

BIRD MIGRATION PHENOLOGY IN WEST CENTRAL ILLINOIS

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ABSTRACT

Sighting dates for birds in western Illinois were accumulated over a fifteen year period, from 1969 to 1983. The median dates for spring and fall arrival, and for spring and fall departure, were calculated for each migratory species. These four median dates, plus the earliest and latest arrival and departure dates, are shown for each species.

INTRODUCTION

The timing of bird migration has long been a subject of study, but most of the literature seems to be devoted primarily to spring migration. The purpose of this paper is to summarize the timing of spring and fall bird migration in west central Illinois.

Several thorough reports of species migration schedules have been published: Jones (1914) for northern Ohio, Smith (1930) for eastern Illinois, Saunders (1959) for Connecticut, Weydemeyer (1973) for northwest Montana, and Adams (1979) for southern Michigan. The latter three studies calculated average dates, while the first two, and the present study, calculated median dates.

We used medians, rather than means, in this study because median dates are less likely to be skewed by one or two aberrant dates.

STUDY AREA

The area used for this study was selected so as to be compatible with the spring and fall migration reports from the Illinois Department of Conservation (Kleen, 1974-1983). From spring, 1974, through fall, 1980, Illinois Bird Migration districts 4, 5, and 8 were used, which included the counties of Adams, Brown, Bureau, Cass, Fulton, Hancock, Henderson, Henry, Knox, Marshall, Mason, McDonough, Menard,

Mercer, Peoria, Putnam, Rock Island, Schuyler, Stark, Tazewell, Warren, and Woodford. Starting with the spring 1981 report, the migration districts were reorganized slightly. We used districts D, E, and H, which added Pike County and dropped Cass and Menard Counties. Figure 1 shows the maximum extent of the study area.



Fig. 1. Shaded area of Illinois indicates counties included in this study.

METHODS

Six sources of migration data were used. Our primary source was the Illinois Department of Conservation Seasonal Reports (Kleen, 1974-1983). Data were also gathered from the scientific collectors records and ornithology class laboratory records from Western Illinois University, and from personal notes of Given Harper, Alice Krauser, and Edwin Franks. Because several sources of data were used, a single species in a single year often had several different "first arrival" or "last departure" dates. For this report, the earliest arrival and the latest departure were selected for each year for each species, and then summarized for the fifteen-year span. In some uncommon biannual transient species with only a single recorded observation, the date of arrival and departure are necessarily identical.

The median date (the middle-most date) was found by ranking the dates in order from earliest to latest, ignoring the years. For example, the earliest, median, and latest dates in the following set of hypothetical spring arrival dates would be as indicated:

Date	Seasonal rank
May 15, 1977	6
May 5, 1978	4 median
May 4, 1979	3
April 25, 1980	2
May 7, 1981	5
April 8, 1982	1 earliest
June 2, 1983	7 latest

In this case, seven dates are used, so the median is the fourth in seasonal rank.

For a set of data which has an even number of dates, the median is determined by finding the middle date between the middle-most two dates. For example, if there were 8 dates used, and the fourth and fifth were April 6 and April 12, April 9 would be the median date.

But if there were an even number of days between the middle-most two dates, such as, if the middle-most dates were April 6 and 13, the earliest of the two central dates was used for the median arrival date (April 9 in this example) and the latter of the two central dates was used for the median departure date (April 10 in this example).

RESULTS

The migration schedule for each species in west central Illinois is presented in Table 1. We have shown the earliest, median, and latest date for each species' spring arrival, spring departure, fall arrival, and fall departure insofar as applicable to the species. The earliest and latest dates are included to show the range of dates in which each species might be expected to arrive or depart, while the median date is the best indication of the most likely date.

In Table 1, dates are indicated using numbers for the month and day, separated by a slash, such that a date of 3/5 indicates March fifth. The letters "ID" (insufficient data) were used in the dates columns to indicate the lack of recorded dates. The letters "S" (summer) and "W" (winter) are used in these columns where transient species stay during the summer and winter.

Based partly on the reported migration dates, and partly on the maps and texts in field guides by Robbins, et al. (1983), Peterson (1980), and Farrand (1983), each species was given one or more status codes to provide a descriptive statement of its occurrence in west central Illinois. In many cases, the status was difficult to assign, and is therefore debatable and is not meant to be precise.

Status "P" (permanent) indicates the birds live in the area all year. Some species are found in the area all year long, but the population migrates with the seasons or weather; these species are designated "PM". These two status codes are also used in the date columns when there are no obvious migratory periods.

Transient species (status "T") show a distinct migratory period. Some few individuals of biannual transient species may stay in the study area during a season while the majority of the species moves on. These species are designated by either "IS" (individuals may summer) or "IW" (individuals may winter).

Status "U" indicates species which are uncommon, and status "Ir" indicates irregular migrants that do not occur in the study area every year.

The common names, scientific names, and the sequence of species in Table 1 follow the latest A.O.U. checklist (American Ornithologists' Union, 1983).

We found that there is much more information on spring migration than on fall migration, as shown by the sample sizes (in parentheses) in Table 1. Thus, for many species listed, the fall data are less reliable than the spring data.

ACKNOWLEDGMENTS

We wish to thank Given Harper and Alice Krauser for the use of their data, and Vernon Kleen, of the Illinois Department of Conservation, for his advice on the use of his published data.

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KEY TO THE SYMBOLS USED IN TABLE 1.

