Heron.....		225
*White-bellied Booby.....	1	Egret.....		1,825
Water Turkey.....	79	Snowy Egret.....		236
European Cormorant.....	40	Louisiana Heron.....		19
Double-crested Cormorant.....	935	Little Blue Heron.....		1,992
White Pelican.....	397	Green Heron.....		71
Brown Pelican.....	524	Black-crowned Night Heron.....		777
American Merganser.....	7	Yellow-crowned Night Heron.....		51
Red-breasted Merganser.....	10	Sandhill Crane.....		5
Hooded Merganser.....	7	King Rail.....		9
Mallard—Wild.....	14,319	Clapper Rail.....		11
Hand reared.....	1,434	Virginia Rail.....		19
Total.....	15,753	Sora.....		12
Black Duck—Wild.....	3,613	Florida Gallinule.....		176
Hand reared.....	1,279	Coot.....		1,284
Total.....	4,892	Red Phalarope.....		15
Florida Duck.....	44	Northern Phalarope.....		1
Gadwall.....	1,238	Wilson's Phalarope.....		7
Baldpate.....	1,426	Avocet.....		14
Green-winged Teal.....	4,803	Black-necked Stilt.....		36
Blue-winged Teal.....	4,740	Woodcock.....		52
Cinnamon Teal.....	183	Wilson's Snipe.....		21
Shoveler.....	349	Dowitcher.....		36

Stilt Sandpiper.....	15	Rough-legged Hawk.....	17
Knot.....	4	Ferruginous Rough-leg.....	33
Pectoral Sandpiper.....	70	Golden Eagle.....	8
White-rumped Sandpiper.....	4	Bald Eagle.....	49
Baird's Sandpiper.....	6	Prairie Falcon.....	14
Least Sandpiper.....	314	Duck Hawk.....	35
Red-backed Sandpiper.....	105	Pigeon Hawk.....	6
Semipalmated Sandpiper.....	1,377	Sparrow Hawk.....	102
Western Sandpiper.....	39	Audubon's Caracara.....	6
Sanderling.....	29	Osprey.....	38
Marbled Godwit.....	12	Barn Owl.....	26
Greater Yellowlegs.....	25	Long-eared Owl.....	60
Lesser Yellowlegs.....	114	Short-eared Owl.....	1
Solitary Sandpiper.....	11	Barred Owl.....	3
Willet.....	17	Saw-whet Owl.....	5
Wandering Tattler.....	1	Screech Owl.....	106
Upland Plover.....	8	Great Horned Owl.....	58
Spotted Sandpiper.....	177	Snowy Owl.....	12
*Hudsonian Curlew.....	1	Burrowing Owl.....	66
Black-bellied Plover.....	1	Pigmy Owl.....	1
Golden Plover.....	1	Roadrunner.....	1
Killdeer.....	86	Yellow-billed Cuckoo.....	27
Semipalmated Plover.....	50	Black-billed Cuckoo.....	33
Piping Plover.....	7	Belted Kingfisher.....	30
Snowy Plover.....	4	Hairy Woodpecker (<u>villosus</u> group).....	62
Wilson's Plover.....	4	Downy Woodpecker (<u>pubescens</u> group).....	387
Ruddy Turnstone.....	2	Nuttall's Woodpecker.....	1
Black Turnstone.....	2	Yellow-bellied Sapsucker (<u>various</u> group).....	59
Bobwhite.....	431	Pileated Woodpecker.....	1
California Quail.....	202	Red-headed Woodpecker.....	129
Gambel's Quail.....	171	Ant-eating Woodpecker.....	2
Blue Grouse.....	14	Red-bellied Woodpecker.....	43
Ruffed Grouse.....	3	Gila Woodpecker.....	1
Sharp-tailed Grouse.....	14	Flicker (<u>auratus</u> group).....	533
Pheasant.....	66	Red-shafted Flicker.....	10
Wild Turkey.....	5	Whippoorwill.....	2
Band-tailed Pigeon.....	18	Poorwill.....	1
White-winged Dove.....	10	Nighthawk.....	17
Mourning Dove.....	1,911	Chimney Swift.....	29,112
Ground Dove.....	120	White-throated Swift.....	1
Inca Dove.....	192	Ruby-throated Hummingbird.....	10
Chinese Spotted Dove.....	256	Eastern Kingbird.....	108
Turkey Vulture.....	159	Arkansas Kingbird.....	142
Black Vulture.....	1,288	Cassin's Kingbird.....	3
Marsh Hawk.....	81	Crested Flycatcher (<u>crinitus</u> group).....	22
Sharp-shinned Hawk.....	19	Ash-throated Flycatcher (<u>cinerascens</u> group).....	6
Cooper's Hawk.....	33	Phoebe.....	405
Goshawk.....	1	Say's Phoebe.....	24
Red-tailed Hawk (<u>borealis</u> group).....	42	Black Phoebe.....	40
Red-shouldered Hawk (<u>lineatus</u> group).....	13	Wood Pewee.....	14
Swainson's Hawk.....	31	Western Wood Pewee.....	3
Broad-winged Hawk.....	5	Yellow-bellied Flycatcher.....	31

Western Flycatcher.....	5	Savannah Sparrow.....	903
Acadian Flycatcher.....	9	Baird's Sparrow.....	5
Alder Flycatcher.....	27	Grasshopper Sparrow.....	51
Least Flycatcher.....	101	Henslow's Sparrow.....	2
Hammond's Flycatcher.....	3	Leconte's Sparrow.....	5
Horned Lark (<u>alpestris</u> group).....	462	Sharp-tailed Sparrow.....	11
Magpie.....	396	Seaside Sparrow.....	47
Blue Jay.....	2,883	Lark Sparrow.....	16
Steller's Jay (<u>stelleri</u> group).....	32	Harris's Sparrow.....	2,281
Woodhouse's Jay.....	9	White-crowned Sparrow (<u>leucophrys</u> group).....	4,917
California Jay.....	80	Golden-crowned Sparrow.....	1,175
Canada Jay (<u>canadensis</u> group).....	15	White-throated Sparrow.....	15,716
Oregon Jay.....	8	Tree Sparrow.....	4,127
Raven.....	12	Chipping Sparrow.....	2,727
Crow.....	289	Clay-colored Sparrow.....	689
Fish Crow.....	165	Field Sparrow.....	770
Clark's Nutcracker.....	20	*Worthen's Sparrow.....	1
Starling.....	5,602	White-winged Junco.....	353
Bobolink.....	5	Junco (<u>hyemalis</u> - <u>oregonus</u> group).....	17,966
Cowbird.....	6,161	Red-backed Junco.....	284
Bronzed Cowbird.....	1	Rufous-crowned Sparrow.....	2
Yellow-headed Blackbird.....	168	Song Sparrow.....	7,307
Red-winged Blackbird.....	3,994	Lincoln's Sparrow.....	2,054
Tri-colored Red-wing.....	2,509	Swamp Sparrow.....	909
Eastern Meadowlark.....	112	Fox Sparrow.....	2,036
Western Meadowlark.....	97	Red-eyed Towhee.....	1,458
Hooded Oriole.....	45	Arctic Towhee (<u>maculatus</u> group).....	664
Orchard Oriole.....	80	Canyon Towhee (<u>fuscus</u> group).....	179
Baltimore Oriole.....	476	California Towhee (<u>crissalis</u> group).....	250
Bullock's Oriole.....	86	Abert's Towhee.....	120
Rusty Blackbird.....	138	Green-tailed Towhee.....	30
Brewer's Blackbird.....	311	Cardinal.....	1,344
Grackle (<u>quiscula</u> group).....	5,964	Rose-breasted Grosbeak.....	245
Boat-tailed Grackle.....	970	Black-headed Grosbeak.....	80
Evening Grosbeak.....	256	Blue Grosbeak.....	1
Pine Grosbeak.....	58	Indigo Bunting.....	203
Purple Finch.....	5,893	Lazuli Bunting.....	29
House Finch.....	3,426	Painted Bunting.....	60
Crossbill.....	35	Dickcissel.....	1
Gray-crowned Rosy Finch.....	1	Lark Bunting.....	3
Hoary Redpoll.....	8	Western Tanager.....	26
Redpoll.....	927	Scarlet Tanager.....	83
Goldfinch (<u>tristis</u> group).....	937	Summer Tanager.....	6
Arkansas Goldfinch (<u>psaltria</u> group).....	147	Purple Martin.....	252
Lawrence's Goldfinch.....	4	Cliff Swallow.....	186
Pine Siskin.....	225	Barn Swallow.....	1,942
English Sparrow.....	304	Tree Swallow.....	1,458
Snow Bunting.....	789	Violet-Green Swallow.....	38
Lapland Longspur.....	445	Bank Swallow.....	1,013
Chestnut-collared Longspur.....	40	Rough-winged Swallow.....	58
McCown's Longspur.....	2	Bohemian Waxwing.....	23
Vesper Sparrow.....	256	Cedar Waxwing.....	3,053

