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LONG-EARED OWL NESTLING

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The PASSENGER PIGEON

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IN THIS ISSUE

	Page
Bluebird Trails	107
By Mrs. Paul Romig	
WSO's Bluebird Trails is a project to provide homes for dwindling numbers of Bluebirds and also an adventure in bird study for young people. Learn how a trail is set up and then help to put it in action!	
The Evening Grosbeak Invasion of 1961-62	110
By A. C. Epple	
An analysis of a phenomenal invasion of the eastern United States along with comments and observations on flight speeds, food consumption, flock size and bird weights.	
By the Wayside	124
Jimmy, Come Home!	127
By Mrs. Melvin Asher	
The story of a Crow that bathed up to fifteen times a day, loved to rip apart rubber mats, and thoroughly endeared himself to his benefactors.	
Food Habits of the Long-eared Owl	130
By Thomas H. Nicholls	
Rodents make up a large portion of the Long-eared Owl's diet. An analysis of 35 owl pellets confirms the beneficial role of this unusual bird of prey.	
Field Notes: The Spring Season	134
By Thomas Soulen	
According to many observers, May 12-14 was the spring migration for 1962. Most people commented on the extremely rapid movement of birds through the state in May.	

Volume XXIV, Number 4

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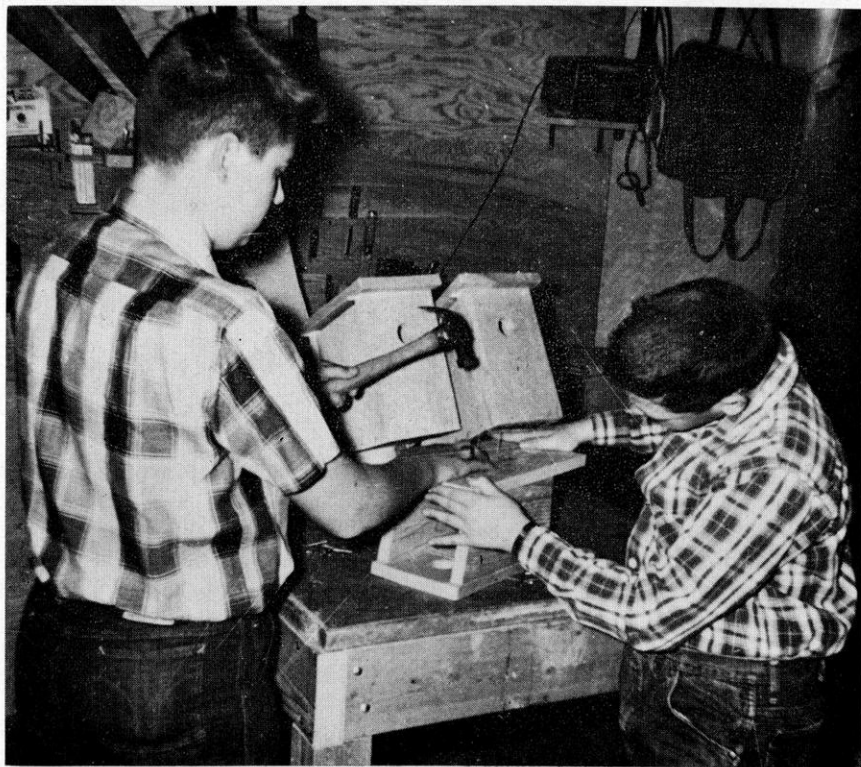
An adventure in learning and conservation

Bluebird Trails

By MRS. PAUL ROMIG

Like the young man in Maeterlinck's story, "The Bluebird of Happiness," some nature lovers in the Badger state are now hoping to find both Bluebirds and happiness in their own backyards. In the rural areas of Wisconsin, insecticides, unfavorable winter range conditions, electric fences, and clean fencerows have gradually diminished the normal Bluebird population so that in many places a Bluebird sighting has become a rare event.

In 1960 the Green Bay Bird Club inaugurated a "Bluebird Trails Project." While Bluebird Trails are not an innovation, the scope of the Wisconsin project goes beyond the mere erection of houses.



BLUEBIRD TRAILS HELP TO TEACH SKILLS

PHOTO BY PAUL ROMIG



TERRY HUMPHRIES INSPECTS 4-H BLUEBIRD HOUSE

PHOTO BY BARBARA HUMPHRIES

The objectives of the program are:

- 1) To provide housing for a diminishing population of Bluebirds and a fairly prosperous population of Tree Swallows.
- 2) To provide a creative conservation project for young people through group action and thereby stimulate interest in conservation.
- 3) To interest individuals in constructing and operating Bluebird Trails as a hobby and as a way of studying birds.