- ID Insufficient data
- Ir Irregular; not present every year
- IS Some individuals may summer
- IW Some individuals may winter
- P Permanent resident
- PM Species present all year, but the local population migrates with the season or weather
- S The species summers in the area
- T Transient species; shows a distinct migratory period
- U Uncommon to extremely uncommon in the area
- W The species winters in the area
- () Sample size; number of years' data available for calculating median
- 2/4 Month and day (February 4 in this example)

Table 1. Spring and Fall Sighting Dates (Month/Day) for West Central Illinois Birds, 1969-1983.

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Common Loon <i>Gavia immer</i>	T	3/30	4/15(10)	5/9	3/30	5/5(10)	5/10	10/20	11/1(8)	11/22	10/23	12/7(8)	12/21
Pied-billed Grebe <i>Podilymbus podiceps</i>	T,IS	2/4	3/8(12)	4/17	3/5	5/7(12)	6/7	8/6	9/1(8)	9/6	10/23	10/27(8)	12/17
Horned Grebe <i>Podiceps auritus</i>	T	2/22	3/18(10)	4/15	3/20	4/10(10)	5/5	9/18	11/13(9)	11/22	11/13	11/22(9)	12/12
Eared Grebe <i>Podiceps nigricollis</i>	U,T	ID	ID	ID	ID	ID	ID	9/6	9/6(1)	9/6	9/6	9/6(1)	9/6
American White Pelican <i>Pelecanus erythrorhynchos</i>	U,T	4/21	4/21(1)	4/21	4/21	4/21(1)	4/21	10/23	11/1(3)	11/1	10/23	11/1(3)	11/1
Double-crested Cormorant <i>Phalacrocorax auritus</i>	T	2/17	4/4(10)	4/24	3/25	5/9(10)	5/31	9/3	9/27(9)	12/11	10/21	11/23(9)	12/11
American Bittern <i>Botaurus lentiginosus</i>	T,IS	4/14	4/18(10)	5/12	4/16	5/5(10)	5/12	8/8	8/27(4)	11/3	9/6	10/13(4)	11/3
Least Bittern <i>Icthyophaga exilis</i>	T,IS	5/8	5/21(5)	5/26	5/8	5/21(5)	5/30	ID	ID	ID	ID	ID	ID
Great Blue Heron <i>Ardea herodias</i>	T	2/10	3/13(14)	4/9	S	S	S	S	S	S	10/5	12/16(10)	1/1
Great Egret <i>Casmerodius albus</i>	T,IS	3/9	4/4(11)	4/22	4/5	4/17(11)	5/12	7/8	8/18(10)	11/12	8/25	10/20(10)	12/6
Snowy Egret <i>Egretta thula</i>	U,IS	4/30	4/30(1)	4/30	4/30	4/30(1)	4/30	ID	ID	ID	ID	ID	ID

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Little Blue Heron <i>Egretta caerulea</i>	T,IS	2/4	4/21(6)	5/10	4/19	5/7(6)	5/10	7/20	8/1(6)	8/8	8/4	8/13(6)	10/10
Cattle Egret <i>Bubulcus ibis</i>	T,IS	3/29	4/18(9)	5/12	4/18	5/9(9)	6/13	8/3	9/6(7)	11/8	8/28	10/20(7)	11/24
Green-backed Heron <i>Butorides striatus</i>	T	4/8	4/21(11)	4/30	S	S	S	S	S	S	9/16	9/30(8)	12/17
Black-crowned Night-heron <i>Nycticorax nycticorax</i>	T	4/9	4/15(10)	5/1	S	S	S	S	S	S	9/23	10/6(5)	11/11
Yellow-crowned Night-heron <i>Nycticorax violaceus</i>	T,IS	4/7	4/30(8)	5/7	4/7	5/7(8)	6/2	8/24	9/13(3)	10/9	9/13	10/9(3)	10/10
Tundra Swan <i>Cygnus columbianus</i>	T,U	2/12	2/28(2)	3/16	3/15	3/16(2)	3/16	10/31	11/21(4)	12/1	11/11	11/30(4)	12/17
Greater White-fronted Goose <i>Anser albifrons</i>	T	2/7	2/29(7)	3/24	2/12	3/22(7)	4/4	ID	ID	ID	ID	ID	ID
Snow Goose <i>Chen caerulescens</i>	T	2/7	2/27(9)	3/12	3/4	4/8(9)	5/22	9/12	10/15(10)	10/25	9/19	11/10(10)	12/26
Canada Goose <i>Branta canadensis</i>	T,PM	2/7	2/20(9)	2/22	2/19	5/6(9)	6/5	9/1	9/9(9)	10/2	9/21	11/27(9)	1/16
Wood Duck <i>Aix sponsa</i>	T	2/7	3/3(11)	3/28	S	S	S	S	S	S	10/17	12/15(9)	12/20
Green-winged Teal <i>Anas crecca</i>	T	2/4	3/18(12)	4/1	3/30	4/27(12)	5/26	7/13	9/15(12)	11/10	9/14	11/15(12)	12/20

