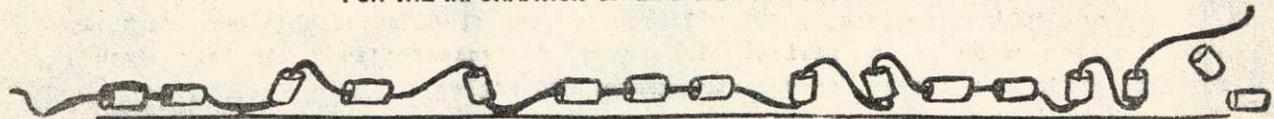


BIRD BANDING NOTES

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



Vol. 2

Washington, D. C., October, 1932

No. 7

"Watch for Series Designations on Your Bands"
(Series letters now include A, B, C, F, and H)

GENERAL INFORMATION FOR COOPERATORS

In the interest of economy, it is necessary to scrutinize carefully expenditures for bird banding. For this reason cooperators are requested to see that bands do not long remain idle. Excess material should be returned promptly when the need is no longer apparent or when stations are suspended or discontinued.

It is probable that only two or three numbers of BIRD BANDING NOTES can be issued during this fiscal year, as the quantity of paper available for such use is very limited. The reports and comments of station operators, therefore, must necessarily be abridged when published in these informational circulars.

The present number contains much important information and should be read carefully by every station operator.

Banding Records.--Cooperators are again reminded that each schedule should contain the data for one species only. When records of two or more species are entered on a schedule, it necessitates recopying the reports at the Bureau or returning them to the station operator for that purpose, involving waste of time and paper. Schedules should be either written in ink or typewritten. Do not use a lead pencil.

All the old 3 by 5 cards--Record of Bird Banded--should be destroyed, as they are no longer used in the banding work.

Pheasants Not to be Banded.--Introduced game birds, such as pheasants and Hungarian partridges, must not be marked with Biological Survey bands. The only bird not native to North America for which authority to band has been granted is the European starling.

Bands.--In the contract for purchasing bands during the present fiscal year the old No. 1 band, made exactly as it was two or three years ago, has been included. The band issued last year as No. 1 is being retained, but will now be designated Size 0.

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.

Sizes 5 and 6 have been increased in size. The new size 5 is, therefore, also suitable for birds somewhat larger than those on which the old band of this size was used. Size 6 is now sufficiently large for all the larger species of ducks, night herons, great blue herons, and other birds with tarsi of similar size.

A new split-ring band, which will replace the flat, adjustable band formerly used has been added to the series. This band, designated Size 7, is large enough for such birds as pelicans, cormorants, geese, and eagles.

Bird-Banding Manual Not for Publicity Purposes.--The manual for bird banders is sent only to bird-banding cooperators; that is, persons to whom Federal bird-banding permits have been issued. Sometimes a cooperator requests that a copy of this publication be sent to some person who may be interested in the banding work. As the supply of this bulletin is limited, this can not be done until a permit has actually been issued. In other words, the manual can not be used for publicity purposes.

Cooperators Should Make Station Contacts.--Operators of bird-banding stations are urged to maintain contact with other cooperators in the same general area, so they can consult one another regarding recaptured birds banded at near-by stations. When requested, the operator of the banding station should supply the operator of the recapturing station with the original data, so that the latter will be able to complete the return card (Bi-137) to send to the Biological Survey.

Visits Washington.--The Biological Survey has recently enjoyed visits from several bird-banding cooperators, among whom were: Mrs. W. H. Edwards, of Fairhope, Ala.; Alston Clapp, sr., of Houston, Tex.; Mr. and Mrs. James L. Carter, of Swansea, Mass.; Horace D. McCann, of Paoli, Pa.; and George P. Low, of Quincy, Mass.

Iowa Requires Bird-Banders to Hold State Collecting Permit.--The attention of all Iowa bird-banding cooperators is directed to an opinion of the State Attorney General that persons banding birds in Iowa must have the regular scientific collecting permit issued by the State. Such permits are, of course, supplementary to the Federal banding permit.

Annual Report Shows Progress.--Because of the world-wide economic conditions of last year, it is probably unusual for an annual report to show gratifying progress. Nevertheless, such was the situation in bird-banding work for the fiscal year 1932, during which was made the greatest advance in this means of research of any year since it has been a regular activity of the Biological Survey. During the past year the Bureau purchased 350,000 bands. Cooperators numbered 1,976. The total number of birds reported banded during the year was 212,146 and 11,789 returns were received. The grand total of birds banded from the time the project was begun in 1920 to June 30, 1932, was 1,123,528.

During the fiscal year 1932 seven species of birds were added to the list of those that have been banded. These are: Grace's warbler, Kirtland's warbler, olivaceous flycatcher, buff-breasted sandpiper, Inca dove, and roseate spoonbill, Covekie. Almost the entire list of North American birds has now been covered by bird-banding activities, so it is unusual to add a species to the records of those banded.

1976 / 107. banded -88-
212 146.
1976
14546
13832
714

1976 / 5. returns
11,789
9880
1909

In the following tables are presented: (1) The number of individuals of the different species banded during the fiscal year, and (2) lists of station operators banding 100 or more birds. As has been stated in previous issues of BIRD BANDING NOTES, these tables include only those records received by the Bureau between July 1, 1931, and June 30, 1932. Records received after June 30 are included in the totals for the succeeding fiscal year. Emphasis is again placed upon the fact that the value of a station can not be judged solely by the number of birds banded. Some stations are banding less than 100 birds a year, but are making important local studies. Nevertheless, all station operators are interested in the growth of the work which is more or less reflected by the activity of the banding stations, and it is believed, also, that a little healthy competition among stations makes for the general welfare of the work.

BIRDS BANDED DURING THE FISCAL YEAR 1932

Common loon.....	5	Greater scaup duck.....	5
Eared grebe.....	16	Lesser scaup duck.....	6,556
Western grebe.....	2	Golden-eye.....	1
Pied-billed grebe.....	7	White-winged scoter.....	1
Leach's petrel.....	82	Ruddy duck.....	12
White pelican.....	634	Hooded merganser.....	4
Brown pelican.....	38	American merganser.....	1
Gannet.....	1	Red-breasted merganser.....	1
European cormorant.....	347	Turkey vulture.....	7
Great blue heron.....	36	Black vulture.....	11
American egret.....	5	Goshawk.....	3
Snowy egret.....	165	Sharp-shinned hawk.....	12
Reddish egret.....	150	Cooper's hawk.....	35
Louisiana heron.....	813	Red-tailed hawk.....	63
Little blue heron.....	518	Red-shouldered hawk.....	32
Green heron.....	33	Broad-winged hawk.....	6
Black-crowned night heron.....	926	Swainson's hawk.....	16
American bittern.....	16	Rough-legged hawk.....	10
Least bittern.....	8	Golden eagle.....	2
White ibis.....	128	Bald eagle.....	1
Roseate spoonbill.....	13	Marsh hawk.....	66
Whistling swan.....	9	Osprey.....	40
Canada goose.....	238	Prairie falcon.....	1
Snow goose.....	11	Duck hawk.....	1
Mallard.....	6,418	Pigeon hawk.....	13
Black duck.....	3,971	Sparrow hawk.....	44
Gadwall.....	45	Spruce grouse.....	1
Baldpate.....	344	Ruffed grouse.....	89
Pintail.....	3,012	Prairie chicken.....	2
Green-winged teal.....	555	Sharp-tailed grouse.....	8
Blue-winged teal.....	320	Bob-white.....	448
Cinnamon teal.....	119	California quail.....	516
Shoveller.....	20	Gambel's quail.....	95
Wood duck.....	254	Wild turkey.....	146
Redhead.....	467	King rail.....	1
Ring-necked duck.....	455	Clapper rail.....	12
Canvas-back.....	262	Virginia rail.....	17