In 1962 the Wisconsin Society for Ornithology assumed statewide leadership in this project. We hope to fulfill our goal—Wisconsin, the first state to have Bluebird Trails in every agricultural county.

In the beginning, efforts were directed toward enlisting adult groups sponsoring youth organizations in building houses and erecting them along fence rows. The Green Bay Bird Club found the 4-H organization one of the best groups to work with on the Trails project. 4-H is na-

tional in scope and operates in both rural and urban areas, usually on a countywide basis. For the most part the leadership is conservation-minded, and the club programs incorporate many conservation activities.

Other organizations, such as boy scouts, girl scouts and school classes have also shown interest in this project.

A Bluebird Trail is defined as ten houses built to standard specifications and erected on fence posts or other suitable supports. The houses are spaced not less than 500 feet apart. They should be located in a circuit convenient for maintenance and checking. In most open field areas 80- to 160-acre tracts will provide an ample number of good locations.



TREE SWALLOWS OCCUPY MANY
HOUSES ON A BLUEBIRD TRAIL

PHOTO BY JOHN LEE

Detailed specifications are made available to youth organizations. A system for judging and grading the trails was developed with suitable awards to be given at the end of the season to the organization in a county erecting the best trail. Trails are rated on the basis of: quality of house construction, conformity with approved specifications, proper location and erection, and records of occupancy and maintenance.

WSO has published an attractive 20-page Bluebird Trails Guide.* The guide details specifications for house construction and covers instructions for location and erection. Information for sponsors, suggested check sheets, and information for club leaders is included.

A Bluebird Trail can take you and the young people out along the fascinating fencerow. As the young people operate a trail each year, they can observe the amazing natural phenomena that occur in the houses and along the fencerows. These occurrences suggest interesting studies that can contribute to our need for greater knowledge of nature and the interrelationship of all living things. Bluebirds have a story to tell the men of tomorrow. It is a story that dwarfs a million words or statistics on the dangers of insecticides or the need for protecting our vanishing habitats for all creatures.

For those participating as sponsors of Bluebird Trails there is great satisfaction in having created a dynamic interest in youth in nature's processes that will live on into the future.

201 W. Whitney Road

Green Bay, Wisconsin

*The guide is available from WSO's Bluebird Trails chairman, Mrs. Paul Romig, 201 W. Whitney Road, Green Bay, Wisconsin. Prepaid cost is 25c each.

THE EVENING GROSBEAK INVASION OF 1961-62

By A. C. EPPLE

October 31 was the date of the invasion. On that memorable day in 1961 four pairs of Evening Grosbeaks, with yellow wings flashing and giant beaks bared, zoomed into my yard at Stevens Point, Wisconsin, for an attack on my meager food supplies. For these avians from the east to arrive so early caught me quite unprepared. Little did I know that my unexpected guests would be steady boarders for the next six months and consume nearly 1,000 pounds of sunflower seeds.

The eight had doubled in number by the 8th of November and from this time until November 23 the flock increased rapidly. By the last week in November the count in the yard at any one time ranged from 75 to 125 birds, with the usual number being close to the 100 figure. This condition continued to exist for the next three months.

I began trapping on November 12 and during the first week 38 grosbeaks were ringed with government bands. In addition, each bird was weighed and further identified with its own particular combination of plastic color bands. At the end of two weeks 63 additional birds had been processed in this manner and only one repeat capture had been made. By January 1, 1962, a total of 250 birds had been processed and only 8 were repeat captures. The large number of birds banded as compared to the small number of repeat captures indicates that a large grosbeak population must have been in the vicinity of Stevens Point.

Early in January, Professor Robert Whitmire, a co-worker who once lived in Arkansas, told me that Evening Grosbeaks were reported as being present in that state. This information prompted me to learn the extent of this phenomenal invasion. To accomplish this, form letters with enclosed questionnaires were sent to the compilers of Christmas season bird census as published in the April, 1961, **Audubon Field Notes**. The response was most gratifying; of the 124 letters that were sent to observers in Ontario and 20 to observers in the central states, 83 answers were received. Twelve were returned with the postal mark "address unknown." Many of the correspondents wrote lengthy letters relating personal experiences and provided me with the names of others with whom to correspond.

