

A Cross Section of Shore-Bird Migration Near Toledo, Ohio.—

Very few observers are in a position to study the movements of Limicolae as a class, for, generally speaking, the sand-bars and mud flats so attractive to shore birds are seldom found away from the larger rivers and lakes. For this reason, there is much to be learned concerning the numbers and movements of this order. It is with the hope of adding something to the general fund of knowledge that the following data are submitted.

These records were obtained during 1930 on thirty-five field trips made into the country around Bono (twelve miles east of Toledo) and at Little Cedar Point (ten miles east of Toledo). Bono is a small village about a mile inland from Lake Erie, located upon land which lies at or very near lake level, and which has been reclaimed through a series of dikes and drainage canals. In the spring of 1929, due to a combination of high lake levels and severe storms, dikes were washed out in several places, and hundreds of acres of farm land flooded. In 1930 much of the land was either under several inches of water or a vast expanse of mud, depending on the direction of the wind, which controls lake levels. These mud flats attracted flocks of shore birds and here observations were made.

For those birds preferring sand beaches, trips were made to Little Cedar Point, a sand-bar terminating the marshy peninsula which marks the dividing line between Lake Erie and Maumee Bay.

In showing the period of migration, three dates are given: First seen, maximum on one trip, and last seen. The figure in parentheses following the date indicates the number of individuals. To round out my data, a few significant records from other observers have been included.

American Woodcock (*Rubicola minor*). Fairly common summer resident. March 22 (1); August 2 (10); October 26 (3). Found in the wooded margins.

Wilson's Snipe (*Capella gallinago delicata*). Common migrant. April 12 (10 maximum); May 17 (1). Fall. July 20 (2); September 1 (8); November 9 (1).

Long-billed Dowitcher (*Limnodromus griseus scolopaceus*). Fairly common. May 4 (2); May 17 (6)—R. Bailey. Fall. July 20 (6); July 27 (25); September 1 (3).

Stilt Sandpiper (*Micropalama himantopus*). Not common. July 20 (10); July 27 (10); August 10 (2). No spring records.

Knot (*Calidris canutus*). Not common. May 16 (6)—Mrs. Littlefield; May 31 (12). No fall records.

Pectoral Sandpiper (*Pisobia maculata*). Common. March 16 (50)—Mrs. Littlefield; April 26 (300); May 25 (1). Fall movement, July 14 (5); August 3 (100); October 18 (8).

White-rumped Sandpiper (*Pisobia juscicollis*). Rare migrant. May 31 (1); June 8 (1); July 27 (1).

Baird's Sandpiper (*Pisobia bairdi*). Rare migrant. May 31 (2); July 27 (1); August 10 (1).

Least Sandpiper (*Pisobia minutilla*). Common. May 11 (6); May 25 (25); May 31 (20). Fall. July 13 (10); August 3 (200); October 5 (1).

Red-backed Sandpiper (*Pelidna alpina sakhalina*). Common. May 11 (2); May 31 (20); June 8 (4). Fall. October 5 (1); October 18 (15); November 2 (4).

Semipalmated Sandpiper (*Ereunetes pusillus*). Common. May 11 (1); May 25 (100); June 8 (75). Fall. July 4 (2); July 27 (200); September 27 (1).

Western Sandpiper (*Ereunetes mauri*). Rare (?). July 27 (2); August 2 (2).

Sanderling (*Crocethia alba*). Regular in small numbers in fall. June 7 (10); July 13 (3); July 26 (15); September 27 (5).

Greater Yellowlegs (*Totanus melanoleucus*). Common. March 16 (25)—Mrs. Littlefield; April 26 (25); May 11 (5). Fall. July 19 (2); August 10 (50); November 22 (1).

Yellow-legs (*Totanus flavipes*). Common. April 12 (2); May 4 (50); May 25 (14). Fall. July 14 (10); July 20 (100); October 5 (15).

Solitary Sandpiper (*Tringa solitaria solitaria*). Regular in small numbers. April 27 (1); May 6 (3); May 31 (1). Fall. July 20 (2); August 10 (5); September 1 (1).

Western Willet (*Catoptrophorus semipalmatus inornatus*). Very rare migrant. August 17 (1).

Upland Plover (*Bartramia longicauda*). Not common summer resident. May 16 (1); August 3 (12); August 24 (4).

Buff-breasted Sandpiper (*Tryngites subruficollis*). Rare migrant. September 1 (2).

Spotted Sandpiper (*Actitis macularia*). Common summer resident. April 27 (4); August 17 (20); September 20 (1).

Hudsonian Curlew (*Numenius hudsonicus*). Rare migrant. May 17 (4)—Lawrence Hicks. The same day a flock of twenty was seen by the writer at Lakeside, Ohio.

Black-bellied Plover (*Squatarola squatarola cynosurae*). Common. May 16 (6); May 25 (125); June 8 (8). Fall. August 3 (2); August 24 (25); November 22 (1).

Golden Plover (*Pluvialis dominica dominica*). Common. March 16 (13); April 26 (100); June 1 (1)—Charles Walker. These birds arrived still in winter plumage. Fall. August 17 (1); September 21 (40); November 16 (12).

Killdeer (*Oxyechus vociferus vociferus*). Common summer resident. February 23 (1); August 3 (500); November 23 (3).

Semipalmated Plover (*Charadrius semipalmata*). Common. May 11 (35); May 25 (150); June 8 (15). Fall. July 20 (4); August 3 (125); September 21 (1).

Piping Plover (*Charadrius meloda*). Rare summer resident. June 24, two pairs—Joe Bailey.

Ruddy Turnstone (*Arenaria interpres morinella*). Fairly common. May 17 (6); May 31 (100); June 8 (10). Fall. July 26 (6); August 24 (1).—LOUIS W. CAMPBELL, Toledo, Ohio.