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures			
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest	
Surf Scoter <i>Melanitta perspicillata</i>	T,U	1/4	1/4(1)	1/4	1/4	1/4(1)	1/4	9/28	9/28(1)	9/28	9/28	9/28(1)	9/28	
Common Goldeneye <i>Bucephala clangula</i>	T,IW	1/24	2/28(14)	5/7	1/24	4/7(14)	5/7	10/5	11/11(7)	11/14	11/1	11/24(7)	12/29	
Bufflehead <i>Bucephala albeola</i>	T,IW	2/10	3/7(12)	4/9	3/7	4/17(12)	5/7	10/27	11/6(7)	11/21	11/15	12/4(7)	12/22	
Hooded Merganser <i>Lophodytes cucullatus</i>	T,IS	2/5	2/27(10)	3/14	2/24	3/27(10)	6/10	10/24	11/6(9)	12/20	11/6	12/13(9)	12/26	
Common Merganser <i>Mergus merganser</i>	T,IW	1/19	2/23(12)	3/21	1/24	4/20(12)	6/15	10/17	11/1(7)	12/2	10/22	12/1(7)	12/19	
Red-breasted Merganser <i>Mergus serrator</i>	T	2/21	3/6(11)	3/19	3/29	4/18(11)	5/18	9/27	11/12(6)	11/20	9/27	11/14(6)	11/26	
Ruddy Duck <i>Oxyura jamaicensis</i>	T	2/12	2/22(10)	3/23	4/15	5/11(10)	5/23	9/24	10/16(10)	10/26	10/13	12/1(10)	12/17	
Turkey Vulture <i>Cathartes aura</i>	T	2/17	3/7(12)	4/1	S	S	S	S	S	S	S	9/30	10/25(10)	1/12
Osprey <i>Pandion haliaetus</i>	T	4/4	4/14(10)	4/15	4/4	5/5(10)	5/9	8/23	9/6(11)	10/2	9/7	10/16(11)	11/19	
Bald Eagle <i>Haliaeetus leucocephalus</i>	T	W	W	W	1/9	3/19(12)	4/3	9/2	10/25(10)	11/27	W	W	W	
Northern Harrier <i>Circus cyaneus</i>	T,PM	2/9	3/13(11)	4/21	3/7	4/21(11)	5/8	8/23	9/12(8)	9/29	9/13	9/29(8)	10/10	

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Wild Turkey <i>Meleagris gallopavo</i>	U,P	P	P	P	P	P	P	P	P	P	P	P	P
Northern Bobwhite <i>Colinus virginianus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
King Rail <i>Rallus elegans</i>	T	3/16	4/10(5)	5/8	S	S	S	S	S	S	S	ID	ID
Virginia Rail <i>Rallus limicola</i>	T,IS	4/6	5/2(9)	5/16	4/6	5/6(9)	5/16	7/17	8/15(2)	9/24	7/17	8/15(2)	9/24
Sora <i>Porzana carolina</i>	T,IS	4/3	4/14(10)	4/19	4/14	5/9(10)	5/17	8/6	9/21(9)	10/27	9/4	9/30(9)	10/27
Common Moorhen <i>Gallinula chloropus</i>	Ir,IS	4/25	5/8(6)	5/22	4/25	5/8(6)	5/22	ID	ID	ID	ID	ID	ID
American Coot <i>Fulica americana</i>	T,IS	2/1	3/4(12)	3/30	3/28	5/11(12)	6/9	8/20	9/24(9)	11/15	10/24	11/15(9)	12/17
Sandhill Crane <i>Grus canadensis</i>	Ir,U	3/22	3/25(3)	4/11	3/22	3/25(3)	5/3	ID	ID	ID	ID	ID	ID
Black-bellied Plover <i>Pluvialis squatarola</i>	T	5/5	5/7(5)	5/17	5/6	5/22(5)	6/1	8/3	8/19(8)	10/31	8/6	10/18(8)	11/6
Lesser Golden-plover <i>Pluvialis dominica</i>	T	3/10	4/21(8)	5/6	3/31	5/10(8)	6/8	7/27	9/13(7)	9/27	9/17	10/4(7)	11/11
Semipalmated plover <i>Charadrius semipalmatus</i>	T	4/24	5/3(8)	5/10	5/8	5/26(8)	5/31	7/15	7/31(8)	9/30	8/8	9/19(8)	10/20

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Killdeer <i>Charadrius vociferus</i>	T	2/16	3/3(15)	4/2	S	S	S	S	S	10/10	12/4(10)	1/1	
American Avocet <i>Recurvirostra americana</i>	Ir,T	5/2	5/2(1)	5/2	5/2	5/2(1)	5/2	8/5	9/26(4)	11/1	8/5	9/26(4)	
Greater Yellowlegs <i>Tringa melanoleuca</i>	T	3/22	3/28(10)	5/8	4/11	5/12(10)	6/12	7/4	7/20(11)	10/26	8/16	10/29(11)	
Lesser Yellowlegs <i>Tringa flavipes</i>	T	3/12	3/29(8)	4/6	4/11	5/14(8)	5/30	7/2	7/11(8)	8/2	9/24	11/7(8)	
Solitary Sandpiper <i>Tringa solitaria</i>	T	4/10	4/17(10)	4/30	4/24	5/10(10)	5/22	7/2	7/14(10)	8/22	7/14	8/29(10)	
Willet <i>Catoptrophorus</i>	Ir,U	4/23	4/26(2)	4/29	4/29	4/29(2)	4/29	8/10	8/10(1)	8/10	8/10	8/10(1)	
Spotted Sandpiper <i>Actitis macularia</i>	T,IS	4/15	4/18(10)	4/25	4/20	5/9(10)	5/30	7/4	7/29(9)	9/29	8/4	10/8(9)	
Upland Sandpiper <i>Bartramia longicauda</i>	T,IS	4/13	4/24(8)	5/10	4/15	5/3(8)	6/8	8/1	8/16(3)	10/5	8/8	8/16(3)	
Hudsonian Godwit <i>Limosa haemastica</i>	Ir,T	5/10	5/15(4)	5/22	5/20	5/22(4)	5/23	ID	ID	ID	ID	ID	
Marbled Godwit <i>Limosa fedoa</i>	U,T	ID	ID	ID	ID	ID	ID	8/11	8/11(1)	8/11	8/27	8/27(1)	
Ruddy Turnstone <i>Arenaria interpres</i>	Ir,T	5/7	5/11(3)	5/17	5/11	5/23(3)	5/31	8/13	8/27(5)	9/6	8/19	9/1(5)	

