

necessarily return to the same locality in which they have nested before.

It is evident that the presence or absence of Waxwings in a given locality is due to the abundance or lack of a supply of the berry or fruit that forms the major part of their food. A later experience in the vicinity of Bozeman, Montana, confirms this. During the summer of 1908 there were no Waxwings that I observed in the vicinity of Bozeman. The next year, however, they appeared in June and were abundant throughout the summer. During this time I found two Waxwing nests in shade trees along the streets of Bozeman and could doubtless have found many if I had had time for search. In this region the service berry (*Amelanchier alnifolia*) forms the principal article of food. This berry was very abundant about Bozeman in 1909 and correspondingly scarce in 1908. During the summer of 1910, in a few short visits to Bozeman, I again found Waxwings quite common and service berries fairly abundant.

NOTES ON THE MIGRATION OF THE SAW-WHET OWL.

BY P. A. TAVERNER AND B. H. SWALES.

FROM all written accounts it appears that the Acadian, or Saw-whet, Owl (*Cryptoglaux acadia acadia*) is generally regarded as a resident wherever found or that, if it migrates at all, it is but slightly and the movement is limited to the northern and southern extremes of its range. This view is reflected by the citations from the following authors.

Wilson. "This species is a general and constant inhabitant of the Middle and Northern States."¹

A. K. Fisher. "The species is not migratory but is more or less of an irregular wanderer in its search for food during the fall and winter."²

¹ Wilson. American Ornithology. Brewer ed., 1840, 310.

² Fisher. Hawks and Owls of the United States in Their Relation to Agriculture, 1893, 161.

Coues. "Fitted to endure great cold, it is resident in our northern districts."¹

Bendire. "It is a constant resident throughout the greater portion of its range within the United States, only migrating from its more northern breeding grounds and passing the winter mainly in the Middle States where it is met with at times in considerable numbers."²

Nuttall. "In the United States it is not uncommon as far south as Pennsylvania and New Jersey where it is resident."³

Other authorities could be quoted but the above is sufficient to show the general trend of opinion on this subject. Some of our late experiences, however, in southern Ontario and adjoining territory, have caused us to alter our mind on the residential status of this species and we believe that it migrates more extensively and generally than has heretofore been supposed.

The fact is, that our recent observations at Point Pelee have induced us to believe, that in resident species, migration is the rule with its component individuals rather than the exception. The mere accident that the northern limit of the winter range overlaps the southern limit of the summer range is no indication that migration is not the fixed habit of every individual of the species even though the movement is not observable, because as summer birds leave and winter ones from the north come in, the average population remains unchanged and the movement therefore unnoticed.

The first indication we received of any strong migratory movement in this species was when W. E. Saunders of London, Ont., received word from Mr. Tripp of Forest, Ont., of a migration disaster on the shores of Lake Huron, October 18, 1906. His investigation of this occurrence was reported in 'The Auk'.⁴ He discovered the shore of the lake in the vicinity of Port Franks covered with the water-washed bodies of birds that had been overwhelmed in a storm, likely while crossing the lake; and though he

¹ Coues. *Birds of the Northwest*, 1874, 316.

² Bendire. *Life Histories of North American Birds*, Vol. I, 1892, 350.

³ Nuttall. *A Popular Handbook of the Ornithology of Western North America*. Chamberlain ed., Vol. I, 1872, 72.

⁴ Saunders. *Auk*, 1907, 108-110.

covered but a small portion of the affected territory and did not touch upon its worst part, he counted 1845 dead birds in two miles of shore. Here was evidently a disaster that overcame a large movement of mixed migrants but the salient fact in this connection is, that he counted 24 Saw-whet Owls among the debris. Mr. Saunders is, and has been for the last twenty-five years, a most keen and enthusiastic field worker, but in summing up his experience with the species, says: "The Saw-whets were a surprise. They are rare in western Ontario, and one sees them only at intervals of many years, evidently they were migrating in considerable numbers."

A statement elicited from the captain of the fish boat 'Louise' of Sandusky, Ohio, bears very closely upon this subject. He says, that about October 10, 1903, when on the steamer 'Helena,' off Little Duck Islands, Lake Huron, he saw a large migration of small owls and that many of them lit on the steamer. His description tallied very well with that of this species and there is the probability that it was a relay of this same migration that was so hardly used in 1906.

We were unable to include this species in our List of the 'Birds of Point Pelee,'¹ having at the time of publication (1906-07) no satisfactory record of its occurrence there, though we had often looked for it. In an adjacent and quite comparable station, Long Point, on Lake Erie and sixty miles to the east, we had heard that Saw-whets were at times captured in numbers by stretching old gill nets across the roads in the woods. The birds flying down the clear lanes became entangled in the meshes and thus caught. This was received from what seemed good authority and backed by so many specimens that we had decided to use the expedient in discovering the presence of the species on the Point. However, October 30, 1908, Swales, while working the Red Cedar (*Juniper virginiana*) thickets near the outer end of the Point discovered the fresh remains of two birds of this species. Later the same day Saunders found another in the same condition, and November 22 he found two fresh and several older remains. At the time, seeing the great devastation wrought to bird life by the Cooper

¹ Taverner and Swales. The Birds of Point Pelee, Ontario, Wilson Bulletin, 1907-1908.

