

ground, their heads neatly severed as though cut with a knife, and both head and body untouched. There were no marks of animals or birds of prey on them, nor had any attempt been made to eat any portion of the bodies. We have been unable to determine what agency could have killed these wonderful flyers, in little groups, day after day, over a period of two weeks, and leave no trace behind.

The result of our labors was the banding of 2,500 Common Terns, 217 Roseates, and nine Piping Plovers.

Auburndale, Mass., September 10, 1925.

TREE TRAPS

BY RICHARD B. HARDING

Much interest has been shown regarding various forms of tree traps suitable for birds such as Downies, Hairies, Chickadees, etc., so that your editor has asked for descriptive matter covering trapping devices for these birds.

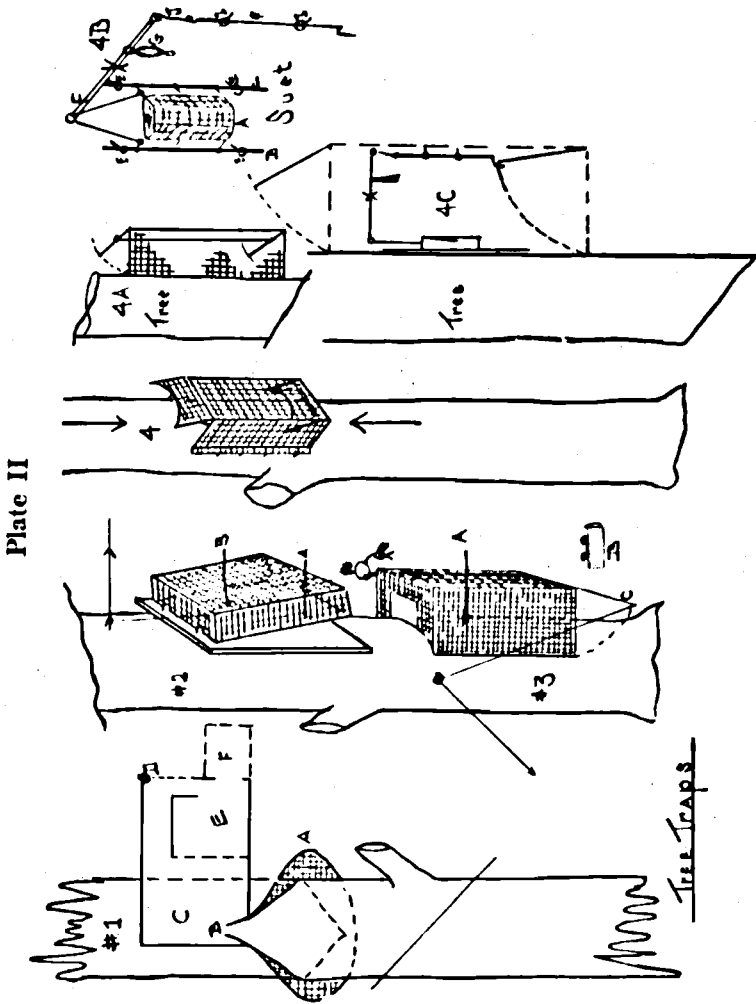
The accompanying sketches (Plate II) show cross sections or perspective views, without detail, of four different traps. If the reader has an aptitude for tools, these traps can be made at home; otherwise it is recommended that they be purchased from Mr. A. W. Higgins, Rock, Mass., who is familiar with and has made all of these traps.

No. 1 is the Lyons automatic tree trap. *A* is a wire guard, some six inches wide, which is fastened to the trunk of the tree at an angle so the birds climbing up the tree are diverted by the guard towards its highest point, where the entrance to the trap begins (*B*). *C* is the trap chamber proper. The captured birds climb to the top of this chamber, where they see a mirror at *D* and attempt to escape in that direction. As soon as they come in contact with this mirror, having no purchase, they fall down into the sub-chamber (*E*) and are finally removed in a gathering cage (*F*). For its use this trap depends upon the operator finding some tree or group of trees that are frequented by such birds as the Black and White Warbler and Brown Creeper. Where such a tree is found this trap has been very successful.

No. 2 is a vertical pull trap which has been most successful in the hands of the writer over a period of three years. It consists of a letter-basket covered with fine-mesh wire, mounted on a vertical board which is fastened to the tree. *A*

pull stick (A) holds the trap open. The trap is baited near the top with suet at B.

No. 3 is a pull-trap consisting of a wire-mesh cage, approximately 18" x 10" x 8", placed directly against the bark of a tree, the top being fitted to follow the curve of the tree. In the top is a taking-door covered by a piece of wire mesh



with a weight on it. The trap is baited at *A* by lashing a piece of suet on a small block of wood (*B*), which is hung at *A* by means of two screw-eyes. A door (*C*) at the bottom, which is also fitted to follow the curve of the tree, is operated by means of a pull-string shown in the sketch.

Trap No. 3 is a somewhat modified form of that described by Mrs. Arthur B. Emmons, 2nd, in Bulletin No. 2, pp. 32 and 33, 1925, and was devised by H. S. Shaw. Mr. Whittle is particularly in favor of this trap on account of its simplicity of operation, low cost of construction, and extreme safety; but this trap is, of course, non-automatic, and must be placed within sight of the house, whereas trap No. 4 is entirely automatic and can be placed anywhere about the station, and is favored by the writer after experimenting with a great many automatic tree traps.

No. 4, 4A, 4B, and 4C is an automatic trap which has proved most efficient. No. 4 shows the trap mounted against the tree in perspective. There are top and bottom doors which operate in conjunction by means of a connecting-rod, as shown in 4A. No. 4B shows the suet-holder (*A*), which slides up and down on two wires (*B* and *C*) in four eye-rings (*E*). The suet-holder (*A*) is connected to a lever (*F*) operating on a fulcrum at *X*. A weight (*G*) balances the combined weight of the suet-holder (*A*) and whatever suet may be inside of it. The lever (*F*) in turn operates a rod (*H*) which slides between two rings (*I, I*) which are fastened to the front of the trap. The bottom end of the rod *H* is bent as shown to engage the top edge of the bottom door. A small joint (*J*) is inserted between the lever (*F*) and a rod (*H*) in order that the rod *H* may not bind in the rings *I, I*. No. 4C is a cross-section of the trip mechanism. The fulcrum *X* does not show but may be extended across the interior of the trap from one side to the other, engaging the lever *F* at *X*. By means of the weight (*G*), this trap may be made extremely sensitive and birds may enter either by the top or bottom. As soon as they place any weight whatsoever on the suet-holder (*A*), the mechanism operates on both doors at once, retaining the bird within the trap. A suitable taking-door is placed either in the top door or on one side, near the top.

In the next issue it is hoped to give a full description of the Warbler trap with which Prof. Frederick A. Saunders has had excellent results during the past season.