

In this paper, migrant species were included only if their recorded arrival dates constituted more than or equal to 50% of the study years at the site. Minimum sample size (n) was 12 years for eastern (E) Illinois arrivals, 21 years for eastern (E) Indiana, 8 years for species from western (W) Illinois tables and 10 years for southern (S) Wisconsin arrivals. A few selected species did not occur at the Wisconsin site and we eliminated some species whose partial wintering populations made spring transient movements difficult to recognize (i.e., Mallards, American Robins, Eastern Meadowlarks). Often aided by students and colleagues, our observations were made

yearly without contacting each other about the progress of migration. We calculated median dates as average arrivals to minimize the skewing effect of extreme records and to match the 2 published sources. We adopted Craig and Franks' (1987) method of using the earlier arrival date of a pair when the calculated median fell between 2 consecutive dates for samples involving an even number of years. From our own arrival records we also computed means and standard errors as measures of annual variability involving unequal sample sizes.

Regional Trends

In order to compare regional differences in seasonal avian activity at

2 Wisconsin locations, Leopold and Jones (1947) applied Hopkins' (1918) Bioclimatic Law, a phenological rule-of-thumb. This rule states that in spring, periodic biological events in North America average 4 days later for each 1° of latitude northward, 5° of longitude eastward and 400 feet (121.92m) of elevation upward. To test the law's validity for predicting migratory behavior, we used Charleston (39°30'N, 88°11'W, 209m elev.) as our E Illinois reference point and calculated that the typical migrant should arrive 2.1 days later in W Illinois at Macomb (40°29'N, 90°40'W, 213 m elev.), 6.9 days later in E Indiana at Richmond (39°50'N, 84°51'W, 299 m elev.) and 16.1 days

Table 1. February-March median arrival dates of 23 migrants in eastern Illinois and median deviations in days at 3 other Midwestern sites (n = sample years)

| SPECIES | Trend-a/ | E Illinois | | W Illinois | | E Indiana | | S Wisconsin | |
|--------------------------------------|----------|------------|----|------------|----|-----------|----|-------------|----|
| | | Median | n | Dev | n | Dev | n | Dev | n |
| Red-winged Blackbird | S | 20 Feb | 22 | +2 | 15 | +5 | 31 | +18 | 14 |
| Killdeer | S | 21 Feb | 22 | +10 | 15 | +2 | 29 | +18 | 13 |
| Common Grackle | S | 21 Feb | 22 | +11 | 15 | +4 | 28 | +18 | 19 |
| Common Goldeneye | S | 23 Feb | 18 | +5 | 14 | +12 | 23 | +40 | 18 |
| Lesser Scaup | S | 25 Feb | 20 | +5 | 14 | +17 | 35 | +42 | 16 |
| American Woodcock | S | 1 Mar | 22 | +7 | 12 | +1 | 33 | +15 | 20 |
| Turkey Vulture | S | 2 Mar | 21 | +5 | 12 | +15 | 38 | +18 | 17 |
| Ring-necked Duck | - | 4 Mar | 20 | 0 | 13 | +8 | 34 | +38 | 11 |
| Bufflehead | - | 7 Mar | 20 | 0 | 12 | +16 | 28 | +34 | 14 |
| Horned Grebe | S | 9 Mar | 17 | +9 | 10 | +14 | 23 | +40 | 14 |
| American Coot | W | 10 Mar | 19 | -6 | 12 | +6 | 34 | +41 | 15 |
| Fox Sparrow | W | 11 Mar | 21 | -5 | 11 | +10 | 32 | +10 | 17 |
| Brown-headed Cowbird | - | 11 Mar | 21 | -2 | 15 | -4 | 28 | +24 | 10 |
| Pied-billed Grebe | W | 12 Mar | 21 | -4 | 12 | +4 | 35 | +34 | 12 |
| Rufous-sided Towhee | S | 14 Mar | 22 | +8 | 15 | +8 | 28 | +32 | 15 |
| Red-breasted Merganser | W | 15 Mar | 20 | -9 | 11 | +15 | 23 | +28 | 15 |
| Blue-winged Teal | W | 16 Mar | 21 | -1 | 12 | +12 | 36 | +27 | 10 |
| Field Sparrow | U | 17 Mar | 22 | +1 | 14 | +1 | 26 | +22 | 18 |
| Eastern Phoebe | S | 22 Mar | 22 | +5 | 15 | +1 | 37 | +5 | 19 |
| Swamp Sparrow | S | 22 Mar | 20 | +6 | 11 | +15 | 21 | +29 | 11 |
| Common Loon | - | 23 Mar | 14 | +23 | 10 | +9 | 31 | +16 | 19 |
| Brown Thrasher | S | 25 Mar | 22 | +6 | 10 | +8 | 40 | +27 | 19 |
| Tree Swallow | S | 28 Mar | 19 | +6 | 15 | +8 | 36 | +10 | 11 |
| Actual average median deviation | | | | +3.6 | | +8.1 | | +25.5 | |
| Theoretical average median deviation | | | | +2.1 | | +6.9 | | +16.1 | |

a/ Illinois-Indiana arrival trends: uniform (U) within 4-day interval at the 3 sites; first at southernmost (S) E Illinois; advance from west (W) eastward; advance from east (E) westward; trendless (-).