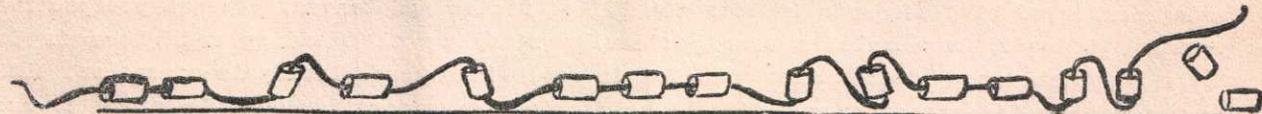


BIRD BANDING NOTES

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, 1936

No. 14

Band numbers are correctly written as B 342749; 35-619528; etc.

GENERAL INFORMATION TO COOPERATORS

The fiscal year of the Federal Government that ended on June 30, 1936, was one of great activity in the Biological Survey, the Section of Distribution and Migration of Birds, Division of Wildlife Research, being no exception. Special duties of many kinds prevented the issuance of Bird Banding Notes, although material for copy was abundant. As will be noted in the annual report section, the activities of banding stations were in no way lessened during this period but instead continued to manifest a healthy growth.

As was the case a year ago when No. 13 of this volume was issued, there are several matters that it is desirable to bring to the attention of all operators, even at the risk of repetition. Many of them have been at one time or another mentioned in these pages. It should be remembered that Bird Banding Notes serves a dual purpose, first, that of acquainting all stations with items of interest, and second, of giving cooperators instructions necessary for standardization of the system.

Dr. Gabrielson becomes Chief of Bureau.—In the last issue of Bird Banding Notes the name of Ira N. Gabrielson was listed as Assistant Chief of the Division of Wildlife Research. At that time Jay N. Darling ("Ding" of cartoon fame) was Chief of the Biological Survey. When Mr. Darling took office in 1934 it was understood that his services would not continue indefinitely because of business contracts from which he could obtain only a temporary leave of absence. Unquestionably Darling is the best-known conservationist in America. He completely reorganized the Survey and when ready to retire selected Dr. Gabrielson as his successor, his choice being confirmed by Secretary of Agriculture Henry A. Wallace.

Dr. Gabrielson has been with the Bureau for 21 years and is a biologist of international reputation. He is much interested and places much confidence in the investigations of the Section of Distribution and Migration of Birds. This has been repeatedly demonstrated during the past year by his designation of the Section Chief as the chairman of important Bureau committees.

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.

New Cooperators.--For several years inadequate funds made it necessary for the Bureau to decline to issue additional banding permits. Although Congress has now increased our appropriations, it nevertheless seems necessary to continue this policy more or less. The reason is the great interest that attaches to the banding work and the constantly increasing number of bird students in both the United States and Canada. When a prospective cooperator, however, contemplates some particular study by the banding method or is in position to establish a station that will fit in well with those already in operation, then (assuming he has the necessary qualifications) serious consideration will be given to his application.

Schedules and return cards.--In spite of frequent instruction there are still a few cooperators who yearly cause themselves unnecessary labor and confusion to the Bureau by their failure to prepare schedules and return cards properly. Every cooperator is accordingly requested to read this section carefully.

Schedules should be sent in twice a year, but each species should be reported only once during that period. That is, records of winter birds should be reported when these species have departed in the spring (May or June) and summer birds in the fall after the autumn migration is over. With resident species each operator should use his own judgment, but usually a time can be selected when for one reason or another such birds are temporarily absent from the vicinity of the station.

Do not send in schedules monthly.

Schedules should, of course, be as full as possible. For example, a Junco schedule partially filled at the end of December should be continued on into the next year. As rapidly as possible the banding files are being condensed by copying data from partially filled schedules onto ones of earlier date for the same species from the same station. The files already contain more than 2,250,000 sets of data, so efficiency demands that wherever possible all blank paper be eliminated.

On each schedule in the space provided in the upper left-hand corner the total number of birds represented on that sheet should be noted. Each operator naturally wants this total for his own information and when the proper notation is made it saves much time in the Washington office, as a batch of schedules can be quickly run over and the individual totals checked off on an electric adding machine.

Schedules should contain original banding data only. Do not list on them any return records. The punch cards are provided for this purpose. Similarly, punch cards should never be used for original banding data for which return records have not been received. Return cards for "station returns" should, however, be completely filled in with banding and return dates.

Under no circumstances should more than one species be listed on a schedule. The schedules are filed in A.O.U. (1910) order and when one is received carrying data for more than one species it must be either rewritten in the Washington office or returned to the station.

Do not make out return cards for recovery records reported from the Washington office. When a recovered bird is reported to the Survey by anyone not a station operator, a return

card is prepared before the record is reported to the station of banding. For the operator of that station to prepare and send in another return card is useless duplication, causing unnecessary labor for him and confusion in the files.

When a bird banded in one season is recaptured several times in a succeeding season, the first date of recapture is obviously the date of return and the one to be entered in the space provided on the return card. Any subsequent recaptures that season are repeats. These may be listed on the back of the card if the operator so desires, but this is not a requirement of the Survey.

Species numbers.--Every species of North American bird is given a number by the American Ornithologists' Union, and as this number is punched on the return card it is a real help when operators show it after the name of the bird. This also is not a requirement as the Survey appreciates the fact that these numbers are used by very few bird students and that it would take much time for cooperators to look up each species and determine its A.O.U. number. For those who desire to render this assistance and who use the Handbook of Birds of Eastern North America, by Frank M. Chapman, a word of caution is desirable. In the revised edition of 1914 the number in bold face type immediately preceding the name of the species is the A.O.U. number. In the 1932 edition, however, the number preceding the species name is not the A.O.U. number, which is given in brackets following the species name.

Local returns.--In a few communities there are several stations operating within a relatively short distance of each other. The operators of these should maintain contact and when they trap a banded bird that is foreign to their station, check up with the operators of nearby stations to see whether or not the bird may have been banded in the same general region. Frequently the record can be completed, and this will save time for the operator and for the Washington office.

Contact with other station operators is always desirable. When the operator of a station writes to the Survey reporting some difficulty that he has had in trapping a particular species, it is the custom of the Survey to furnish him with the names and addresses of other cooperators who have been particularly successful with that species, believing that the direct contact thus established will produce better results than relayed information that might be incomplete in some important detail.

Mourning Doves.--At the State Cooperative Research Station at the Alabama Polytechnic Institute, Auburn, Ala., Associate Biologist H. S. Peters is conducting as one of his major problems a study of the Mourning Dove. As a means of assisting in this study a special request has been received from Dr. Gabrielson that all banding cooperators make a special effort to band both adult and young birds of this species. At a few stations Mourning Doves have already received considerable attention, notably that of W. B. Taber, at Kansas, Ill., while W. W. Demeritt, at Key West, Fla., has been banding several hundred of these birds each season during the past few years. (He banded 576 during 1935.) The Survey will appreciate it if still other stations will give this bird special attention. The data obtained will be useful, not only in regulatory work but in the scientific investigations being conducted by Mr. Peters.

Bird Banding Notes.--The stock of all numbers of Bird Banding Notes, Volume 1, is exhausted. So also are certain numbers of Volume 2 and for the benefit of those stations

that from time to time make effort to complete their sets, the Bureau would be glad to receive these numbers of Volume 2 from those cooperators who do not care to preserve them. The numbers desired are 1, 3, 4, 6, 7, and 11.

Banding of exotic birds.--As all cooperators know, it has been the policy of the Survey not to authorize the use of official bands on pheasants or other introduced upland game birds. This policy is continued and will include Bob-white Quail raised at game farms. These latter birds are now being produced in such large numbers that it would be impracticable to furnish bands for all requests so it seems desirable not to start the practice. Exceptions for both quail and pheasants may occasionally be authorized by the Bureau. It is, however, entirely proper for cooperators to band such other introduced birds as the European Starling, Chinese Spotted Dove, Crested Mynah, and European Tree Sparrow.

Migratory Bird Treaty Act Violations.--Occasionally birdbanding cooperators have brought to their attention violations of the Federal law protecting migratory birds. These usually consist of the destruction of the eggs or young of gulls, terns, herons, or other birds, although they sometimes involve out-of-season shooting or other violations concerned with migratory waterfowl. Reporting these violations two or three months after their occurrence is of no value, but if when the facts come to the attention of the cooperator he will immediately send a wire collect to the Bureau, prompt action will be taken by a Federal Game Management Agent.

WORK DURING THE YEAR

Tabulation of the birdbanding work done during the fiscal year 1936 shows a most gratifying improvement over the preceding period. It is believed that this also represents an improved situation generally with most species of North American birds.

The old stations that have consistently shown great activity have continued their operations, a number of other stations have extended their work, while some stations established during the year have, by the volume of work already accomplished, indicated that they will be valuable links in the system. The Bureau believes that ultimately it will be possible to have 5,000 banding stations operating in the Western Hemisphere. Naturally, these stations always will be concentrated in the United States and southern Canada, but there is every reason to believe that many important banding points can be established at various places in the Arctic regions of Canada, Alaska, Newfoundland, and Greenland. The closest kind of cooperation exists between the Biological Survey and the National Parks of Canada Branch, and the Bureau's relationship with other Governmental agencies, both at home and in foreign countries, is equally cordial. Accordingly, it is felt that eventually there should be no great difficulty in extending the banding system to the Latin American countries. Probably in every one of those countries there are resident Americans who are more or less interested in bird life. Contact with them can be established through the Consular Service of the State Department and also through the Pan American Union, which has already informally assured us of its cooperation.

Publicity concerning the banding work is already a matter of frequent note in clippings received from Central and South American newspapers, while the January number of "Revista Rotaria" (the Spanish edition of "The Rotarian") carried an excellent illustrated article, by Wm. I. Lyon, President of the Inland Bird Banding Association, on banding work. It will,

of course, require time to work out full details, but conversations with officials of Mexico already indicate that in the near future we will have active banding stations operating in that country, using regular official bands.

Correction.—In spite of all precautions the tabulation showing the work done during the fiscal year 1935 carried two or three errors. These are greatly regretted, particularly as they involve the omission of the names of cooperators who did most commendable work during the period.

The following four cooperators should have been mentioned in the tabulations: C. E. Holcombe, of Zion, Ill., who banded 2,872 birds; Carmen A. J. Beining, of Platteville, Wis., who reported the banding of 306; L. E. Dyke, of Winter Park, Fla., who banded 559; and R. N. Saxton, of Washington, D. C., who banded 141.