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Sanderling <i>Caliátris alba</i>	T	5/6	5/8(6)	5/23	5/6	5/12(6)	5/23	7/20	9/5(8)	9/21	7/20	9/11(8)	10/25
Semipalmated Sandpiper <i>Caliátris pusilla</i>	T	4/23	5/3(10)	5/9	5/4	5/20(10)	6/5	7/6	7/25(10)	9/3	7/29	9/24(10)	11/27
Western Sandpiper <i>Caliátris mauri</i>	T	5/4	5/13(6)	5/23	5/11	5/16(6)	5/30	7/4	8/1(10)	9/6	7/21	8/28(10)	11/1
Least Sandpiper <i>Caliátris minutilla</i>	T	4/17	4/28(9)	5/10	5/1	5/17(9)	6/11	7/2	7/12(9)	9/29	8/5	9/29(9)	11/11
White-rumped Sandpiper <i>Caliátris fuscicollis</i>	U,T	5/8	5/25(6)	5/30	5/16	5/31(6)	6/11	9/5	9/5(1)	9/5	9/16	9/16(1)	9/16
Baird's Sandpiper <i>Caliátris bairdii</i>	U,T	4/24	5/11(7)	5/30	5/6	5/16(7)	5/30	7/16	8/10(5)	10/10	8/10	10/10(5)	11/11
Pectoral Sandpiper <i>Caliátris melanotos</i>	T	2/7	3/28(10)	4/10	3/29	5/9(10)	5/30	6/24	8/2(11)	11/13	8/2	10/29(11)	11/20
Dunlin <i>Caliátris alpina</i>	T	4/7	5/2(8)	5/11	5/8	5/18(8)	5/29	9/16	9/28(5)	10/19	9/28	10/25(5)	12/6
Stilt Sandpiper <i>Caliátris himantopus</i>	U,T	5/4	5/7(3)	5/17	5/13	5/26(3)	5/31	7/2	7/25(9)	8/5	7/6	8/6(9)	10/22
Buff-breasted Sandpiper <i>Tryngites subruficollis</i>	Ir,U,T	ID	ID	ID	ID	ID	ID	8/23	9/2(4)	9/26	8/23	9/2(4)	10/2
Short-billed Dowitcher <i>Limnodromus griseus</i>	T	4/29	5/5(8)	5/10	5/4	5/15(8)	5/24	7/6	8/3(10)	8/18	7/6	9/4(10)	11/15

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Long-billed Dowitcher <i>Limnodromus scolopaceus</i>	T	4/19	4/21(3)	5/6	4/21	5/6(3)	5/14	8/4	9/17(8)	10/8	8/4	10/10(8)	11/2
Common Snipe <i>Gallinago gallinago</i>	T,IS	2/27	3/16(12)	3/25	3/10	5/4(12)	5/15	7/13	10/7(12)	12/10	7/13	11/24(12)	12/26
American Woodcock <i>Scolopax minor</i>	T	2/21	3/8(12)	3/29	S	S	S	S	S	S	10/16	11/8(9)	11/22
Wilson's Phalarope <i>Phalaropus tricolor</i>	T	4/21	5/2(8)	5/16	5/1	5/7(8)	5/25	7/13	8/13(6)	9/8	7/13	9/1(6)	11/18
Red-necked Phalarope <i>Phalaropus lobatus</i>	U,T	5/18	5/18(1)	5/18	5/18	5/18(1)	5/18	8/23	9/2(2)	9/10	8/23	9/2(2)	9/10
Franklin's Gull <i>Larus pipixcan</i>	Ir,T	3/26	4/4(3)	4/29	3/31	4/4(3)	4/29	8/27	9/13(5)	10/19	9/13	10/22(5)	11/6
Bonaparte's Gull <i>Larus philadelphia</i>	T	3/12	3/30(10)	4/15	4/5	5/6(10)	5/17	8/23	10/24(7)	11/11	8/23	11/5(7)	12/19
Ring-billed Gull <i>Larus delawarensis</i>	T	2/16	3/8(10)	3/28	3/28	5/8(10)	5/31	8/3	8/23(9)	10/26	8/11	10/29(9)	12/12
Herring Gull <i>Larus argentatus</i>	T	2/14	3/30(9)	5/8	3/30	5/7(9)	5/31	8/8	9/2(10)	11/13	8/25	10/6(10)	12/12
Caspian Tern <i>Sterna caspia</i>	T	4/19	5/4(7)	5/16	4/19	5/16(7)	5/23	7/7	8/18(10)	9/21	8/9	9/27(10)	10/8
Common Tern <i>Sterna hirundo</i>	T	4/15	4/30(9)	5/17	4/20	5/13(9)	5/21	8/6	8/13(7)	9/10	8/6	8/18(7)	10/31

