

an abundant and never-failing food-supply in preceding winters may account for this.

During December of the present season very little snow fell, and prior to the 26th temperatures were not unseasonable.

It cannot be stated positively that all the 1925-26 returns have yet been taken. Automatic traps are used, but for several reasons we do not like to compel all the birds coming to the station to obtain their food entirely from the traps, for there is competition between species for the food placed in the traps, particularly when large numbers of birds are present, the more aggressive species keeping the less aggressive species away. This difficulty is met by increasing the number of trapless feeding-places where other returns may possibly have escaped being taken.

Wells River, Vt., January, 1926.

BANDING RESULTS IN MAINE

BY FREDERICK A. SAUNDERS

IN the early summer of 1924, banding operations were begun on a very small scale in Kittery Point, Maine. The traps are situated in an area partly covered with a tall growth of hickory and oak trees, with adjacent woods, pastures, and hayfields, all within a quarter of a mile of the seashore. There is a wet bushy hollow, a pool of water sometimes used by cattle as a drinking-place, tangles of blackberry vines, and plenty of rough open areas grown over with ground juniper, etc., all near by. The characteristic birds breeding in the woods there are Redstarts, Chestnut-sided Warblers, Black and White Warblers, Baltimore Orioles, Wood Pewees, Indigo Buntings, and Red-eyed Vireos; while the adjacent territory yields Song Sparrows, Maryland Yellowthroats, Chipping Sparrows, Chewinks, Yellow Warblers, etc.

Early in April, 1924, a stone and cement drinking and bathing basin was supplied with running water. It is about two feet from the ground, located among the tall trees, and eight feet from a window in my one-story camp. The year before, when it was being built, a Redstart visited it before the cement was dry, and the local birds used it as a bath as soon as it was finished, in spite of the fact that the above-mentioned pool already existed within a distance of one

hundred yards. Some twenty species have been seen bathing there, the most regular visitors being Redstarts, Chestnut-sided Warblers, Yellow Warblers, Song Sparrows, Robins, Chipping Sparrows, and Indigo Buntings. The sparrows appear to like the bath less than they do the adjacent food-supplies.

Various means of allowing the water to enter the basin were tried—a fountain, a short drip, and a submerged pipe. There seemed to be no positive preference on the part of our birds to any special method, but since the success of the Harding drip trap, we have used a slow drip from a few inches height to keep up a lively surface.

A pull-string trap was operated near by for Sparrows, etc., but the Warblers scorn it, so we tried a cover to the bird-bath, of hatbox size and shape, arranged finally to have a double door (ten inches wide) whose line of hinges leans backward, so that when the doors are open the front and part of the top of the trap are open. There is only one good perch near the bath, and the standard method of approach of all the birds is from a near-by brush heap to the perch and thence to the bath. The open door was therefore placed on the side next to the perch.

The birds certainly visit the bath less freely when the trap is in position. Such a sight as six Cedar Waxwings bathing together I have had only when it was removed, and some species decline to have anything to do with it. The most frequent visitors, however, are used to it, and during the whole of the summer of 1925 the trap was left in position, with the doors tied open, except on trapping days, when a pull-string closes them from within the camp. My frequent and long absences from the camp gave the birds a chance to get used to this arrangement, and I could drop in for a half-day's trapping with certainty of interesting results.

Some species prefer to enter from the bottom of the door, and others from the top; hence the compromise in the design. Robins must have a chance to drop in, while Phoebes (and sometimes Red-eyed Vireos) prefer to dash in on the wing, and out again apparently without using their feet at all. It is an engaging game trying to catch a Phoebe under these conditions, but a pull timed at the moment when he touches the water brings the doors shut before he reaches them on the way out. The narrowness of the entrance makes it difficult for two birds with an ordinary supply of scrappiness to use the bath at the same time, but I once succeeded in pulling the doors on a male Indigo and a Yellow Warbler together,

a color combination which I greatly enjoyed in the brief moment before they discovered that the doors had failed to shut quite tight.

Such conclusions as can be drawn from our operations must be taken as tentative, as the numbers of birds involved are quite too small to make anything else possible. I present them as propositions to be proved. It appears likely that:

(a) The male breeding Warblers remain in the breeding-spot the entire summer, through the moult, and leave with the last of their species, while the females and young, after staying about a while, wander off in July.

(b) The same male Warblers return to the breeding-ground, and probably many of the females also. The young seem not to return.

(c) A water trap attracts a wider variety of species than any other, including some that one might expect to take more easily in other ways; but certain species ignore water entirely (*e.g.* Nuthatches, Chickadees, Downy Woodpeckers).

(d) Warblers will go at least one hundred yards for water conveniently arranged, even though other water is nearer.

I have made only one brief try with the Harding drip trap with top opening. This was especially aimed at a Warbler breeding near by, but did not succeed. I hope for another chance.

So much for the water traps. Ground traps have yielded mostly Song Sparrows, with many returns. A Tree Sparrow dropped in last March, staying over a week before moving on, and wearing a band put on by Mrs. Hubbard in New Haven, Connecticut, more than two years before,—so far the only bird taken which was banded by some one else. Fox Sparrows and other migrants find the traps occasionally.

Tree-trunk traps have so far yielded only Woodpeckers and Nuthatches. Chickadees are unduly rare in our woods. A pair of Downy Woodpeckers was found steadily from July, 1924, resident in that spot all winter and the next summer. The male had at first a red top to his head, but later was found wearing his red in the conventional spot. Such a plumage freak was new to me.

In all we took in 1925, 9 Song Sparrow returns out of a possible 29; 2 Redstarts out of 12; 1 Yellow Warbler out of 2; 1 Indigo Bird out of 1 (my only 100% species), and I saw one of my three 1924-banded Chestnut-sided Warblers, but failed to trap it. Perhaps in 1926, with the birds newly banded in 1925 to draw from, more interesting results may be obtained.

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