On June 30, 1936, the list of birdbanding cooperators numbered 2,077. In the list, however, are names of many who have not made a report for three or four years. Communications will be sent to these inactive cooperators in the near future, and it is quite probable that many of them will be dropped.

Table 1 shows a comparison of the work done during the fiscal year 1935 with that done during 1936, and contains a summary of the grand total since the work was started in 1920:

Table 1.—Banding work during 1935 and 1936 compared.

	<u>1935</u>	<u>1936</u>
Banded birds reported.....	249,829	274,695
Returns received.....	16,913	18,268
Grand total of birds banded since 1920..	1,906,455	2,181,150
Grand total of returns since 1920.....	117,685	135,953

Birds banded.—Following the practice of the last few years, in Table 2 is listed the number of individuals of each species of bird banded and reported during the fiscal year. The arrangement is that of the A.O.U. check-list of 1910, this order continuing in use in the banding files. An asterisk (*) indicates a species new to the list of banded birds, four having been added during the year—the Wandering Tattler, the Arizona Crested Flycatcher, the Large-billed Sparrow, and the Plumbeous Gnatcatcher.

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 sub-species 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 1936.

Western Grebe.....	47	Redhead.....	521
Holboell's Grebe.....	1	Canvasback.....	553
Horned Grebe.....	3	Greater Scaup.....	227
Eared Grebe.....	129	Lesser Scaup.....	906
Pied-billed Grebe.....	10	Ring-necked Duck.....	1,357
Loon.....	126	American Goldeneye.....	2
Red-throated Loon.....	1	Bufflehead.....	55
Atlantic Puffin.....	23	Harlequin Duck.....	6
Cassin's Auklet.....	2	American Eider.....	1
Black Guillemot.....	112	White-winged Scoter.....	1
Murre.....	153	Ruddy Duck.....	16
Razor-billed Auk.....	53	Blue Goose.....	68
Glaucous-winged Gull.....	24	White-fronted Goose.....	4
Great Black-backed Gull.....	8	Canada Goose.....	436
Western Gull.....	600	Whistling Swan.....	3
Herring Gull.....	19,298	Roseate Spoonbill.....	21
California Gull.....	8	White-faced Glossy Ibis.....	3
Ring-billed Gull.....	4,519	American Bittern.....	11
Laughing Gull.....	230	Least Bittern.....	16
Franklin's Gull.....	287	Great Blue Heron.....	123
Caspian Tern.....	1,273	American Egret.....	618
Royal Tern.....	2,502	Snowy Egret.....	163
Forester's Tern.....	23	Reddish Egret.....	8
Common Tern.....	23,429	Louisiana Heron.....	224
Arctic Tern.....	1,113	Little Blue Heron.....	1,398
Roseate Tern.....	4,843	Green Heron.....	111
Least Tern.....	278	Black-crowned Night Heron.....	684
Sooty Tern.....	1	King Rail.....	5
Black Tern.....	38	Clapper Rail.....	2
Black Skimmer.....	306	Virginia Rail.....	13
Leach's Petrel.....	817	Sora.....	17
Ashy Petrel.....	2	Yellow Rail.....	3
Wilson's Petrel.....	1	Florida Gallinule.....	11
Gannet.....	1	Florida Gallinule x Coot.....	1
Water-Turkey.....	274	Coot.....	1,818
European Cormorant.....	63	Northern Phalarope.....	1
Double-crested Cormorant.....	427	Wilson's Phalarope.....	7
White Pelican.....	702	Avocet.....	3
Brown Pelican.....	431	Black-necked Stilt.....	3
American Merganser.....	12	Woodcock.....	5
Red-breasted Merganser.....	2	Wilson's Snipe.....	13
Hooded Merganser.....	10	Dowitcher.....	253
Mallard.....	14,526	Stilt Sandpiper.....	10
Black Duck.....	4,283	Knot.....	1
Gadwall.....	173	Pectoral Sandpiper.....	48
Baldpate.....	657	White-rumped Sandpiper.....	28
Green-winged Teal.....	2,642	Least Sandpiper.....	396
Blue-winged Teal.....	2,475	Red-backed Sandpiper.....	14
Cinnamon Teal.....	215	Semipalmated Sandpiper.....	3,210
Shoveller.....	100	Western Sandpiper.....	38
Pintail.....	11,894	Sanderling.....	18
Wood Duck.....	597	Greater Yellow-legs.....	40

Lesser Yellowlegs.....	103	Roadrunner.....	7
Solitary Sandpiper.....	24	Yellow-billed Cuckoo.....	33
Willet.....	4	Black-billed Cuckoo.....	34
*Wandering Tattler.....	2	Belted Kingfisher.....	20
Upland Plover.....	1	Hairy Woodpecker (<u>villosus</u> group).....	78
Spotted Sandpiper.....	247	Downy Woodpecker (<u>pubescens</u> group).....	346
Killdeer.....	136	Texas Woodpecker (<u>scalaris</u> group).....	3
Semipalmated Plover.....	149	Nuttall's Woodpecker.....	1
Piping Plover.....	23	White-headed Woodpecker.....	1
Ruddy Turnstone.....	2	Yellow-bellied Sapsucker (<u>varius</u> group).....	70
Oyster-catcher.....	3	Williamson's Sapsucker.....	2
Bob-white.....	633	Pileated Woodpecker.....	3
Mountain Quail.....	2	Red-headed Woodpecker.....	109
Scaled Quail.....	22	Ant-eating Woodpecker.....	33
California Quail.....	366	Lewis's Woodpecker.....	1
Gambel's Quail.....	61	Red-bellied Woodpecker.....	59
Ruffed Grouse.....	3	Gila Woodpecker.....	8
Willow Ptarmigan.....	1	Flicker (<u>auratus</u> group).....	733
Sharp-tailed Grouse.....	16	Red-shafted Flicker.....	28
Ring-necked Pheasant.....	280	Whip-poor-will.....	9
Hungarian Partridge.....	22	Nighthawk.....	14
Wild Turkey.....	416	Chimney Swift.....	14,432
Mourning Dove.....	1,654	Ruby-throated Hummingbird.....	10
Ground Dove.....	26	Rufous Hummingbird.....	1
Inca Dove.....	4	Kingbird.....	121
Domestic Pigeon.....	7	Arkansas Kingbird.....	74
Chinese Spotted Dove.....	76	Crested Flycatcher (<u>crinitus</u> group).....	54
Turkey Vulture.....	21	*Arizona Crested Flycatcher (<u>magister</u> group).....	3
Black Vulture.....	1,606	Ash-throated Flycatcher (<u>cinerascens</u> group).....	6
Marsh Hawk.....	54	Phoebe.....	520
Sharp-shinned Hawk.....	14	Say's Phoebe.....	49
Cooper's Hawk.....	42	Black Phoebe.....	8
Goshawk.....	1	Wood Pewee.....	18
Red-tailed Hawk (<u>borealis</u> group).....	15	Western Wood Pewee.....	5
Red-shouldered Hawk (<u>lineatus</u> group).....	13	Yellow-bellied Flycatcher.....	39
Swainson's Hawk.....	7	Western Flycatcher.....	3
Broad-winged Hawk.....	16	Acadian Flycatcher.....	10
Rough-legged Hawk.....	40	Alder Flycatcher.....	22
Ferruginous Rough-leg.....	28	Least Flycatcher.....	78
Golden Eagle.....	7	Vermilion Flycatcher.....	2
Bald Eagle.....	22	Horned Lark (<u>alpestris</u> group).....	105
Prairie Falcon.....	1	Magpie.....	18
Pigeon Hawk.....	4	Blue Jay.....	2,716
Sparrow Hawk.....	80	Steller's Jay (<u>stelleri</u> group).....	97
Osprey.....	72	Woodhouse's Jay.....	23
Barn Owl.....	71	California Jay.....	28
Long-eared Owl.....	38	Canada Jay (<u>canadensis</u> group).....	3
Short-eared Owl.....	19	Raven.....	3
Barred Owl.....	7	White-necked Raven.....	56
Saw-whet Owl.....	2	Crow.....	931
Screech Owl.....	107		
Great Horned Owl.....	44		
Snowy Owl.....	7		
Burrowing Owl.....	20		

Fish Crow.....	8	Sage Sparrow.....	2
Clarke's Nutcracker.....	22	Rufous-crowned Sparrow.....	1
Pinon Jay.....	1	Song Sparrow.....	6,670
Starling.....	9,891	Lincoln's Sparrow.....	1,413
Bobolink.....	12	Swamp Sparrow.....	755
Cowbird.....	2,021	Fox Sparrow.....	1,370
Yellow-headed Blackbird.....	480	Towhee.....	1,230
Red-winged Blackbird.....	2,545	Arctic Towhee (<u>maculatus</u> group).....	284
Meadowlark.....	287	Canon Towhee (<u>fuscus</u> group).....	59
Western Meadowlark.....	139	California Towhee (<u>crissalis</u> group).....	307
Hooded Oriole.....	39	Abert's Towhee.....	51
Orchard Oriole.....	57	Green-tailed Towhee.....	42
Baltimore Oriole.....	377	Cardinal.....	1,524
Bullock's Oriole.....	99	Rose-breasted Grosbeak.....	148
Rusty Blackbird.....	128	Black-headed Grosbeak.....	205
Brewer's Blackbird.....	221	Blue Grosbeak.....	4
Grackle (<u>quiscula</u> group).....	5,478	Indigo Bunting.....	271
Boat-tailed Grackle.....	1,173	Lazuli Bunting.....	33
Evening Grosbeak.....	349	Western Tanager.....	64
Pine Grosbeak.....	58	Scarlet Tanager.....	84
Purple Finch.....	4,563	Summer Tanager.....	10
Cassin's Purple Finch.....	1	Purple Martin.....	442
House Finch.....	3,352	Cliff Swallow.....	98
Crossbill.....	41	Barn Swallow.....	2,215
Hoary Redpoll.....	8	Tree Swallow.....	1,704
Redpoll.....	569	Violet-green Swallow.....	32
Goldfinch (<u>tristis</u> group).....	940	Bank Swallow.....	1,087
Arkansas Goldfinch (<u>psaltria</u> group).....	40	Rough-winged Swallow.....	44
Pine Siskin.....	112	Bohemian Waxwing.....	1
English Sparrow.....	398	Cedar Waxwing.....	2,030
Snow Bunting.....	383	Phainopepla.....	12
Lapland Longspur.....	100	Northern Shrike.....	13
Chestnut-collared Longspur.....	6	Loggerhead Shrike (<u>ludovicianus</u> group).....	82
Vesper Sparrow.....	160	Red-eyed Vireo.....	168
Savannah sparrow.....	1,115	Philadelphia Vireo.....	8
*Large-billed Sparrow.....	1	Warbling Vireo.....	16
Grasshopper Sparrow.....	14	Yellow-throated Vireo.....	7
Henslow's Sparrow.....	7	Solitary Vireo (<u>solitarius</u> group).....	7
Leconte's Sparrow.....	2	White-eyed Vireo.....	6
Seaside Sparrow.....	4	Black and White Warbler.....	282
Lark Sparrow.....	24	Prothonotary Warbler.....	12
Harris's Sparrow.....	2,094	Worm-eating Warbler.....	6
White-crowned Sparrow (<u>leucophrys</u> group).....	4,912	Blue-winged Warbler.....	14
Golden-crowned Sparrow.....	876	Brewster's Warbler.....	2
White-throated Sparrow.....	15,344	Lawrence's Warbler.....	1
Tree Sparrow.....	4,564	Golden-winged Warbler.....	11
Chipping Sparrow.....	3,030	Nashville Warbler.....	135
Clay-colored Sparrow.....	326	Orange-crowned Warbler (<u>celata</u> group).....	260
Brewer's Sparrow.....	2	Tennessee Warbler.....	334
Field Sparrow.....	1,005	Parula Warbler.....	30
White-winged Junco.....	4	Cape May Warbler.....	78
Junco (<u>hyemalis-oregonus</u> group).....	18,054	Yellow Warbler.....	321
Red-backed Junco.....	574		