Sora.....	16	Puffin.....	4
Yellow rail.....	1	Band-tailed pigeon.....	64
Florida gallinule.....	18	Mourning dove.....	776
American coot.....	1,503	Ground dove.....	55
Oyster-catcher.....	2	Inca dove.....	1
Ringed plover.....	7	Yellow-billed cuckoo.....	12
Piping plover.....	24	Black-billed cuckoo.....	25
Semipalmated plover.....	7	Road-runner.....	4
Wilson's plover.....	2	Barn owl.....	294
Killdeer.....	150	Screech owl.....	76
American golden plover.....	1	Horned owl.....	56
American woodcock.....	11	Snowy owl.....	31
Wilson's snipe.....	2	Burrowing owl.....	133
Long-billed curlew.....	12	Barred owl.....	19
Upland plover.....	7	Long-eared owl.....	22
Spotted sandpiper.....	247	Short-eared owl.....	3
Solitary sandpiper.....	11	Saw-whet owl.....	8
Willet.....	25	Whip-poor-will.....	4
Lesser yellow-legs.....	4	Nighthawk (<u>minor</u> group).....	19
Pectoral sandpiper.....	1	Chimney swift.....	9,189
White-rumped sandpiper.....	1	Ruby-throated hummingbird.....	13
Baird's sandpiper.....	1	Belted kingfisher.....	33
Least sandpiper.....	128	Flicker (<u>auratus</u> group).....	712
Semipalmated sandpiper.....	262	Northwestern flicker (<u>cafer</u> group).....	1
Western sandpiper.....	1	Gilded flicker.....	3
Buff-breasted sandpiper.....	2	Pileated woodpecker.....	3
Marbled godwit.....	1	Red-bellied woodpecker.....	18
Avocet.....	23	Gila woodpecker.....	2
Black-necked stilt.....	4	Red-headed woodpecker.....	110
Wilson's phalarope.....	2	Ant-eating woodpecker.....	1
Glaucous-winged gull.....	169	Yellow-bellied sapsucker.....	57
Great black-backed gull.....	151	Hairy woodpecker.....	71
Western gull.....	238	Downy woodpecker.....	376
Herring gull.....	5,815	Texas woodpecker.....	3
California gull.....	930	Nuttall's woodpecker.....	1
Ring-billed gull.....	702	American three-toed woodpecker.....	5
Laughing gull.....	3,260	Eastern kingbird.....	147
Franklin's gull.....	20	Arkansas kingbird.....	13
Gull-billed tern.....	1	Scissor-tailed flycatcher.....	2
Forster's tern.....	157	Crested flycatcher (<u>crinitus</u>).....	36
Common tern.....	19,355	Ash-throated flycatcher.....	1
Arctic tern.....	11	Olivaceous flycatcher.....	1
Roseate tern.....	2,383	Eastern phoebe.....	441
Least tern.....	118	Black phoebe.....	4
Royal tern.....	2,301	Say's phoebe.....	37
Cabot's tern.....	10	Yellow-bellied flycatcher.....	12
Caspian tern.....	740	Acadian flycatcher.....	8
Black tern.....	127	Alder flycatcher.....	26
Black skimmer.....	2,352	Least flycatcher.....	54
Razor-billed auk.....	27	Wright's flycatcher.....	1
Murre.....	345	Western flycatcher.....	8
Dovekie.....	2	Eastern wood pewee.....	31
Black guillemot.....	1	Horned lark.....	63
Pigeon guillemot.....	2		

Violet-green swallow.....	25	Hermit thrush (<u>guttata</u> group).....	832
Tree swallow.....	607	• Russet-backed thrush (<u>ustulata</u> group).....	578
Bank swallow.....	2,149	Gray-cheeked thrush.....	313
Rough-winged swallow.....	68	Veery.....	130
Barn swallow.....	2,142	Eastern bluebird.....	943
Cliff swallow.....	172	Chestnut-backed bluebird.....	60
Purple martin.....	568	Mountain bluebird.....	21
Canada jay.....	5	Townsend's solitaire.....	1
Blue jay.....	2,284	Golden-crowned kinglet.....	65
Steller's jay.....	83	Ruby-crowned kinglet.....	142
Florida jay.....	14	American pipit.....	7
California jay.....	187	Bohemian waxwing.....	227
American magpie.....	16	Cedar waxwing.....	342
White-necked raven.....	321	Phainopepla.....	5
Crow.....	399	Northern shrike.....	29
Clark's nutcracker.....	18	Loggerhead shrike (group).....	95
Pinon jay.....	6	Starling.....	4,656
• Black-capped chickadee (<u>atricapillus</u> group).....	1,902	White-eyed vireo.....	2
Carolina chickadee.....	43	Bell's vireo.....	26
Mountain chickadee (<u>gambeli</u> group).....	31	Blue-headed vireo (group).....	7
Hudsonian chickadee (<u>hudsonicus</u> group).....	1	Red-eyed vireo.....	75
Chestnut-backed chickadee (<u>rufescens</u> group).....	1	Philadelphia vireo.....	5
Tufted titmouse.....	255	Warbling vireo.....	15
Plain titmouse (<u>inornatus</u> group).....	98	Black and white warbler.....	223
Coast bush-tit.....	18	Prothonotary warbler.....	1
• White-breasted nuthatch (<u>carolinensis</u> group).....	379	Worm-eating warbler.....	2
• Red-breasted nuthatch.....	130	Golden-winged warbler.....	2
Brown-headed nuthatch.....	16	Blue-winged warbler.....	7
Pygmy nuthatch.....	4	Tennessee warbler.....	106
Creeper.....	334	Orange-crowned warbler (group).....	52
Wren-tit.....	170	Nashville warbler.....	49
House wren.....	3,055	Parula warbler.....	17
Winter wren.....	89	Yellow warbler (group).....	174
Bewick's wren (group).....	88	Magnolia warbler.....	91
Carolina wren (group).....	96	Cape May warbler.....	5
Cactus wren.....	2	• Black-throated blue warbler.....	50
Long-billed marsh wren (group).....	148	Myrtle warbler.....	870
Short-billed marsh wren.....	1	Audubon's warbler.....	202
Rock wren.....	6	Black-throated gray warbler.....	3
Mockingbird.....	455	Townsend's warbler.....	1
Catbird.....	2,566	Black-throated green warbler.....	23
• Brown thrasher.....	1,772	Cerulean warbler.....	4
Curve-billed thrasher.....	8	Blackburnian warbler.....	1
California thrasher.....	41	Grace's warbler.....	6
Sage thrasher.....	1	Chestnut-sided warbler.....	20
• Robin.....	7,270	Bay-breasted warbler.....	8
Varied thrush.....	159	Black-poll warbler.....	110
Wood thrush.....	310	Kirtland's warbler.....	1
		Pine warbler.....	100
		Prairie warbler.....	7
		Palm warbler.....	41
		Oven-bird.....	377
		Northern water-thrush.....	247