INVASION INTO WISCONSIN

Apparently the Evening Grosbeaks that migrated into Wisconsin had their origin in the eastern part of the United States and Canada. Foreign retraps (birds captured and released at different stations from those where they were originally banded) and reports of out-of-state captures of birds that were banded in Wisconsin show that most of the birds originated in eastern Ontario, Quebec and the New England states. Of 21 foreign retraps in my banding operations, seven were banded in New York, two in Massachusetts and three in Ontario. Two birds had been

banded by Harold Hanson in northcentral Minnesota, and the remaining birds had been handled at stations in Wisconsin and Michigan. Thirteen of the grosbeaks I banded were recovered at other stations or were found dead and reported to the Fish and Wildlife Service by a non-bander. Ten of these were reported from Wisconsin, and of the remaining three, one each was recovered in Indiana, Michigan and Quebec. The last is of particular interest because it was trapped on June 24, 1962, by G. H. and H. C. Parks at 39-Mile Camp in Rimouski County in the Province of Quebec (7).^{*} This nesting ground for the Evening Grosbeak is located on the St. Lawrence River about 180 miles northeast of the city of Quebec.

Mr. and Mrs. Henry Koenig of Sauk City processed 39 foreign re-traps, 23 of which had been banded at stations in Wisconsin. Three of the remaining 16 had been banded in Minnesota, and the rest were largely from the New England states and Ontario. Dr. Charles Kemper of Chippewa Falls, Wisconsin, has received reports for seven of the 10 foreign re-traps he has made. Two of the seven were banded in New York, two in Connecticut and the remaining three in Wisconsin.

East to West Movements

This east to west movement has been an established fact since M. J. Magee of Sault Ste. Marie, Michigan, did his work with Evening Grosbeaks in the late 1920's and early 30's. The population build-up in Wisconsin during the fall of 1961 first occurred in the north and gradually spread southward. There is considerable evidence that these birds entered the state over the land route between Lake Superior and Lake Huron at Sault Ste. Marie. Mr. James McDonald at Sault Ste. Marie, Canada, and Mr. Kenneth Slater at Hulbert, Michigan, report large numbers of these birds in early fall and again in April and May which indicates a movement during these two periods. Rather disconcerting, however, is the fact that these two men noted very few grosbeaks in this region during the fall of 1961 but large numbers were observed in May of 1962. It is quite possible that at times these birds may make a non-stop flight over this land mass between the two lakes. This supposition is somewhat enhanced by the presence of fair numbers of Evening Grosbeaks in the Rhinelander, Wisconsin, area during December, 1962, when very few of them had been observed at Sault Ste. Marie. The Christmas count by the Rhinelander group recorded over 100 grosbeaks and at the present writing (late March, 1963) they are still there.

Years in which there is not a great southward movement, the grosbeaks sometimes remain in the Sault Ste. Marie area in large numbers. During the winter of 1960-61 when very few grosbeaks were observed in Wisconsin, Mrs. Rose Sylvester of Sault Ste. Marie, Michigan, fed several thousand pounds of sunflower seed to these birds. There would be from 400 to 500 grosbeaks in her yard at one time.

The fact that populations of Evening Grosbeaks build up in northern Wisconsin before high populations occur along the Lake Michigan shoreline indicates that they do not fly across the lake in their westward movement. There is some evidence to suggest that this is also true in

^{*}Parenthetical figures refer to "Literature Cited" on page 124.

regard to Lakes Huron and Ontario. James Woodford reports that during the spring migration of 1962 large numbers of grosbeaks were observed moving along the south shore of Lake Erie just west of Buffalo (9). Due to a lack of reports from northwestern Wisconsin it is difficult to assess the extent of the flight of grosbeaks into Wisconsin around the western edge of Lake Superior. There is usually a large flock of these birds in the Duluth area every winter. This past winter (1962-63) Mrs. Oscar McCracken of Hibbing, Minnesota, in a personal letter indicated the presence of an unusually large number of Evening Grosbeaks in her area.

