

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY
Washington, D. C.

BIRD BANDING NOTES.

No. 6.

March 21, 1923.

The Biological Survey wishes to thank bird banding cooperators for their hearty support of Bird Banding Notes, which has resulted in the receiving of so much copy that only a part of it can be included in this number. Among the reports that have come in are the descriptions of several interesting and ingenious traps that have been developed, one of which is figured herein. Particular attention is called to the trap designed by J. Eugene Law, as it may solve the difficulty of trapping some of those chickadees that seem to have learned the mysteries of sparrow traps.

The new method of handling the original records is working most satisfactorily. It is saving a great amount of labor at the central office, and it is believed that it also simplifies the work of our cooperators. Operators are cautioned not to mail a large number of these valuable records in an envelope, unless a piece of string is tied around it both ways. The sharp edges and corners of the cards will cut through an envelope very quickly, resulting in a possible loss of records. All cards should be filled out with pen and ink, for they become part of a very large file that will remain in use for many years. Lead pencil entries are therefore not satisfactory.

If any cooperator has on hand a large number of bands received prior to February 1, 1923, and will advise the Bureau, a supply of blank cards will be forwarded for reporting their use.

NOTE: - "Bird Banding Notes" is not a publication in any sense of the word, being issued merely for the information of our cooperators, not for general distribution. However, anyone using in a published paper any of the information contained in this circular will be expected to give full credit to the person named and to the Biological Survey.

Don't forget to keep an accurate record of repeats and returns and to send in a full account at least twice a year. (See Bird Banding Notes No. 5.) Operators who wish to continue the use of schedules for recording "repeats" and "returns" may obtain a supply upon request. Interesting happenings or results will always be welcomed for use in Bird Banding Notes.

Advise the Biological Survey promptly of a change of address. This is necessary not only for the records of the Bureau, but also for the Division of Publications where is filed the mailing list of bird banding cooperators.

STATIONS.

Many interesting and valuable accounts continue to come in from trapping stations, which are of great importance in directing attention to difficulties or special problems that need investigation.

We are satisfied that bird banders are persons sincerely interested in the welfare of the birds and that they are taking every precaution to avoid mishaps. Occasionally, however, an operator will report a tragedy. This information is needed, as it may become very useful at some future time, but cooperators should not take such accidents too much to heart. It is to be remembered that in the trapping and handling of such highly organized animals as birds, accidents are occasionally almost unavoidable. They do not appear to be numerous, however, and are not to be considered as particularly serious, in view of the high character of bird banding data. Don't leave traps unattended for more than a few hours; protect them from bird enemies; and handle captives gently but firmly. With that as a guide, and with continued experimental work for the development or improvement of traps, we can have assurance that bird banding work has come to stay as a method of bird study, and to take the high place it deserves as a method of original research.

Several operators have questioned the advisability of banding starlings and grackles, because of the fact that locally they are responsible for more or less injury to other birds. The position of the Bureau is that these species should be banded, and for the very reason that they are occasionally troublesome. It is possible that they may eventually develop into a serious economic problem, and the more data we can gather concerning their life habits and distribution, the better can we recommend control measures. The bird banding method is designed primarily for the gathering of facts. English Sparrows, however, should not be banded. At some future time we may undertake a study of this species through banding, but this should not be done now.

Stuart T. Danforth, of Ithaca, N. Y., reports that his principal trapping station (located near the head of Cayuga Lake) is in a shelter that has been used as a feeding station for many years. The station should therefore yield good results since the birds already know that food may be obtained there. That feeding stations are potential banding stations and that the transformation is very easily effected is a matter we have been discussing for several months. Mr. Danforth adds another animal to our list of "undesirable captures," having caught a weasel in an Ever-set trap used at one of his substations.

Mrs. Helen G. Whittle, of Cohasset, Mass., had an interesting guest at her station on January 11, when a Richardson owl decided that one of the small sparrows or juncos feeding around the trap might be requisitioned for breakfast. We learn, however, that the attack was unsuccessful, although Mrs. Whittle was afforded a splendid opportunity to study the owl at close range. Mrs. Whittle has also been studying an interesting group of seven white-throated sparrows, that could be found near the station at almost any time." Mr. Baldwin has had a similar experience at his Thomasville, Ga., station, and it will be recalled that he advances the theory of a "neighborhood group." (See *The Auk*, 1922, p. 216.)