Louisiana water-thrush.....	2	Common redpoll.....	58
Kentucky warbler.....	5	Pine siskin.....	239
Connecticut warbler.....	36	Goldfinch (<u>tristis</u> group).....	1,834
Mourning warbler.....	56	Arkansas goldfinch (<u>psaltria</u>	
Macgillivray's warbler.....	34	group).....	195
Maryland yellow-throat (<u>trichas</u>		Red crossbill.....	1,293
group).....	399	White-winged crossbill.....	140
Yellow-breasted chat.....	28	Green-tailed towhee.....	6
Hooded warbler.....	2	Towhee (<u>erythrophthalmus</u> group).....	1,474
Wilson's warbler (<u>pusilla</u> group)	33	Towhee (<u>maculatus</u> group).....	91
Canada warbler.....	53	Brown towhee (<u>fuscus</u> group).....	80
American redstart.....	246	Abert's towhee.....	24
Bobolink.....	23	Lark bunting.....	31
Eastern meadowlark.....	319	Ipswich sparrow.....	1
Western meadowlark.....	9	Savannah sparrow.....	778
Yellow-headed blackbird.....	73	Grasshopper sparrow.....	67
Red-winged blackbird		Leconte's sparrow.....	4
(<u>phoeniceus</u> group).....	3,597	Henslow's sparrow.....	4
Orchard oriole.....	52	Sharp-tailed sparrow.....	12
Hooded oriole (<u>cucullatus</u>		Seaside sparrow.....	5
group).....	3	Vesper sparrow.....	390
Baltimore oriole.....	282	Rufous-crowned sparrow.....	2
Bullock's oriole.....	62	Black-throated sparrow.....	3
Rusty blackbird.....	428	Sage sparrow.....	1
Brewer's blackbird.....	399	• Junco (<u>hyemalis</u> group).....	12,452
Boat-tailed grackle.....	61	Red-backed junco (<u>phaeonotus</u>).....	41
Grackles (<u>quiscula</u> group).....	6,597	Tree sparrow.....	3,547
Cowbird.....	983	Chipping sparrow.....	2,482
Western tanager.....	15	Clay-colored sparrow.....	419
Scarlet tanager.....	15	Brewer's sparrow.....	14
Hepatic tanager.....	2	Field sparrow.....	928
Summer tanager.....	1	Harris's sparrow.....	3,059
Cardinal.....	678	White-crowned sparrow (<u>leuco-</u>	
Rose-breasted grosbeak.....	128	<u>phrys</u> group).....	4,335
Black-headed grosbeak.....	57	Golden-crowned sparrow.....	1,786
Indigo bunting.....	72	• White-throated sparrow.....	12,031
Lazuli bunting.....	2	Fox sparrow.....	1,410
Dickcissel.....	8	Lincoln's sparrow.....	1,146
Evening grosbeak.....	466	Swamp sparrow.....	656
Purple finch.....	4,190	Song sparrow.....	8,883
Cassin's purple finch.....	14	Lapland longspur.....	16
House finch.....	2,637	Chestnut-collared longspur.....	6
Pine grosbeak.....	10	Snow bunting.....	194
Hoary redpoll.....	1		

COOPERATORS REPORTING MORE THAN 100 BANDED BIRDS DURING THE YEAR

The following banded more than 1,000 birds:

Austin Ornithological Station, North Eastham, Mass.....	18,994
William I. Lyon, Waukegan, Ill.....	8,673
E. A. McIlhenny, Avery Island, La.....	4,621
E. Milby Burton, Charleston, S. C.....	4,355
Frederick E. and C. C. Ludwig, Lansing, Mich.....	4,176
Mr. and Mrs. T. T. McCabe, Berkeley, Calif.....	4,128
Mr. and Mrs. Harold Michener, Pasadena, Calif.....	3,412
Dr. A. R. Shearer, Mont Belvieu, Tex.....	3,320
Harold C. Wilson, Ephraim, Wis.....	2,817
Miss Mary C. Baker and R. Owen Merriman, Kingston, Ont.....	2,810
Mrs. Ethel M. and Sears Crowell, Franklin, Mass.....	2,611
Dr. J. F. Brenckle, Northville, S. Dak.....	2,505
Glenn Berner, Jamestown, N. Dak.....	2,377
M. J. Magee, Sault Ste. Marie, Mich.....	2,359
Dr. Miles D. Pirnie, Augusta, Mich.....	2,337
C. E. Holcombe, Zion, Ill.....	2,249
Frank W. Robl, Ellinwood, Kans.....	2,176
Richard Gordon, Abbeville, La.....	2,003
S. H. Weakley, Fort Smith, Ark.....	1,867
B. S. Bowdish, Demarest, N. J.....	1,788
S. Prentiss Baldwin, Cleveland, Ohio.....	1,733
Dr. Winsor M. Tyler, Boston, Mass.....	1,705
Mrs. Marie V. Beals, Elmhurst, N. Y.....	1,694
Chas. H. Feltes, Modesto, Calif.....	1,652
Wm. P. Wharton, Groton, Mass.....	1,649
Dr. H. A. Burns, Ah-gwah-ching, Minn.....	1,630
E. L. Sumner, Berkeley, Calif.....	1,610
Verdi Burtch, Branchport, N. Y.....	1,556
Russel S. Davis, Clayton, Ill.....	1,527
Frank. B. Foster, Haverford, Pa.....	1,500
John Molter, Brookland, D. C.....	1,482
Canuto G. Manuel, Ann Arbor, Mich.....	1,391
R. J. Middleton, Norristown, Pa.....	1,379
Albert K. and Daniel Smiley, Mohonk Lake, N. Y.....	1,343
Henry P. Baily, Philadelphia, Pa.....	1,340
Prof. O. A. Stevens, Fargo, N. Dak.....	1,339
Dr. Edmund Jurica, Lisle, Ill.....	1,310
Dr. W. B. Large, Rochester, N. Y.....	1,308
Rev. G. C. M. Bierens, Fairmount, N. Dak.....	1,233
Miss Louise J. Miller, Zion, Ill.....	1,189
Reed W. Ferris, Beaver, Oreg.....	1,188
Dr. Dayton Stoner, Iowa City, Iowa.....	1,188
Seth H. & Geo. P. Low, Quincy, Mass.....	1,176
Lony. B. Strabala, Leetonia, Ohio.....	1,113
Paul A. Stewart, Leetonia, Ohio.....	1,040
Christian J. Goetz, Cincinnati, Ohio.....	1,032
Mrs. Effie A. Anthony, Bar Harbor, Me.....	1,015

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

E. Earl Bell, Water Valley, Miss.	Lyndon L. Hargrave, Flagstaff, Ariz.
Mrs. Chas. L. Bull, Oradell, N. J.	Rev. Geo. W. Luther, Detour, Mich.
Ernest D. Clabaugh, Berkeley, Calif.	John Leo Partin, Los Angeles, Calif.
Mr. and Mrs. Ben L. Clary, Coachella, Calif.	E. C. Smith, Pennsgrove, N. J.
Mrs. Florence K. Daley, Oliverea, N. Y.	Prof. Louis A. and Frederick H. Test,
Ted G. Delang, Wilmette, Ill.	W. Lafayette, Ind.
Wm. Henry Farrar, Zion, Ill.	