Black-throated Blue Warbler.....	98	Bewick Wren (<u>bewicki</u> group).....	89
Myrtle Warbler.....	1,504	House Wren.....	2,722
Audubon's Warbler.....	287	Winter Wren.....	91
Magnolia Warbler.....	315	Long-billed Marsh Wren.....	187
Cerulean Warbler.....	4	Brown Creeper.....	307
Chestnut-sided Warbler.....	102	White-breasted Nuthatch.....	438
Bay-breasted Warbler.....	66	Red-breasted Nuthatch.....	106
Blackpoll Warbler.....	252	Brown-headed Nuthatch.....	1
Blackburnian Warbler.....	33	Pygmy Nuthatch.....	113
Black-throated Green Warbler.....	106	Tufted Titmouse.....	393
Townsend's Warbler.....	1	Plain Titmouse (<u>inornatus</u>	
Pine Warbler.....	62	group).....	53
Palm Warbler (both).....	85	Chickadee (<u>atricapillus</u> group).....	1,420
Prairie Warbler.....	28	Carolina Chickadee	
Ovenbird.....	756	(<u>carolinensis</u> group).....	80
Northern Water-thrush		Mountain Chickadee (<u>gambeli</u>	
(<u>noveboracensis</u> group).....	238	group).....	62
Louisiana Water-thrush.....	5	Chestnut-backed Chickadee	
Kentucky Warbler.....	9	(<u>rufescens</u> group).....	31
Connecticut Warbler.....	47	Bush-tit.....	31
Mourning Warbler.....	113	Verdin.....	3
Macgillivray's Warbler.....	3	Wren-tit.....	7
Maryland Yellow-throat (<u>trichas</u>		Golden-crowned Kinglet.....	258
group).....	531	Ruby-crowned Kinglet.....	344
Chat.....	64	Blue-gray Gnatcatcher.....	7
Hooded Warbler.....	3	*Plumbeous Gnatcatcher.....	1
Wilson's Warbler (<u>pusilla</u> group).....	134	Townsend's Solitaire.....	61
Canadian Warbler.....	150	Wood Thrush.....	304
Redstart.....	771	Veery (<u>fuscescens</u> group).....	247
Pipit.....	30	Gray-cheeked Thrush	
Sage Thrasher.....	3	(<u>minima</u> group).....	381
Mockingbird.....	664	Olive-backed Thrush (<u>ustulata</u>	
Catbird.....	3,036	group).....	1,183
Brown Thrasher.....	1,791	Hermit Thrush.....	1,405
Curve-billed Thrasher.....	10	Robin.....	6,912
Bendire's Thrasher.....	1	Varied Thrush.....	45
California Thrasher.....	26	Bluebird.....	1,128
Crissal Thrasher.....	11	Western Bluebird (<u>mexicana</u>	
Cactus Wren.....	49	group).....	333
Rock Wren.....	2	Mountain Bluebird.....	47
Carolina Wren.....	155		

Station totals.—There are still some station operators who apparently do not understand the reason that the Bureau has made the rule to include in the total only those birds whose records are actually received at the Biological Survey by the close of business on June 30. It is believed, however, that a little thought will convince cooperators that some rule must be applied, and with stations scattered throughout the country as well as in Canada, it would be virtually impossible to close the books unless a rule of this kind was made and rigidly adhered to.

As has been stated in previous reports, the value of any particular banding station cannot be determined solely by the number of birds that it bands, as some stations that band relatively few birds do interesting and valuable work. Nevertheless, these tabulations have been enthusiastically received at all banding stations and the Survey is accordingly glad to publish them for the information of all concerned.

The following banded more than 1,000 birds:

O. L. Austin Ornithological Research Station, North Eastham, Mass.....	24,440
E. A. McIlhenny, Avery Island, La.....	12,706
Wm. I. Lyon, Waukegan, Ill.....	11,449
Ben B. Coffey, Jr., Memphis, Tenn.....	7,553
Dr. A. O. Cross and W. A. O. Gross, Brunswick, Maine.....	7,157
F. E. and C. C. Ludwig, Lansing, Mich.....	6,883
Philip A. DuMont, Columbia, S. Dak.....	6,163
F. Burton Whitman, Jr., Wollaston, Mass.....	5,770
Mrs. Marie V. Beals, Elmhurst, N. Y.....	5,083
Alfred A. Reuss, Jr., Blue Island, Ill.....	4,858
Irvin St. J. Sturgis, Lexington, Mo.....	4,151
Christian J. Goetz, Cincinnati, Ohio.....	3,720
Nion R. Tucker, San Francisco, Calif.....	3,395
Wm. P. Wharton, Groton, Mass.....	3,164
Dr. J. F. Brenckle, Northville, S. Dak.....	3,121
Mr. and Mrs. Harold Michener, Pasadena, Calif.....	3,028
Mrs. F. C. Laskey, Nashville, Tenn.....	2,896
E. Milby Burton, Charleston, S. Car.....	2,894
Frederick C. Labahn, Jr., Blue Island, Ill.....	2,803
Ida Merriman, Kingston, Ont.....	2,701
Henry P. Baily, Philadelphia, Pa.....	2,658
Charles H. Feltes, Modesto, Calif.....	2,642
C. E. Holcombe, Zion, Ill.....	2,636
Preston F. Osborn, Lakin, Kans.....	2,633
Geo. E. Mushbach, Brigham, Utah.....	2,546
Dr. Edmund Jurica, Lisle, Ill.....	2,468
Harold C. Wilson, Ephraim, Wis.....	2,445
Dr. A. R. Shearer, Mont Belvieu, Tex.....	2,383
Hugh M. Worcester, Berkeley, Calif.....	2,293
Mrs. Ethel M. Crowell and Sears Crowell, Franklin, Mass.....	2,224
R. J. Middleton, Norristown, Pa.....	2,010
A. J. Butler, Chilliwack, B. C.....	1,828
Dr. T. E. Musselman, Quincy, Ill.....	1,804
Charles B. Floyd, Newton, Mass.....	1,800
Louise J. Miller, Zion, Ill.....	1,791
F. W. George, Sioux Falls, S. Dak.....	1,756
E. E. Allgier, Lake Andes, S. Dak.....	1,737
Irl Rogers, Modesto, Calif.....	1,720
Karl E. Bartel, Blue Island, Ill.....	1,694
Edward M. Davis and Wm. M. Davis II, Shirley, Mass.....	1,671
Bennett K. Matlack, Bridgeton, N. J.....	1,612
J. P. Kennedy, Winnipeg, Man.....	1,468
M. J. Magee, Sault Ste. Marie, Mich.....	1,434
Dr. S. Prentiss Baldwin, Cleveland, Ohio.....	1,342
E. R. Kalmbach, Denver, Colo.....	1,330
Glenn Berner, Jamestown, N. Dak.....	1,275
Mrs. H. W. Gray, Wilton, N. Dak.....	1,257
Rev. G. C. M. Bierens, Fairmount, N. Dak.....	1,244
Edward Ward, Delta, Man.....	1,146
M. L. Jones, Pomeroy, Iowa.....	1,143
Israel J. Pothier, Lower Wedgeport, N. S.....	1,132
C. M. Owens, Monticello, Ark.....	1,128
Dr. Karl Christofferson, Blaney, Mich.....	1,122

Dr. Lawrence E. Hicks, Columbus, Ohio.....	1,120
Wm. W. Demeritt, Key West, Fla.....	1,117
M. M. Turner, Water Valley, Miss.....	1,100
E. W. Ehmann, Piedmont, Calif.....	1,053
Mrs. Marie Domitz and Gustav Domitz., Pequannock, N.J.....	1,011
Howard W. Braun, Canton, Ohio.....	1,000
Joseph Powers, Flanders, N.Y.....	1,000

The following banded between 800 and 1,000:

Shaler E. Aldous, Denver, Colo.	Geoffrey Gill, Huntington, N.Y.
Robert Allison, Athol, Mass.	Richard Gordon, Abbeville, La.
B. S. Bowdish, Demarest, N. J.	Lyndon R. Hargrave, Flagstaff, Ariz.
Dr. H. A. Burns, Ah-gwah-ching, Minn.	W. Rodman Peabody, Milton, Mass.
Louis R. Caywood, Tucson, Ariz.	H. D. Ruhl, Lansing, Mich.
Norman Gall, Sebewaing, Mich...	Prof. Robert E. Ware, Clemson College, S.C.