Phainopepla.....	9	Pipit.....	3
Northern Shrike.....	9	Mockingbird.....	728
Loggerhead Shrike (<u>ludovicianus</u> group) ..	106	Catbird.....	2,687
Red-eyed Vireo.....	181	Brown Thrasher.....	2,049
Philadelphia Vireo.....	4	Curve-billed Thrasher.....	17
Warbling Vireo.....	52	Bendire's Thrasher.....	8
Yellow-throated Vireo.....	4	California Thrasher.....	95
Blue-headed Vireo (<u>solitarius</u> group).....	10	Cactus Wren.....	14
White-eyed Vireo.....	4	Rock Wren.....	5
Black and White Warbler.....	350	Canyon Wren.....	1
Prothonotary Warbler.....	14	Carolina Wren.....	139
*Swainson's Warbler.....	3	Bewick's Wren (<u>bewicki</u> group).....	82
Worm-eating Warbler.....	17	House Wren.....	2,144
Blue-winged Warbler.....	45	Winter Wren.....	74
Brewster's Warbler.....	1	Long-billed Marsh Wren.....	167
Golden-winged Warbler.....	28	Brown Creeper.....	424
Nashville Warbler.....	177	White-breasted Nuthatch.....	436
Orange-crowned Warbler (<u>celata</u> group).....	336	Red-breasted Nuthatch.....	56
Tennessee Warbler.....	498	Pygmy Nuthatch.....	83
Parula Warbler.....	21	Tufted Titmouse.....	447
Cape May Warbler.....	39	Plain Titmouse (<u>inornatus</u> group).....	17
Yellow Warbler.....	360	Chickadee (<u>atricapillus</u> group).....	1,505
Black-throated Blue Warbler.....	43	Carolina Chickadee(<u>carolinensis</u> group)....	62
Myrtle Warbler.....	1,203	Mountain Chickadee (<u>gambeli</u> group).....	57
Audubon's Warbler.....	244	Hudsonian Chickadee.....	14
Magnolia Warbler.....	326	Chestnut-backed Chickadee(<u>rufescens</u> group)	16
Cerulean Warbler.....	4	Bush-tit.....	26
Chestnut-sided Warbler.....	178	Wren-tit.....	88
Bay-breasted Warbler.....	127	Golden-crowned Kinglet.....	89
Blackpoll Warbler.....	148	Ruby-crowned Kinglet.....	375
Blackburnian Warbler.....	57	Townsend's Solitaire.....	6
Black-throated Gray Warbler.....	2	Wood Thrush.....	279
Black-throated Green Warbler.....	100	Veery (<u>fuscescens</u> group).....	197
Townsend's Warbler.....	11	Gray-cheeked Thrush (<u>minima</u> group).....	319
*Hermit Warbler.....	1	Russet-backed Thrush (<u>ustulata</u> group).....	1,354
Kirtland's Warbler.....	5	Hermit Thrush.....	1,357
Pine Warbler.....	98	Robin.....	6,511
Palm Warbler.....	30	Varied Thrush.....	75
Prairie Warbler.....	15	Eastern Bluebird.....	1,651
Ovenbird.....	706	Western Bluebird (<u>mexicana</u> group).....	502
Northern Water-thrush(<u>novaboracensis</u> group).....	236	Mountain Bluebird.....	38
Louisiana Water-thrush.....	5		
Kentucky Warbler.....	14		
Connecticut Warbler.....	50		
Mourning Warbler.....	68		
Macgillivray's Warbler.....	27		
Maryland yellow-throat(<u>trichas</u> group).....	640		
Chat.....	93		
Hooded Warbler.....	9		
Wilson's Warbler (<u>pusilla</u> group).....	213		
Canadian Warbler.....	205		
Redstart.....	724		

Station totals.--Some operators apparently do not yet understand why the Bureau has made the ruling that records must be actually received at the Biological Survey before the close of business on June 30 in order to be included in the totals for the year. A little thought will convince them that some rule of that sort must be made for closing the books, especially as the annual report to the Secretary of Agriculture must be made up immediately after the close of the fiscal year.

As has previously been stated, the value of a station cannot be judged entirely by the number of birds that are there banded. Some cooperators who band relatively few birds have made interesting and valuable contributions to the study. Nevertheless, the tabulation by stations has been so enthusiastically received that the Survey is glad to publish it for the information of all concerned.

This year it has seemed desirable to create another "class" - those who banded more than 5,000 birds. Besides the cooperators listed in the following groups, there were 329 others who banded a total of 11,446 birds, an average of about 35 apiece.