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

Edwin C. Anderson, Dell Rapids, S. Dak.	Edward C. Hoffman, Cleveland, Ohio
H. L. Angus, Quincy, Ill.	Paul W. Hoffman, Milwaukee, Wis.
S. M. Batterson, Mohler, Oreg.	Mrs. F. C. Laskey, Nashville, Tenn.
Carmen Beining, Platteville, Wis.	Miss Signe Lee, Glyndon, Miss.
Oscar M. Bryens, McMillan, Mich.	Horace D. McCann, Paoli, Pa.
A. J. Butler, Chilliwack, B. C.	James P. Melzer, Milford, N. H.
Floyd B. Chapman, Columbus, Ohio	Geo. E. Mushbach, Ogden, Utah
Dr. Karl Christofferson, Blaney, Mich.	J. A. M. Patrick, Yorkton, Sask.
Miss Marion Clow, Lake Forest, Ill.	W. Rodman Peabody, Milton, Mass.
Mrs. Arch Cochran, Nashville, Tenn.	Carl Richardson, Prospect, Oreg.
Norman Criddle, Treesbank, Man.	C. L. Snyder, Tyrone, N. Mex.
David J. Davis, Wilmette, Ill.	Prof. J. W. Stack, East Lansing, Mich.
E. W. Ehmann, Piedmont, Calif.	Mrs. Arthur P. Thomas, Indianapolis,
Prof. Frank M. Erickson, Salem, Oreg.	Ind.
Frank L. Farley, Camrose, Alta.	Miss Hildegard C. Thorp, Amherst, Mass.
Geoffrey Gill, Huntington, N. Y.	Nion R. Tucker and Joseph O. Tobin,
Mrs. C. H. Hall, Los Angeles, Calif.	Burlingame, Calif.
Henry O. Havemeyer, Mahwah, N. J.	M. M. Turner, Water Valley, Miss.
Lawrence E. Hicks, Columbus, Ohio	Mrs. Kenneth B. Wetherbee, Worcester,
Richard M. Hinchman, Milton, Mass.	Mass.

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

Miss Dorothy A. Baldwin, Hardwick, Mass.	Mrs. Estella C. Feser, Chicago, Ill.
L. H. Barkhausen, Chicago, Ill.	Prof. Allan C. Fraser, Ithaca, N. Y.
(Work done by Frank Schader, Big Suamico, Wis.)	Mr. and Mrs. J. A. Gillespie, Glen- olden, Pa.
Morton P. Bates, Grand Rapids, Mich.	Mrs. Hannah R. Gray, Wilton, N. Dak.
Geo. M. Benson, Voltage, Oreg.	Frank Hopkins, Campbellsport, Wis.
Deane N. Brigham, Kennebunk, Me.	Dr. J. E. Horning, Nanton, Alta.
Carl W. Buchheister, Hewlett, N. Y.	Clarence S. Jung, Milwaukee, Wis.
Herbert Buckalew, Milford, Del.	E. R. Kalmbach, Denver, Colo.
Frank M. Carroll, New Orleans, La.	Frederic H. Kennard, Newton, Mass.
Mrs. Frederick M. Cutler, Amherst, Mass.	Geo. Lang, Indian Head, Sask.
H. L. Chaffee, Amenia, N. Dak.	Dr. Harrison F. Lewis, Ottawa, Ont.
Mrs. Marie Dales, Sioux City, Iowa	Mrs. Helena E. Lindsey, Hayward, Calif.
John H. Davidson, Wilmette, Ill.	Joseph Mailliard, San Francisco, Calif.
Dr. Roy V. Dillingham, Lansing, Mich.	Miss Grace C. Meleney, White Plains, N. Y.
Richard J. Eaton, Boston, Mass.	Arthur Milliken, North Andover, Mass.
Mrs. Willard H. Edwards, Fairhope, Ala.	Allen S. Montgomery, Owosso, Mich.
Geo. D. Eustis, Vinehard Haven, Mass.	

Arthur Morley, Swampscott, Mass.
Mrs. Margaret M. Nice, Columbus, Ohio
Dr. Wm. Pepper, Philadelphia, Pa.
Wm. Pepper, jr., Wyncote, Pa.
Miss Pearl E. Post, Prescott, Ariz.
Thomas F. Power, Worcester, Mass.
Arthur Rotch, Boston, Mass.
Harry D. Ruhl, East Lansing, Mich.
Clarence H. Sanderson, Sherrill, N. Y.

Lewis O. Shelley, Westmoreland, N.H.
Prof. Frank Smith, Hillsdale, Mich.
Stanley F. Stein, Shakopee, Minn.
D. K. Stephenson, South Bend, Ind.
Wm. A. Taylor, Sharon, Mass.
Geo. Tonkin, Berkeley, Calif.
Prof. Geo. Wagner, Madison, Wis.
Harry E. Woods, Huntington, Mass.

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

Robert Allison, Athol, Mass.
Harry G. Anderson, Madison, Wis.
Miss Mary C. Baker, Kingston, Ont.
Dr. Harry A. Barbour, Mayville, Mich.
Dr. Henry S. Bartholomew, Lansing, Mich.
Beecher Beery, Pleasant Hill, Ohio
Mrs. Carrie F. Bicknell, Los Angeles,
Calif.
Mark A. Borkey, Auburn, Pa.
Dr. Earl Brooks, Noblesville, Ind.
Adam Brown, Parry Sound, Ont.
Henry Bunting, Madison, Wis.
Miss Emily H. Butterfield, Farmington,
Mich.
Ralph G. Carpenter, 2d, Wolfboro, N. H.
John R. Carter, Muscow, Sask.
Lowell E. Carter, Russiaville, Ind.
R. H. Carter, Muscow, Sask.
Prof. O. E. Christy, Muncie, Ind.
Alston Clapp, sr., Houston, Tex.
Victor Coles, Cincinnati, Ohio
Mr. and Mrs. Francis V. Crane, Needham,
Mass.
Dr. Ralph E. DeLury, Ottawa, Ont.
Willard Ferguson, Muskegon, Mich.
Miss Ethel B. Finster, Asheville, N. C.
F. W. George, Aberdeen, S. Dak.
Arthur J. Gorski, Ephraim, Wis.
Samuel A. Grimes, South Jacksonville, Fla.
Mrs. Marjorie Lee Guest, Athens, Ohio
Walter P. Houle, Forest Lake, Minn.
Clarence L. Hauthaway, Boston, Mass.
Mrs. Chas. S. Hegeman, Montclair, N. J.

H. Gordon Heggeness, Fargo, N. Dak.
Ralph T. King, St. Paul, Minn.
Chas. P. Lyman, Canton, Mass.
Raymond O. Marshall, Leetonia, Ohio
Bennett K. Matlack, Bridgeton, N. J.
Dr. Geo. E. McPherson, Belchertown,
Mass.
Mrs. Daisy M. Morrison, Gulfport, Fla.
Dr. John T. Nichols, New York, N. Y.
Mrs. Emily C. Peabody, Appleton, Wis.
L. C. Pettibone, Dawson, N. Dak.
James V. Porter, Glenwood, Minn.
Mrs. Cristabel S. Rockwood, Northampton,
Mass.
Prof. Wm. Rowan, Edmonton, Alta.
Mr. and Mrs. A. F. Satterthwait, Web-
ster Groves, Mo.
Frederick C. Scott, Plainfield, N.J.
John E. and Norman O. Sibley, Whitte-
more, Mich.
Wendell P. Smith, Wells River, Vt.
Mrs. John A. Thompson, Minneapolis, Minn.
Carl E. Traut, Battle Creek, Mich.
Mrs. Susan E. Van Zandt, San Rafael,
Calif.
Miss Blanche Vignos, Los Angeles, Calif.
Dr. Wm. A. Wellemeier, Vassar, Mich.
Joseph Wendle, Barkerville, B. C.
Mr. and Mrs. Chas. L. Whittle, Peter-
boro, N. H.
LeRoy Wilcox, Speonk, N. Y.
Geo., Leonard, & Harold Wing, Jackson,
Mich.