Hawks, as shown by the numerous bunches of feathers scattered over the ground, we attributed the fate of the Saw-whets to this source; but even then we could hardly help wondering that this day-flying hawk could so successfully hunt such a secretive bird, living, as it naturally would during the day, in the dense masses of cedar where we had, by repeated observation, been led to suppose a bird was safe from hawk molestation.

The mystery, however, was cleared up, to our satisfaction at least, this last fall, October 15, 1910. While looking for warblers in these same red cedar thickets, Taverner discovered, by aid of the scattered plumage, the spot where another of these owls had met an untimely fate. With this incentive, we made a careful search that shortly resulted in Swales discovering what we looked for, half way up a small cedar and about seven feet from the ground. This he secured, but we had hardly properly papered the specimen for carrying when another was seen eating a mouse. On finding itself observed, it rose high up on its legs, leaned forward, and glared at the intruder, still holding the body of the mouse in its bill, exhibiting no fear and only evinced anxiety by following every movement with its golden eyes. Within less than two hours, and in a small part of the thickets, we discovered twelve of these owls. We looked carefully for the young, the *albifrons* plumage, but without success.

All birds seen were alert and the majority in the densest red cedar clumps. Most of them were close up against the trunk of their respective trees, and usually about six feet from the ground, the highest being about twelve feet, and the lowest four. None showed any fear. But one flushed, and that was only when the tree it was on was jarred in our passage; even then it flew but a few yards and allowed our close approach. None uttered any sound except the usual owlish snapping of the bill. We collected what we thought was a moderate number and returned to camp for a camera with which we returned later.

We separated on reaching the owl grounds and in about five minutes both had located owls. Taverner immediately set up the instrument to photograph his, but the situation was bad and a jar of the branch it was on, frightening the subject, it flew away and was not followed, but the paraphernalia was taken over to where

Swales was watching his specimen. The bird was rather high up and in the shade, and a couple of attempts were made to get a picture without satisfactory results. The camera was too low to get what we wanted so we spliced dead branches to the legs, using what was lying around handy for material. The straps from the carrying case and field glasses, three handkerchiefs, and the strings of a tobacco bag furnished the binding materials and the whole made an exceedingly wabby stand, but it visibly raised the lens to an approximate level with the bird. With this bundle of apparatus we again tried, and drawing closer and closer we got the subject on the plate and finally made the exposure. Having got what we thought to be the best possible results, we experimented a bit to see how close the bird would let us approach. We got right under it by degrees and then raised our hand until it was even with it, and touched the branch at its side upon which it stood. Finally Swales attempted to stroke it on the back, but this was more than it would stand and it flew, but only a few feet, and lit on a horizontal branch almost in the open and in good light. The camera tripod was hurriedly restored to its former lengthy but wabby condition, and with the front lens combination removed and the bellows extended to its farthest extent, an exposure of nine seconds was made. This was the only picture that proved really satisfactory, being the only one in which the instrument had remained steady. The seance ended in another attempt to touch the bird, and as it was getting late, we returned to camp.

Through the night we listened carefully for the peculiar call that gives the species its name, but without result. We were too busy with our specimens to go out the mile or so that separated us from the ground where we had found them, and we heard none nearby. The next morning we started out early to give Saunders a chance to see the remarkable sight, as he had been working another part of the Point the day before. We worked the whole end of the Point with great care, but except for the scattered remains of another unfortunate, saw not a sign of them. They had evidently departed in the night.

We saw in all, twelve birds; eight were found by diligent search, and the remainder we just ran on to. They were all quiet and so near the color and contour of other natural forms as to be most

inconspicuous. We covered but a small portion of the available likely-looking ground, and were actively searching not more than two hours. If our eyes picked up one quarter of those in sight we did well, and if the whole available territory was at that time as densely populated with Saw-whets as the small portion we worked, the total number of this rare species on the Point must have been very great.

There were very few Accipitres about this time, but there were accompanying the Saw-whets quite a number of Long-eared and Short-eared Owls. Allowing for repeated observation of the same individual, we saw six Long-eared and two Short-eared Owls. Beyond doubt, these larger and close relatives were the offending parties as they would be hunting at night at the only time when, in their foraging, the Saw-whet would be open to attack; and it is suggested that it is due to the depredations of the Long-eared Owl, which generally hunts the same thickets, that this beautiful little owl is so regularly rare as it is.

Here, then, are records of four migrational massings of this hitherto supposed resident owl. It was too early in the season to explain their gathering as "winter wandering in search of food," and the close tallying of all the dates point to the conclusion that from the middle to the end of October the Saw-whet Owls migrate in considerable numbers, but from their nocturnal habits and secluded habitats while en route are seldom observed. In all probability, too, such noticeable gatherings are only to be observed in such places as at Point Pelee where a constricted migration route brings many together at one time. Long Point is another place much like Pelee in this regard, and the Lake Huron episodes likely originated in other fly lines across that body of water and of which we as yet know nothing.