The following banded more than 5,000 birds:

Harold S. Peters, Biological Survey.....	22,135
Austin Ornithological Research Station, North Eastham, Mass.....	20,128
E. A. McIlhenny, Avery Island, La.....	17,458
Ben B. Coffey, Jr., Memphis, Tenn.....	8,693
C. C. and F. E. Ludwig, Lansing, Mich.....	7,586
John Crystal, Niagara Falls, N. Y.....	7,582
Preston F. Osborn, Lakin, Kans.....	5,926
Dr. J. F. Brenckle, Northville, S. Dak.....	5,702
Irvin St. J. Sturgis, Lexington, Mo.....	5,527
Alfred H. Reuss, Jr., Blue Island, Ill.....	5,278
Stanley G. Jewett, Burns, Oreg.....	5,237

The following banded between 1,000 and 5,000:

William I. Lyon, Waukegan, Ill.....	4,676
Mrs. Ethel M. Crowell, Franklin, Mass.....	4,361
Laurence B. Fletcher, Boston, Mass.....	4,003
Mr. and Mrs. Harold Michener, Pasadena, Calif.....	3,822
Charles H. Feltes, Modesto, Calif.....	3,733
Christian J. Goetz, Cincinnati, Ohio.....	3,714
Johnson Neff, Sacramento, Calif.....	3,666
Mrs. Marie V. Beals, Elmhurst, N. Y.....	3,377
C. M. Owens, Monticello, Ark.....	3,370
William P. Wharton, Groton, Mass.....	3,309
C. E. Holcombe, Zion, Ill.....	3,231
Frank W. Robl, Ellinwood, Kans.....	3,198
Dr. E. Jurica, Lisle, Ill.....	2,631
Archie Hull, Lakeview, Mont.....	2,617
Frederick C. Labahn, Jr., Blue Island, Ill.....	2,333
Leonard R. Mewaldt, Aberdeen, S. Dak.....	2,179
Mrs. C. E. Peterson, Madison, Minn.....	2,158
Miss Ida Merriman, Kingston, Ont.....	2,036
E. M. and W. M. Davis, Shirley, Mass.....	2,017
Miss Louise J. Miller, Zion, Ill.....	1,920
Henry P. Baily, Philadelphia, Pa.....	1,800

George E. Mushbach, Brigham, Utah.....	1,745
Prof. J. W. Stack, East Lansing, Mich.....	1,690
H. D. Ruhl, Lansing, Mich.....	1,657
H. E. McArthur, Waukegan, Ill.....	1,630
Karl E. Bartel, Blue Island, Ill.....	1,457
M. J. Magee, Sault Ste. Marie, Mich.....	1,456
A. J. Butler, Chilliwack, B. C.....	1,339
Seth H. Low, Kenmare, N. Dak.....	1,327
Peter J. Van Huizen, Cambridge, Md.....	1,287
B. S. Bowdish, Demarest, N. J.....	1,275
Vernon C. Rossman, Waukesha, Wis.....	1,270
Glenn L. Berner, Jamestown, N. Dak.....	1,251
Ralph H. Imler, Denver, Colo.....	1,212
Rev. G. C. M. Bierens, Fairmount, N. Dak.....	1,206
Fred G. Bard, Regina, Sask.....	1,183
Henry B. Loeff, Oak Harbor, Wash.....	1,164
Robert E. Ware, Clemson, S. C.....	1,159
Dr. Karl Christofferson, Blaney, Mich.....	1,157
Lewis O. Shelley, Westmoreland, N. H.....	1,127
Cordia J. Henry, Upham, N. Dak.....	1,094
Prof. O. A. Stevens, Fargo, N. Dak.....	1,090
Verdi Burtch, Branchport, N. Y.....	1,073
Mrs. Hannah W. Gray, Wilton, N. Dak.....	1,057
George M. Benson, Burns, Oreg.....	1,031
Wesley H. Bartlett, Fairfield, Iowa.....	1,005
Howard N. Braun, Canton, Ohio.....	1,003
Joseph Powers, Flanders, N. Y.....	1,000
Lawrence E. Hicks, Columbus, Ohio.....	1,000

The following banded between 800 and 1,000:

Robert Allison, Athol, Mass.	Reed W. Ferris, Beaver, Oreg.
S. Prentiss Baldwin, Cleveland, Ohio.	Dr. Harold H. Hayes, Hubbard Woods, Ill.
Gardiner Bump, Albany, N. Y.	M. L. Jones, Pomeroy, Iowa.
Dr. H. A. Burns, Ah-gwah-ching, Minn.	Duncan McIntosh, Auburn, Ala.
Stuart Criddle, Treesbank, Manitoba.	Edwin D. McKee, Grand Canyon, Ariz.
Dr. D. A. Dery, Quebec, Que.	Carlos Stannard, Phoenix, Ariz.
Dumont Banding Station, Pequannock, N.J.	Edward Ward, Delta, Manitoba.
E. W. Ehmann, Piedmont, Calif.	Mrs. Kenneth B. Wetherbee, Worcester, Mass.
	Charles Yeomans, Chicago, Ill.

The following banded between 500 and 800:

James W. Botsford, Niagara Falls, N. Y.	Geoffrey Gill, Huntington, N. Y.
William E. Brentzel, Fargo, N. Dak.	Mrs. Ada C. Govan, Lexington, Mass.
Oscar M. Bryens, McMillan Mich.	Charles O. Handley, Blacksburg, Va.
Ernest D. Clabaugh, Berkeley, Calif.	Mrs. Howard G. Hill, Redlands, Calif.
H. P. Cottingham, Indianapolis, Ind.	Paul W. Hoffmann, Milwaukee, Wis.
Sears Crowell, Franklin, Mass.	Jack H. Jennings, Bowmansville, Ontario.
Mrs. Florence K. Daley, Oliveira, N. Y.	E. R. Kalmbach, Denver, Colo.
Russell S. Davis, Clayton, Ill.	J. P. Kennedy, Winnipeg, Manitoba.
Mrs. and Mrs. Louis G. Flentge, Wheeling, Ill.	Howard H. Krug, Chesley, Ont.
Fred Gallup, Escondido, Calif.	P. Kuntz, Winnipeg, Manitoba.
	Mrs. F. C. Laskey, Nashville, Tenn.

Harley C. Lawrence, New Holland, N. C.
Harrison F. Lewis, Ottawa, Ont.
T. E. Musselman, Quincy, Ill.
Mrs. and Mrs. William Pepper, Jr.,
Wyncote, Pa.
Miles D. Pirnie, Battle Creek, Mich.

Christopher T. Ridley, Norwood, Manitoba.
G. Stratton, Waco, Tex.
Estes Suter, Hot Springs, S. Dak.
Alfred D. Trempe, Sault Ste. Marie, Mich.
Milton Wetherill, Kayenta, Ariz.
LeRoy Wilcox, Speonk, N. Y.

The following banded between 300 and 500:

Walter I. Allen, Pasadena, Calif.
James E. Beecher, Chicago, Ill.
Henry A. Bowden, Litchfield, Conn.
Donald S. Brock, Oakland, Calif.
Adam Brown, Parry Sound, Ont.
Miss Marion Clow, Lake Forest, Ill.
Robert T. Cochran, St. Marks, Fla.
Raymond R. Cook, Chilmark, Mass.
Gene H. Crawford, Lapwai, Idaho.
Mrs. Frederick M. Cutler, Amherst, Mass.
Mrs. Marie Dales, Sioux City, Iowa.
Wm. M. Davidson, Beltsville, Md.
Arnold E. Davis, North Whitefield, Maine.
John T. Emlen, Jr., Davis, Calif.
Thomas L. Engleby, Roanoke, Va.
Frank M. Erickson, Salem, Oreg.
George W. Fink, Crows Landing, Calif.
Mr. and Mrs. John A. Gillespie,
Glenolden, Pa.
Lloyd W. Hatch, Copemish, Mich.
H. O. Havemeyer, Mahwah, N. J.
Harold L. Hutchins, Hamden, Conn.
C. F. Jackson, Durham, N. H.