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

Geo. T. Baker, Bemidji, Minn.
Harley W. Barton, Ferndale, Wash.
James B. Batson, Lumberton, Miss.
Glen W. Bell, Mount Berry, Ga.
Miss Marion A. Boggs, Waynesville, N. C.
Henry A. Bowden, Litchfield, Conn.
J. S. Brindley, Bluntsville, Ala.
Brother Paul, c.s.c., Fort Wayne, Ind.
Mrs. Geo. E. Burbank, Sandwich, Mass.
Read Burtsfield, West Lafayette, Ind.
Victor H. Cahalane, Bloomfield Hills,
Mich.
Brighton C. Cain, Oakland, Calif.
Mrs. Edith B. Carman, Grand Junction,
Colo.
Clarence E. Chapman, Oakley, S. C.
Lawrence B. Chapman, Newton Highlands,
Mass.
John H. Chase, Youngstown, Ohio
Basil Colbran, Windsor, N. S.
C. Conklin, Canal Winchester, Ohio
James B. Connell, Henderson, N. C.
James Cosbey, jr., Williamstown, Mass.
Leslie Crane, Rutland, Vt.
S. J. Darcus, Penticton, B. C.
W. M. Davidson, Silver Spring, Md.
E. A. Doolittle, Painesville, Ohio
Mrs. Elizabeth M. Dunham, Wellesley, Mass.
O. E. Ehrhart, Antwerp, Ohio
Albert F. Eichelsdoerfer, Rock Island, Ill.
Miss Mary M. Erickson, Berkeley, Calif.
Colvin Farley, White Plains, N. Y.
F. H. Fawcett, College Place, Wash.
Mrs. Harriet A. Frothingham, Brookline,
Mass.
Rev. Paul B. Frydrych, Dayton, Ohio
Mrs. Blanche M. Getty, Sioux Falls, S. Dak.
Mrs. Elsa K. Glossbrenner, Indianapolis,
Ind.
Mrs. Anna C. Goddard, Greensburg, Ind.
Mrs. Grace W. Govert, Quincy, Ill.
Wallace B. Grange, Madison, Wis.
Fred Hall, Crawfordsville, Ind.
Mr. and Mrs. Richard B. Harding, Brookline,
Mass.
Mr. and Mrs. Vernon Haskins, East Durham,
N. Y.
Floyd W. Hatch, Copenish, Mich.
Dr. Harold H. Hayes, Hubbard Woods, Ill.
Mrs. Frank D. Hubbard, New Haven, Conn.
Wm. Ireland, jr., Grandview, Ohio
Hugh R. Israel, Palo Alto, Calif.
Mrs. Esther L. Jackson, Ohio, Ill.
Randolph Jenks, Morristown, N. J.
Robert A. Johnson, Oneonta, N. Y.
William Johnson, Waukegan, Ill.
Egbert Jones, Ceres, Calif.
Thomas N. Jones, Union, Ont.
Howard A. W. Kates, Downingtown, Pa.
G. Vendle Knepper, Medina, N. Y.
James A. Laughlin, Marshall, Mo.
Miss Eleanor C. Layman, San Diego,
Calif.
Carl Levingston, Redlands, Calif.
S. A. Liddell, Summerland, B. C.
Mrs. F. C. Lincoln, Takoma Park, Md.
Mrs. Lila M. Lofberg, Big Creek, Calif.
A. R. Lundquist, Webster, S. Dak.
Mrs. Robert. N. Malloy, Corsicana, Tex.
Lester R. Marland, Ware, Mass.
Mrs. Grace Reder Mason, Zion, Ill.
John Francis Matuszewski, Westbury,
N. Y.
H. E. McArthur, Waukegan, Ill.
Reid McManus, jr., Memramcook, N. B.
Byron W. McPheters, Bar Harbor, Me.
Gale W. Monson, Argusville, N. Dak.
Mrs. Blanche L. Morton, Indianapolis,
Ind.
L. C. Nielsen, Battle Creek, Mich.
Chas. E. Northcutt, Columbia, Mo.
Mrs. Arthur Newton Pack, Princeton,
N. J.
Fred Mallery Packard, Passiac, N. J.
Mrs. L. B. Payne, Santa Cruz, Calif.
Theed Pearse, Courtenay, B. C.
S. E. Perkins, 3d, Indianapolis,
Ind.
James L. Peters, Harvard, Mass.
John B. Price, Stanford Univ., Calif.
F. W. Rapp, Vicksburg, Mich.
Walter L. Richardson, Porterville,
Calif.
Prof. and Mrs. J. B. Rishel and
R. J. Niedrach, Denver, Colo.
John McB. Robertson, Buena Park,
Calif.
Miss Agnes E. Russell, Westfield, Wis.
Mrs. Herbert L. Salmond, Westfield,
Mass.
Walter R. Salt, Rosebud, Alta.
Benjamin Shreve, Salem, Mass.
H. M. Simpson, West Summerland, B. C.
Roger Leon Slocum, Trempealeau, Wis.
Wm. E. Smith, South Chatham, Mass.
Leo Speth, Platteville, Wis.

Chas. J. Spiker, Canastota, N. Y.
G. D. Sprot, Vancouver Island, B. C.
Miss Edna M. Stevens, Blue Rapids, Kans.
Miss Perna M. Stine, Minot, N. Dak.
Emmett C. Stout, Crawfordsville, Ind.
E. L. Sumner, jr., Berkeley, Calif.
W. B. Taber, jr., Kansas, Ill.
Eric M. Tait, Summerland, B. C.
Frank J. Vejtasa, Fairdale, N. Dak.
Henry E. Wagner, Detroit, Mich.
J. Marshall Magner, Webster Groves, Mo.
E. C. Weeks, Sanbornton, N. Y.

T. F. Wemhaner, Quincy, Ill.
John Price Wetherill, jr., Philadelphia,
Pa.
Mrs. M. Fay Wetmore, Takoma Park, Md.
Mrs. E. S. White, Joliet, Ill.
Francis B. White, Concord, N. H.
Mrs. Henry H. Wilder, Westfield, Mass.
Samuel W. Witmer, Goshen, Ind.
Geo. S. Wolfram, Canal Winchester, Ohio
Dr. Harold B. Wood, Harrisburg, Pa.
Hugh M. Worcester, Merrill, Oreg.
C. Brooke Worth, St. Davids, Pa.

PHOTOGRAPHS

Many interesting photographs have been received from cooperators since the last issue of BIRD BANDING NOTES. In submitting prints it will be appreciated if cooperators will write in ink a legend on the back of each and sign their names. The photographs received are as follows:

W. W. Demeritt, Key West, Fla.: A series of eleven, showing the different types of traps he uses in capturing mourning doves.