B. S. Bowdish, of Demarest, N. J., has made some very interesting observations on the plumage of the purple finch. Certain individuals that when first taken early in January showed no trace of color, were acquiring this character when taken as repeats during the last part of the month. This is a most interesting and valuable contribution and right in line with suggestions for the study of plumages that have been made by Dr. Charles W. Richmond, of the United States National Museum.

The canary cage trap described by Mrs. Elizabeth A. Herrick (see *Bird Banding Notes* No. 4) is proving popular. Mrs. Herrick has reported installing a second trap, and other cooperators also have adopted this type. An interesting account just received is from Dr. Mary F. Hobart, who in describing her station "Dodona," at Needham Heights, Mass., states that she is using this type of trap, although she operates it by a "pull-string."

R. E. Horsey, of Rochester, N. Y., has sent in some interesting notes from his station. He has found that occasionally ice or snow will gather on the bands so that it is necessary to thaw them out between thumb and finger before the number can be read. From his observations, however, this does not do any harm to the birds as the bands were never frozen to the leg. Occurrences of this character are likely to be uncommon as this "balling up" of the band with snow would take place only at certain temperatures.

Mr. and Mrs. George F. Fisher, who operate a station at State Line, Wis., report banding 116 crossbills and siskins in two days. They use a drop trap operated on a platform outside a window of their house.

The station of J. K. Jensen, at the United States Indian School, Santa Fe, N. Mex., has developed a most gratifying activity during the last month or two. Since January first, Mr. Jensen has sent in almost 300 records of banded juncos (intermediate and pink-sided), western evening grosbeaks, canyon towhees, and other western birds. A recent photograph from him shows a flock of evening grosbeaks on the lawn at the school.

Mrs. Ida De Loach, of Mulat, Fla., found a pair of Carolina wrens roosting under one of her windows and decided that they needed bands. One evening after dark she accordingly caught them with a butterfly net, and banded and kept them in a screened-in porch until dawn, when they were given their liberty. We shall watch our only Florida station with a large measure of expectancy for further interesting observations.

Arthur Morley, of Swampscott, Mass., took a census of the birds around his station on February 10. He had estimated 75 birds but a careful count with the aid of his traps showed just over a hundred birds feeding at the station. Such data are valuable and point to another investigation in which the Biological Survey is much interested, that of making bird counts, or censuses, in selected areas.

Harry G. Higbee, superintendent of the Moose Hill Bird Sanctuary, at Sharon, Mass., has submitted the following table showing the results obtained at his trapping station for the years 1920, 1921, 1922, and 1923 to January 16, inclusive.

NUMBER AND SPECIES OF BIRDS BANDED

By Harry George Higbee, Superintendent of Moose Hill Bird Sanctuary, Sharon, Mass., from 1920 to January 16, 1923.

<u>Species</u>	<u>1920</u>	<u>1921</u>	<u>1922</u>	<u>1923</u>	<u>Total</u>
1 Mallard		2			2
2 Wood duck		5			5
3 Ruffed grouse	1		1		2
4 Ring-necked pheasant		10			10
5 Sparrow hawk			2		2
6 Long-eared owl		1			1
7 Barred owl			1		1
8 Downy woodpecker		1			1
9 Northern flicker			1		1
10 Chimney swift	3		6		9
11 Phoebe			2		2
12 Cowbird			1		1
13 Baltimore oriole		1			1
14 Purple finch		31	65		96
15 American goldfinch				3	3
16 White-throated sparrow			1		1
17 Tree sparrow		9	31	5	45
18 Chipping sparrow			14		14

<u>Species</u>	<u>1920</u>	<u>1921</u>	<u>1922</u>	<u>1923</u>	<u>Total</u>
19 Field sparrow			5		5
20 Slate-colored junco		20	33	29	82
21 Song sparrow		7	51		58
22 Swamp sparrow		1			1
23 Fox sparrow			14		14
24 Towhee			9		9
25 Barn swallow		5	1		6
26 Tree swallow			1		1
27 Cedar waxwing	3				3
28 Red-eyed vireo	2				2
29 Catbird	1	3	1		5
30 House wren		1	2		3
31 White-breasted nuthatch		2	1		3
32 Chickadee		43	10	1	54
33 Robin		4	4		8
34 Bluebird		5	2		7
Total birds banded	10	151	259	38	458

Returns:

- May 11, 1922, Purple finch, 50208, banded May 21, 1921,
- Jan. 14, 1923, Junco, 12283, banded Feb. 9, 1922,
- Jan. 14, 1923, Tree sparrow, 12282, banded Feb. 5, 1922,
- Jan. 14, 1923, Tree sparrow, 13636, banded Apr. 6, 1922,
- Jan. 15, 1923, Tree sparrow, 12291, banded Mar. 23, 1922.