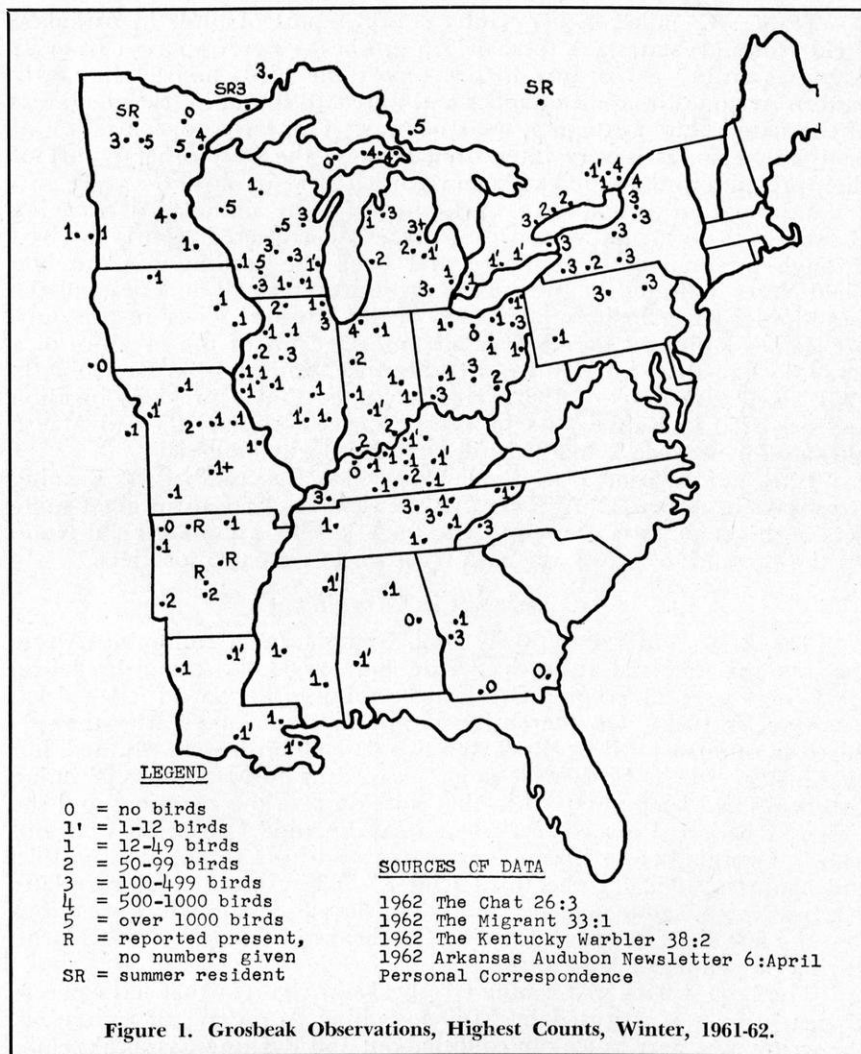
During the winter of 1961-62 Wisconsin had more Evening Grosbeaks than any other midwestern state. Richard Graber, reporting for the Middlewestern Prairie Region in **Audubon Field Notes** (3) writes, "about 1,500 Evening Grosbeaks were counted at 53 localities on the region's Christmas counts and by March at least 3,300 birds had been counted at 137 stations." In the 46 Christmas counts made in Wisconsin there were 34 groups reporting a total of 3,581 grosbeaks. About one-third of these saw over 100 birds with Rhinelander recording a total of 521. Only 14 groups observed less than 50 birds.

Some indication of the number of birds present in the state can be obtained by noting the number of repeat captures of grosbeaks as compared to the total number of these birds processed at three banding stations. Mr. and Mrs. Koenig in Sauk City banded 1,302 grosbeaks and had repeat captures of 192; Dr. Charles Kemper in Chippewa Falls banded 676 and had repeat captures of 71. My own banding efforts netted a total of 868 Evening Grosbeaks with 139 repeats. Since these birds were moving through the state in large numbers during November and December, and again in April and May it is unlikely that total population determinations provide more than a rough estimate of the relative abundance of birds in the region of the count.

MIGRATION INTO THE MID-CENTRAL STATES

Although Wisconsin probably had a greater number of Evening Grosbeaks than any other midwestern state (Figure 1) there were other places where large populations occurred. Of the other states studied, Evening Grosbeaks were most abundant in Illinois, Indiana, Ohio, Kentucky, North Carolina and Arkansas. Except for Minnesota and Arkansas, all the reports from states west of the Mississippi River indicated observing fewer than 50 birds at any one time. Evening Grosbeaks were also reported in Louisiana, Mississippi and Georgia.

The most southern penetration occurred in Louisiana where Mr. Robert M. LaVal in a personal communication stated in January of 1962, "one bird was sighted by Bert Monroe in northern New Orleans which is the farthest south they went as far as we know." Mr. LaVal reporting on the Evening Grosbeaks in Natchitoches writes, "The grosbeaks were here from April 15 until approximately the 23rd. We assume that they were heading north again. There were 13 in the flock of which one was collected by Dr. Douglas Lancaster of N. W. State College." He further reports the presence of 30 to 40 grosbeaks in one group eating salt along the road near Hammond, Louisiana.