Paul W. Hoffman, Milwaukee, Wis.: Eight, of black terns, robins, red-winged blackbirds, alder flycatchers, and least bitterns.

Eugene C. Stacy, Tiffin, Ohio: Ten, of a house wren at its nesting box, other birds captured for banding purposes, and a bird banding trap containing 2 cotton-tail rabbits.

George D. Eustis, Chilmark, Mass.: A series of fourteen portraying a brood of 8 barn owls, which he banded.

Dr. J. E. Horning, Carmangay, Alta.: About 125 prints from his superb collection. These are photographs of adults, nestlings, nests, and eggs of many species of land and water birds.

V. L. Marsh, Great Falls, Mont.: Twenty-eight, showing nests and eggs of the pintail, avocet, coot, bittern, great blue heron, and black-headed grosbeak; nest and young of the great horned owl, herring gull, great blue heron, and double-crested cormorant; a bank swallow in a trap; and a young Bullock's oriole.

Floyd W. Hatch, Copemish, Mich.: Two pictures of his daughter holding a kingfisher captured in a special trap that he has designed for these birds.

Osborn M. Thompson, Gustine, Calif.: A picture of a waterfowl trap holding ducks and coots. This trap, while being illegally operated, was discovered by a deputy game warden.

Cora E. Shoop, Mascoutah, Ill.: One, showing a banded bird perched on her finger.

Paul A. Stewart, Leetonia, Ohio: Two of a barn-swallow trap invented by him for capturing these birds.

Alston Clapp, sr., Houston, Tex.: Four pictures of the party he led to Vingte' Un Island in Trinity Bay, Chambers County, Tex., to band roseate spoonbills, herons, and other birds breeding there.

Dr. Karl Christofferson, Blaney Park, Mich.: Three, one of which shows the doctor holding a wood duck; another is of a young robin; and the third shows a banded sparrow hawk.

Mrs. Arch Cochran, Nashville, Tenn.: Two, showing the net trap she has developed, which has proved quite successful in taking ground-feeding birds.

Mrs. J. A. Gillespie, Glenolden, Pa.: A picture of two of the traps she operated at Oak Bluffs, Mass., during the summer.

Mrs. Claude D. Peake, Austin, Tex.: One of an Inca dove with its nest and eggs.

WORK AT BANDING STATIONS

Wm. W. Demeritt, of Key West, Fla., who operates the station "Farthest South," transmitted an interesting report of his work with mourning doves, of which species he has banded a large number. He says that a fairly large number of mourning and white-winged doves passed through Key West during migration.

Russell S. Davis, of Clayton, Ill., reports that although most birds with the trap habit lose weight during the time that they frequent a banding station, a purple finch that repeated 65 times in 60 days at his station proved an exception. This bird weighed considerably more when it left the station than when it came. The explanation probably is that this bird, which had a deformed bill, had no difficulty in cracking the hemp seeds used for bait, and it fed on them exclusively. These seeds are rich in oil, and so probably added fat to the bird's body. Mr. Davis is conducting exceptionally interesting experiments in bird weights, and has already obtained some information that is difficult to explain.

Dr. George Wagner, of Madison, Wis., in transmitting his bird-banding records for the past spring, stated that the great reduction in the numbers of chimney swifts in that region is the most prominent ornithological phenomenon witnessed there for many years. It will be of interest to compare this observation with records from other points at which in recent years large numbers of these birds have been banded.

Paul A. Stewart, of Leetonia, Ohio, in a supplementary report on his use of a flash light in banding birds, makes the following comment: It is best to wait until the young birds are several days old, and work should be done in the early morning, starting in time to finish before daylight. Also, when working in barns that might contain cats he finds it desirable to cage his captured birds before commencing banding work, as if the birds are frightened from their nests or do not remain on them when released, they might not be able to find perches out of reach of the cats and in the darkness would fall an easy prey. Mr. Stewart also states that from his experience he does not believe it advisable to use a flash light when working with large colonies of birds as some of them will inevitably be frightened from their nests before the operator attempts to capture them. Mr. Stewart has had excellent success this year in capturing barn swallows in the trap that was developed by A. W. Higgins, of Rock, Mass.

C. E. Holcombe, of Zion, Ill., obtained good results this past season in banding marsh hawks and flickers. His banding records, recently received, contain data for 25 young marsh hawks and 62 flickers. Mr. Holcombe has also been successful in attracting birds to nest boxes. He reports that flickers, crested flycatchers, purple martins, house wrens, bluebirds, starlings, and tree swallows are nesting in boxes he placed on his half acre of ground.

Ben H. Thompson, of Berkeley, Calif., says that this year's entire crop of young white pelicans on Molly Island, Yellowstone Lake, Wyo., has been banded.

Albert K. and Daniel Smiley, of Mohonk Lake, N. Y., who also operate a banding station at Haverford, Pa., have again had a most successful year. They banded 1,642 birds at Mohonk Lake and 121 at Haverford, making a total of 1,763, and received 104 returns. Their report contains many illuminating details of the studies they have been conducting.

Mrs. F. C. Laskey, of Nashville, Tenn., started her bird-banding station in August, 1931, and between that time and the end of June, 1932, she banded 649 birds of 40 species. Her station is in the same general area as that of Mrs. Arch Cochran, so they are able to compare notes, on the habits of the different birds observed. Among other interesting items, Mrs. Laskey says that her best catches during the summer were made with a water spray as bait under a drop or beginner's flat trap. She also noted that immature brown thrashers have gray eyes, some of them being a blue-gray that is close to the color of the blue eyes of many persons.

Glenn L. Berner, of Jamestown, N. Dak., reports banding 1,017 birds, of 27 species between January 1 to June 1, 1932. Harris's sparrow heads his list with 377 individuals. A snowstorm on May 27 arrested a heavy migration of olive-backed and gray-cheeked thrushes, and Mr. Berner reports making many captures. He also took a fair number of warblers, and was surprised to capture a least flycatcher in a Government sparrow trap.

Dr. Karl Christofferson, of Blaney Park, Mich., between January 1 and June 27, 1932, banded 293 birds, 58 of which were evening grosbeaks. He also banded 37 snow buntings and 36 blue jays.

Raymond O. Marshall, of Leetonia, Ohio, commenting upon the way different birds repeat at his station, says that the field sparrow is most notable in this respect. This species repeated 60 times, one bird alone being taken 23 times. This bird repeated every day from April 10 to April 22, sometimes being taken from the trap three times in one day. Mr. Marshall also captured six birds of various species banded at other stations, while two banded by him were retaken at other points.

Lyndon L. Hargrave, of Flagstaff, Ariz., has called attention to an error in the last number of Bird Banding Notes, wherein it was stated that he had banded some 600 birds during the past year. As a matter of fact, his report covered only a few months. During his first year of banding he marked nearly 1,000 birds, his list covering 45 species, and being headed by Shufeldt's junco with 202 individuals. Many of the birds banded by him are peculiar to the southwestern part of the country, and probably are more or less unfamiliar to most station operators.

John A. Gillespie, of Glenolden, Pa., reported that crested flycatchers had returned to his station for the tenth consecutive year, using the same old hollow fence post that had been nailed to the side of a house for their accomodation. Mr. and Mrs. Gillespie have been cooperating in the bird-banding work for more than ten years and he says that they "have enjoyed every minute of it."