Thomas N. Jones, Union, Ontario
Victor R. Kiessling, Phoenix, Ariz.
Eric C. Kinsey, Manor, Calif.
George Lang, Indian Head, Sask.
Miss Signe Lee, Glyndon, Minn.
Joseph Mailliard, San Francisco, Calif.
Miss Grace C. Meleney, White Plains, N. Y.
Mr. and Mrs. T. T. McCabe, Berkeley, Calif.
Horace D. McCann, Paoli, Pa.
Mrs. Daisie M. Morrison, Gulfport, Fla.
Martin K. Nelson, Fertile, Minn.
W. Rodman Peabody, Milton, Mass.
Carl A. A. Pedersen, Montvale, N. J.
James L. Peters, Harvard, Mass.
Edgar S. Preston, Tower City, N. Dak.
W. R. Priebe, Twin Falls, Idaho.
Major G. D. Robinson, St. Petersburg, Fla.
M. Lawrence Shields, Andover, Mass.
Herbert H. Southam, Toronto, Ont.
Dayton Stoner, Albany, N. Y.
Louis A. Test, Lafayette, Ind.
Lawrence Tyler, Parry Sound, Ont.
Reginald V. Whelan, Smoky Falls Plant, Ont.
S. W. Witmer, Goshen, Ind.

The following banded between 200 and 300:

L. H. Barkhausen, Chicago, Ill.
S. M. Batterson, Mohler, Oreg.
George N. Bondurant, Bristol, Tenn.
R. H. Carter, Jr., Muscow, Sask.
Marshall S. Davison, Enderlin, N. Dak.
John Dornan, Philadelphia, Pa.
Paul E. Downing, Highland Park, Ill.
Mrs. Howard A. Drew, Barre, Vt.
Arthur S. Einarsen, Corvallis, Oreg.
Miss Constance Everett, Waseca, Minn.
C. G. Fairchild, Merrill, Oreg.
Maxwell E. Foster, South Hamilton, Mass.
Adrian C. Fox, Park River, N. Dak.
Rudolph S. Fried, Katonah, N. Y.
Gill Gigstead, Havanna, Ill.
Joseph A. Hagar, Marshfield Hills, Mass.
Lyndon L. Hargrave, Flagstaff, Ariz.
Mrs. L. G. Hobson, Louisville, Ky.
Miss Margaret Hopkins, Brass Hill,
Nova Scotia.

Dr. B. L. von Jarchow, Racine, Wis.
Howard W. Knight, Belchertown, Mass.
George W. Luther, De Tour, Mich.
Mrs. L. B. Payne, Santa Cruz, Calif.
Fred H. Pegg, North Edmonton, Atla.
Clifford Presnall, Zion National Park, Utah.
Samuel D. Robbins, Belmont, Mass.
Mrs. Mary Hall Schaub, Wilmette, Ill.
Mrs. Jesseeka Seiber, Cutler, Ind.
Dr. Ward M. Sharp, Valentine, Nebr.
Gerald Spawn, Mount City, Mo.
Charles J. Spiker, Branchport, N. Y.
Chester J. Stajkowski, Washington, D. C.
Don K. Stephenson, South Bend, Ind.
Mrs. A. P. Thomas, Indianapolis, Ind.
H. S. Turner, Penikese Island, Mass.
Harry E. Weakley, North Platte, Nebr.
William G. Webb, Eagle Rock, Calif.
John P. Wetherill, Jr., Philadelphia, Pa.
Lemuel Whitaker, Ocala, Fla.

Mrs. and Mrs. Charles L. Whittle,
Peterboro, N. H.
Mrs. Will Williams, Bakersfield, Calif.

Dr. Harold B. Wood, Harrisburg, Pa.
Mrs. Ruth J. Wright, Randolph, Mass.

The following banded between 100 and 200:

Robert Adams, Waukesha, Wis.
Ross B. Albaugh, Mayfield Hills, Ohio.
C. M. Aldous, Orono, Maine.
Dean Amadon, Hartford, Conn.
Mrs. Effie A. Anthony, Bar Harbor, Maine.
Lawrence M. Ashley, Takoma Park, Md.
Prof. Will C. Baker, Kingston, Ont.
Philip C. Barney, Farmington, Conn.
Logan J. Bennett, Ames, Iowa.
Russell M. Berthel, White Bear Lake, Minn.
Miss Barbara D. Blanchard, Berkeley, Calif.
Charles F. Bodsworth, Port Burwell, Ont.
Homer R. Bolen, Cape Girardeau, Mo.
Roger L. Branham, Hingham, Mass.
Robert B. Brown, Winnetka, Ill.
Herbert R. Buettnner, Burlington, Iowa
John B. Calhoun, Nashville, Tenn.
Lowell E. Carter, Russiaville, Ind.
Richard L. Caylor, Cleveland, Miss.
Lawrence B. Chapman, Wellesley, Mass.
Arthur W. Clausen, Winnetka, Ill.
Cyril K. Coldwell, Gaspereau, Nova Scotia
Victor H. Coles, Cincinnati, Ohio.
Albert E. Conway, West Chester, Pa.
Richard D. Connor, Livingston, N. J.
Allan D. Creelman, North Scituate, Mass.
Carl Eggert, Rockford, Ill.
O. E. Ehrhart, Antwerp, Ohio.
Frank B. Foster, Phoenixville, Pa.
Harold Frank, Waukesha, Wis.
F. Everett Frei, Glasgow, Ky.
Rev. Paul. B. Frydrych, Dayton, Ohio.
James R. Gardiner, Vancouver, B. C.
F. W. George, Sioux Falls, S. Dak.
Mrs. William Gerdes, Jr., Quincy, Ill.
Miss Elizabeth C. Gilliland, Carlisle, Ind.
Mrs. Elsa K. Glossbrenner, Indianapolis, Ind.
Mrs. Lillian H. Govert, Memphis, Tenn.
Adrian Haak, Norwood, Manitoba.
Mrs. Jessie Hoyt Hatch, Ocean Beach, Calif.
Mrs. Charles S. Hegeman, Montclair, N. J.
T. S. Hennessey, Ottawa, Ont.
Louis E. Hildebrand, Winnetka, Ill.
Frank Hopkins, Poynette, Wis.
Mrs. Esther L. Jackson, Ohio, Ill.
Henry C. Kyllingstad, Valley City, N. Dak.
Bert Lambert, Allenville, Mich.
S. A. Liddell, Summerland, B. C.
Edward McColgan, Catonsville, Md.