TRAPS.

No opportunity has been presented to test the two traps mentioned in Bird Banding Notes No. 4. These have been received from the shops and from a superficial examination it is thought that they will be found useful for some species not readily captured by other traps.

Through the courtesy of James Parmelee the Biological Survey is planning this spring to establish an experimental station on his estate in Washington, D. C. Here traps of various types will be tested for the benefit of our cooperators.

Most of the accidents that have been reported seem to occur in using the drop trap. Apparently, the birds detect the movement of those traps that have board sides as these cause a heavy shadow. Mr. Lyon has been using several of these traps at his Waukegan, Ill., station, and he has not reported any casualties. We are therefore led to believe that this is because his traps are made entirely of wire netting, the sides of which are merely sections of the original piece, bent at right angles to form the tray. It may be added that this is the simplest type of construction.

In order to eliminate the swaying of this trap when the string is pulled and to provide more rapid action, R. E. Horsey, of Rochester, N. Y., reports adopting the simple expedient of cutting the supporting stick in two and fastening the pieces together again with a small hinge. The hinge is on the side toward the tray when the trap is set. When the string is pulled the hinge opens, dropping the trap instantly.

J. Eugene Law, the Chairman of the Banding Chapter of the Cooper Ornithological Club, has devoted a great deal of time to experimental work and has devised a bird trap that should especially recommend itself because of its simple and inexpensive construction. It is primarily a "one bird trap," and as Mr. Law explains, "a fleet" of them are desirable for each station. The following explains its construction and operation:

FALSE BOTTOM TRAP.

By J. Eugene Law.

I have been experimenting with the new idea here described, testing traps of various sizes and shapes - square, round, oblong, etc., and larger, and smaller - and this 6"x12", x 4" high trap catches more birds than any of the others, although I have one 6" x 6", x 4" high made on the same plan which catches nearly as many. I say "new idea," but I can claim credit only for its application to a bird trap, for the idea of a "bale" dropping and locking the door I have borrowed from a bobcat trap of quite a different design which an old trapper showed me. In this trap (6" x 12") I have caught the California thrasher, brown towhee, golden-crowned sparrow, Gambel sparrow, and wren-tit without going out of my own yard.

To set the trap, the false bottom is engaged with the back wall 1 inch off the ground and held there by the trigger which holds the door open when in that position. As the door and the bale which locks it when it drops are sometimes not quite heavy enough to sustain the suspended false bottom I often put a chip or stone on the open door.

The bait I put well to the back across the cage from the door. Thus, the bird has to step on the false bottom to reach the bait and the false bottom can be pushed down so near the end of the trigger that the slightest touch will instantly spring the trap and the bird is locked in.

I find that the birds hardly hesitate at all to run right into this trap even without any camouflage, although I think they hesitate less in the traps that I have painted with linseed oil, allowed to dry, then re-painted and while the oil was still moist sifted dirt over it so that when dry the dirt becomes a part of the trap.

False bottoms made of either 1/3" hardware cloth or cardboard work successfully, but the latter must be camouflaged with oil and dirt.