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Forster's Tern <i>Sterna forsteri</i>	T	4/12	4/29(8)	5/17	4/12	5/8(8)	5/25	7/23	8/18(7)	10/8	8/27	9/10(7)	10/8
Least Tern <i>Sterna antillarum</i>	U,T	ID	ID	ID	ID	ID	ID	7/8	7/8(1)	7/8	7/8	7/8(1)	7/8
Black Tern <i>Chlidonias niger</i>	T	5/2	5/7(9)	5/10	5/7	5/12(9)	6/10	7/20	8/2(7)	8/10	7/20	9/4(7)	9/17
Rock Dove <i>Columba livia</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Mourning Dove <i>Zenaidura macroura</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i>	T	4/28	5/7(10)	5/13	S	S	S	S	S	S	S	8/20	9/17(5)
Yellow-billed Cuckoo <i>Coccyzus americanus</i>	T	4/28	5/8(13)	5/25	S	S	S	S	S	S	S	9/16	10/16(8)
Common Barn-owl <i>Tyto alba</i>	U,P	P	P	P	P	P	P	P	P	P	P	P	P
Eastern Screech-owl <i>Otus asio</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Great Horned Owl <i>Bubo virginianus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Snowy Owl <i>Nyctea scandiaca</i>	U,T	W	W	W	3/29	3/29(1)	3/29	11/13	11/14(2)	11/15	W	W	W

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Barred Owl <i>Strix varia</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Long-eared Owl <i>Asio otus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Short-eared Owl <i>Asio flammeus</i>	T	W	W	W	3/15	3/16(2)	3/16	11/10	11/30(2)	12/21	W	W	W
Northern Saw-whet Owl <i>Aegolius acadicus</i>	U,PM	W	W	W	ID	ID	ID	10/3	10/3(1)	10/3	W	W	W
Common Nighthawk <i>Chordeiles minor</i>	T	4/25	5/4(15)	5/18	S	S	S	S	S	S	9/17	10/1(7)	10/24
Whip-poor-will <i>Caprimulgus vociferus</i>	T	4/9	4/20(15)	5/3	S	S	S	S	S	S	8/11	9/13(4)	9/23
Chimney Swift <i>Chaetura pelagica</i>	T	3/22	4/13(14)	4/27	S	S	S	S	S	S	10/6	10/18(9)	11/6
Ruby-throated Hummingbird <i>Archilochus colubris</i>	T	4/22	5/4(15)	5/12	S	S	S	S	S	S	8/31	9/25(9)	10/2
Belted Kingfisher <i>Ceryle alcyon</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	T,PM	2/15	3/29(13)	4/20	S	S	S	S	S	S	10/24	11/10(4)	1/17
Red-bellied Woodpecker <i>Melanerpes carolinus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>	T,IW	2/2	4/6(15)	5/4	4/4	4/14(15)	5/6	8/5	9/22(7)	10/19	8/6	10/19(7)	11/17
Downy Woodpecker <i>Picoides pubescens</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Hairy Woodpecker <i>Picoides villosus</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Northern Flicker <i>Colaptes auratus</i>	T,PM	1/17	3/13(11)	4/16	S	S	S	S	S	S	11/17	12/4(2)	12/23
Olive-sided Flycatcher <i>Contopus borealis</i>	T	5/5	5/8(9)	5/15	5/7	5/17(9)	6/7	8/11	8/25(10)	9/8	9/6	9/14(10)	9/26
Eastern Wood-pewee <i>Contopus virens</i>	T	3/24	5/10(14)	5/20	S	S	S	S	S	S	9/13	9/29(10)	10/16
Yellow-bellied Flycatcher <i>Empidonax flaviventris</i>	T	5/1	5/12(9)	5/29	5/1	5/20(9)	6/3	8/15	9/6(7)	10/5	8/23	9/10(7)	10/7
Acadian Flycatcher <i>Empidonax virescens</i>	T	4/27	5/7(10)	5/16	S	S	S	S	S	S	10/6	10/6(1)	10/6
Alder Flycatcher <i>Empidonax alnorum</i>	T	3/26	5/18(8)	6/4	3/26	5/23(8)	6/14	ID	ID	ID	ID	ID	ID
Willow Flycatcher <i>Empidonax traillii</i>	T	4/29	5/14(9)	5/23	S	S	S	S	S	S	S	ID	ID
Least Flycatcher <i>Empidonax minimus</i>	T	4/26	5/6(10)	5/9	5/9	5/20(10)	6/1	7/29	9/2(7)	9/29	8/19	9/14(7)	9/29

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Marsh Wren <i>Cistothorus palustris</i>	T	4/12	5/5(10)	5/11	S	S	S	S	S	S	9/25	10/8(4)	11/1
Golden-crowned Kinglet <i>Regulus satrapa</i>	T,IW	3/1	3/29(15)	4/15	3/1	4/14(15)	5/3	9/5	10/2(11)	11/5	10/4	11/5(11)	12/31
Ruby-crowned Kinglet <i>Regulus calendula</i>	T	3/18	4/2(13)	4/12	4/6	5/14(13)	5/18	8/19	9/12(10)	11/13	10/29	11/28(10)	12/20
Blue-gray Gnatcatcher <i>Polioptila caerulea</i>	T	4/11	4/20(11)	5/7	S	S	S	S	S	S	9/2	9/13(8)	10/20
Eastern Bluebird <i>Sialia sialis</i>	T	2/7	3/2(15)	3/28	S	S	S	S	S	S	9/10	11/20(10)	12/7
Veery <i>Catharus fuscescens</i>	T	4/25	4/28(10)	5/6	4/27	5/23(10)	5/26	8/23	9/1(6)	9/12	8/23	9/4(6)	10/18
Gray-cheeked Thrush <i>Catharus minimus</i>	T	4/29	5/4(13)	5/14	5/7	5/18(13)	5/24	9/2	9/12(7)	10/9	9/6	10/2(7)	10/11
Swainson's Thrush <i>Catharus ustulatus</i>	T	4/17	5/5(14)	5/10	4/22	5/17(14)	6/3	9/2	9/8(10)	9/11	9/2	10/2(10)	10/16
Hermit Thrush <i>Catharus guttatus</i>	T	4/1	4/5(10)	4/9	4/8	5/8(10)	5/26	9/20	10/6(11)	10/23	10/20	10/25(11)	11/23
Wood Thrush <i>Hylocichla ustulata</i>	T	4/17	4/27(13)	5/10	S	S	S	S	S	S	8/11	10/8(5)	1/24
American Robin <i>Turdus migratorius</i>	T,PM	1/15	2/19(14)	3/11	S	S	S	S	S	S	11/10	11/30(10)	12/30