The first collection record for the state of Louisiana was made in West Monroe by James B. Avant in his home yard on January 14, 1962. Mr. W. H. Turcotte of Jackson, Mississippi, states in his answer to my questionnaire, "Three males were collected in northeast Jackson, one each on February 22, March 11 and March 23. All three specimens are at the museum." Mr. Turcotte further relates that a flock of at least 11 birds wintered in and around Jackson. Evening Grosbeaks were frequently observed in the vicinity of this community from January 29 until March 27. The first observations for the winter 1961-62 occurred on December 17 in Franklin County. The first recorded sightings of these birds in the state of Mississippi occurred on March 20 and 26, 1960, at Oxford.

Frances C. James in her winter season report of birds in **Audubon Field Notes** (4) states, "A total of 875 grosbeaks were reported from 28 Arkansas cities." According to her report the birds arrived in north-eastern Arkansas in mid-December and were still found in scattered areas of the state as late as the first week of May. This large concentration of birds in Arkansas is very interesting because the only other report of their presence in the state had been recorded 20 years earlier.

Information available to me concerning the numbers of Evening Grosbeaks in Iowa and Missouri is scarce. The scattered reports received through personal correspondence and from the reading of **Audubon Field Notes** indicates the presence of grosbeaks in small flocks east of the Des Moines River in Iowa and north of the Missouri River in Missouri. Mr. James Rising of Kansas City has informed me of the presence of a small flock of these birds in nearby Lawrence, Kansas, from December 2, 1961, until early May of 1962. He also stated that a previous invasion had occurred in Kansas City in 1911. Between January 23 and May 6 of that year between 2 and 25 birds were regularly observed.

Little information is available concerning the numbers of Evening Grosbeaks in Alabama. Apparently they were not present in great numbers in this state. Mrs. Douglas James mentions in **Audubon Field Notes** (4) the presence of grosbeaks for a few days at only two locations.

Grosbeaks in Georgia

Mrs. J. W. Jones of Waverly Hall, Georgia, (near Columbus) wrote that one male arrived at her feeder on January 11, 1962, and by February 5 there were 22 Evening Grosbeaks coming to her yard (personal letter, May 10, 1962). On March 23, 36 appeared, and thereafter they reduced in number until April 19. On this date 40 birds were counted, but by April 27 all the birds were gone. According to Mrs. Jones, Evening Grosbeaks had been observed in that state on previous occasions and she states, "I believe I am correct when I say Evening Grosbeaks were not seen in Georgia before 1955. They reappeared in (I think) 1958 or 1959 and again in 1962 for the third winter." This information correlates very well with a statement by B. M. and Mary S. Shaub which mentions that the first sight record of Evening Grosbeaks in Georgia was at Macon during the winter of 1954-55 (8).

The largest flock of Evening Grosbeaks in Georgia that has come to my attention was reported by Mrs. Josephine A. Dimon of Columbus. She writes, "As near as we can count, about 150 Evening Grosbeaks came to our feeder each morning." Her first sight of these birds was on February 3, 1962, although she does acknowledge that they could have been around earlier as she was away during the previous two weeks. Her last record shows a few birds present on April 21. Grosbeaks were also reported in Atlanta (1). Reports from Thomasville and Brunswick, Georgia, indicate that no Evening Grosbeaks were in the area. Thomasville is near the Florida border in the southwest part of the state, and Brunswick is a coastal city in southeastern Georgia.

The grosbeaks began their migration by entering the state of Maine as early as August 17. First observations in Massachusetts and New York were made during late September, and by early October these birds were reported in Pennsylvania. By the first week in November the invasion had reached southeastern Tennessee and North Carolina (Figure 2). Most