The following banded between 500 and 800:

M. E. Beatty, Yosemite Park, Calif.	Mrs. B. B. Mayhill, Delphi, Ind.
Wm. E. Brentzel, Fargo, N. Dak.	H. E. McArthur, Waukegan, Ill.
Harold J. Brodrick, Washington's Birthplace, Va.	C. A. A. Pedersen, Montvale, N.J.
Mrs. George E. Burbank, Sandwich, Mass.	Fred H. Pegg, Glenevis, Alta.
John B. Calhoun, Nashville, Tenn.	Dr. Wm. Pepper, Philadelphia, Pa.
Stuart Criddle, Treesbank, Man.	Wm. Pepper, Jr., Wyncote, Pa.
Mrs. Frederick Morse Cutler, Amherst, Mass.	Mrs. Charles E. Peterson, Madison, Minn.
Wm. M. Davidson, Silver Spring, Md.	E. Carroll Poler, Medina, N.Y.
Dr. D. A. Dery, Quebec, Que.	J. L. Primrose, Raleigh, N. C.
Frank M. Erickson, Salem, Oreg.	R. Clark Richards, Ogdensburg, N.Y.
Allan C. Fraser, Ithaca, N.Y.	Vernon Rossman, Waukesha, Wis.
Reed W. Ferris, Beaver, Oreg.	Arthur Rotch, Boston, Mass.
Mrs. Ada C. Govan, Lexington, Mass.	Clarence H. Schoenike, Oconomowoc, Wis.
Earl R. Greene, New Holland, N. C.	H. H. Southam, Toronto, Ont.
H. Gordon Heggeness, Fargo, N. Dak.	Don. K. Stephenson, South Bend, Ind.
Paul W. Hoffmann, Milwaukee, Wis.	James J. Storrow, Boston, Mass.
Egbert R. Jones, Ceres, Calif.	Peter J. van Huizen, Cambridge, Md.
C. Gordon Kriebel, Norristown, Pa.	Don. H. Welsh, Elkhart, Kans.
George Lang, Indian Head, Sask.	Mrs. Kenneth B. Wetherbee, Worcester, Mass.
	Mrs. Will Williams, Bakersfield, Calif.
	Charles Yeomans, Chicago, Ill.

The following banded between 300 and 500:

George A. Ammann, Ruthven, Iowa	H. L. Chaffee, Amenia, N. Dak.
Mrs. Effie A. Anthony, Bar Harbor, Maine	Mr. and Mrs. Ben L. Clary, Coachella, Calif.
Bertram A. Barber, Hillsdale, Mich.	Marion Clow, Lake Forest, Ill.
Fred G. Bard, Regina, Sask.	Frank H. Convey, Elizabeth, N.J.
S. M. Batterson, Mohler, Oreg.	George L. Cook, Chilliwack, B. C.
Paul Beaubien, Flagstaff, Atiz.	Allan D. Creelman, North Scituate, Mass.
Henry A. Bowden, Litchfield, Conn.	Mrs. Marie Dales, Sioux City, Iowa
Oscar M. Bryens, McMillan, Mich.	L. E. Dyke, Winter Park, Fla.
Herbert R. Buettner, Burlington, Iowa	John M. Frazier, Hattiesburg, Miss.
Waldemar Burding, Quogue, N.Y.	Mr. and Mrs. John A. Gillespie, Glenolden, Pa.
Verdi Burtch, Branchport, N.Y.	

Arthur J. Gorski, Ephraim, Wis.
Edward H. Graper, Wakefield, Mich.
Edward P. Hamilton, Milton, Mass.
Dr. Harold H. Hayes, Hubbard Woods, Ill.
Lawrence E. Hunter, Dallas City, Ill.
Harold L. Hutchins, Hamden, Conn.
Eric C. Kinsey, Manor, Calif.
P. Kuntz, Winnipeg, Man.
Dr. Harrison F. Lewis, Ottawa, Ont.
Henry B. Loeff, Oak Harbor, Wash.
Malcolm McDonald, Delmar, N.Y.
Edwin D. McKee, Grand Canyon, Ariz.
James P. Melzer, Milford, N.H.
Arthur Milliken, North Andover, Mass.
Mrs. Daisie M. Morrison, Gulfport, Fla.

The following banded between 200 and 300:

H. L. Angus, Quincy, Ill.
Dr. Harry A. Barbour, Mayville, Mich.
L. H. Barkhausen, Chicago, Ill.
Philip C. Barney, Farmington, Conn.
Wesley H. Bartlett, Fairfield, Iowa
Walt Batezel, Collingswood, N.J.
James E. Beecher, Chicago, Ill.
Beecher Beery, Pleasant Hill, Ohio
Carmen Beining, Platteville, Wis.
H. M. Boyer, Midland, Tex.
Joseph M. Bradley, Weston, Mass.
R. H. Carter, Muscow, Sask.
Ralph D. Dieterle, Detroit, Mich.
H. M. DuBois, Portland, Oreg.
An rew H. DuPre, McClellanville, S.C.
Thomas E. Engleby, Roanoke, Va.
Constance Everett, Waseca, Minn.
P. E. Fellows, Hartford, Conn.
Mr. and Mrs. Louis G. Flentge,
Wheeling, Ill.
Frank B. Foster, Phoenixville, Pa.
Maxwell E. Foster, South Hamilton, Mass.

The following banded between 100 and 200:

Robert Adams, Waukesha, Wis.
C. M. Aldous, Orono, Maine
Walter I. Allen, Altadena, Calif.
Oscar P. Allert, McGregor, Iowa
Will C. Baker, Kingston, Ont.
Richard O. Bender, Prospect Park, Pa.
Mrs. Anna Benson, Fruita, Colo.
Mrs. Harriet W. Blake, Berkeley, Calif.
Charles H. Bradshaw, Mesick, Mich.
Herbert Buckalew, Milford, Del.
Floyd B. Chapman, Columbus, Ohio
Lawrence B. Chapman, Newton Highlands,
Mass.

Clifford Presnall, Zion National Park,
Utah
Christopher T. Ridley, Norwood, Man.
Frank W. Robl, Ellinwood, Kansas
Mrs. S. H. Rogers, Buford, Tenn.
Rexford N. Saxton, Washington, D. C.
Herman W. Schaars, Milwaukee, Wis.
Gustav J. Schultz, Waukegan, Ill.
Charles J. Spiker, Branchport, N. Y.
Prof. J. W. Stack, East Lansing, Mich.
Prof. O. A. Stevens, Fargo, N. Dak.
Dr. Dayton Stoner, Albany, N.Y.
Frank Urquhart, Port Coquitlam, B.C.
S. W. Witmer, Goshen, Ind.

Rudolph S. Fried, Katonah, N.Y.
Vernon Haskins, East Durham, N.Y.
Grant Henderson, Greensburg, Ind.
Mrs. L. G. Hobson, Louisville, Ky.
Dr. B. L. von Jarchow, Racine, Wis.
Robert H. Jordan, Oklahoma City, Okla.
Howard H. Krug, Chesley, Ont.
Allen S. Montgomery, Owosso, Mich.
Geo. D. Robinson, Ridley Park, Pa.
Will Robinson, Terrace, B. C.
Lewis O. Shelley, East Westmoreland, N.H.
M. Lawrence Shields, Andover, Mass.
H. M. Simpson, West Summerland, B.C.
Roger L. Slocum, Trempealeau, Wis.
G. Stratton, Waco, Tex.
E. L. Sumner, Menlo Park, Calif.
Blanche Vignos, Los Angeles, Calif.
Clarence Webb, Jr., Earleville, Md.
John Price Wetherill, Jr.,
Philadelphia, Pa.
Reginald V. Whelan, Smoky Falls Plant, Ont.
Mrs. Ruth J. Wright, Randolph, Mass.

O. B. Christy, Muncie, Ind.
C. Conklin, Canal Winchester, Ohio
Raymond R. Cook, Chilmark, Mass.
James Cosby, Jr., Buffalo, N.Y.
Elizabeth L. Curtis, Seattle, Wash.
John Dorman, Philadelphia, Pa.
Paul E. Downing, Highland Park, Pa.
Carl Eggert, Rockford, Ill.
John T. Emlen, Jr., Davis, Calif.
J. T. Fowle, Vernon, B. C.
Harriet A. Frothingham, Brookline, Mass.
Rev. Paul B. Frydrych, Dayton, Ohio
Keahon Garland, Demarest, N.J.

Mrs. Wm. Gerdes, Jr., Quincy, Ill.
Mrs. Blanche M. Getty, Sioux falls,
S. Dak.
Mrs. Charlotte H. Green, Raleigh, N.C.
Owen J. Gromme, Milwaukee, Wis.
Mrs. Marjorie Lee Guest, Athens, Ohio
Mrs. Gladys Hamersley, Duncan, B. C.
Harry S. Hathaway, South Auburn, R. I.
Leonard Heaton, Moccasin, Ariz.
Harold Hedges, Kansas City, Mo.
Dr. Elmer A. Heinz, Quincy, Ill.
Carlton Herman, Syracuse, N. Y.
Louis E. Hildebrand, Kenilworth, Ill.
Paul F. Hodge, Washington, D. C.
Frank Hopkins, Campbellsport, Wis.
Dr. J. E. Horning, Edmonton, Alta.
Walter P. Houle, Forest Lake, Minn.
Edward S. Huddleston, Tippecanoe City,
Ohio
George A. Ingham, Jr., Collingdale, Pa.
Mr. and Mrs. Earl Jackson, Santa Fe,
N. Mex.
Mrs. Esther L. Jackson, Ohio, Ill.
Thomas N. Jones, Union, Ont.
Howard W. Knight, Belchertown, Mass.
Bert Lambert, Allenville, Mich.
Joseph Mailliard, San Francisco, Calif.
Horace D. McCann, Paoli, Pa.
Edward McColgan, Catonsville, Md.
H. M. Meades, Niagara Falls, Ont.
Jesse V. Miller, Peterboro, N. H.
Mrs. Blanche L. Morton, Indianapolis, Ind.
Mrs. Margaret M. Nice, Columbus, Ohio
Mrs. Elizabeth F. Norris, Buck Hill Falls,
Pa.
Mrs. Ethel R. O'Keefe, Glenarm, Ill.
Wm. H. Over, Vermilion, S. Dak.