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Gray Catbird <i>Dumetella carolinensis</i>	T	4/22	5/2(15)	5/6	S	S	S	S	S	S	9/29	10/13(10)	11/16
Northern Mockingbird <i>Mimus polyglottos</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Brown Thrasher <i>Toxostoma rufum</i>	T	1/31	3/31(10)	4/14	S	S	S	S	S	S	9/29	10/29(10)	12/26
Water Pipit <i>Anthus spinoletta</i>	T	3/12	4/25(8)	5/10	3/18	5/9(8)	5/17	9/1	9/27(6)	10/15	9/10	10/27(6)	11/8
Cedar Waxwing <i>Bombicilla cedrorum</i>	T,PM	2/10	2/15(9)	3/15	2/25	3/17(9)	5/27	8/7	9/10(6)	10/20	8/15	10/1(6)	12/17
European Starling <i>Sturnus vulgaris</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
White-eyed Vireo <i>Vireo griseus</i>	T,IS	4/15	5/1(13)	5/16	4/28	5/9(13)	5/21	8/29	9/14(7)	10/1	8/29	9/14(7)	10/1
Bell's Vireo <i>Vireo bellii</i>	T	5/3	5/7(10)	5/11	S	S	S	S	S	S	7/30	9/1(3)	9/7
Solitary Vireo <i>Vireo solitarius</i>	T	4/26	5/3(9)	5/7	5/2	5/12(9)	5/20	9/2	9/15(10)	9/29	9/21	10/9(10)	11/2
Yellow-throated Vireo <i>Vireo flavifrons</i>	T,IS	4/24	4/27(12)	5/16	4/24	5/7(12)	5/16	9/3	9/7(6)	10/1	9/11	9/22(6)	10/17
Warbling Vireo <i>Vireo gilvus</i>	T,IS	4/14	4/25(15)	5/3	4/25	5/4(15)	5/8	9/3	9/6(8)	9/11	9/5	9/13(8)	9/18

Table 1. (continued)

Common Name	Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
			First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Philadelphia Vireo	<i>Vireo philadelphicus</i>	T	4/29	5/5(10)	5/10	5/7	5/14(10)	5/30	9/6	9/14(7)	9/22	9/12	9/25(7)	10/7
Red-eyed Vireo	<i>Vireo olivaceus</i>	T,IS	4/18	5/1(12)	5/5	4/24	5/8(12)	5/19	8/27	9/16(11)	10/8	9/21	10/3(11)	10/11
Blue-winged Warbler	<i>Vermivora pinus</i>	T,IS	4/26	5/4(10)	5/7	4/30	5/11(10)	5/15	8/30	8/30(3)	9/4	8/30	8/30(3)	9/4
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	T,IS	4/25	5/6(14)	5/12	5/6	5/18(14)	5/24	8/26	9/6(9)	9/17	9/4	9/14(9)	9/22
Tennessee Warbler	<i>Vermivora peregrina</i>	T	4/6	4/27(15)	5/5	5/1	5/24(15)	5/29	8/19	9/2(10)	9/21	9/25	10/8(10)	10/20
Orange-crowned Warbler	<i>Vermivora celata</i>	T	4/18	4/29(10)	5/8	4/27	5/15(10)	6/5	9/6	9/24(11)	10/30	10/4	10/21(11)	12/28
Nashville Warbler	<i>Vermivora ruficapilla</i>	T	4/5	4/30(13)	5/7	5/2	5/20(13)	5/27	8/22	9/2(11)	9/22	8/29	10/13(11)	12/9
Northern Parula	<i>Parula americana</i>	T	4/9	5/1(13)	5/10	4/26	5/10(13)	5/16	9/8	9/21(7)	10/4	9/13	9/24(7)	10/4
Yellow Warbler	<i>Dendroica petechia</i>	T	4/24	4/28(12)	5/9	S	S	S	S	S	S	9/14	9/18(3)	9/23
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	T	4/26	5/2(13)	5/13	5/8	5/22(13)	6/9	8/16	8/31(11)	9/10	9/3	9/26(11)	10/11
Magnolia Warbler	<i>Dendroica magnolia</i>	T	4/29	5/6(10)	5/22	5/9	5/23(10)	6/4	8/22	9/2(12)	10/1	8/24	10/1(12)	10/24