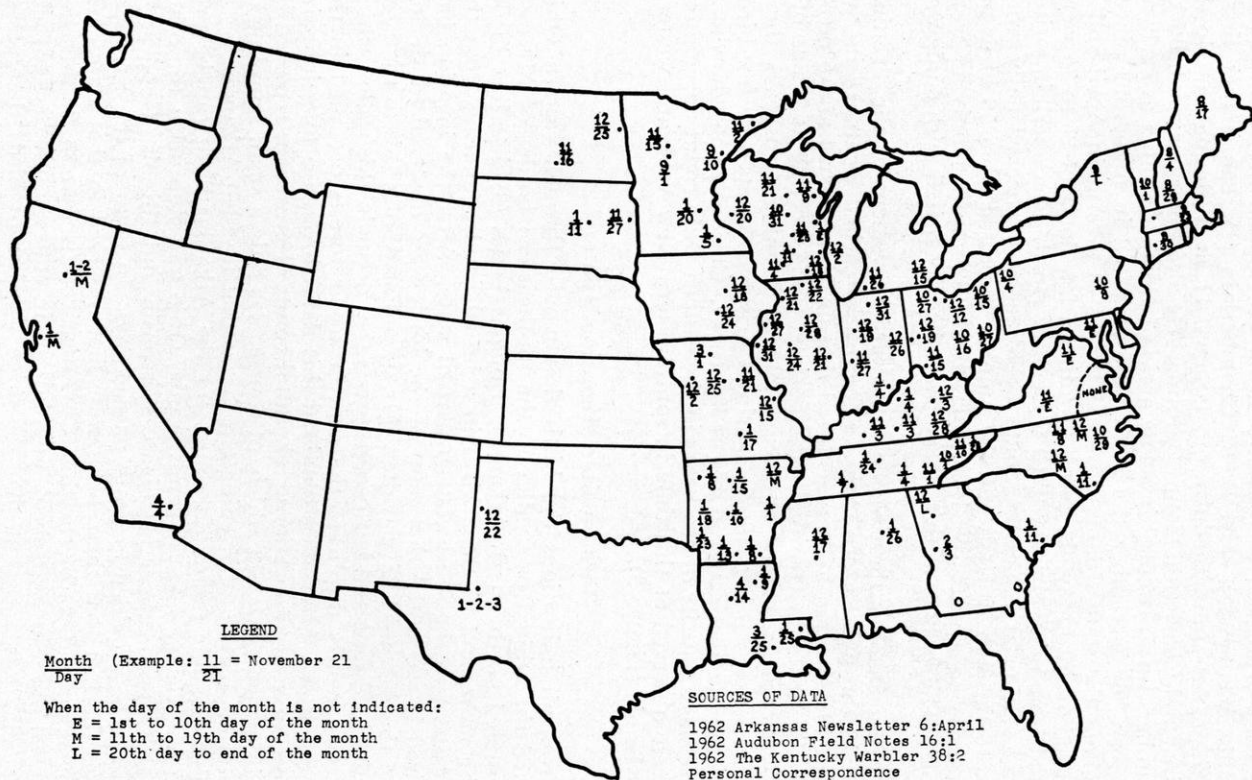


Figure 2. First Sightings of Evening Grosbeaks, Winter 1961-62.

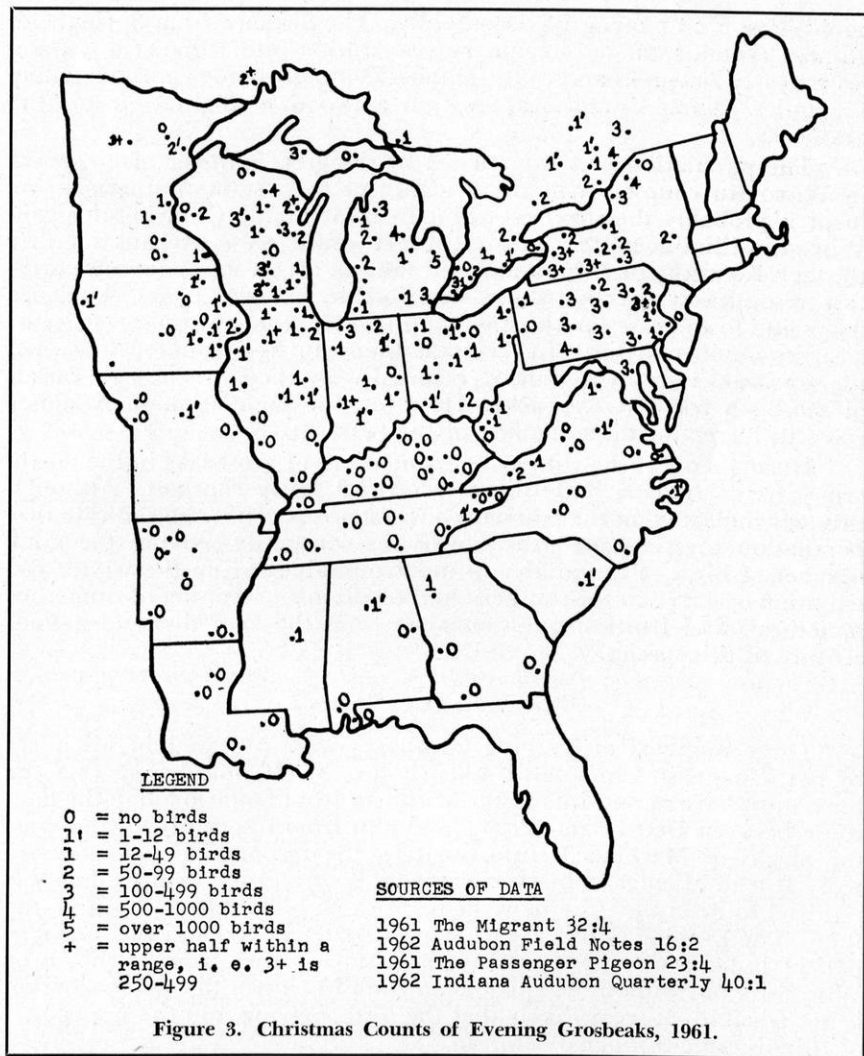
interesting is the observation of three males in the Elkmont area of the Great Smoky Mountains on October 1, 1962, a month in advance of the next earliest report for this state (personal correspondence, J. B. Owen, Knoxville, Tennessee). Mr. B. R. Chamberlain (1) reports that these birds appeared simultaneously on January 11 at Wilmington, North Carolina, and Charleston, South Carolina. He also mentions small flocks "in numbers up to twenty" in many areas of North Carolina as early as November. By December the birds were reported in numerous places throughout the state. Many grosbeaks were still present in April and a few stayed on into May. In South Carolina a few flocks of 25 to 75 were reported from mid-February until the end of April. Chamberlain writes that one station at Lancaster, South Carolina, was "checked daily from March 19 through April 1, and the number increased from 56 birds on the first day to a peak of 215 on March 23. By April 1 only 14 were present." The feeders at this station were heavily baited with sunflower seeds.

