

Regional Trends and Annual Variations in the Fall Migrations of Midwestern Birds

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In our previous paper on regional trends and annual variations in midwestern migrants (Hunt and Cope 1996) we reported average spring arrival dates at four study sites in Illinois, Indiana, and Wisconsin based on long-term yearly data. In this sequel we present comparable trends and variations in median fall arrivals and/or departures at these same four sites and over the same spans of years. Except for the two published reports included in this paper we found no other long-term studies of fall migration by North American land birds with comparable data. F. M. Chapman (1910) presented tables of fall migrant arrivals and departures by 10-day intervals in New Jersey and adjacent New York, but he published neither exact dates nor years of study. For clarity and continuity we have repeated partial descriptions of our study areas, methods, and statistical information from our earlier paper.

Study Areas and Methods

Our primary migration data were recorded from 1965 to 1987 in eastern Illinois near (A) Charleston (39°30'N, 88°11'W) and from 1946 to 1987 in eastern Indiana near (B) Richmond (39°50'N, 84°51'W). Comparable data were gathered in 1969-1983 by Craig and Franks (1987) in western Illinois near (C) Macomb (40°29'N, 90°40'W) and in 1966-1985 by Lange (1986) in southern Wisconsin near (D) Baraboo (43°27'N, 89°45'W). These four locations are shown in Figure 1, and because fall data were sometimes lacking, for a species to appear in our tables the minimum number of sample years were (A) 12, (B) 10, (C) 8 and (D) 11.

From our own observations of yearly first arrivals and last departures at sites A and B together with reports to us from competent observers we calculated median dates as average arrivals and departures to minimize the skewing effect of extreme records and to match the two published sources at C and D. We adopted Craig and Franks' (1987) procedure of using the earlier arrival and later departure date of the central pair when a calculated median fell between two consecutive dates for samples involving an even number of years. From our own arrival and departure records we also computed means and standard errors as measures of annual variability involving unequal sample sizes.

Regional Trends

As year-round birders have experienced, detecting the first arrivals and last departures of fall migrants is far more challenging than recording the first appearance of each species in spring. Alexander Wetmore (1926) aptly stated that "arrival in spring is particularly punctual ..." but "definite data for the rate at which birds travel south in autumn are lacking, as at that season birds are quieter than in spring and more difficult to observe. The journey in many cases also is



The Brown Thrasher is one of a group of Illinois summer residents studied by the authors. Photo taken 17 December 2000 by Dennis Oehmke.

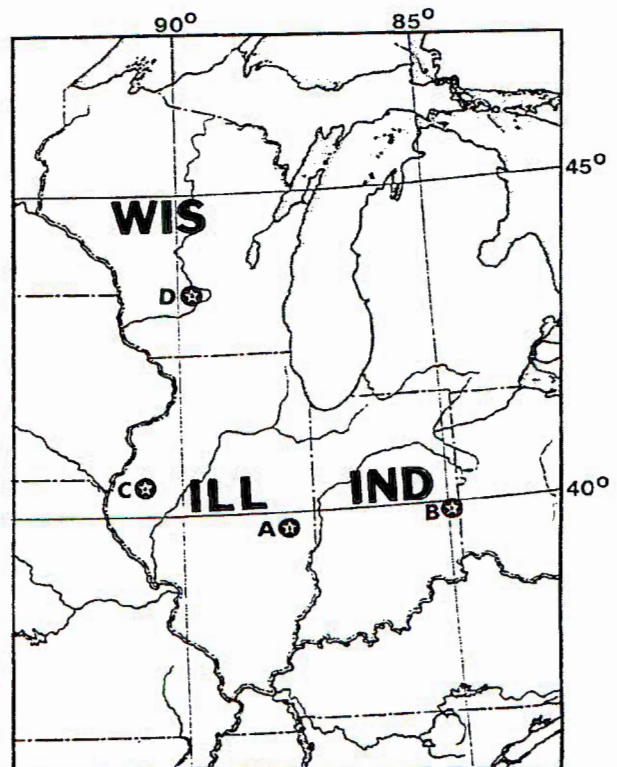


Figure 1. Migration data centers for *E* Illinois at (A) Charleston, *E* Indiana at (B) Richmond, *W* Illinois at (C) Macomb and *S* Wisconsin at (D) Baraboo.