Lawrence J. Merovka, New Orleans, La.
Merriam L. Miles, Clinton, Iowa.
Rev. Percy H. Miller, Collinsville, Ill.
Arthur Millikin, Simsbury, Conn.
Louis M. Moos, Huron, S. Dak.
Miss Marguerite E. Morrow, Philadelphia, Pa.
Mrs. Blanche L. Morton, Indianapolis, Ind.
Farley M. Mowat, Saskatoon, Sask.
H. Russell Moyer, Temple, Pa.
Walter J. Mueller, Milwaukee, Wis.
Mrs. Ethel Rogers O'Keefe, Glenarm, Ill.
William H. Over, Vermillion, S. Dak.
Mrs. Emily C. Peabody, Rosendale, Wis.
Charles A. Pease, Berkeley, Calif.
S. Morris Pell, Lenox, Mass.
Dr. William Pepper, Philadelphia, Pa.
O. W. Pflueger, Mont Alto, Pa.
Israel J. Pothier, Lower Wedgewood, Nova
Scotia.
Mrs. Helen S. Pratt, Eagle Rock, Calif.
James G. Ralston, Flushing, N. Y.
Webster H. Ransom, Spokane, Wash.
Dr. J. E. Horning, Edmonton, Alta.
Harry Richardson, Grand Rapids, Mich.
Mrs. Cristabel S. Rockwood, Northampton,
Mass.
Mrs. Sam H. Rogers, Buford, Tenn.
Miss Agnes E. Russell, Westfield, Wis.
E. V. Rutherford, Indianapolis, Ind.
Mrs. M. C. Sargent, Pasadena, Calif.
Herman W. Schaars, Milwaukee, Wis.
Clarence H. Schoenike, Madison, Wis.
Gustav J. Schultz, Waukegan, Ill.
M. H. Scorer, Westerville, Ohio.
Frederick C. Scott, Darien, Conn.
Barton L. Sharp, Lititz, Pa.
H. M. Simpson, Summerland, B. C.
Robert E. Smart, Chicago, Ill.
Miss Alta Smith, Cuyahoga Falls, Ohio.
Donald W. Smith, Wolfville, Nova Scotia.
Frank Smith, Hillsdale, Mich.
L. H. Smith, Moscow, Idaho.
Wendell P. Smith, Wells River, Vt.
Harold E. Spinney, Wilmette, Ill.
Miss E. Grace Stewart, New York, N. Y.
Wendell W. Stillwell, Mount Vernon, Ohio.
E. L. Sumner, Menlo Park, Calif.
George M. Sutton, Ithaca, N. Y.
Mrs. John A. Thompson, Minneapolis, Minn.

Mrs. Wilson Tout, North Platte, Nebr.
Nion R. Tucker, San Francisco, Calif.
Miss Blanche Vignos, Los Angeles, Calif.
Prof. George Wagner, Madison, Wis.
Richard Weaver, Ithaca, N. Y.
E. C. Weeks, Sanbornton, N. H.

Franklin H. West, Narberth, Pa.
F. J. B. Williams, Portage La Prairie,
Manitoba.
Dr. C. Brooke Worth, Swarthmore, Pa.
Chandler R. Young, Martin, S. Dak.
James B. Young, Louisville, Ky.

PHOTOGRAPHS

Many interesting and valuable additions have been made to the photograph files during the year, but, unfortunately, little progress has been made toward completing the albums, because of the pressure of other duties.

Photographs received during the year were as follows:

Henry B. Loeff, Oak Harbor, Wash., 2, of Mallards on his lawn 2 miles from the nearest water, during the winter of 1936.

Mrs. Effie A. Anthony, Bar Harbor, Maine, one of a banded Sora Rail.

E. C. Weeks, Sanbornton, N. H., one of a bird box made from a gourd.

Vernon Rossman, Waukesha, Wis., 2 of banded immature Barred Owls.

Mrs. Ada C. Govan, Lexington, Mass., 4; two showing her glass-sided feeding shelter, one of birds on the snow about feeding stands, and one of her house and grounds in summer.

A. G. Combs, Turpin, Okla., 4 pictures of young Long-billed Curlews, photographed in Baca County, Colo.

R. R. Santee, San Mateo, Calif., 2 of four young Saw-whet Owls, one showing three on a branch, and the other showing all four in a nest box, with an infertile egg and a tree mouse.

Joseph M. Bradley, Weston, Mass., one of a top entrance trap raised from the ground on a table-like structure.

W. E. Schantz, Columbus, Ohio, a picture of a Song Sparrow perched on the support of a Japanese beetle trap.

George D. Eustis, Chilmark, Mass., a series of 5 pictures of a brood of young Barn Owls, three being taken when they were 28 days old, and the other 2 when they were 34 days old.

O. A. Stevens, Fargo, N. Dak., a picture of one of his traps showing its location with reference to shrubbery and nearby bare ground.

Lawrence E. Hunter, Dallas City, Ill., a series of 9 views of a heron and anhinga colony at Reelfoot Lake, Tenn.; four species of herons -- the Great Blue, American Egret, Snowy Egret, and Black-crowned Night-and Anhingas are shown. A handful of young Kingfishers also are pictured.

O. J. Gromme, Milwaukee, Wis., 6 photographs showing the layout for hawk catching under the direction of the Milwaukee Public Museum. One shows a Duck Hawk being removed from the net.

Dr. C. Brooke Worth, Swarthmore, Pa., a series of 7 -- five of a successful type of tree trap, one of a funnel trap on the ground with a Starling in the gathering cage, and one showing the banding of one of these birds.

Allen Green, Oakville, Iowa, 3; one of his waterfowl sanctuary in the winter of 1937 with several hundred ducks on the snow and more in the air, and two of a crow.

W. R. Priebe, Twin Falls, Idaho, 6. Three of these show the spring flight of waterfowl, two are views of his banding trap well filled with ducks (Mallards, two Canvasbacks, and one Baldpate), and the other is of a flock of hybrid geese, a cross between a wild Canada and a Chinese Call goose.

Otto Stoltenberg, Omaha, Nebr., a picture of some of the members of the Omaha Nature Study group observing a flock of pinioned geese of several species.

Preston F. Osborn, Lakin, Kans., 2, showing the ducks on his sanctuary at feeding time and a hybrid duck that he caught last year.

L. J. Merovka, New Orleans, La., 4, two being of a nest of the Purple Gallinule and the other two of nests of the Least Bittern.

Mrs. G. H. Caughey, Antrim, N. H., a picture of a Chickadee contemplating a chunk of suet on a branch at her station.

John A. Gillespie, Glenolden, Pa., 4, three of which show Bald Eagles' nests, and the fourth the island where they are located.

Edward McColgan, Catonsville, Md., 3, two of young Bald Eagles at different ages and one of an opossum that was caught in a banding trap.

WORK AT BANDING STATIONS

Several cooperators have written that the work of their stations has passed the stage where the number of bands placed is the chief objective, but that to them banding has become a means for studying some special problem. Through banding many things about bird life are discovered that could be learned in no other way.

Station operators who are carrying on special studies are requested to tell us about them. If we know what problems are being investigated, it will be possible to put operators working on the same or related subjects in direct communication with one another to their mutual benefit.

Russell S. Davis, Clayton, Ill., reports that the chief interests at his station are food requirements and sex determination.