John L. Partin, Los Angeles, Calif.
James L. Peters, Harvard, Mass.
Prof. O. W. Pfleuger, Mont Alto, Pa.
Helen S. Pratt, Eagle Rock, Calif.
Edgar S. Preston, Tower City, N. Dak.
F. W. Rapp, Vicksburg, Mich.
Marc C. Rich, New York, N.Y.
Harry Richardson, Grand Rapids, Mich.
Agnes Russell, Westfield, Wis.
Mrs. Grace T. Sargent, Pasadena, Calif.
Mr. and Mrs. A. F. Satterthwait,
Webster Groves, Mo.
Barton L. Sharp, Lititz, Pa.
Cora E. Shoop, Steelville, Mo.
George S. Shortess, Elizabethtown, Pa.
James Silver, Washington, D.C.
Prof. Frank Smith, Hillsdale, Mich.
Frank R. Smith, Church Creek, Md.
Wendell P. Smith, Wells River, Vt.
William P. Sparks, Waco, Tex.
Carlos Stannard, Phoenix, Ariz.
E. Grace Stewart, New York, N.Y.
Paul A. Stewart, Leetonia, Ohio
Estes Suter, Hot Springs, S. Dak.
Dr. George M. Sutton, Ithaca, N.Y.
W. B. Taber, Kansas, Ill.
Mrs. Arthur P. Thomas, Indianapolis, Ind.
Mrs. John A. Thompson, Minneapolis, Minn.
Frank J. Vejtasa, Fairdale, N. Dak.
Dr. Larwence H. Walkinshaw, Battle
Creek, Mich.
Lawrence Ward, St. Johns, Mich.
Louis M. Weber, St. Louis, Mo.
E. C. Weeks, Sanbornton, N.H.
Julius H. White, Rochester, N.Y.
Charles L. Whittle, Peterboro, N.H.
LeRoy Wilcox, Speonk, N.Y.
Dr. Harold B. Wood, Harrisburg, Pa.
Dr. C. Brooke Worth, St. Davids, Pa.

PHOTOGRAPHS

Many interesting and valuable additions to the photographic files have been made during the year but pressure of other work has prevented completing the albums. It is hoped, however, that it will be possible to get this work up-to-date in the near future. The photographs received during the year are as follows:

Don H. Welsh, Elkhart, Kans., 4; one showing a number of Pintails and other ducks in his banding trap, the others showing large flocks of ducks in flight on the Cimarron River. In one picture a Golden Eagle is seen flying low over the ducks.

Wm. I. Lyon, Waukegan, Ill., a photograph of a Bronzed Grackle showing the injury that can result to a bird's foot from use of an improper band.

W. R. Sullivan, Legion, Tex., 6 beautiful photographs of Black-chinned Hummingbirds. In one of the pictures there are at least eight of these little birds grouped around one of his food containers.

Oscar M. Bryens, McMillan, Mich., 3, showing winter scenes at his banding station.

Edward McColgan, Catonsville, Md., 8 photographs of a Woodcock, a Flicker, a Purple Finch, a Tree Sparrow, a Chickadee, a Robin, and a Wood Thrush.

Mrs. Howard A. Drew, Barre, Vt., 3 photographs of two of the traps in use at her station, all of which have glass sides and tops.

Lewis R. Caywood, Coolidge, Ariz., a picture of a cat in one of his banding traps. When the cat had been killed an autopsy was performed and a bird band removed from its stomach, positive evidence of the destruction of bird life by this animal in the vicinity of the banding station.

J. R. Douglass, Twin Falls, Idaho, 4 photographs of wild ducks feeding in a wheat field on the outskirts of the town.

Pres on F. Osborn, Lakin, Kans., a series of 20 attractive photographs of the birds on his private waterfowl sanctuary and of different catches of ducks in his banding traps.

E. R. Greene, New Holland, N. C., a series of 8, one of the inside of his large waterfowl trap, one of himself releasing a banded Baldpate, some showing his traps during a snow storm, and the others of scenes in the vicinity of his station.

John A. Gillespie, Glenolden, Pa., a series of 4 photographs of incidents connected with the banding of several young Bald Eagles in April 1936.

Alfred H. Reuss, Jr., Blue Island, Ill., 3 pictures of traps at his banding Station.

F. W. Robl, Ellinwood, Kansas, 5, of ducks and geese (309 of the latter) that wintered on his farm, and of a waterfowl trap he operated during January on the Cimarron River. In three successive days with this trap he caught 68, 129, and 87 Mallards, a total of 184 for three day's work.

Paul W. Hoffman, Milwaukee, Wis., a series of 8, including portraits of a Forster's Tern on its nest, a Wilson's Phalarope, a Chipping Sparrow, and young of the Forster's Tern and Pied-billed Grebe.

Fred H. Pegg, Glenevis, Alta., 4 pictures taken at his station, one of a drop trap baited with the carcasses of two skunks which Mr. Pegg says make very good bait during the winter for Canada Jays, Hairy and Downy Woodpeckers, and Black-capped Chickadees; another shows two Sharp-tailed Grouse in this same trap. (Mr. Pegg caught 19 of these birds during the season.) A third photograph is that of a Black-capped Chickadee in a carrying cage, and the fourth shows a beginners flat trap for small birds on a low platform.

Roy. H. Smith, Kent, Ohio, a photograph of a dead Starling found in the bottom of a brick smokestack.

E. Carroll Poler, Medina, N. Y., 4 photographs of a Bank Swallow trap that he developed, which operates successfully on large colonies of these birds.

Allen Green, Oakville, Iowa, a photograph of a large flock of Mallards feeding in the cornfield at the edge of his refuge, and one of 35 egrets that spent two months on the refuge during the summer of 1935.

C. V. Bracher, of St. Louis, Mo., an excellent photograph of a Woodcock on its nest.

Israel J. Pothier, Lower Wedgeport, Nova Scotia, a photograph of Outer Bald Island where Common and Arctic Terns and Leach's Petrels nest.

Duke Trempe, Sault Ste. Marie, Mich., 2 photographs of European Murres at a colony in Sweden.

E. A. McIlhenny, Avery Island, La., 2 excellent photographs of the large trap that he constructed for the capture of Black Vultures, with a hundred or more of these birds in and around the trap.

Karl E. Bartel, Blue Island, Ill., a series of 7 photographs of scenes in the vicinity of his banding station.

P. F. Hodge, Washington, D. C., 7 photographs of waterfowl and their nests in and around the Roaches Run Refuge on the Potomac River below Washington. One of the photographs shows a large carp eating corn placed as food for the ducks.

WORK AT BANDING STATIONS

This entire issue of Bird Banding Notes could be composed of the interesting reports on this subject received during the past year but space, of course, does not permit even brief mention of the work of every banding station, so it is hoped that cooperators will not feel slighted if no reference is made to their activities in the following paragraphs.

Wm. P. Wharton, of Groton, Mass., reports that he has been carrying on a study of the effects of the Protocalliphora fly on nestling Bluebirds and Tree Swallows, and to some extent on other species. Station operators will recall that this is a continuation of a project originally started by the late Charles W. Johnson of the Boston Society of Natural History.

Prof. R. E. Ware, of Clemson College, S. C., has reported to the Bureau that he has ordered some of the new Verball traps to be used in capturing hawks for banding purposes. He remarks that he has been criticized for banding hawks and releasing them, a comment that brings to mind the almost universal prejudice existing against the birds of prey. Bird-banding cooperators should do everything possible to counteract this feeling, as the hawks and owls are among the most interesting of our native birds and should not be condemned even when on occasion they may kill one of the song or game birds. It should be remembered that they have probably been doing this for hundreds of years without any appreciable effect on the relative abundance of the species preyed upon.

The group of banding stations operated by Alfred H. Reuss, Jr., Karl Bartel, and Frederick C. Labahn, Jr., at Blue Island, Ill., had a very successful season. A report from Mr. Reuss in February indicated that they all had banded large numbers of birds of several

varieties. A diagram submitted by Mr. Bartel shows the relationship of these three stations. These cooperators have been making serious attempts to capture adult Herring Gulls, which is a real job as the writer of these notes knows from personal experience. Messrs. Reuss, Bartel, and Labahn have started a mimeographed monthly bulletin for bird study entitled "The Old Field Lark". Only the January and February numbers are available in the Survey office, but these include much interesting material. Naturally, banding activities occupy a prominent place in the notes.

Mr. Bartel has been doing some good work in instructing farmers in the vicinity concerning the correct status of the birds of prey. He reports that some farmers have apparently changed their ideas on this subject and have reported that the prey taken by the hawks usually consists of rats, mice, and moles. Mr. Bartel is also spreading some good information concerning the destructiveness of the so-called domestic cat.

Mr. Reuss has inquired whether it is necessary to obtain formal permission from county officers to trap in a forest preserve district. If such a district has not been specifically designated as a State or Federal bird refuge, it probably is not necessary to have permission to trap in writing. Nevertheless, as a matter of policy the Bureau believes that in all such cases it is desirable to obtain such permission from the officers in charge, as that procedure will be more likely to assure their whole-hearted cooperation and so eliminate any annoyance and embarrassment.

Geoffrey Gill, of Huntington, Long Island, N. Y., acting on the suggestion made by Dr. Harold B. Wood, of Harrisburg, Pa., in the last number of Bird Banding Notes, reports that his station is conducting a special study on Catbirds, dealing particularly with the migration, nest spacing, territory, age, return of young to place of banding, and other features in the life history of this species. He would be glad to establish contact with any other station banding these birds in numbers.

Carl A. A. Pedersen, of Montvale, N. J., reporting on his work for the summer of 1935, stated that almost all the birds taken at his station during that season were captured in water drip traps, chiefly of the Chardonneret type. A male Scarlet Tanager was recaptured for the fifth consecutive season, and in 1935 it repeated so often that Mr. Pedersen finally left the trap open for it. He states that when caught the bird acted more like a chicken and would merely squat down so he could take it out of the trap.

James P. Melzer, of Milford, N. H., cautions those cooperators who work with Evening Grosbeaks or other birds with powerful bills never to have more than one bird at a time in a gathering cage. If one should seize another by the leg or wing it would result in a crushed bone. For the same reason it is a good plan to use single-celled traps when working with such birds, and to hold their heads. The reason is obvious!

Ralph H. Imler, of Stockton, Kans. has joined the ranks of those station operators who are specializing on birds of prey. In a report sent in last fall he said that in two months he had captured two Great Horned Owls, three Red-tailed Hawks, two Swainson's Hawks, one Marsh Hawk, and five Burrowing Owls. He is keeping the weights and measurements of all birds handled. The Verbaal trap described in the last number of Bird Banding Notes is undoubtedly the best trap ever devised for work of this kind as it definitely eliminates any possibility of serious injury to the captured bird.