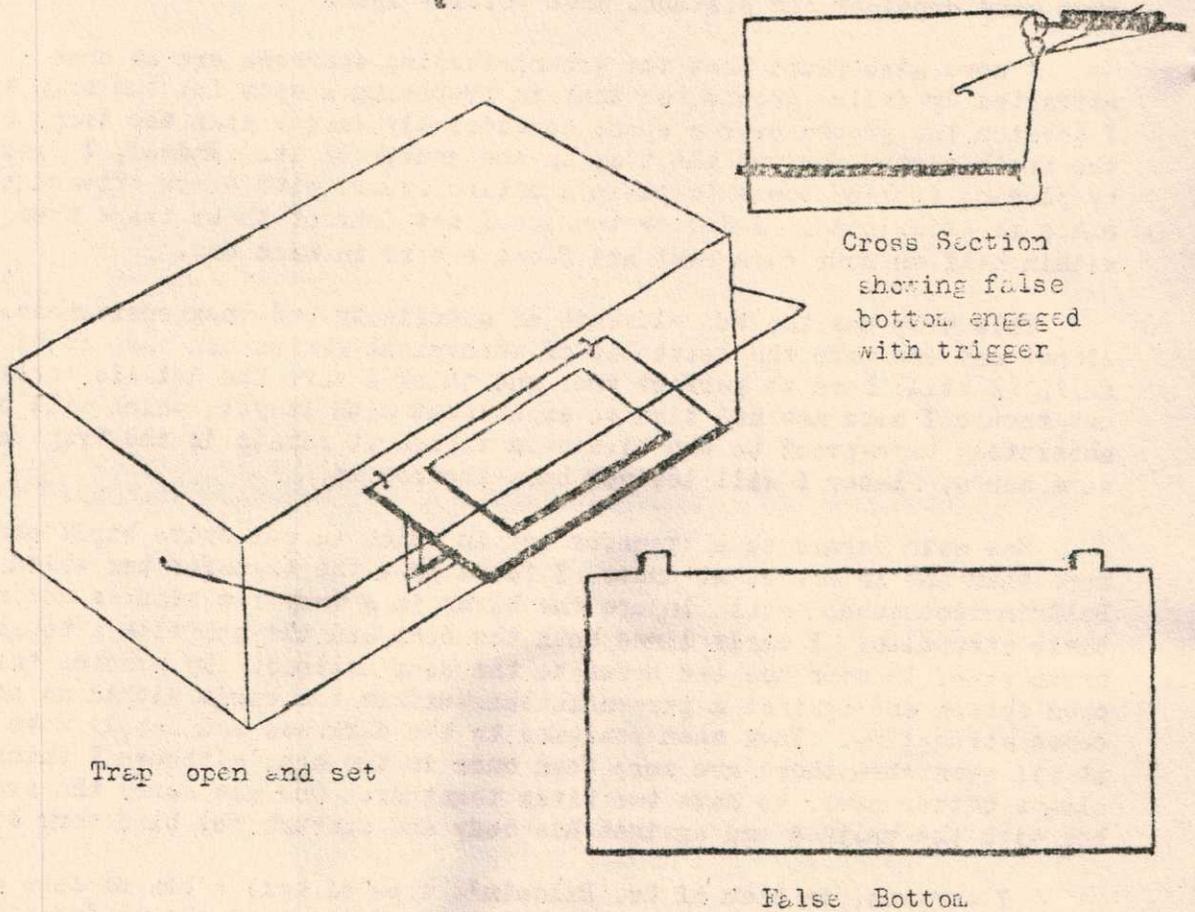
I feel that my experiments are conclusive enough with this small trap, so that I am making a "fleet" of them in order to have them scattered over some considerable distance when working them.

I have also found that the ground-feeding sparrows are at once attracted by fallow ground, so that in preparing a spot for the trap set I scratch the ground over a space considerably larger than the trap, exposing the fresh earth, and put the trap in the center of it. Indeed, I find that by placing four of these traps in a hollow square with doors outward the catch is stimulated. A day or two ago I set four of these traps thus and within half an hour came back and found a bird in each one.

This trap has the two elements of simplicity and inexpensiveness. Almost any one with the least bit of mechanical genius can make it himself. I still hope to perfect one, and think I have the details worked out though I have not had time to experiment with it yet, which will be absolutely harm-proof to the bird even though it remain in the trap for some hours. Later I will let you know the result.

Now with regard to a transfer box in which to put extra birds when more than one is caught at once. I found that the transfer box which Mr. Baldwin recommended would injure the birds in a very few minutes during their struggles. I early lined both the door and the box with a tough brown paper leaving the end opposite the door unlined. By placing this open screen end against a perpendicular surface the birds within at once cease struggling. They seem resigned to the darkness and hardly move about at all even when there are more than once in the box, although I think it is always better never to have two birds together. One can carry the transfer box with the unlined end against his body and disturb the bird very little.