Mrs. Florence K. Daley, of Olivera, N. Y., describes an ingenious means of supplying the birds with food during her absence in winter. A balsam tree is cut and wired to the porch. Over this from top to bottom is poured hot fat in which she has mixed chopped suet, nuts, millet, hemp and sunflower seeds, bread crumbs, chick feed, and scratch feed. As the weather is already cold when this is done, the fat hardens immediately and a good supply of food is there for the birds. Mrs. Daley says she has seen Chickadees, Blue Jays, Nuthatches, and Woodpeckers all feeding at once on the tree.

O. J. Gromme, of the Milwaukee Public Museum, submitted a report of a hawk-banding project carried on in the fall of 1936 under the direction of the Museum with the assistance of two enrollees from the C.C.C. Sixteen hawks were banded and much information regarding their migrations was collected. Several hundred feet of motion picture film was taken. This work is being continued this season, according to a recent report from Mr. Gromme.

The National Association of Audubon Societies has called for volunteers to help band hawks and owls under the supervision of Richard H. Pough, in charge of the Hawk and Owl Department. For several years, the Bureau has been urging the banding of birds of prey, and in the past two years there has been a notable increase in the number banded, more than 2,300 each year.

Harold S. Peters (then stationed at Auburn, Ala.), banded 21,503 Chimney Swifts in 8 weeks during September and October 1936. He caught 248 birds banded by himself and 24 by others, at distances of 10 to 125 miles from the place of banding. He also had 305 repeats. The oldest bird taken was banded September 15, 1927, at Charleston, W. Va., by I. H. Johnston. As very little is known concerning the migration of the Chimney Swift, it is desirable to have large numbers of them banded, especially in the lower Mississippi Valley.

M. J. Magee, of Sault Ste. Marie, Mich., on May 17, 1937, wrote that he had trapped and banded more than 25,000 birds within 75 feet of his dining-room window.

Clarence L. Hawthaway, of West Newton, Mass., sent in an interesting account of a young Sparrow Hawk that he had saved after it had been attacked by other hawks. The bird was unable to fly and was kept as a pet all winter. Last spring by taking it farther and farther from its perch it was taught to fly. He also gives some interesting information on the diet of young Sparrow Hawks at Plymouth. The parents have been seen to bring Starlings, an occasional Flicker, and even a Bobwhite to the young.

Leroy Wilcox, of Speonk, N. Y., banded 6 Red Phalaropes on April 28, 1937. Several hundred of these birds were driven to the shore by a severe storm. Having observed that the birds were feeding on jelly fish, Mr. Wilcox baited a trap with some and caught four. The other two were caught with a scoop net.

Preston F. Osborn, of Lakin, Kans., was also successful in banding Red Phalaropes, 9 in all, but gives no details of how he caught them. Mr. Osborn also banded 4 Blue Geese (a rare bird so far west), and 5 Sandhill Cranes.

George C. Munro, of Honolulu, Hawaii, has been doing interesting work with the birds on nearby islands. The Survey arranged to supply him with bands and on September 6, 1937, he reported the banding of 162 Shearwaters, 76 Boobies, and 6 Petrels. In commenting on the banding of the Shearwaters, he states: "I banded 76 of the Shearwaters when setting and I think nearly all were males; recently on another island I banded 86 at night when they came in to feed the young and I think they were nearly all females."

Mrs. Ada Clapham Govan, of Lexington, Mass., recently concluded successfully a hard fight for the preservation of the tract of woodland where she studies birds and operates her banding station. This woodland being threatened with the ax, she so aroused public opinion by a series of delightfully written, but forceful, stories that she was able to raise the necessary funds to assure its preservation as a sanctuary. Such militant action is most commendable.

TRAPS

J. L. Primrose of Raleigh, N. C., submitted a drawing of an "elevator" trap. The trap, made of hardware cloth, is 30 inches square and 8 inches deep. It is suspended 6 to 8 inches above the ground on a frame made of two 1/4-inch steel rods, bent at right angles and driven into the ground. The upright portion of the rod passes through the trap about an inch from the corner. The trap is hung on the frame by a flat hook to which the pull string is attached. Birds are reported to enter this trap much more readily than the other drop traps nearby which have one side on the ground.

Mrs. Ada Clapham Govan, of Lexington, Mass., worried over the occasional "sore noses" of birds caught in traps made of wire netting, designed one with glass sides which, she reports, works perfectly with no injury of any kind to the bird. Experience has shown that skin abrasions at the base of the bill are not usually serious, but they do look bad and when they can be so easily avoided, it is much worth while. Mrs. Govan says that "even Blue Jays, Thrashers, Mourning Doves, and Robins fail to gain enough momentum to injure themselves in any way" in this trap.

Henry C. Kyllingstad, of Bowden, N. Dak., describes a novel manner of baiting a Brenckle drip trap. The drip of the ice box was extended by means of a piece of hose and provided almost exactly the 2 drop per second needed for best results.

Wendell F. Stephenson of East Rumney, N. H., sent in a drawing of a small trap, usable either on the ground or in a tree. It is flattened, heart-shaped, and the netting forms almost a complete funnel. It is supplied with a bottom to which is attached a strap of soft metal several inches longer than the top so bent as to form a hook at each end. With a long pole this can be lifted into a tree and hung over a branch, with the opening either up or down. It is baited with suet attached to the door opposite the entrance.

Preston F. Osborn, of Lakin, Kans., has been very successful in trapping shore birds. He describes his trap as a small-mesh, wire duck trap with a 4-foot opening at one end, and a roll top to be dropped by the pull of a string about 75 feet long. The trap was placed in the slough mud where there was $\frac{1}{4}$ to $\frac{1}{2}$ inch of water. About a pint of worms was used in front of and in the trap at a baiting. Two Yellowlegs were also placed in the trap for decoys. On being flushed, the birds went to the trap quite readily.

James T. Tanner, of Cortland, N. Y., has forwarded sketches and photographs of two automatic traps devised and used by him in capturing hawks at the Witmer Stone Wildlife Sanctuary, at Cape May Point, N. J. In general these employ the same principle used in one of the old professional European bird-catcher's traps, namely, a chamber holding a live bird as a bait or decoy. In attempting to reach this bird, the hawk enters another chamber and strikes a trigger which causes the doors to close upon it.

Marshall S. Davidson, of Enderlin, N. Dak., sent in a sketch of a modified Chardonneret trap used at his station. The chief difference is in the manner of trigger release.

Dr. C. Brooke Worth, Swarthmore College, Swarthmore, Pa., furnished the Survey with a detailed account of a light, cheaply constructed Chimney Swift trap. It is regretted that space is not available for a complete account of this, which is of value to every station planning work with this species. If enough stations are interested, an effort will be made to have the description of this trap issued specially. It is designed for use only on nesting swifts.

RETURNS

W. Rodman Peabody, of Boston, Mass., reports two interesting returns of Juncos, as follows: "On January 26, 1935, I banded two juncos with bands numbered 34-119804 and 34-119807. The latter bird, 34-119807, was killed a year later, January 29, 1936, at Booz, Alabama. The former bird, 34-119804, returned to my trap on February 26, 1936, but was killed at Alexander City, Alabama, on December 27, 1936. Both of these birds, therefore, were at my trap in Milton in January, 1935, one of them was at my trap in the winter of 1936, and both of them were killed in Alabama. I think this is unusual evidence of a confined migrational route."