Mrs. Marie Dales, of Sioux City, Iowa reported in December 1935, that although during the previous summer she had noted fewer birds of all species, nevertheless, during October she banded 116 Robins, a record for that species for that month at her station. She suggested that poison bran put out to kill grasshoppers in some localities might have had something to do with the shortage in birds. There is little evidence that poison bait put out for the destruction of insects has been responsible for the death of many song birds, but it is something that should be watched carefully by everyone interested. The Bureau always will be glad to have any direct evidence one way or the other.

Edward McColgan, of Catonsville, Md., also reported a shortage of birds in the vicinity of his station. He has trapped many birds afflicted with the disease known as bird diphtheria, and has sent specimens of these sick birds to the Survey laboratories where the diagnosis was made by Dr. J. E. Shillinger, In Charge of Disease Control.

Oscar M. Bryens, of McMillan, Mich., has been operating his station continuously since 1924, and in a report submitted in January of this year he gives a tabulation of the work accomplished during the different years. His biggest year was 1930, during which he banded 859 birds. His total for 1935 was 359 birds of 26 species, led by the Savannah Sparrow with 93 individuals, the Eastern Cowbird with 88, and the Snow Bunting with 35. In considering his grand total of 4,253 birds banded since 1924, it is noted that this list is still headed by the Savannah Sparrow with 1,304 individuals, followed by the Snow Bunting with 579 and the Cowbird with 528. One Savannah Sparrow banded as an immature in 1932 has been retaken every year since. After its first recapture in 1935 it repeated 38 times during the next two months. He has now captured three varieties of Redpolls at his station. These are the Common, Greater, and Hoary.

Harold C. Wilson, of Ephraim, Wis., submitted in December 1935, his report for the period from May to September, during which 2,445 birds of 25 species were banded. As usual his list was headed by the Herring Gull which made up 2,319 of the total.

Mrs. F. C. Laskey, of Nashville, Tenn., submitted during 1935 the banding data for 913 birds of 39 species. Her list is headed by the Mockingbird with 155 individuals. She is making a life-history study of that species.

C. E. Holcombe, of Zion, Ill., in commenting on the nearly 3,000 birds that he bands each year, reports that in 1935 he captured 123 Hermit Thrushes and 84 Oven-birds. Twenty-six of the thrushes were captured and banded on October 15, while 75 of the Oven-birds were banded during that month. On November 2, 1935, his grand total reached 25,000.

E. W. Ehmann, of Piedmont, Calif., who operates the waterfowl banding station at Lake Merritt, Oakland, Calif., made two trappings in November 1935, capturing 1,425 the first time and 1,104 the second. An interesting feature of the work at this station is the large number of return records that are obtained; for example, in the first trapping only 662 were new birds, and in the second only 122 were found without bands. In December 1935 the trap was operated a third time and 764 birds were captured, of which 465 were already banded.

W. E. Brentzel, of Fargo, N. Dak., banded 464 birds of 30 species during the last six months of 1935. His list is topped by the Junco with 225 individuals. It is noted that in addition to 49 Robins he also banded during this period 28 Harris's Sparrows, 22 Lincoln's Sparrows, and 14 Nashville Warblers.

Prof. J. W. Stack, of East Lansing, Mich., reports that during the winter of 1935-36 four new species were added to the list of banded birds at the Michigan State College Station, making 120 species in all. The total for these new birds was 168, including 117 Snow Buntings, 23 Lapland Longspurs, 27 Horned Larks (both Northern and Prairie forms), and 1 Horned Grebe.

Dr. E. Jurica and V. Laketek, of Lisle, Ill., banded 1,368 birds during the period from June to December, 1935. Their list was headed by the Junco with 338, followed by the Robin with 123. They banded six other kinds of thrushes, including the Eastern Bluebird, and both the Ruby-crowned and Golden-crowned Kinglets and 18 species of warblers. The warbler list was headed by the American Redstart with 82 individuals, followed by the Myrtle Warbler with 45, the Magnolia Warbler with 36, the Oven-bird with 29, and the Tennessee Warbler with 20.

Richard O. Bender, of Ridley Park, Pa., is interested in a colony of Great Blue Herons near Salem, N. J. During the present season he was able to band 19 of these birds. Although work with herons is usually somewhat difficult, which is clearly indicated by Mr. Bender's report, it is worth while as interesting return records are likely to be reported from tropical countries.

Miss Edna M. Stevens, of Blue Rapids, Kans., has reported a most interesting occurrence of the nesting of a pair of Pine Siskins. It is believed that this is the first recorded instance of the breeding of the species in that State.

A. D. Trempe, of Sault Ste. Marie, Mich., made a trip in March 1936 to the Leeward Islands of the Hawaiian group, at which time he banded several species that probably have not been previously marked. These included the Wedge-tailed Shearwater, the Brown and White Albatrosses, the Red-footed Booby, the Blue-faced Booby, the Man-of-War Bird, one of the Tropic Birds, and the Bristle-thighed Curlew. He reports seeing two flocks of the Laysan Teal, one of 18 birds and the other of 25. This species is very rare and it has been feared that it might become extinct.

Chas. H. Feltes and Irl Rogers, of Modesto, Calif., have continued their work with the Cedar Waxwings. Up to April of the present year they had between them banded nearly a thousand, and although this is only about one fifth of the number taken last year, it nevertheless is a large catch of any species.

DeWitt P. Brokaw, of Plainfield, N.J., has had a remarkably high percentage of returns considering the number of birds he has banded. He reports that the period from January to April, 1936, he recaptured 27 of the 286 birds banded between January 1, 1932, and July 1, 1935. This is nearly 10 percent. Some of his birds have been recaptured nearly every year since his station was established.

Wm. P. Wharton, of Groton, Mass., who in winter operates at Summerville, S. C., banded during the last winter 1,554 birds at that point and obtained 301 return records. Chipping Sparrows, White-throated Sparrows, and Meadowlarks are prominent in the list of species.

Ben. B. Coffey, Jr., of Memphis, Tenn., is one of the cooperators who is always successful in banding a large number of herons and it is noted that his report for the last fiscal year is no exception. In addition to herons of several species, he also reported the banding of 93 Water Turkeys, or Anhingas. A letter from him dated July 28, 1936 gives

a most interesting report of his work this season banding herons and Anhingas in the swamps of central and southern Mississippi. Mosquitoes and cotton-mouth moccasins helped to make matters interesting for the naturalists.

Preston F. Osborn, of Lakin, Kans., works with both migratory waterfowl and nongame species. His report for the last fiscal year included banding data for 2,245 birds in the waterfowl group and 356 in the nongame group. It is interesting to note that he banded 4 Cinnamon Teals, which certainly are very rare as far east as Kansas, Although they also were reported last year from Iowa. Mr. Osborn also banded 127 Mourning Doves. His waterfowl banding list is headed by the Green-winged Teal with 643 individuals, followed by the Mallard with 569, and the Blue-winged Teal with 408. His list also included Shovelers, Greater and Lesser Scaups, Ruddy Ducks, Redheads, Canvasbacks, Gadwalls, Buffleheads, and Canada Geese, as well as Virginia Rails, Coots, and Lesser Yellow-legs.

C. M. Owens, of Monticello, Ark., has submitted a report of his operations during the past fiscal year during which he banded 1,128 birds of 44 species. His list is headed by the White-throated Sparrow with 255, followed by the Swamp Sparrow with 140 and the Cardinal with 118. Of 83 White-throated Sparrows banded in November 1935, he recaptured 20, or nearly 25 percent.

Wm. I. Lyon, of Waukegan, Ill., has been conducting some interesting experiments to test the homing instinct of the Cowbird. Birds banded at his station have been shipped considerable distances in various directions and he has had some rather remarkable return records. This year Mr. Lyon extended his field activities into the Provinces of Manitoba and Saskatchewan. Incidentally, Mr. Lyon's grand total of birds banded by him was, in February 1936, 77,214 of 183 species.

Wendell W. Stillwell, of Mount Vernon, Ohio, transmitted to the Bureau a set of the cards he uses for keeping data at his station. An examination of these forms indicates that much thought has been given to the type of information desired. It is, in fact, one of the most comprehensive systems for handling station data that has been devised. Mr. Stillwell suggested that it might be possible to get announcements of banding work on some of the national radio hook-ups. It appears, however, that this is not a practical proposition but it does seem as though station operators in various parts of the country might maintain contact with their local stations and from time to time broadcast short talks that would help to spread the information that thousands of birds are wearing bands and that when they are found they should be reported to the Biological Survey in Washington.

F. W. George, of Aberdeen, S. Dak., has submitted an interesting tabulation showing the relative abundance of the different birds at his station for the years 1933, 1934, and 1935. If space were available it would be worth while reprinting these tables in Bird Banding Notes, and it brings to mind a scheme that has been advocated for many years by Mr. Lyon, the President of the Inland Association, and which is carried out on "Inland Form No. 1". In brief, it would seem possible through the results of the work at the birdbanding stations throughout the country to prepare tabulations each year that would show the relative abundance of many species of birds. Sometime if adequate help is available in the Washington office the Survey may request information of this kind from the different stations. If the plan can be worked out satisfactorily, special forms will be prepared, probably similar to those of the Inland Association.

Dale S. King, of the National Park Service, stationed at Coolidge, Ariz., has submitted a report of the work done on nine of the Southwestern Monuments during the past year. There is opportunity for some important ornithological investigations at these points and it is hoped that the work already started will be continued and expanded. Previous to July 1935 banding stations were already in operation at the Navajo, Kayenta, Arizona, and Casa Grande National Monuments, and during the summer of 1935 personnel of other monuments were informed of the program and seven new stations were established.

TRAPS

The ingenuity of birdbanding cooperators in developing new types of traps and in perfecting others continues unabated. It would require a complete issue of Bird Banding Notes to describe all those that have been reported within the last year or two. Some of these are merely modifications of others that have been in use for some time, while others have been worked out on entirely new lines. All this material is, of course, being kept available for use in the proposed revision of the Manual for Bird Banders, and reference to them in these pages is little more than an index to the files so that they will not be overlooked. When time is available to go ahead with the preparation of the revision, it may then be necessary to ask cooperators who have developed different types of traps to submit specimens so that proper drawings or photographs can be made.

Charles H. Feltes and Irl Rogers, of Modesto, Calif., had one of their Modesto traps entered in the humane trap contest of the American Humane Association, of Albany, N. Y. This is one of the best of the single-cell traps.

