

side of the Point, and the self-planting of trees on the west side. The series of parallel ridges are parallel to the west side, but not to the east side.

A summary of the work done follows in the language of two of the students, supplemented later by a list of the birds and their dates of occurrence. These reports undertake to give a brief survey of the more prominent ecological features that have some bearing upon the distribution of the birds.

REPORT ON THE ECOLOGY OF PELEE ISLAND, SUMMER OF 1910.

Part I.

BIRD CONDITIONS BEFORE THE BEGINNING OF MIGRATIONS.

Before the beginning of the migrations the birds were divided into four distinct groups ecologically; one of which has several further subdivisions. These are the birds found in the woods on the point, the marsh birds, the water and beach birds, and the birds found inland, mostly about cultivated fields or small woodlots.

Under the first group, that of the woods birds, there are three subdivisions, the birds of the cedars, the birds of the deciduous belt, and the birds that frequented both indiscriminately.

The birds found distinctively among cedars were the Screech Owl, Cardinal, Cedar Waxwing, Pine Warbler, and Brown Thrasher. Of these Cardinal, Cedar Waxwing, and Thrasher deserve especial mention because of their great abundance, especially considering the northern locality. The Pine Warbler must have nested there, which is a good record. The Screech Owl was probably seen only in the cedars because we were there most after dark.

Of the birds seen only in the deciduous belt, the Hairy, Downy and Red-headed Woodpeckers stayed among the tall trees with dead tops, found at the base of the point. The Blue Jay, Warbling Vireo and Crested Flycatcher, as well as the Black-billed Cuckoo, also stayed in these tall trees, among the dense foliage. The Towhee and Catbird stayed in the

dense thickets south and west of the marsh, while the Woodcock frequented the damp woods west of the marsh. The Wood Pewee, Northern Yellow-throat and Redstart stayed mostly in the lower deciduous trees on the point itself.

The Mourning Dove, Yellow-billed Cuckoo, Flicker and Crow were found indiscriminately in the woods and in about their usual numbers. The Robin, Bronzed Grackle, Song Sparrow and Baltimore Oriole were present indiscriminately, but in smaller numbers than is usual on the Ohio shore. The Carolina Wren was also present in small numbers, which is unusual for so northern a locality. The Kingbird, Orchard Oriole, Indigo Bunting and Red-eyed Vireo were present in unusual abundance, especially the two last mentioned.

The Marsh birds, which had presumably bred in the swamp on the island, were the Wood Duck and Blue-winged Teal, the Least and American Bitterns, the Green and Great Blue Herons, the King, Virginia and Sora Rails, the Florida Gallinule, the Short-eared Owl, Belted Kingfisher, Phoebe, Alder Flycatcher, Red-wing, and Long-billed Marsh Wren. Yellow Warblers and Louisiana Water-Thrushes may also have nested here. The Black Terns nest in swamps, but at the time of our visit were plainly beach birds. They probably do not nest on the island.

The birds found flying over the water and lighting on the beach were the Herring Gull, Common and Black Terns, Spotted Sandpiper, and Killdeer. The Belted Kingfisher divided his time about equally between the beach and the swamp. Some Common Terns were still nesting on Middle Island and the Hen and Chicken group, but most of the gulls and terns were through nesting, and gathered on the end of the sandspit in immense numbers, standing there much of the day. The Black Terns were in the curious mottled, molting plumage very largely.

In the pastures and cultivated fields inland were some species, such as the Bobolink, Meadowlark, Vesper and Field Sparrows and Migrant Shrike, which never came upon the point. Around the houses and orchards were a few House

Wrens and Bluebirds, although they were much less common than in Ohio. In the bits of woodland and in great trees left in the open fields were the nests of Bald Eagles, and Red-shouldered and Red-tailed Hawks, and Great Horned Owls were also found in the woods.

Part II.

MIGRATION CONDITIONS.

During the migrations there were four, or possibly five, different groups. Some worked south by stages, resting at night in the swamps, others followed the beach, or flew out over the water, some flew right out the point from base to tip, either continuing their flight all the way, or lighting in the trees occasionally to rest; but by far the greatest number of birds worked along gradually through the woods, only starting in their flight when they reached the limit of shrubby vegetation. These are the birds that cannot often be seen in the act of migrating, and which Pelee Island is especially suited to catch in the act.

The Swamp-frequenting migrants were the Pied-billed Grebe, Mallard, Coot and Black Duck, where there was open water; the Wilson's Snipe, Yellow-legs, and Solitary Sandpiper on the mudflats. The Least, Semipalmated, Baird's and Spotted Sandpiper and the Killdeer and Semipalmated Plovers occasionally visited the mudflats, although usually staying on the beach. The Little Blue Heron, a straggler from the south, may as well be mentioned here. Its occurrence so far north is rare, but not unprecedented. The Rails and Herons were probably migrating, but we could not detect their movement with certainty.

Over the water migrated the Bonaparte Gull and Caspian Tern, and along the beach came a host of shore-birds. The Dowitcher, Knot, Baird Sandpiper, Hudsonian Godwit, and Black-bellied Plover were some rarities that were seen; the Baird Sandpiper in considerable numbers. The Least, Semipalmated, and Spotted Sandpiper, the Sanderling, the Ruddy Turnstone, and the Piping, Semipalmated and Killdeer Plo-