Henry C. Denslow, of Hartford, Conn., has advised the Survey of the death of Blue Jay 439724 on June 30, 1936. This bird was picked up in the spring of 1921, having fallen from the nest, and was raised by hand. In 1926 it was banded by Mrs. Lucy S. Chapin. Although repeatedly released, the bird always returned and remained a pet until its death. Banding records show the Blue Jay to be a hardy bird. This one of fifteen years is the oldest of which we have record.

232820, Glaucous-winged Gull, banded July 25, 1925, on Mitlenatch Island, Strait of Georgia, B. C., by Theed Pearse, was found dead September 17, 1936, at Egmont, Jervis Inlet, B. C.

36-645761, Herring Gull, banded August 3, 1936, on Kents Island, N. B., Canada, by Alfred O. Gross, was killed at Villa J. Cordel, Vera Cruz, Mexico, on March 25, 1937.

36-511802, California Gull, banded July 8, 1936, at Redberry Lake, Redberry, Sask., Canada, by William I. Lyon, was killed October 29, 1936, at Chihuahua, Chih., Mexico.

A531803, Royal Tern, banded July 18, 1931, in Charleston County, S. C., by E. Milby Burton, was shot about March 15, 1937, near San Juan y Martinez, Pinar del Rio, Cuba.

36-326842, Common Tern, banded July 14, 1936, at Goose Bar Island, near Brant Beach, N. J., by Henry P. Baily, was captured alive, the band removed, and the bird released at Soure, Para, Brazil, on January 6, 1937.

36-309895, Roseate Tern, banded July 5, 1936, by O. L. Austin, at Tern Island, Chatham, Mass., was found sick (and it died) at Demerara River, British Guiana, January 17, 1937.

36-311259, Roseate Tern, banded July 11, 1936, at Egg Island, Chatham, Mass., by O. L. Austin, was probably found dead at Tucundeau Island, Salinas, Para, Brazil, on March 4, 1937.

A702711, Double-crested Cormorant, banded June 28, 1929, at Waubay Lake, S. Dak., by A. R. Lundquist, was shot at Timbalier Island, Terrebonne Parish, La., January 20, 1937.

34-708256, White Pelican, banded July 7, 1935, at Clear Lake Refuge, Modoc County, Calif., by H. M. Worcester, was captured and released at Gretna, Phillips County, Kans., in May, 1937.

36-800481, Brown Pelican, banded October 4, 1936, at Pelican Island, Brevard Reservation, Fla., by E. M. and W. M. Davis, was found dead at Doce Lequas Keys, South of the Island of Cuba, about April 1, 1937.

36-633958, Mallard, banded December 16, 1936, at Fulton County, Ill., by C. J. Goetz, was caught in a muskrat trap on May 11, 1937, 80 miles east of Norway House, Manitoba (Stevenson Lake).

34-544074, Black Duck, banded November 23, 1934, at Bride Lake, East Lyme, Conn., by P. C. Barney, was shot in May, 1936, at Woolfreys Cove, Bryon Bay, Labrador.

35-513264, Baldpate, banded February 6, 1935, at Lake Merritt, Oakland, Calif., by E. W. Ehmann, was killed by an Indian near Allakaket, Koyukuk River, Alaska, in the Spring of 1936.

36-613448, Blue-winged Teal, banded April 4, 1936, at Avery Island, La., by E. A. McIlhenny, was shot at Carataska Lagoon, Honduras, on February 1, 1937.

36-508220, Blue-winged Teal, banded May 20, 1936, at Lacreek Migratory Waterfowl Refuge, Martin, S. Dak., by C. R. Young, was shot at Brewer's Lagoon, Honduras, on February 5, 1937.

35-406239, Blue-winged Teal, banded September 20, 1936, at Thief Lake, Marshall County, Minn., by Martin K. Nelson, was killed at Sisal, Yucatan, Mexico, April 28, 1937.

36-416885, Blue-winged Teal, banded September 15, 1936, at Lakin, Kans., by Preston F. Osborn, was killed at Laguna del Coyol, near Vera Cruz, Mexico, April 20, 1937.

35-408652, Blue-winged Teal, banded September 12, 1936, at Avery Island, La., by E. A. McIlhenny, was shot at Laguna Popa, Boquilla, Cartagena, Colombia, on November 15, 1936.

36-628503, Pintail, banded October 22, 1936, at Lake Malheur Refuge, Oregon, by Stanley G. Jewett, was shot at Etzatlan, Jalisco, Mexico, January 21, 1937.

34-552725, Pintail, banded February 21, 1935, at Avery Island, La., by E. A. McIlhenny, and shipped to Cambridge, Md., to be released by P. J. Van Huizen, was shot at Port O'Connor, Tex., on November 27, 1936.

34-552414, Pintail, banded February 4, 1935, at Avery Island, La., by E. A. McIlhenny, and shipped to Berkeley, Calif., to be released by H. M. Worcester, was shot at Kellers Bay, Jackson County, Tex., on November 26, 1936.

B647694, Pintail, banded September 28, 1936, at Ogden, Utah, by E. R. Kalmbach, was trapped and released, January 18, 1936, at Balboa Park, San Diego, Calif., by Fred Gallup.

36-674007, Pintail, banded October 10, 1936, at Upper Souris Refuge, Foxholm, N. Dak., by Philip N. Chase, was killed at Guatemala City, Guatemala, in March, 1937.

237681, Redhead, banded April 18, 1926, at Ithaca, N. Y., by Douglas Beyea, trapped and released April 29, 1935, at Thief Lake, Marshall Co., Minn., by Martin K. Nelson (band changed to B691900), was shot in October 1936, at Lake Manitoba, Man., Canada.

36-605250, Redhead, banded October 2, 1935, at Lake Malheur Refuge, Oreg., by P. A. DuMont, was killed at La Salina, near Ensenada, Baja California, Mexico, on February 23, 1937.

34-645008, Blue Goose, banded November 22, 1935, at Chiniere au Tigre, Vermillion Parish, La., by E. A. McIlhenny, was shot near Port Albany, via Moosonee, Ontario, in October 1936.

A723544, Blue Goose, banded November 12, 1933, at Avery Island, La., by E. A. McIlhenny, was killed by an Indian at Albany, via Moosonee, Ontario, in May 1936.

A726539, Canada Goose, banded March 24, 1936, at Earleville, Md., by Clarence Webb, Jr., was shot by an Esquimo at Inmusuak River, probably near Port Harrison, Quebec, Canada, during the summer of 1936.

A726253, Canada Goose, banded March 7, 1935, at Earleville, Md., by Clarence Webb, Jr., was shot by an Esquimo at Inmusuak River, probably near Port Harrison, Quebec, Canada, during the summer of 1936.

A701349, Canada goose, banded April 6, 1931, at Muskegon, Mich., by Willard Ferguson for Miles D. Pirnie, was shot by an Esquimo at Inmusuak River, probably near Port Harrison, Quebec, Canada, during the summer of 1936.