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Cape May Warbler <i>Dendroica tigrina</i>	T	4/23	5/5(10)	5/10	5/6	5/15(10)	5/27	9/13	9/17(3)	9/26	9/13	9/26(3)	10/10
Black-throated Blue Warbler <i>Dendroica caerulescens</i>	T	5/6	5/14(4)	5/18	5/6	5/16(4)	5/18	8/24	9/15(8)	9/30	8/24	9/20(8)	9/30
Yellow-rumped Warbler <i>Dendroica coronata</i>	T	3/15	4/9(15)	5/8	4/10	5/16(15)	5/21	8/16	9/16(11)	10/11	9/29	11/9(11)	12/22
Black-throated Green Warbler <i>Dendroica virens</i>	T	4/21	5/1(15)	5/10	5/3	5/18(15)	5/27	8/14	9/4(13)	9/22	9/3	10/9(13)	11/1
Blackburnian Warbler <i>Dendroica fusca</i>	T	4/27	5/2(13)	5/13	5/5	5/22(13)	5/29	8/17	8/30(10)	9/15	8/28	9/24(10)	10/10
Yellow-throated Warbler <i>Dendroica dominica</i>	T	4/12	4/20(8)	5/7	S	S	S	S	S	S	ID	ID	ID
Pine Warbler <i>Dendroica pinus</i>	T	4/13	4/27(10)	5/11	4/13	5/9(10)	5/24	8/16	9/15(5)	9/20	9/7	9/20(5)	9/22
Prairie Warbler <i>Dendroica discolor</i>	T	5/6	5/9(5)	5/10	5/6	5/9(5)	5/10	9/28	9/28(1)	9/28	9/28	9/28(1)	9/28
Palm Warbler <i>Dendroica palmarum</i>	T	4/14	4/23(15)	5/11	5/2	5/11(15)	5/21	9/11	9/13(8)	10/7	9/12	10/4(8)	11/12
Bay-breasted Warbler <i>Dendroica castanea</i>	T	5/2	5/10(12)	5/13	5/8	5/19(12)	5/29	8/22	9/5(10)	9/25	9/6	9/25(10)	10/10
Blackpoll Warbler <i>Dendroica striata</i>	T	4/26	5/3(14)	5/15	5/11	5/23(14)	5/26	9/2	9/11(8)	9/25	9/2	9/14(8)	9/25

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Cerulean Warbler <i>Dendroica cerulea</i>	T,IS	4/27	5/2(8)	5/8	4/29	5/12(8)	5/28	9/23	9/30(2)	10/6	9/23	10/1(2)	10/9
Black-and-white Warbler <i>Mniotilta varia</i>	T	4/14	4/26(13)	5/10	5/1	5/18(13)	5/26	8/10	8/28(10)	9/12	9/19	10/1(10)	10/11
American Redstart <i>Setophaga ruticilla</i>	T,IS	4/24	5/4(14)	5/10	5/4	5/9(14)	5/21	8/10	8/31(10)	9/4	9/3	9/30(10)	10/7
Prothonotary Warbler <i>Protonotaria citrea</i>	T	4/27	5/3(10)	5/6	S	S	S	S	S	S	8/14	8/17(2)	8/20
Worm-eating Warbler <i>Helminthos vermivorus</i>	T,IS	4/30	5/8(6)	5/11	5/9	5/12(6)	5/20	ID	ID	ID	ID	ID	ID
Ovenbird <i>Seiurus aurocapillus</i>	T,IS	4/23	5/5(10)	5/15	5/6	5/18(10)	5/28	8/25	9/7(9)	9/29	9/2	9/23(9)	11/10
Northern Waterthrush <i>Seiurus noveboracensis</i>	T	4/17	4/26(13)	5/6	4/27	5/19(13)	5/28	8/17	9/6(9)	9/27	8/17	9/17(9)	10/8
Louisiana Waterthrush <i>Seiurus motacilla</i>	T,IS	4/7	4/30(9)	5/10	5/4	5/8(9)	5/22	ID	ID	ID	ID	ID	ID
Kentucky Warbler <i>Opornis formosus</i>	T,IS	4/20	5/6(14)	5/10	5/6	5/11(14)	6/21	9/13	9/13(1)	9/13	9/13	9/13(1)	9/13
Connecticut Warbler <i>Opornis agilis</i>	T	4/23	5/15(8)	6/1	4/23	5/23(8)	6/1	9/7	9/14(3)	9/24	9/7	9/14(3)	9/24
Mourning Warbler <i>Opornis philadelphia</i>	T	5/6	5/10(10)	5/16	5/7	5/13(10)	5/30	8/16	9/13(6)	9/23	8/16	9/21(6)	10/22

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals		Spring Departures		Fall Arrivals		Fall Departures					
		First	Median Latest	First	Median Latest	First	Median Latest	First	Median Latest				
Common Yellowthroat <i>Geothlypis trichas</i>	T	4/20	4/29(15)	5/6	S	S	S	S	10/1	10/20(6)	11/22		
Hooded Warbler <i>Wilsonia citrina</i>	T,IS	4/6	5/10(8)	5/26	4/6	5/10(8)	5/26	ID	ID	ID	ID		
Wilson's Warbler <i>Wilsonia pusilla</i>	T	4/20	5/7(11)	5/14	5/14	5/24(11)	5/29	8/10	9/3(11)	9/10	9/18(11)	10/1	
Canada Warbler <i>Wilsonia canadensis</i>	T	5/7	5/10(9)	5/13	5/8	5/21(9)	6/5	8/17	9/1(9)	9/6	8/30	9/18(9)	10/17
Yellow-breasted Chat <i>Icteria virens</i>	T	5/1	5/4(10)	5/8	S	S	S	S	S	S	8/20	8/20(1)	8/20
Summer Tanager <i>Piranga rubra</i>	T	4/21	5/7(10)	5/17	S	S	S	S	S	S	ID	ID	ID
Scarlet Tanager <i>Piranga rubra</i>	T,IS	4/23	5/3(15)	5/18	5/4	5/10(15)	5/25	9/8	9/16(7)	10/3	9/16	9/29(7)	10/7
Northern Cardinal <i>Cardinalis cardinalis</i>	P	P	P	P	P	P	P	P	P	P	P	P	P
Rose-breasted Grosbeak <i>Phoebastria ludovicianus</i>	T,IS	4/20	4/27(15)	5/4	4/28	5/3(15)	5/8	8/30	9/10(11)	10/5	9/20	10/3(11)	10/24
Blue Grosbeak <i>Guiraca caerulea</i>	T	5/7	5/8(6)	5/10	S	S	S	S	S	S	ID	ID	ID
Indigo Bunting <i>Passerina cyanea</i>	T	4/22	5/3(15)	5/8	S	S	S	S	S	S	9/15	10/1(7)	10/18
Dickcissel <i>Spiza americana</i>	T	4/11	5/2(15)	5/16	S	S	S	S	S	S	8/18	10/3(4)	12/26

