

age of once every eleven minutes. The food was small-winged insects and larvæ. The parent birds seldom went directly to the nest with food, but perched on nearby twigs for a few moments.

WARBLER NOTES FROM WAYNE COUNTY, MICHIGAN.

BY J. CLAIRE WOOD.

Mr. P. A. Taverner's interesting paper in the *Wilson Bulletin* for December, 1908, on ornithological observation in this locality impresses one with the difference a few miles can make, especially in warbler migration. Normal years he regards May 4 as marking about the height of the warbler migration while a reference to my note-book establishes May 15 as the average date in the zone of my observations. During the season of 1908 he found practically no warblers until May 17, when they rushed through in almost a day. This doubtless refers to a section north of the city, for southwest of the city and other portions of the county I found the warblers in normal abundance. The spring season opened with several flocks of Myrtles and a Pine on April 19 and thence transients were noted on most all days afield, concluding with a Blackburnian and three Black-polls on May 28.

I regard the above as about the normal range and, for contrast, wish to state that the very remarkable season of 1907 opened with five Myrtles on April 7, and concluded with three Mourning on June 30. The autumn of 1908 was so divided between the warblers, waders and hawks that I can not fix the status of local warbler abundance by a comparison with the three previous seasons which were almost entirely devoted to the warblers. However, they seemed a trifle scarce, but I doubt if they departed unusually early. The total time given them in October did not exceed four hours, so the following is probably very incomplete. October 4—Last of Water-Thrush, Blackburnian and Cape May. October 6—Last of Tennessee. October 11—Last of Yellow-throat, Black-poll and Magnolia.

The exceedingly dry autumn resulted in forest fires that raged through the wooded districts of Michigan, causing serious loss in property and many human lives. The dense volume of smoke impaired navigation on the Great Lakes for a time and reached this city, Detroit, on the evening of September 11. The next morning this section was enveloped as in a dense fog and the sun shone as through smoked glass, and thus began a spell of alternate smoke and sunshine, according to the condition of the air and direction of the wind. September 21 the smoke was so dense that I could not run lines with the surveyor's transit.

Nine o'clock in the morning I counted thirty Blackburnian and four Black-poll Warblers in several maple trees near the lower end of River Rouge Village. They were still there at four o'clock in the afternoon. September 22, small flocks of Black-poll and Tennessee Warblers were stalled in the shade trees all through the village, but were gone on the 23d. It was only on days like the above that the warblers seemed in any way affected, and the waders not at all.

Mr. Taverner gives September 13 as his earliest fall date for the Lincoln Sparrow. I took a male September 7, 1906, which is in my collection. This bird was in company with two others, and later in the day, two single birds were noted about a mile distant, which looks as if careful investigation would fix the date of first arrivals in the first week of September.

The Philadelphia Vireo is certainly not common here, but I believe a few pass through every year. I have not yet systematically investigated the local vireos, but during the warbler investigation (1905-7) eight vireos of this species were mistaken for warblers and taken on the following dates: May 17 and 20, June 2, and September 3, 10 and 24. Twelve more were identified in time to save their lives. Except a flock of three in the autumn and one pair on June 2, all were single birds. This vireo possesses more warbler characteristics than any other species I have met with, and can not be separated with certainty when in the tops of tall trees.