Dr. A. R. Shearer, of Mont Belvieu, Tex., is continuing his work with the different species of blackbirds, and between July 1, 1931, and June 27, 1932, he banded 3,049 cowbirds.

Mrs. Marjorie Lee Guest, of Athens, Ohio, in addition to operating a busy banding station, has found time to do some good missionary work in acquainting the residents of her community with the fact that large numbers of our native birds are now wearing bands and that these have a real meaning.

Dr. E. Jurica, of Lisle, Ill., banded 1,312 birds during the past fiscal year. Of these, 720 were caught during the spring season, and included 82 warblers, of 15 species. A white-throated sparrow repeated 58 times at this station last spring.

Walt Batezel, of Camden, N. J., in transmitting several schedules for birds banded by him, remarked that five of the catbirds were taken at the tomb of Walt Whitman, in Harleigh Cemetery, Camden, N. J. It is of interest to note that the catbird, which was one of Whitman's favorite songsters, should nest about his resting place. Mr. Batezel is writing a series of articles on birds of south Jersey for the Courier-Post Newspaper of Camden, in which he is including information on bird-banding work.

Frederick E. Ludwig, of Lansing, Mich., has sent in data for 1,205 birds banded by him between April 3 and June 25, 1932. His records indicate that Gambel's sparrow may not be so rare in Michigan as has been supposed. Two per cent of the white-crowned group banded by him are Gambel's sparrows. This again illustrates the usefulness of banding work in clearing up the status of a species, as it is oftentimes difficult to identify accurately Gambel's sparrow in the field, particularly when it is associated with a flock of white-crowned sparrows.

H. Gordon Heggeness, of Fargo, N. Dak., has sent in his first station report, covering 202 birds of 24 species. It was surprising to him to note the great individual differences in birds. Song sparrows were found to vary considerably in size and color markings, while different shades of color were noticeable in a series of white-throated sparrows.

E. Milby Burton, of Charleston, S. C., under date of June 28, reported that he had banded more than 1,000 herons, which he thinks, will be enough of that group for the present year. Ccooperators will agree that this represents an excellent piece of work, and will join with us in congratulating Mr. Burton upon his success.

Oscar McKinley Bryens, of McMillan, Mich., states that the birds he has banded now total 2,670, of which 943 were Savannah sparrows. Mr. Bryens is one of the few cooperators that report taking these birds in large numbers. He has prepared an interesting statement showing the relative abundance of these birds in different years.

The largest number banded by him in one year was 218 in 1930, while only 9 were taken in 1929. Working out the comparative numerical status of different species in different seasons is a subject that should receive more attention at banding stations.

R. Owen Merriman, of Kingston, Ont., assisted by Miss Mary C. Baker, banded more than 2,500 chimney swifts during the latter part of May and early in June. Mr. Merriman calls attention of Canadian cooperators to the fact that the gummed franks inclosed with orders of bird bands require Canadian postage. This is correct, but these franks are of use to our Canadian cooperators in providing an addressed label for returning the mailing tube.

Vernon L. Marsh, of Great Falls, Mont., has sent in an excellent first bird-banding report. Among other interesting species, he banded 60 magpies, 102 yellow-headed blackbirds, 32 great blue herons, 68 white pelicans, and 11 doublecrested cormorants.

Wm. I. Lyon, of Waukegan, Ill., made his ninth annual trip to the gull and tern colonies in the Great Lakes region, and had his usual success. He reports that all birds in the Great Lakes area seemed to have had a better hatching season, particularly the common terns, which he found to be well advanced and many already on the wing. In one colony of Caspian terns he banded 424. He also discovered a colony of black-crowned night herons, and one of great blue herons, banding 93 of the latter.

Mrs. Ethel M. Crowell, and her son, Sears Crowell, of Woods Hole, Mass., again visited the Weepecket Islands to band the common terns that nest there. Although they succeeded in banding some of the birds, the terns did not have a good season. Large numbers of the eggs and young were destroyed either by storms or by some natural enemy. Similar conditions have been reported for other colonies of terns on the north Atlantic Coast.

Frederick E. Ludwig, of Lansing, Mich., also made a trip to some of the gull colonies in the Great Lakes, and banded 3,547 birds of 10 species.

Harold C. Wilson, of Ephraim, Wis., reports that in two months last spring he caught about 950 birds in 25 traps. A skunk, some woodchucks, and a few squirrels were also found in his traps. On May 10, 1932, he took 132 birds, the largest number caught in one day. Mr. Wilson also visited the Sister Islands, in northern Lake Michigan, and banded more than 2,000 herring gulls and 200 common terns.

Frank M. Carroll, of New Orleans, La., continued his work with the birds nesting on Isle au Pitre, and banded a large number of them. The places where he conducted his work are marked by heavy timbers sunk into the ground and carrying copper plates containing pertinent data. He reported many nests and eggs destroyed by rats and mice.

BANDS

The information concerning bands contained in the introductory paragraphs of this number should be read carefully by every station operator.

It should be remembered that the table of comparative sizes given in the Manual for Bird Banders is intended merely as a guide. Station operators should always select the band that best fits each bird. It is just as bad practice to attach too large a band as one that is too small. Either is likely to cause serious injury to the bird.

Mrs. Effie A. Anthony, of Bar Harbor, Me., reports that in her experience the No. 1-A band is too large for downy woodpeckers. She has recaptured three of these birds whose toes had become caught under the band. She also believes that these bands are too large for song sparrows and purple finches unless the ends are lapped, which we now know is bad practice.

Prof. O. A. Stevens, of Fargo, N. Dak., calls attention to the fact that sometimes bands may be overlapped by the birds biting them. This was particularly true with some of the older and thinner bands, but now, since all bands are made of heavier aluminum and most of them given a hard temper, it is believed that much of this trouble has been eliminated.

Mrs. Lotta T. Melcher, of Homosassa Springs, Fla., uses an ordinary 10-cent cake of rouge such as may be obtained at any cosmetic counter to bring out the numbers on her bands. By rolling a string of bands over this the color sinks into the numbers so that those on the smallest bands may be readily read without using a magnifying glass.

Harold Michener, of Pasadena, Calif., reports an incident that confirms the necessity of having bands fit snugly. One of his tamest house finches had its leg broken by the band slipping over a point of wire in a trap made of hardware cloth. This was an old No. 1 band, and apparently there was just space enough for the wire to enter between the band and the bird's leg.

V. L. Marsh, of Great Falls, Mont., advises that Size 3 bands are too small for magpies. When he began work with this species, he placed a No. 3 band on a young bird and found that the band was so small it would not turn on the leg. He accordingly removed it and replaced it with Size 4, which he considers about the right size.

TRAPS

Mrs. Lotta T. Melcher, of Homosassa Springs, Fla. describes a trap she made that measures 2 feet long, 18 inches wide, and 18 inches high, and has an entrance funnel at one end and an outlet funnel at the opposite end. To capture birds about the trap, she places a large-mouthed quart jar over the outlet funnel. The jar is so small and smooth that birds can not turn around or flutter, and so hurt themselves. This sounds like a good idea for an economical gathering cage. A door at the top of the trap is fastened with an old watch ribbon with a snap, which Mrs. Melcher says works excellently, and she believes that a dressmaker's snap would do equally as well.