Table 1. (continued)

Common Name	Latin Name	Status	Spring Arrivals		Spring Departures		Fall Arrivals		Fall Departures					
			First	Median Latest	First	Median Latest	First	Median Latest	First	Median Latest				
Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>	T	4/11	4/11(1)	4/11	4/11(1)	4/11	8/24	9/19(3)	10/10	8/24	10/2(3)	10/10	
Fox Sparrow	<i>Passerella iliaca</i>	T	2/22	3/6(11)	4/9	3/13	4/13(11)	5/11	9/30	10/8(11)	10/19	9/30	11/27(11)	12/31
Song Sparrow	<i>Melospiza melodia</i>	T,PM	2/10	3/13(9)	4/19	S	S	S	S	S	S	11/5	11/5(1)	11/5
Lincoln's Sparrow	<i>Melospiza lincolni</i>	T	4/18	4/30(13)	5/13	4/24	5/18(13)	5/23	9/13	10/1(10)	12/26	10/1	10/27(10)	12/27
Swamp Sparrow	<i>Melospiza georgiana</i>	T,PM	3/2	3/28(11)	5/4	4/8	5/3(11)	5/16	9/21	10/4(9)	11/2	9/26	11/2(9)	12/27
White-throated Sparrow	<i>Zonotrichia albicollis</i>	T	3/7	4/13(15)	4/30	4/17	5/9(15)	5/22	9/2	9/19(11)	12/30	10/7	11/18(11)	1/1
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	T,I,W	1/28	4/25(15)	5/8	4/30	5/8(15)	5/31	9/16	10/5(11)	11/30	10/2	11/22(11)	12/31
Harris' Sparrow	<i>Zonotrichia querula</i>	T,I,W	4/3	4/28(6)	5/6	4/10	5/4(6)	5/15	10/14	10/29(6)	12/20	10/14	11/6(6)	12/20
Dark-eyed Junco	<i>Junco hyemalis</i>	T	W	W	W	4/11	4/28(14)	5/6	9/21	10/6(15)	10/25	W	W	W
Lapland Longspur	<i>Calcarius lapponicus</i>	T	W	W	W	3/9	4/3(6)	5/6	10/29	11/29(7)	12/20	W	W	W
Smith's Longspur	<i>Calcarius pictus</i>	U,T	3/18	3/21(5)	4/4	3/18	3/21(5)	4/11	ID	ID	ID	ID	ID	ID

Table 1. (continued)

Common Name Latin Name	Status	Spring Arrivals			Spring Departures			Fall Arrivals			Fall Departures		
		First	Median	Latest	First	Median	Latest	First	Median	Latest	First	Median	Latest
Snow Bunting <i>Plectrophenax nivalis</i>	U,T	W	W	W	2/22	2/22(2)	2/22	10/5	11/3(8)	12/3	W	W	W
Bobolink <i>Dolichonyx oryzivorus</i>	T,IS	4/16	5/1(13)	5/10	5/7	5/10(13)	6/11	8/17	8/26(2)	9/6	9/6	9/21(2)	10/5
Red-winged Blackbird <i>Agelaius phoeniceus</i>	T,PM	1/20	2/22(15)	4/15	S	S	S	S	S	S	11/1	11/10(7)	1/1
Eastern Meadowlark <i>Sturnella magna</i>	T,PM	1/22	2/22(14)	3/27	S	S	S	S	S	S	11/4	11/20(2)	12/6
Western Meadowlark <i>Sturnella neglecta</i>	Tr,T,PM	2/27	3/23(3)	5/7	3/13	3/23(3)	5/7	ID	ID	ID	ID	ID	ID
Yellow-headed Blackbird <i>Xanthocephalus</i>	U,T,IS	4/12	5/1(6)	5/10	4/12	5/1(6)	5/10	ID	ID	ID	ID	ID	ID
<i>xanthocephalus</i>													
Rusty Blackbird <i>Euphagus carolinus</i>	T,IW	2/26	3/1(11)	4/13	3/21	4/10(11)	5/5	10/6	11/8(10)	11/11	10/6	11/9(10)	12/30
Brewer's Blackbird <i>Euphagus cyanocephalus</i>	T	3/16	4/9(9)	5/4	3/24	4/19(9)	5/6	9/26	9/26(3)	1/1	9/26	9/28(3)	1/1
Common Grackle <i>Quiscalus quiscula</i>	T,PM	2/1	3/4(15)	3/21	S	S	S	S	S	S	10/17	12/20(6)	12/25
Brown-headed Cowbird <i>Molothrus ater</i>	T	2/1	3/9(15)	4/9	S	S	S	S	S	S	10/12	12/22(6)	12/30
Orchard Oriole <i>Icterus spurius</i>	T	4/20	5/1(13)	5/14	S	S	S	S	S	S	8/19	8/26(2)	9/1

