

INFLUENCE OF THE GREAT LAKES ON THE MIGRATION OF BIRDS

BY RALPH BEEBE

The above topic was first brought to my attention when, as a very young boy in my farm home in Schoolcraft County, I observed in autumn the great numbers of hawks which passed along in their autumnal migration. So great was the concentration that the earth was appreciably darkened at times as the hordes passed over. Many were Cooper's Hawks but there were also Red-tailed, Red-shouldered, Broad-winged, and many too high up to identify. After the flight came the Goshawk, which sometimes lingered all winter.

Our farm was located in the hardwood belt, which extended back from Lake Michigan for a considerable distance, except for a belt of pine barrens about two miles wide along the shore and coming to within a half mile of our farm.

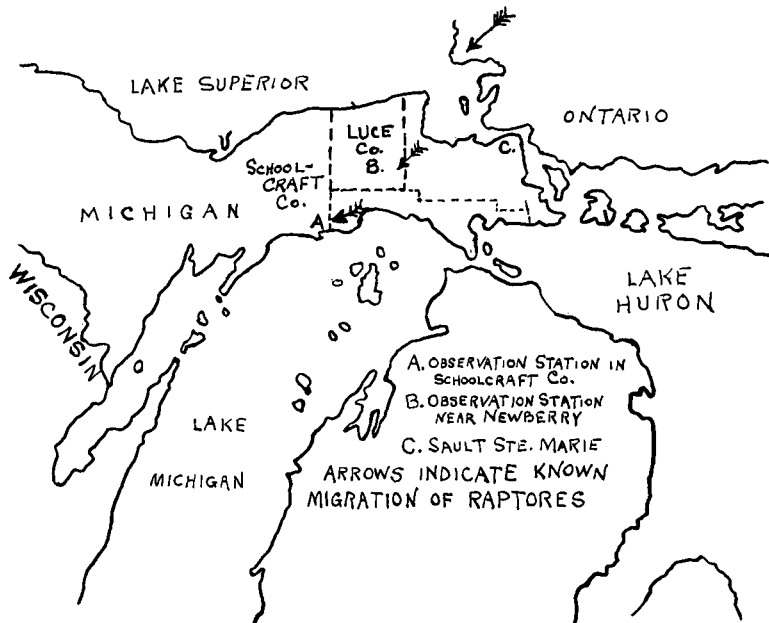
Subsequently, from about 1909 to 1916, observations were conducted near Newberry, Luce County, about midway between Lake Michigan and Lake Superior. The country there is mostly cut over land, there is some virgin timber remaining and there are farms of considerable area. The land is sandy except the swamps, rolling in contour, the hills of glacial origin as attested by the soil strata observed when an excavation is made. Solitary boulders, some as large as a small house, testify to the moving abilities of the ice in former ages. There were occasional small lakes, dug out by the shifting ice. Here I was privileged to make some careful observations, some of the results of which I will endeavor to relate. They are by no means complete but may suggest a line for future investigations.

The hawks first mentioned were the most conspicuous and easiest observed on account of their size and diurnal habit. The Cooper's Hawk is a breeding bird but immense numbers formerly migrated in autumn along the shore of Lake Michigan, keeping within the timber belt and avoiding the open pine barrens. The Red-tailed, Red-shouldered, and Broad-winged Hawks kept high in the air and did not tarry along the way as the Cooper's Hawk sometimes did, to the detriment of our poultry yard. The Sparrow Hawk invariably laid his course through the fields and pine barrens, avoiding the heavy forest. Duck Hawks were sometimes seen and they are known to nest along the Pictured Rocks on Lake Superior.

All these raptorial birds migrated in a westerly direction in the autumn and in an easterly direction in the spring. The autumnal migration was much larger. Many of the birds passing through in

autumn came from the interior of Canada. At Whitefish Point on Lake Superior the State maintains a hawk hunter, who posts himself there and shoots the injurious species as they appear. The route then lies along the northerly shore of Lake Michigan into Wisconsin instead of across the Straits of Mackinac. The Straits are only about ten miles wide and there are islands for resting places between, yet apparently few hawks cross there. In spring the route is reversed.

In September and October the traveler along the north shore of Lake Michigan will see little parties of Sanderlings, bobbing along



the wave line, occasionally taking wing but always proceeding westward. In spring the return journey is made. At East Tawas on the west shore of Lake Huron from September 26 to October 7, 1930, none were observed, although they were migrating along the north shore of Lake Michigan at the time.

The migration route from Wisconsin through the Upper Peninsula of Michigan appears to be an important one, bringing many western species into the region. Some of these may be noted. Unless otherwise noted they are sight records although made under conditions which I have never felt permitted any uncertainty of identification.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*). Observed in Schoolcraft County, April 9, 1904.