W. E. Brentzel, of Fargo, N. Dak., has worked out another modification of the Brenckle Water Trap. He states that as so modified it becomes an excellent general purpose trap suitable for trapping many different species of birds. The modifications are, first, a ring or hoop elevated just above the doors when they are set to provide a perch for birds and to prevent them from perching on and tripping the doors; and second, side openings to replace the top openings in one or more cells. As all cooperators who have used the Brenckle trap know, the top openings are excellent for warblers and many other birds but there are some that prefer the side openings at the ground level. One that Mr. Brentzel has modified has seven top openings and three side openings. Reporting in December 1935, he stated that this trap had caught 580 birds of which 181, or almost one-third, were taken from the side openings. This total number included more than 30 species.

In working out a suitable side opening, Mr. Brentzel states that the door should be large enough for all kinds of birds and yet it should not project above the trap where it can be used as a perch. In the type he uses, the door and trigger are of the Potter trip-door-step type but the door is cut horizontally into two pieces which are hinged at the middle by means of wire rings so that it will fold up when the trap is set. It hangs to the trap proper by means of rings attached at the top and is slightly larger than the opening to prevent forcing by birds from the inside. The trigger wire engages with the door at the middle hinge, or at the apex of the angle formed by the door when set. Guide wires on the inside of the trap chamber and wire rings on the doors slide the door when tripped to a proper closed position. Mr. Brentzel states that this door is quick acting and as the top hinge holds it rigidly in place it will not jam and fail to close when tripped.

Mrs. Howard A. Drew, of Barre, Vt., in commenting on her glass-walled traps, says that they have two advantages over hardware cloth. First, birds cannot injure themselves, and second, since the glass presents no visual obstruction, the birds enter more readily. She has submitted a sketch of a trap she proposes to make which will have two cells separated by a glass partition.

Edward P. Hamilton, of Milton, Mass., has worked out a couple of little ideas that may be useful at other stations. He says he has found that the treadle in the Glenhaven trap is so near the door that many birds set it off and yet manage to get out. Placing the treadle farther into the trap naturally solves this problem but the extra leverage of the heavier treadle requires a slight upward bend of the end of the trigger wire, which makes the trap rather difficult to set off. To overcome this he added a small flat spring made from a piece of sheet brass soldered on top of the trap which engages with a wire attached vertically to the treadle. The pressure of the spring will compensate for the extra weight of the longer treadle. The wire that engages with the spring is attached to the treadle wire about one inch from the entrance of the trap.

Mr. Hamilton suggests a means to take care of the gray squirrels that get into traps and sometimes do a great deal of damage before they can be removed. He puts a "squirrel safety valve" in all his traps by cutting a 3 x 4 inch square hole in a side of each cell, bending out at right angles at the top and bottom of this hole a square ledge or sill of the netting and putting small wooden slats into the sockets formed by the meshes of the ledge. The squirrel quickly finds these and chews his way out without damaging treadles, trigger wires, and doors. Both these ideas look as though they should be very much worth while.

W. W. Demeritt, of Key West, Fla., has sent in blue prints of the hawk traps that are used at "Station Farthest South". These are in effect drop traps made 4 ft. long, 2 ft. wide, and 1 ft. high, the framework being made of 3/8 in. welded steel rods. The entire trap is covered with 1 in. mesh poultry wire. A decoy cage is placed in the center of the trap with a figure 4 release so that a hawk entering the trap to get at the decoy steps on the long arm of the figure 4 and trips the trap.

Charles Yeomans, of Ephraim, Wis., also has been doing some experimental work with automatic releases for drop traps. He has worked out a perch trip that apparently is quite satisfactory. The supporting prop is hinged in the middle, the hinge being toward the inside of the trap. In the upper section of the prop a small round-headed screw is driven allowing clearance under the head so that a thin brass plate can be hung over it. By means of a slotted hinge a piece of 1/2-inch dowel stick a foot or more in length, is attached to the bottom of this brass plate so that it projects into the trap parallel with the ground. At the inner end of the dowel stick a short string is attached and to this another stick is tied with the opposite end on the ground. The end elevated by the string clears the ground about an inch. This provides a more or less double perch for any bird entering the trap and gives considerable leverage.

Edwin A. Mason, of Groton, Mass., has sent in an ingenious development of the sparrow trap that can be easily described and made at any banding station. The cage part of the trap is 3 ft. long, 16 in. wide, and 10 in. high, one piece of wire netting forming the top and sides. The entrances are made in the middle of both sides. To make these, two cuts are made, beginning at the bottom and carried upward 2-1/2 in. The wire between these cuts is then trimmed and bent up at right angles to the sides of the trap. Two pieces of wire netting 6 in. wide and 16 in. long are now bent in the middle and fastened like inverted "L's" to the sides of both entrances forming an alleyway open at the top and extending across the trap at the ground level. Another piece of wire netting as high and as wide as

the alleyway and in the shape of an inverted "V" is placed in the middle of the alleyway to prevent birds running through the trap and out the other side. This also deflects them upward and so into the areas at both sides of the alleyway. Number 2 hardware cloth is used throughout. Mr. Mason says that his brother, Noel M. Mason, is really the designer of this trap. While working with Mr. Wharton at Summerville, S. C., this last winter, Mr. Mason made a "Jumbo" trap of this type, 4 ft. long, 20 in. wide, and 10 in. high, with entrances 3-1/2 in. square. It proved most satisfactory, particularly for the capture of Meadowlarks.

F. W. Rapp, of Vicksburg, Mich., has submitted a diagram and description of a Figure 4 trap which has been in use at his station for about two years and which has been very effective in taking Bronzed Grackles, Blue Jays, Robins, Downy Woodpeckers, Hairy Woodpeckers, Starlings, Tufted Titmice, Chickadees, and White-breasted Nuthatches. The trap is quite similar to the Higgins Auto-Trip trap described and figured on page 32 of the Manual, with the difference that in Mr. Rapp's trap the figure 4 arrangement is entirely on the inside of the trap chamber. The trigger arrangement also is in front rather than in the rear and the door closes by falling through an arc of 90 degrees rather than by sliding up and down as in the case of the Higgins trap.

Henry C. Kyllingstad, Valley City, N. Dak., has reported much success with one of the simplest traps that has been described. In effect, the trap is merely one of the wire baskets that grocers often use to display fresh vegetables and which have a semi-circular depressed area at one end. Using the basket upside down the only alteration Mr. Kyllingstad made to transform it into a trap was to insert into the curved part of the frame, a funnel made of hardware cloth. He reports that the entire change from basket to trap took about five minutes, and that in the first 6 days he used it 10 birds were taken. Mr. Kyllingstad also reports such success with the Brenckle Water-drip trap, particularly with some of the cells modified for side-opening doors.

Howard H. Michaud, of Fort Wayne, Ind., has shown much ingenuity in developing a practical Chardonneret trap from an ordinary orange crate. These crates normally are made with two compartments and it is a relatively simple matter to remove some of the side boards and substitute hardware cloth, which of course also is used to cover the top. Mr. Michaud uses mouse-trap springs to close the doors more quickly, and the tops of small fruit jars are fastened to the trip sticks for the purpose of holding bait. By means of small screw-eyes he also attached the trigger sticks to the central partition board. Although Mr. Michaud makes no comment concerning the cost of this trap, it is believed that 50¢ would easily cover the expense.

F. W. George, of Aberdeen, S. Dak., has sent the Biological Survey a sketch of an efficient combination trap for warblers and other tree insect-eating and ground-feeding birds. Mr. George makes no claim for originality but says that it is just a good working combination type of trap that will assuredly not disappoint the user. The combination consists of two somewhat modified cells of the Potter trap and two of the Chardonneret type of traps. The four cells are baited by one pan of water in the center. Mr. George states that such a trap is easily constructed and rather inexpensive, but most important is the fact that it gets the birds. He also has developed a very efficient cat trap. This last has two chambers with sliding doors of the Potter trap type. When a treadle in the center of the trap is depressed it pulls down a cord which draws out a trigger pin that has been supporting the door, and which is thus allowed to fall.

Richard O. Bender, of Ridley Park, Pa., reports adding the Verball trap to his equipment and its successful employment in the capture of Sparrow Hawks and Barn Owls.

Henry B. Looff, of Oak Harbor, Wash., has sent in a sketch of a trap that he has found most satisfactory for the capture of waterfowl. This trap is little more than two large funnels, one built more or less inside of the other. The outer funnel has an opening of 18 in., and the inner is 5 in. Both the trap chambers are covered over and fences or leads direct the swimming birds toward the outer funnel entrance.

Arthur W. Clausen, of Blue Island, Ill., has recently submitted sketches and detailed specifications of a "Six Cell Hexagon Trap (Potter Type)" that appears to be very well made. The trap chambers measure 10 in. across the front, 1-1/2 in. across the back, and are 8-1/2 in. deep. All joints of the No. 10 galvanized wire framework are soldered, additional strength being given to the joints by "sleeves" made from 1/4 in. copper tubing. The frame is covered with 1/2 in. mesh (No. 2) hardware cloth. The doors, door slides, and triggers are made according to the specifications on pp. 22 and 23 of the Manual.

In baiting the trap with "live water" care should be exercised that the drip is through the center hexagonal shaft. Mr. Clausen has already taken a large number and variety of birds with this trap and as he points out, there are always two or three openings staring a bird in the face, no matter from which direction it may approach.

BANDS

Colored celluloid bands should never be used except when special studies are being conducted that make it desirable to identify individual birds without excessive retrapping. Since the numbered aluminum band should always be attached, it naturally follows that at best the additional celluloid band is an extra handicap, even if it is a minor one. Furthermore, no useful purpose is served and as the Bureau does not propose to stock these bands in unlimited quantities, there is unnecessary waste if they are attached to birds other than those that are receiving special study warranting their use. These bands are furnished in one size only but they may be enlarged or reduced by first softening them in warm water.

Bands of size 8 are general utility bands made large enough for Swans, Pelicans, Eagles, and other very large birds. For those species that are too large for a band of size 7 but still not large enough to carry a band of size 8, the latter should be used, the band being reduced in size by cutting off a portion of the blank metal. The aluminum is easily cut with a pair of tin snips, diagonal wire cutters, or a large pair of side cutting pliers. For Canada Geese, for example, about one half inch should be cut off one end of the piece of metal from which the band is formed.

Some station operators have reported their opinion that the size 0 band seems rather wide for such small birds as creepers, kinglets, and wrens. As one cooperater rather facetiously remarked, they seem more like puttees than bands. The width has, however, been reduced as much as possible and still leave room for the three lines that carry the address on the inner surface.