During October there was a southward movement of the Evening Grosbeaks through eastern Ohio. These birds reached Kentucky in November. Mr. Gordon Wilson reported that on November 4 and 5 members of the Kentucky Ornithological Society, while meeting at Mammoth Cave National Park, saw approximately 20 Evening Grosbeaks there (personal letter, April 1, 1962). During Christmas counts very few birds were noted in either eastern Ohio or Kentucky. Curiously enough, whereas there was a paucity of grosbeaks in the eastern Ohio count, large numbers were observed at this time in southwestern New York and western Pennsylvania (Figure 3).

Two Possible Migration Routes

From all indications the birds that moved through eastern Ohio followed the Ohio River valley to the southeastern border of Missouri and entered northeastern Arkansas. Douglas James (5) describes in detail the movement of these birds in a broad band extending from the northeastern to the southwestern part of state. After the invasion had stabilized it was noted that most of the birds were observed south and west of the Arkansas River valley. Mr. James attributes this to the presence of mixed pine and hardwood forests that occur in this region which "... most nearly duplicate the pine-spruce-fir forests occupied in the nesting season." Mr. James obtained this data through a questionnaire sent to people in 27 locations. The total count of grosbeaks reported by these informants was 818 which, of course, was only a small sampling of the total population of Evening Grosbeaks that invaded Arkansas.

Two possible migration routes for the Arkansas birds can be proposed: one via New York, Pennsylvania, Ohio and Kentucky; the other through Ontario, upper Michigan, Wisconsin and Illinois. Good arguments can be provided for both passageways. In favor of the Kentucky route is the fact that these birds were first observed in that state early in November and yet by the time Christmas counts were made they had all moved on. Since grosbeak populations in states south of Kentucky were small, it is apparent that the large number of birds that passed through Kentucky could not all have gone directly south. They did not go north because the sequence of dates as birds moved into and through Illinois and Indiana clearly showed a north to south movement. The



last observations of grosbeaks in Kentucky were made at about the time the first birds were noted in northeastern Arkansas. The closest point to the Arkansas border where birds were observed in Kentucky was at Bowling Green which is about 125 miles from the Missouri-Arkansas-Kentucky boundary lines. As will be indicated later, this distance is probably within the range of the average daily flight for this bird.

Arguments favoring the passage of these birds from Illinois into Arkansas are similar to those presented for Kentucky. The birds reached their southern-most penetration of the state of Illinois during the third week in December (Figure 2) and it would be possible for a few birds to move into Arkansas by the 20th of that month. By the first week in January, when the population in Arkansas was building up, these birds

could have been moving in very rapidly. The distance from Springfield, Illinois, (about their most southern penetration into Illinois) to Arkansas is nearly 250 miles and to the Illinois-Kentucky border approximately 175 miles. These distances are within a two days' flight time for the grosbeaks.

The population pressure created by the great number of grosbeaks in Wisconsin coupled with the evidence of a constant southern movement is probably the strongest point in favor of the Ontario-Michigan-Wisconsin-Illinois route. The grosbeaks could enter Arkansas either through Kentucky or Illinois and still fan out across the state in a north-east to southwest direction as was described by Douglas James. Evidence damaging to the case for the flight through Kentucky is the presence of a larger number of birds in Arkansas than can be accounted for when the grosbeaks were in Kentucky (Figure 1). By the Christmas season all of the birds had left Kentucky. However, the population in Arkansas was still increasing after the first of the year.

