OBSERVATIONS ON HAWK-BANDING WITH RECORDS AND RECOVERIES

BY ALBERT A. CROSS

Henry Davis Minot undoubtedly had a weakness for Hawks, for he makes the statement that: "Size always has a fascination for the world. The young collector prizes a Hawk's egg more than that of the rarest Warbler. The egg is big, the bird that laid it is big, the nest in which it was laid is big, the tree in which the nest was built is big, and the wood in which the tree grows is big,"* etc. Something of this sort must enter into the desires of some of us who wish to band Hawks in preference to other and more easily taken species. We also have a liking for the environment surrounding nesting birds of prey and we derive satisfaction in overcoming the difficulties incident to the work.

To attain a reasonable amount of success in banding Hawks it is to the advantage of the bander to obtain a working knowledge of the territory in which his operations are to be conducted. The various streams must be well known, as the presence of water has an important bearing on the matter of nesting-sites. The various heavily timbered ridges, the remaining stands of pine and hemlock, and the activities of the now numerous operators of portable sawmills which are constantly changing good Hawk country into rabbit pastures, must be known.

It is profitable for the Hawk-bander to search for the old empty nests of these birds at any period of the year. The greatest success, however, may be had in the fall after the trees have shed their leaves, and from then on during the winter and spring. After the foliage is dense enough to furnish shade, nests are difficult to locate, in fact we have spent considerable time in relocating nests when the time for banding young Hawks arrived. With the coming of the leaves the whole aspect of the woods is changed. Any empty Hawk's nest is a good prospect for future reference and should be visited periodically. Nests frequently remain unoccupied for years, only to be put to use again by a pair of breeding birds. With the single exception of the Sharp-shinned Hawk (Accipiter velox) which nests early in June, the best time for a survey of known nests is about the middle of May. A certain

^{*} The Land-Birds and Game-Birds of New England, Second Edition, 1895, p. 384.

habit of the Red-tailed Hawk (*Buteo b. borealis*) and the Red-shouldered Hawk (*Buteo l. lineatus*), namely that of adding green sprays of hemlock and pine to their old nests just previous to occupancy, saves labor for the Hawk-bander. These sprays can be seen from the ground even when placed in the tallest trees. With bird-glasses, occupied nests appear fringed or feathered, and a knowledge of this fact will save unnecessary climbing. According to conditions noted, future visits to the nests may be planned, and the young perhaps

eventually banded.

As to what may be looked for in the line of recoveries of banded Hawks, it would seem from the records to date that a very satisfactory percentage may be expected. The work is new, and the future must tell the story. However, as a result of our very limited experience, which includes banding forty-nine birds, nine recoveries have been reported, which equals 20 per cent.* For certain reasons it is evident that some of the Hawks wearing bands, although taken, will not be reported, and this we may ascribe to the fact that since some States protect certain species of Hawks by law, apprehension is often felt by most people possessing a dead bird that the State law is being violated. This situation is the result of the fact that people able readily to identify Hawks are not at all common, and so the average trapper or hunter plays safe while engaged in a line of endeavor calling for more than the ordinary exercise of secretiveness. The failure on the part of bird men to establish friendly relations with, and gain the confidence of, trappers, results in the loss of valuable recovery records of many of the rarer Hawks and Owls, and even of the Golden Eagle.

We have devised no satisfactory way of taking mature birds alive for banding purposes, although they may of course be taken by removing their eggs from the nest and substituting hens' eggs, and then placing a steel trap in the nest. This method, however, would require more attention than is feasible except in rare cases. It is also inhuman to trap Hawks in the usual manner. A bird taken in this way can hardly be blamed for abandoning its nest. Our efforts to take Hawks on a pole on which a trap had been placed, using as a decoy a stuffed Owl, was a failure, the Hawks paying no

^{*} March 26, 1927. I have just received notice from the Biological Survey to the effect that Sparrow Hawk No. 279950 banded by myself on June 21, 1926, was caught by E. E. Demott at E. New Market, Md., on March 19, 1927. "Caught in trap."

This bird makes the total number of recoveries approximately 22 per cent.

attention to the Owl. The only successful method in our experience is to drive the handle of a rake into the ground in an upright position, and place a steel trap on the tines. This was tried in a field where Hawks had been coming to catch chickens, but with unsatisfactory results, owing to the cruelty involved. In all cases where steel traps are used in taking birds of prey, those with weak springs should be selected and the jaws of the traps should be wrapped with cotton or some soft cloth. Safeguards should also be made by attaching a wire or cord to the trap long enough to enable the bird to reach

the ground.

To save time in banding, when fast work is necessary, it is best to prepare the proper number of bands in advance by bending them around a lead pencil or a stick of suitable diameter, and also to bend the spurs or appendages into the proper position so that they may be easily engaged with the pliers. The surplus length of band should be cut off with shears, or be broken off by bending it back and forth. The strap bands in present use are not entirely satisfactory. On mature birds it is difficult to attach them without help, while on Sharp-shins and Sparrow Hawks (Falco s. sparverius), birds having small tarsi, it is a delicate operation to secure a proper fit. Hawk-banders will welcome the new type of band which it is understood may soon be supplied by the Biological Survey.