Similarly the size 0 band is as small as it is practical to manufacture. While it

might be possible to make a band that would have a smaller diameter, there would not be room on such a small bit of metal for the legend or address and a number of five figures. Because of the fact that these bands are used in large quantities, a number of less than five figures would necessitate a complicated system of series designations that it is believed would cause much confusion. The inside diameter of this band is .083 inches.

M. L. Miles, of Clinton, Iowa, has raised the point of whether or not Cardinals and Blue Jays are able to remove number 2 bands. With some of the older bands that were made of soft aluminum of rather thin gage, this probably was frequently done. It may also have been possible with Number 2 bands of a recent series that were made from rolled aluminum wire instead of sheet metal. All bands larger than and including size 2 are now made of much heavier aluminum that is supposed to be fully tempered, and it is believed that these bands should resist the efforts of any bird to remove them. When a bird is retrapped and it is found the band has been pinched tight against its leg, removal is, of course, necessary. This is a very delicate operation and requires the services of an assistant to hold the bird. A satisfactory method of removing damaged bands is described on page 99 of the Manual. The point to emphasize is that all leverage must be exerted directly on the band and not on the leg of the bird which may be very easily broken.

R. O. Bender, of Prospect Park, Pa., reports that as the result of his work during the past spring with Great Blue Herons he believes that size 6 is slightly small for use on those birds. Size 7 probably will be a better band for the species.

The following preliminary table showing comparative sizes of birds and bands has been worked out as a result of reports received from a large number of banding stations. It is believed that the sizes of bands have now been fairly well standardized and accordingly it is hoped that it will be possible to work out a definite list of comparative sizes which will be put in printed form as soon as possible. Comments from different stations are desired by the Survey.

Use the correct size. A band too large or too small will cause trouble and possibly the serious injury or death of the bird. If you don't have the right size, release the bird unbanded.

Comparative Sizes--Birds and Bands

Species	Size	Species	Size
Grebes.....	6	Mallard.....	6 1/2
Ring-billed Gull.....	6	Teals.....	5
Herring Gull.....	6	Pintail.....	6
Franklin's Gull.....	5	Scaups.....	6
Caspian Tern.....	5	Great Blue Heron.....	7
Cabot's Tern.....	5	Egret.....	7
Common Tern.....	3	Snowy Egret.....	6
Least Tern.....	1A	Little Blue Heron.....	6
Black Tern.....	2	Green Heron.....	5
Black Skimmer.....	4	Black-crowned Night Heron.....	6
Petrels.....	1A	King Rail.....	5
Cormorants.....	8	Virginia Rail.....	4
Pelican.....	8	Coot.....	6

1/. For hand-reared Mallards size 7 is preferable.

Species	Size	Species	Size
Woodcock.....	4	Meadowlark.....	2 <u>5/</u>
Semipalmated Sandpiper.....	1A	Orioles.....	1A <u>4/</u>
Willet.....	4	Bronzed Grackle.....	3 <u>2/</u>
Spotted Sandpiper.....	1A	Dvening Grosbeak.....	2
Killdeer.....	3	Purple Finch.....	1 <u>3/</u>
Bobwhite.....	4	Goldfinch.....	1
Grouse.....	6	Savannah Sparrow.....	1
Mourning Dove.....	4	Harris's Sparrow.....	1A
Marsh Hawk.....	5	White-throated Sqarrow.....	1A
Sharp-shinned Hawk.....	3	Tree Sparrow.....	1
Red-tailed Hawk.....	6	Chipping Sparrow.....	1
Barn Owl.....	6	Junco.....	1
Screech Owl.....	5	Song Sparrow.....	1 <u>3/</u>
Great Horned Owl.....	8	Fox Sparrow.....	1A
Burrowing Owl.....	5	Cardinal.....	2
Cuckoos.....	2	Purple Martin.....	2
Belted Kingfisher.....	4	Tree Swallow.....	1
Hairy Woodpecker.....	2	Red-eyed Vireo.....	1
Downy Woodpecker.....	1A	Myrtle Warbler.....	0
Flickers.....	3	Ovenbird.....	1
Nighthawks.....	2	Yellow-breasted Chat.....	1A
Chimney Swift.....	1A	Catbird.....	1A <u>4/</u>
Kingbird.....	1A	Brown Thrasher.....	3
Wood Pewee.....	1	House Wren.....	1
Horned Lark.....	1A	White-breasted Nuthatch.....	1A
Blue Jay.....	3 <u>2/</u>	Chickadee.....	0
Crow.....	5	Hermit Thrush.....	1A
European Starling.....	2	Robin.....	2 <u>5/</u>
Cowbird.....	2	Bluebird.....	1A
Red-winged Blackbird.....	2		

BAIT

C. M. Owens, of Monticello, Ark., reports that he had excellent success in trapping Field Sparrows when he baited his traps with millet seed mixed with white bread. This was on the advice of the Survey. It is usually worth while to add white bread to almost any other kind of bait, not because all kinds of birds will take it, but because it seems to attract them to the other bait which may not be so conspicuous.

Occasionally the Survey will receive a request for information concerning a sure-fire bait for some particular bird. Whenever possible the Survey endeavors to reply to such communications by giving the cooperator making the inquiry the name and address of some other operator who may have had some success with the particular species in question. It is desirable that station operators contact each other as much as possible, as an interchange of ideas from first-hand correspondence in both stimulating and enlightening.

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- 2/. Some individuals, size 4.
 - 3/. " " " 1A.
 - 4/. " " " 2.
 - 5/. " " " 3.

RETURNS

In December 1935 arrangements were made with Charles L. Whittle, editor of the quarterly journal "Bird-Banding", for the publication in each issue of a selected series of return records. Announcement to this effect was made to all station operators under date of December 16. Two of these papers have already appeared and it is planned that they will be continued as long as it is possible for "Bird-Banding" to furnish space for them.

For obvious reasons it will be impossible to publish all records for many species, so station operators should not think that it is an oversight if some particular record of a bird banded by them is not included in the tables published.

As all cooperators know, it is not a requirement of the Survey that they subscribe to the magazine "Bird-Banding". Nevertheless, the Bureau feels that anyone who is sufficiently interested in this work to maintain and operate a banding station should be receiving the one magazine in North America that is issued particularly for the kind of work they are doing. In addition to items about banding, it contains much useful and interesting information on other lines of ornithological work, both in this country and in Europe.

Among the many interesting returns received at the Washington office during the past year the following may be mentioned:

Herring Gull 385626, banded July 2, 1925 at Mire Island, 8 miles east of St. James, Mich., by F. C. Lincoln, was caught on a fish hook about July 15, 1936 at South Manitou, Mich.

A number of Royal Terns banded in Charleston County, S. C., by E. Milby Burton, were recovered in the British West Indies, and Cuba.

Roseate Tern 711780, banded in August 1928 at Penikese Island, Mass., by Lawrence B. Fletcher, was trapped and released June 28, 1935 at Tern Island, Chatham, Mass., by Dr. Oliver L. Austin.

A number of Brown Pelicans banded on Pelican Island, Mosquito Lagoon, Fla., by Edward M. Davis, in November, 1934 and 1935, were recovered in the winter of 1935 in the vicinity of Oriente, Cuba.

Mallard 237653, banded February 23, 1924 at Union Springs, N. Y., by Douglas H. Beyea, was killed Nov. 1, 1935 at Attawapiskat Lake, Ont., Canada.

Black Duck 496164, banded March 10, 1927 at Oakdale, L.I., N.Y., by Alvah G. Allen, was caught in a muskrat trap during the Spring of 1936 near Starks, Me.

Blue-winged Teal A549116, banded Sept. 17, 1935 at the Munuskong State Park, Chippewa Co., Mich., by H. D. Ruhl, was shot April 26, 1936 between Guanica and Lojas, Puerto Rico.

Blue-winged Teal A 544466, banded September 22, 1933 at the Munuskong State Park, Chippewa Co., Mich., by H. D. Ruhl, was killed January 5, 1936 at Cape Haitien, Haiti.

Pintail 34-610409 banded February 10, 1936 at Midland, Tex., by H. M. Bayer, was trapped and released April 6, 1936 at Midwest, Wyo., by Norman Young.

Pintail 35-519649, banded March 6, 1935 at Irvington, Calif., and shipped to Molokai, Hawaii, by Mion R. Tucker, was shot December 4, 1935 at Los Banos, Calif. (The band was sent to the Biological Survey for examination, and the number carefully checked).

Pintail 34-552730, banded February 21, 1935 at Avery Island, La., by E. A. McIlhenny, shipped to Cambridge, Md., where it was released by P. J. Van Huizen, was killed about January 15, 1936 at Chaparra, Oriente, Cuba.

Great Blue Heron B 665787, banded May 21, 1933 at St. Johns, Mich., by Lawrence Ward, was shot February 29, 1936 at Corozal, British Honduras.

Egret 34-658471, banded June 1, 1935 at Holly Bluff, Miss., by Ben B. Coffey, Jr., was found injured about Jan. 1, 1936 at Puerto Castilla, Honduras.

Mourning Dove 34-308011, banded July 30, 1935 at Key West, Fla., by W. W. Demeritt, was shot Feb. 16, 1936, at Habana, Cuba.

Chimney Swift A 73881, banded August 26, 1927 at Daytona Beach, Fla., by R. J. Longstreet, was found dead about July 17, 1936 at Ormond Beach, Fla.

Blue Jay 212532, banded July 26, 1925 at Ann Arbor, Mich. by Almerin D. Tinker, was trapped and released February 6, 1936 at Ann Arbor, by Irvin St. Jean Sturgis.

Crow 225931, banded March 19, 1926 at Kansas, Ill., by W. B. Taber, II, was shot June 22, 1936 at Traverse City, Mich.

Bronzed Grackle A 281883, banded May 25, 1934, at Kansas, Ill., by Wm. B. Taber, III, was caught by hand and released at Lakeview, Miss., March 15, 1936, by Ben B. Coffey, Jr.

Bank Swallow C 30270, banded June 12, 1932 at Clear Lake, Ind., by Prof. J. W. Stack, was found dead in June 1936 on the Rio Maranon, near Yquitos, Peru.

Black-throated Green Warbler 34-75026, banded October 4, 1934 at Overbrook, Pa., by Henry P. Baily, was killed Dec. 17, 1935 at Tetela, Oaxaca, Mexico.