F. W. Rapp, of Vicksburg, Mich., points out an error in Bird Banding Notes, Vol. 2, No. 6, page 81, in describing the tub trap. He says that instead of laying the trap on its side, he sets it right side up in the same position it would be were the tub to be filled with water. In other words, the trap is one with a top entrance. It is believed, however, that this trap will give satisfaction in either position.

Charles T. Lyman, of North Andover, Mass., reports success in the use of a gathering cage with celluloid on top and sides. He points out that this type of cage has an advantage over others in that the birds enter it more readily, do not injure their bills as they sometimes do in cages made of hardware cloth, and are more easily removed for banding. Mr. Lyman also finds the "Triplex" trap efficient, and he thinks it much underrated.

W. W. Demeritt, of Key West, Fla., submitted blueprints showing the construction of traps he uses for mourning doves. All drawings are being eliminated from this issue of BIRD BANDING NOTES, but we appreciate the detailed information supplied by Mr. Demeritt. His traps suggest the following types, which are fully described in the Manual: The house trap, the chardonneret, and the Lurvey combination trap. He also has used woven-wire desk baskets and pyramid traps made of wooden slats. This last is in many ways a drop trap except that he operates it by means of the figure four set.

Floyd W. Hatch, of Copemish, Mich., sent in an interesting trap that he has used for the capture of adult kingfishers at their nesting burrows. The trap is made from a metal-capped mailing tube, 10 inches long and 3 inches in diameter. The bottom end has been cut out and a piece of ordinary window screen fastened over it with friction tape. The screw cap has been cut out until nothing but the rim with the threads remain. Across this is soldered a piece of galvanized wire, that has swinging from it several pieces of straight wire that hang down so that they are about one-half inch apart. These hanging wires will swing into the tube, but will not swing out. The trap is placed in the entrance of the burrow after the kingfisher has entered it, and as the bird comes out, it enters the tube, where it is easily captured. Mr. Hatch also reports that he caught and banded some young kingfishers in the following manner: A small flashlight was fastened on the end of a cane fishing pole on which was a piece of fishing line with a loop. The pole was inserted in the nesting burrow, and as the flashlight illuminated the interior of the nest chamber, it was a comparatively simple matter to slip the loop over the head of each bird and drag it gently to the burrow entrance. After banding the young birds, they were placed in the burrow backwards and they immediately backed to the far end of the chamber. It is necessary to put them in backwards, as apparently they insist on facing the light.

L. M. Litzenberger, of Silver City, N. Mex., has submitted a sketch showing his favorite trap arrangement. This consists of a flat drop trap, which, instead of being supported by the usual stick, has one side suspended by a cord which passes through a wire loop attached to an overhanging branch of a tree. This cord runs to two observation posts, where the operator can readily release and reset the trap without having to go to it. This is a distinct advantage in taking certain birds. Under the trap is a pan sunk level with the ground and partly filled with gravel and into the pan water drips steadily from a hose suspended overhead in the tree.

Mrs. Arch Cochran, of Nashville, Tenn., has furnished the Bureau with a complete account with drawings of the clap-net she has used successfully. To be fully understood these nets should be illustrated, but as previously stated, it is necessary to eliminate all drawings from the present issue. The Bureau is accordingly holding Mrs. Cochran's information for possible use in a future number of these NOTES. It may be said, however, that the efficiency of the nets is well illustrated by one day's catch at Mrs. Cochran's station. On that day 14 automatic traps set in

the surrounding shrubbery caught only four birds up to 6: p.m., while on the same day in one net 11 birds were taken in 2 hours.

Miss Dorothy A. Baldwin, of Hardwick, Mass., reports that she added three new Potter traps to her station equipment, and in consequence her list of captured birds has been increased considerably. She also has been experimenting with one of the tunnel traps developed by Mrs. Ben L. Clary, of Coachella, Calif.

Wm. A. Willer, of Fort Wayne, Ind., has also submitted a description and drawing of an interesting trap, which he calls the "York" trap. It is a top-opening trap of the Chardonneret type, embodying ideas from several other traps described in the Manual. The lever or perch upon which the bird drops when entering the trap is hinged on a simple wire axle so that it does not become entirely disengaged. This connects with the door by means of a wire extended across the door and terminating in a hook. A mouse-trap spring is used to make the door close more rapidly.

BAIT

H. Gordon Heggeness, Fargo, N. Dak., writes that he was surprised at the success he had in using bread as bait. One of his traps, a 3-celled, top-opening, automatic trap, was baited with bread and placed near a bird bath. Many grackles, robins, catbirds, and orioles were caught.

Fred M. Packard, of Passaic, N. J., also comments on the use of bread crumbs as bait. He adds, however, that white bread is necessary, as he finds that few birds like whole-wheat bread. He also has been successful in using cornbread, gingerbread, and a mixture of various feeds, including rape, hemp, sunflower, oats, canary seed, and rye. The last, he finds, is not a general favorite. Ripe tomatoes proved to be excellent bait for hermit thrushes, while about 85 per cent of the blue jays taken at his station were captured through the use of whole peanuts.

RETURNS

Purple finch No. 160916, banded at Sault St. Marie, Mich., on June 27, 1925, by M. J. Magee, has the following records: June 27, 1926; April 17, 1927; May 11, 1929; May 12, 1930; May 9, 1931; and May 15, 1932.

Lony B. Strabala, of Leetonia, Ohio, indicates on the return card, in the section headed "Where banded," the last date of recapture even when the time between the last date of recapture and the date of return is a year or more, and-regardless of whether or not the bird is a permanent resident. This is highly desirable, as in the case of some birds that are permanent residents it is the last preceding date of recapture that indicates whether or not the return date is a bonafide return record.

Black skimmer No. A-43449, banded by E. Milby Burton, at Cape Romain, S. C., on July 24, 1931, was collected by Mr. Burton as a scientific specimen for the Department of Agriculture of Quebec, Canada, on June 2, 1932, in Charleston Harbor, S. C.

Burrowing owl No. 24451, banded on May 9, 1930, at Benicia, Calif., by E. A. Stoner, was recaptured in a nesting burrow in the same field on April 23, 1932. It was sitting on a clutch of six eggs.

Robin No. 410911, banded as an immature, at Philadelphia, Pa., on August 18, 1925, by Dr. Wm. Pepper, was recaptured by him on September 25, 1929, and again on May 5, 1932.

Lesser scaup duck No. A652895, banded in Colleton County, S. C., on February 15 1930, by E. Milby Burton, was killed by natives during May, 1932 in the Upper Tanana River region of Alaska.

Herring gull No. 321177, banded near St. James, Mich., on July 20, 1924, by F. C. Lincoln, was captured and released at White Shoals near the Beaver Islands, Mich., on May 1, 1932.

White-throated sparrow No. B102761, banded on October 13, 1931 at Sherrill, N. Y., by C. H. Sanderson, was killed about May 3, 1932 at Rector, Ark.

Osprey No. 202392, banded on June 20, 1924 at Providence, R. I., by H. E. Childs, was shot at Lafayette, R. I., on July 16, 1932.

Common tern No. A389163, banded as a juvenile at Lone Tree Island, Sebewaing, Mich., on July 11, 1931, by F. E. Ludwig, was found at Trujillo, Peru, about May 9, 1932.