I suggest, in lieu of Mr. Baldwin's type of box, a box of like size made of corrugated carton paper with a door of the same and window screen at the far end. A bird can not hurt itself in such a box. I make the box taper slightly so that the screen end is smaller, just large enough to allow your hand to close over the bird. I take the additional precaution to have a wire frame hinged so that it telescopes the door end, and about this frame attach the large end of a stocking which has the foot cut off at the ankle. To take out the bird I close this frame over the end of the box, insert my hand in to the ankle end of the stocking, then open the inner door, and there is no chance of the bird's escaping. Without this stocking attachment the bird will often slip back along one's arm and out of the box in spite of oneself.



SPECIFICATIONS.

Top.--Chicken wire $3/4$ -inch mesh, 6 x 12 inches.

Sides.--Same material 4 x 36 inches. Bend to fit top; clasp together the single open corner by twisting the ragged ends of the screen about the opposing strands of the other end. Then attach top, again using loose ends. No separate frame of heavier wire is necessary.

Door opening.--Cut from one long side an opening 4 inches wide by $2-1/2$ inches higher, eliminating the ragged ends.

Door.-- Two pieces of corrugated carton paperboard 6" x 3-1/4" and 4" x 2" respectively. Paint all sides of both with linseed oil and allow to dry thoroughly. When dry repaint one side of the smaller piece and while wet press the wet side tightly onto the larger piece fairly centered. Place the two under a weight to dry. The linseed oil will act as a water-proof glue. Of course one could make the same door out of pieces of shingle or any light board. A door 6" x 3-1/4" made of the same screen as the box works perfectly and can be bent so the bale locks it.

Door hinges.--Make two rings of baling or other stiff light wire for hinges and attach door as indicated in diagram.

Trigger.--Make of baling wire, bent hairpin shape, inserted into wall of box just over door and against one side of door opening, then bring the ends past each other till at almost right angles. Bend a little shoulder at lower point where false floor is to be engaged.

False floor.--Make of corrugated board or of 1/3-inch-mesh hardware cloth. If of board leave two points half an inch long to project for support through the mesh of the box at the back. If hardware cloth is used, make hooks of two loose ends cutting off all other ends close up.

Bale.--Preferably but not necessarily of wire heavier than baling wire. Inside the box, curl the ends forward for half an inch then downward half an inch and cut off. To support the hinging ends of this bale a wire loop should be attached to each wall at the proper place so that the bale will work accurately and can not be displaced.

Camouflage.--If paper board or other board is used for either door or floor the catch is expedited if these parts are given a second coat of linseed oil, after the first has entirely dried, and while the second coat is wet sprinkle fine dirt all over them, to let a coating of sand adhere and dry on.

Set.--Lift bale and open door. Holding trigger in place under door with one hand, engage the other end of trigger against front edge of false floor and press down on door to hold floor on shoulder of trigger tip. Maintain this pressure till trap is placed in position wanted, then put a small chip or pebble on top of door well out, and cautiously release pressure. Then push floor down till the shoulder of the trigger is just about passed. Thus the weight of the tiniest bird will disengage the false floor, releasing the door, which is at once locked when the bale drops over it. Put a stone on top of the trap so that a large bird can not tip it over in its struggles.

Bait.--Use white bread crumbs, raisins, berries, or anything that the particular bird you are after prefers, place bait across floor so that not a crumb can be reached by a bird until it hops onto the floor. Put no bait outside.

Removing bird.--Releasing door cautiously, slip fingers of both hands behind door, one hand on each side, thus at once closing door with the hands. Then grasp the bird with right hand, keeping door space not filled by wrist covered by left hand. When the bird is grasped it can be transferred to the left hand through open bottom of the trap. This is easier than pulling the bird through the door, as head or tail may be in the way.

OTHER TRAPS.

Models or specifications of new traps have been received also from Richard B. Harding, of Brookline, Mass.; I. H. Johnston, of Charleston, W. Va.; R. E. Howland, of Upper Montclair, N. J.; Walter B. Savary, of Wareham, Mass.; Frank L. Bishop, of Rock Port, Mo.; Mrs. H. C. Miller, of Racine, Wis.; and Mrs. Richard Flannigan, of Norway, Mich.; while F. W. Rapp, of Vicksburg, Mich., has sent in the description and a drawing of an ingenious arrangement that he has used when banding purple martins. We hope to use some or all of these in future issues.

BAITS.