On account of the difficulties and dangers in banding Hawks, my banding operations during the last two years have been done in company with Mr. Henry E. Woods of this town. We have also in a number of cases collected their eggs, but doing so has doubtless reduced the number of birds banded, since, as a result, some nests have been abandoned. The loss of eggs and young by depredators such as Crows, as reported to me by Mr. Walter Spofford of Berlin, Massachusetts, has also doubtless reduced the number banded each year.

The following recoveries of Hawks banded in this region by Messrs. Don V. Messer, Harry E. Woods, and myself are now available, having been reported as captured, killed, or found dead. Messer and Woods have furnished me with dates, band-numbers, etc. The summary gives credit to the individual bander and those not so indicated were banded by the writer. As previously stated, Mr. Woods and myself have worked in conjunction during the past two years and have gone 50-50 on the finds.

HAWKS AND OWLS BANDED IN AND ABOUT HUNTINGTON. MASS.

| 1922 to 1926* | | |
|---|--------|---|
| SPECIES | NO. | PLACE OF REMARKS |
| Sharp-shinned Hawk (Accipiter velox) | 5 7 | BANDING Huntington |
| Cooper's Hawk (Accipiter cooperi) | 1 | Chester Four banded by H. E. Woods |
| Red-tailed Hawk (Buteo b. borealis) | 3 | Chester All banded by H. E. Woods |
| | | Huntington Chester |
| Red-shouldered Hawk (Buteo l. lineatus) | 10 | Huntington Six by H. E. Words Woods Woods Chester |
| ${\bf Broad\text{-}winged\ Hawk\ } (\textit{Buteo\ p.\ platypter})$ | ıs) 7 | Huntington Russell |
| Duck Hawk (Falco peregrinus anatum) | 9 | Woronoco Three by Don V. Messer Three by H. E. Woods |
| Sparrow Hawk (Falco s. sparverius) | 4 | Huntington \ |
| Barred Owl (Strix v. varia) | 1 | Huntington |
| Great Horned $Owl(Buteo\ v.\ virginianus)$ | 3 | Southampton Huntington |
| Total | 49 | |

The details of the nine recoveries reported to date (February) 11, 1927) follow:

Duck Hawk No. 228871, banded by Don V. Messer at Woronoco, Mass., June 1, 1925, was killed by F. J. Biddle at Canton, Pennsylvania, on April 6,

Duck Hawk No. 228872, banded by Don V. Messer at Woronoco, Mass., June 1, 1925, was caught in a steel trap on Feb. 24, 1926, by Joseph W. Manuel at Nokesville, Virginia. Mr. Manuel writes that the Hawk was killed by his brother before he noticed that it had a band on its leg; also that it was the first of its kind that he had seen there. Weight given as 2 lbs., 11 oz.

Red-tailed Hawk No. 312005, banded by Harry E. Woods at Chester,

Mass., May 22, 1925, was shot at Brandywine Summit, Pennsylvania, Nov. 12, 1925, by Mr. William Gray.

Red-shouldered Hawk No. 312011, banded by Harry E. Woods at Worthington, Mass., June 1, 1925, was caught in a trap November 28, 1925, by George McNeill at Seagrove, North Carolina.

Duck Hawk No. 204970, banded at Woronoco, Mass., June 1, 1924, was shot on the Kittatinny Mountains, New Jersey, Sept. 28, 1924, by Justus Von Lengerke, of Orange, New Jersey. ("The Auk," Jan., 1925, p. 131.) Sharp-shinned Hawk No. 387586, banded at Huntington, Mass., July 5, 1926, was captured Oct. 31, 1926, by W. E. Barineau at McRae, Georgia.

^{*} Number of birds banded by Harry E. Woods and Don V. Messer shown under "Rearks." All others were banded by me.

Sparrow Hawk No. 279949, banded at Huntington, Mass., June 21, 1926, was found dead by C. F. Garner, Dec. 16, 1926, at Newport News,

Cooper's Hawk No. 312009, banded at Huntington, Mass., by Harry E. Woods, June 18, 1925, was killed by W. V. Yeager, of Brent, Alabama,

Jan. 14, 1927.

Duck Hawk No. 204971, banded by A. A. Cross at Woronoco, Mass., June 1, 1924, was shot in November, 1925, five miles west of York, Pa., by William F. Maul.

These nine recoveries plotted on a map show that in each instance the birds moved southwesterly roughly parallel to the Atlantic, keeping generally some little distance from the coast and to the east of the Blue Ridge Mountains. four Duck Hawk recoveries show this particularly well. records, while very limited in number, also suggest that these eastern-born Hawks spend the winter months along the eastern fringe of the country.

Huntington, Massachusetts, February 11, 1927

SOME PROBLEMS FOR THE BIRD-BANDER

BY EDWARD HOWE FORBUSH

There are many investigations that suggest themselves to those who undertake to band both fledglings and adult There are so many channels into which their efforts may be directed that no one can hope even to name off-hand all the various opportunities for the acquirement of ornithological knowledge that are open to bird-banders.

There is nothing new or original in the notes below, but they are offered with the hope that they may be useful to members of the Northeastern Bird-Banding Association and that some members may attempt to solve some of the problems briefly set forth. Some light has been thrown already upon the answers to some of these questions by the work of pioneers in this field, but there is still much to be learned. Any one who will choose some one line of investigation suggested below may be able to make a valuable contribution to our knowledge of the birds that we handle.

1. When and how do birds molt?

In handling nestlings it is well to note the color of the natal down at first, its color later, and all the changes that take place until the bird becomes fully clothed in juvenal plumage. The location of the feather-