Western Meadowlark (*Sturnella neglecta*). At Newberry, May 14, 19, 1909; May 25, 1912; May 1, 3, 1913; April 27, 1914; and April 8, 15, 1915.

Chestnut-collared Longspur (*Calcarius ornatus*). There was a heavy flight from May 19 to 26, 1909. Many thousands were seen. Other flocks were noted May 25, 1912 (50); May 17, 1914 (4); and May 19, 1914 (30).

Western Yellow-throat (*Geothlypas trichas occidentalis*). At Newberry, May 25, 27, 1909 (3).

Mr. M. J. Magee of Sault Ste. Marie, has trapped and banded several Gambel's Sparrows. The species has also been taken in the lower peninsula. The Harris's and Clay-colored Sparrows are recorded but I have never seen them.

The Swainson's Hawk (*Buteo swainsoni*) has been taken at Hessel near the Straits of Mackinac, October 13, 1908 (Taverner, *Auk*, XXVI, 1909). It was also taken by Wood near Cheboygan across the straits, October, 1883. (*Auk*, XIV, 1897). I saw one near Newberry, September 13, 1910.

The Horned Lark (*Otocoris alpestris alpestris*) was seen in large flocks along the shore of Lake Michigan but was rare in the interior. The Prairie Horned Lark (*Otocoris alpestris praticola*) and the Lapland Longspur (*Calcarius lapponicus lapponicus*) appeared in immense flocks in spring and fall, following the usual migration route.

The Pipit (*Anthus spinoletta rubescens*) occurs abundantly in autumn and less commonly in spring. I believe that the Sprague's Pipit (*Anthus spraguei*) is also found but as yet there are no specimens to substantiate it.

The single known exception to the usual custom of migrating westward in autumn and eastward in spring appears to be in the case of the Evening Grosbeak. Visual observations and banding records of the species indicate that it migrates eastward in autumn and westward in spring. It has recently been established that it is a breeding bird in the area.

Naturally, the lakes attract many species usually marine. Some of these may be noted.

Pomarine Jaeger (*Stercorarius pomarinus*). Three were seen near Newberry on May 23, 1913, flying rapidly southward.

Purple Sandpiper (*Arquatella maritima*). At Newberry, November 25, 1909; November 7, 1910 (specimen); November 7, 1914; and October 21, 1915.

Great Black-backed Gull (*Larus marinus*). At Newberry, January 22, 1916.

Arctic Tern (*Sterna paradisaea*). At Detroit River near Belle Isle, December 14, 1920, and at East Tawas, October 6, 7, 1930 (400).

Another phase of the migration route through Wisconsin is the fact that some species arrive in the spring before or at about the same time as they arrive in the Lower Peninsula. The Meadowlark arrives at Lansing from March 3 to March 28, average March 12. (Barrow's Mich. Bird Life, p. 444). At Newberry I have dates of arrival as follows: March 4, 1910; February 23, 1911; March 2, 1912; February 26, 1913; February 26, 1914; February 17, 1915; and March 11, 1916. Newberry is about 300 miles north of Lansing.

The Veery (Barrow's Mich. Bird Life, p. 713), enters the Lower Peninsula the first week in May or a little earlier. The earliest record at Detroit is given as April 22 and the latest May 4. At Ann Arbor, about fifty miles west, the earliest record in twenty-five years is given as April 16, 1889, and the average appearance the first week in May. At Newberry I have arrival records of April 23, 1913; April 26, 1914; April 24, 1915; and April 16, 1916. But in 1909 it was first recorded May 30, in 1910 on June 4, in 1911 on May 30, and in 1912 on May 24. It would seem improbable that such a wide variation would be due to insufficient observation as it is a common and conspicuous species. I believe that the divergent dates represent arrivals from different sources. The later dates would be consistent with a migratory movement through the Lower Peninsula, while the earlier ones are about equal to the earliest dates of arrival in the Lower Peninsula and suggest a simultaneous movement from the southwest through Wisconsin and Lower Michigan.

The Sharp-tailed Grouse (*Pedioecetes phasianellus phasianellus*) and the Thick-billed Redwing (*Agelaius phoeniceus fortis*) occur in Michigan only on Isle Royale in Lake Superior as far as known.

The Wisconsin route into the Upper Peninsula is used by forms of life other than birds. The coyote has within the past twenty years spread over the Upper Peninsula, coming in from the west and it is now invading the Lower Peninsula. Western species of insects follow the same route.

More than a hundred years ago a marauding band of Sioux Indians came in from the west. They remained for about three years, the relatively peaceable native tribes being unable to resist the fierce invaders. They finally encamped on an island in the St. Marys River. The native tribes had now gathered in force and when the invaders finally left the island the natives fell upon them and left few survivors to return to the western plains.

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