As stated in Bird Banding Notes No. 4, the Biological Survey has received a letter from Dr. R. D. Book, of Corning, Ohio, on the subject of baits. This deserves reproducing verbatim.

BAITS FOR BIRD TRAPS.

By Dr. R. D. Book.

In regard to bait for birds I should like to contribute my experience in the hope that it may possibly be helpful. Wild birds, it seems to me, must be taught to eat new foods. I was told by certain observers that birds were very fond of the seed of sorghum cane. One year I bought a lot of it and found that the birds with which I am acquainted would not touch it. I feel sure that where birds are acquainted with this food they would like it very much, but the birds in my neighborhood had probably never seen it before and would not touch it though I kept it in their sight all winter.

For a time I offered corn cakes but they would not eat them. At last some of them must have tasted and found them good so they all began to eat them. To some extent this experience has been repeated with other foods. Birds can be taught to eat many things with which they are ordinarily unacquainted. I had a pet robin that loved ice cream. He would awaken at nine o'clock at night if we had ice cream and demand some of it. At each little mouthful swallowed he would shiver, but would immediately open his bill for more.

Pet crows and a grackle went wild over cooked macaroni, evidently taking it for a new kind of worm. Usually they go through the motions of "killing" it before they swallow it. When cooked with meat which gives a slight coating of fat it is especially liked. I have not tried it but I imagine that as a trap bait this might be quite successful.

As a winter bait, however, I have found pie crust most excellent and it seems to me an ideal food, with the lard which it contains. Birds love the outer crust but usually avoid the part that is saturated with fruit juices, merely, I imagine, because it is sticky and difficult to eat. For cardinals in winter nothing is better than whole grains of corn.

Outside of this, I have found nuts the most tempting food of all. They are more universally eaten. The English walnut kernel is by far the best, because small birds can eat it easily. Unless peanuts are ground the smaller birds with which I am acquainted will not eat them because they are apt to be too hard. Cardinals, titmice, and chickadees will eat these kernels in summer as well as in winter - the cardinals especially. Yet I am never sure of their apparent liking for these foods in the summer. It always seems to me that those birds which know me and come for the food I toss to them individually are doing so partly to renew acquaintanceship or friendship. They eat the food which I give them but I feel sure that they come partly because it is to them a sort of game. Yet cardinals invariably feed a little of the English walnuts to their young after they have left the nest, and the latter are so fond of them that they set up a hue and cry when they see me, after tasting these once, forcing the adult birds by their importunities to return repeatedly for food. The little ones will of course not come to me for it and could not eat it of themselves if they did come.

Another thing. The female cardinal is particularly fond of English walnuts when she is nesting. I presume it is a concentrated food and for that reason especially acceptable.

An experience with a female titmouse was particularly interesting. Her mate was in the habit of alighting on my hand for pie crust. All the time she was incubating she was crazy for it. She would leave the nest when I approached and never cease her cries until the male would come and get the food and carry it to her. This he would always do before he would return and procure some for himself. But the strange part is this: after the birds were hatched the mother bird would not touch the pie crust. Never afterward to my knowledge could she be induced to take it. Her mate was as interested as I in getting her to take it. One day he tried it time and again but she treated his efforts with utter indifference. Finally she was picking under a small bush and he flew with a piece of pie crust to the bush and gently dropped it through the leaves just in front of her. The female bird paid not the least attention to this, went on picking at the ground and presently flew off, apparently to the chagrin of her mate. Now the part particularly interesting to me is the fact that during the time she was incubating the female was inordinately fond of this food, manifesting what amounted to a craze for it. And this means that the latter idiosyncrasy is a matter of inherited tendency (shall I say?) dating back to very great antiquity - something that I have never heard suggested.

BANDS.

During the past few months, many thousands of bands have been issued to cooperators. For the reason that there is a considerable amount of labor involved, it is our custom to hold order cards until eight or ten have accumulated, when an entire day is devoted to the preparation of the strings of bands, recording and indexing the issue, and the packing and mailing of the bands and cards. For this reason operators should not delay ordering new supplies until their stock of bands is practically exhausted. Of course it is understood that sudden invasions of different species of birds frequently occur and deplete the supply of bands at a station in a very few days. Orders marked "Emergency" will therefore always receive our prompt attention.