34-632334, Great Blue Heron, banded June 21, 1936, at Depue, Ill., by Karl E. Bartel, was shot at Monkey River, British Honduras, on November 30, 1936.

36-720022, Egret, banded June 8, 1936, at Glen Allan, Miss., by Ben B. Coffey, Jr., was probably found dead at San Cristobel, Cuba, about April 6, 1937.

ABBA 37537, Louisiana Heron, banded August 13, 1920 at Avery Island, La., by E. A. McIlhenny, was caught in a muskrat trap at the same place in January, 1937.

C632678, Coot, banded May 2, 1935, at Lansing, Iowa, by W. E. Albert, was shot February 26, 1937, at Bahia Honda, Pinar del Rio, Cuba.

589305, Mourning Dove, banded August 21, 1927, at Tiffin, Ohio, by Eugene C. Stacy, was shot at Tamozola, Oaxaca, Mexico, in December 1934.

B392928, Mourning Dove, banded May 28, 1934, at Lakin, Kan., by Preston F. Osborn, was shot at Morelos, Mexico, on November 29, 1936.

36-527259, Marsh Hawk, banded November 5, 1936, at Cape May Point, N. J., by James T. Tanner, was killed in Currituck Co., N. C., about December 16, 1936.

36-714651, Western Red-tailed Hawk, banded May 14, 1936, in Whitman County, Wash., by L. H. Smith, was shot 2 miles south of Springville, Utah, on November 8, 1936.

34-652242, Red-tailed Hawk, banded October 14, 1935, at Stockton, Kan., by Ralph H. Imler, was caught at Carbon, Tex., January 30, 1937.

309014, Red-tailed Hawk, banded June 20, 1926, at Muscow, Saskatchewan, by R. H. Carter, was killed at Burton, Tex., January 23, 1937.

36-720567, Ferruginous Rough-leg, banded November 10, 1936, at Stockton, Kan., by Ralph H. Imler, was caught at Lovington, N. Mex., on December 28, 1936.

236059, Bald Eagle, banded June 20, 1929, at Sault Ste. Marie, Mich., by M. J. Magee, was caught in a beaver trap and released at Gould City, Mich., about April 21, 1937.

A719311, Barn Owl, banded June 7, 1936, at Leetonia, Ohio, by Paul A. Stewart, was caught in a steel trap at Jamestown, N. Y., on November 26, 1936.

A575185, Burrowing Owl, banded July 2, 1936, at Northville, S. Dak., by Dr. J. F. Brenckle, was found wounded at Kenedy, Tex., November 11, 1936.

237343, Snowy Owl, banded February 2, 1931, at Fairdale, N. Dak., by F. J. Vejtasa, was shot near Port Albany, via Moosonee, Ontario, in October 1936.

F8906, Chimney Swift, banded September 28, 1930, at Soddy, Tenn., by Wyman R. Green, was captured alive and released, in a nest with two young birds at Chatham, Mich., about July 7, 1936.

36-101183, Chimney Swift, banded October 5, 1935, at Hattiesburg, Miss., by John M. Frazier, came down a chimney into a house at West Townsend, Mass., July 15, 1936.

37-107613, Chimney Swift, banded October 2, 1936, at Camp Hill, Ala., by Harold S. Peters, was trapped and released at Clemson College, S. C., April 27, 1937.

37-111682, Chimney Swift, banded October 9, 1936, at Tuskegee, Ala., by Harold S. Peters, was trapped and released at Clemson College, S. C., April 27, 1937.

632443, Starling, banded March 23, 1928, at Washington, D. C. (John Marshall Place), by F. C. Lincoln, was caught in a pigeon coop at Mt. Vernon, N. Y., on July 8, 1936.

B337440, Grackle, banded April 14, 1932, at Peterboro, N. H., by Jesse V. Miller, was found dead at the same place, about May 6, 1937.

35-200461, Evening Grosbeak, banded March 19, 1935, at Winnipeg, Manitoba, by P. Kuntz, was trapped and released March 18, 1936, at Sault Ste. Marie, Mich.

C121824, Eastern Purple Finch, banded July 16, 1932, at Sault Ste. Marie, Mich., by M. J. Magee, was retrapped at the same place May 16, 1937.

36-119647, Harris Sparrow, banded October 3, 1936, at Madison, Minnesota, by Mrs. C. E. Peterson, was shot 30 miles south of Woodward, Oklahoma, on November 21, 1936.

C118186, White-crowned Sparrow, banded October 1, 1932, at Bar Harbor, Maine, by Byron W. McPheters, was found dead during severe cold weather at Gatesville, Tex., on January 12, 1937.

B196480, Golden-crowned Sparrow, banded December 6, 1932, at Kensington Park, Berkeley, California, by Ernest D. Clabaugh, was found dead at the same place about February 6, 1937.

A197232, changed to 36-125387, White-throated Sparrow, banded January 7, 1931, at Summerville, S. C., by William P. Wharton, was retrapped at the same place January 26, 1937.

B129607, Tree Sparrow, banded January 27, 1931, at Ithaca, N. Y., by A. C. Fraser, has returned to the station on January 1, 1932, November 27, 1932, November 18, 1933, December 3, 1934, December 13, 1935, and March 10, 1937.

C82067, Tree Sparrow, banded February 12, 1932, at Antrim, N. H., by Mrs. Rachel E. Caughey, was killed in a trap by a gray squirrel, March 17, 1937, at the same place where it was banded.

F26960, Tree Sparrow, banded February 13, 1933, at Elmhurst, L. I., N. Y., by Mrs. Marie V. Beals, was retrapped at the same place, February 26, 1937.

L20971, Field Sparrow, banded April 11, 1931, at Summerville, S. C., by William P. Wharton, was retrapped at the same place, March 13, 1937.

H54930, Pink-sided Junco, banded March 4, 1935, at Fruita, Colorado, by Mrs. Anna Benson, was caught in a trap by an Indian boy 12 miles east of Cibecue, Ariz., January 22, 1937.

F19694, Indigo Bunting, banded June 16, 1932, at Oliverea, New York, by Mrs. Florence K. Daley, was retrapped at the same place June 5, 1937.

C140722, Cedar Waxwing, banded August 12, 1932, at Winnipeg, Manitoba, by Prof. V. W. Jackson, was probably found dead at Lawson, Kentucky, about February 9, 1937.

35-108210, Cedar Waxwing, banded April 14, 1935, at Modesto, California, by Charles H. Feltes, was killed about March 29, 1937, at Meridianville, Ala., The band was sent to the Biological Survey and the number verified.

35-206186, Northern Shrike, banded February 14, 1936, at McMillan, Mich., by Oscar McKinley Bryens, was retrapped at the same place, January 23, 1937.

36-135855, Catbird, banded September 20, 1936, at Northville, S. Dak., by Dr. J. F. Brenckle, was killed at Tuxpam, Vera Cruz, Mexico, about January 1, 1937.

B112462, Bluebird, banded June 24, 1936, at Ottawa, Ontario, by T. S. Hennessy, was killed by boys, March 3, 1937, at Lake City, Fla.