On the other hand, it is not wise to place an unusually large order at any one time, for a large shipment to one operator, who would use only a comparatively small number, would tie up a quantity of bands that could be used to advantage at other stations.

Another matter should be brought to the attention of bird banding cooperators. Do not reissue bands to any other person. In cases of emergency, one operator may loan bands to another, if this office is notified of the quantity and the numbers involved, but issuing bands to persons, who do not hold Federal permits might render the recipient of the bands liable to arrest by a Federal or Deputy Game Warden. This should be particularly emphasized where the persons involved are under eighteen years of age, such as members of school classes, boy scout troops, etc. Bird banding permits are not transferable, and, furthermore, all operators of experience have learned that the application of small bands is a delicate task, while in working with large birds there may be a certain amount of danger. It will be thus seen that the activities of such persons might readily cause confusion in the records, bring disrepute to the work because of inexperienced handling, and render the bander liable to prosecution.

RETURNS.

Operators are cautioned not to accept visual re-occurrences as "returns". The only valid "return" is the bird that is actually handled and the number of the band carefully read.

Several interesting returns have been received, principally recaptures of birds banded in former years at the same station. These are of value as they indicate that for some species at least, there is an annual return to the same winter quarters, by which is meant the exact area where the individual or flock had wintered previously.

Aaron C. Bagg, of Holyoke, Mass., has recaptured several of the tree sparrows banded by him early in 1922, an experience that has been shared by Wm. P. Wharton, of Groton, Mass., and other New England cooperators.

Mrs. W. K. Harrington, of Norwalk, Conn., recaptured a purple finch on January 26, 1923, that she had banded on May 8, 1922.

Another purple finch return of interest comes from E. S. Bowdish, of Demarest, N. J.; on February 12, 1923, Mr. Bowdish trapped purple finch No. 66137, banded on January 22, 1923, at Fairfield, Conn., by Frank Novak. Such data are of much value and can be used with advantage.

T. E. Musselman, representing the Inland Association, is operating Mr. Baldwin's Thomasville, Ga., station this season. On February 20, he telegraphed Mr. Baldwin that the first morning the traps were operated he caught fifty-seven birds, fifteen of which carried last year's bands. His complete report will be sure to contain many interesting records.

BIRD BANDING ASSOCIATIONS.

At the annual meeting of the New England Bird Banding Association, at Boston on January 17, the following officers were elected: president, Dr. Charles W. Townsend; first vice-president, Dr. Winsor M. Tyler; second vice-president, Dr. Alfred O. Cross; corresponding secretary, Laurence E. Fletcher; recording secretary, Mrs. Alice B. Harrington; treasurer, Charles E. Floyd; councilors, Arthur C. Bent, Aaron C. Bagg, Charles L. Whittle, Francis H. Allen, Ralph Lawson, and Prof. Frederick A. Saunders. The Biological Survey was represented by Frederick C. Lincoln, and the Inland Bird Banding Association by S. Prentiss Baldwin. A dinner, given by Mr. Fletcher in honor of the retiring president, E. H. Forbush, was a delightful feature of the meeting. At this time, the diners were carefully and systematically "banded" and given strict injunctions to "return" another year. It seemed to be the consensus of opinion that if the "trap" be as well "baited" next year, the Association should secure 100 per cent "returns".

Considerable activity is noted in the region of the Inland Bird Banding Association. The president, Mr. Baldwin, called at the Washington office on March 2, and reported satisfactory progress in the work. Additional operators are needed in the central area, in order to study more thoroughly bird migration in the Mississippi Valley, so that if anyone knows of suitable persons residing in that territory who might be interested in the work, he should write either to the Bureau or to the Secretary, Wm. I. Lyon, Waukegan, Ill.

J. Eugene Law, Chairman of the Banding Chapter of the Cooper Ornithological Club, will probably organize the work along the Pacific coast to cover the States of California, Oregon, Washington, and the neighboring Canadian Provinces.

The Linnaean Society of New York and the Delaware Valley Ornithological Club are also preparing to take an active part in the work of bird banding. The committee appointed by the Linnaean Society consists of R. H. Howland, chairman; B. S. Bowdish; M. S. Crosby, and Dr. J. T. Nichols (ex-officio). Wharton Huber, the Assistant Curator of Birds at the Philadelphia Academy of Natural Sciences, is chairman of the committee appointed by the Delaware Valley Club.