During most of the winter the populations of grosbeaks in the northern parts of Indiana and Illinois remained fairly constant. Although this may indicate that the population was static, it could also indicate that population pressure from the north was constantly moving the same number of birds to the south. An unaccountable gap in the winter distribution occurred in the southern half of Illinois. Scanning of numerous periodicals and fruitless questionnaires from the area discloses a total absence of this species.

Michigan Data Spotty

Large numbers of Evening Grosbeaks were observed in Michigan by participants in Christmas counts (Figure 3). It would seem that the birds must have moved into lower Michigan from Ontario along the land route between Detroit and Sarana and also from upper Michigan across the Straits of Mackinac. Unfortunately, the response to my questionnaire sent to Michigan observers was very poor and not enough data was received to determine the movements of these birds into and out of the state. The Evening Grosbeaks present in western Ohio and the northern half of Indiana may have entered these states either from Michigan or Wisconsin, but without adequate data from Michigan this determination is not possible. It seems likely that the birds moving into the upper half of Illinois came through Wisconsin.

The Wisconsin invasion began in late October and early November. The October 31 sighting of 4 pairs of grosbeaks in my yard is the earliest for the state as far as I know. Rhinelander, 100 miles to the north, reported their first grosbeaks on November 23. Mrs. Merwood Chipman in Wautoma recorded her first sighting on November 23, and Glenn Dunn indicates an initial sighting near Westfield on January 1, 1962. The earliest report from the southern part of the state was from Mrs. Melva Maxson, Milton, who reported seven at her feeder with the first one appearing on December 18. On December 22, Mrs. David Stocking at nearby Beloit, observed five birds. The map showing first sightings (Figure 2) indicates a progressive movement of grosbeaks from southern Wisconsin into northern Illinois to as far as the central part of the state.

For the entire United States the deepest penetration of Evening Grosbeaks during the 1961-62 flight seems to be 32° north latitude. Locations close to this latitude where grosbeaks were observed are: the San Gabriel Mountains of southern California; Midland, Texas; Natchitoches, Louisiana; Jackson, Mississippi; Columbus, Georgia; and Charleston, South Carolina (Figure 2).^{*} An exception to this statement is the report of grosbeaks being present in the New Orleans area on a few occasions.

The northward movement of the Evening Grosbeaks to their nesting areas was particularly noticeable during the month of April. Some evidence is available of birds starting north in the latter part of March, especially in the more southern areas. There was a tendency for a few of these birds to stay behind until the last possible moment and this was most evident in areas where sunflower seeds were fed in large amounts. Grosbeaks lingered until the middle of May in places as far south as Arkansas, northern Mississippi, Georgia and North Carolina.

MIGRATION FLIGHT SPEEDS

On the basis of flight records, it is possible to estimate flight distances to nesting grounds at the rate of 50 to 100 miles per day. The last observations of Evening Grosbeaks in northern Minnesota and upper Michigan was on May 23 and in Maine on May 28 (Figure 4). Evening Grosbeaks leaving Arkansas on May 14 would travel between 900 and 1,000 miles in nine days if they migrated through Minnesota or Michigan. To reach Maine by May 28 they would fly nearly 1,400 miles in 14 days. These birds were being observed in Kentucky, Virginia, and North Carolina until almost the middle of May. For them to be seen at the Maine border on May 28, their migration flight would average between 50 and 75 miles a day.

SEX RATIOS

An attempt was made to determine the sex ratios among the birds reported in this study but the results were inconclusive. Very noticeable, and reported quite frequently, was the preponderance of females during the last week or two before the birds moved north. Mr. B. R. Chamberlain (1) writes: "It is also apparent that the decrease in the percent of males as the season progressed was not due to males leaving the area but to a disproportionately large number of females coming in." This agrees with the observation of Dr. Charles Kemper of Chippewa Falls who in a personal communication writes, "I believe the trend toward more females later in the season is because the adult males do not migrate as far south as the females. Now the females, I would guess, are returning and tipping the ratio scale." My own banding records from week to week, and throughout the entire period the grosbeaks were here, gives the males a slight edge over the females. The totals for the year show 436 males to 372 females, and during the week of April 27 to May 3, a total of 31 birds were processed of which 20 were males. It should be noted, however, that my trap, which is five feet above the ground, was

^{*}When preparing Figure 2 for publication, 32° north latitude was inadvertently omitted. This line runs from about the junction of the Georgia-South Carolina state line at the Atlantic Ocean westward through southcentral Alabama and Mississippi, northcentral Louisiana and passes just south of California—Editor.

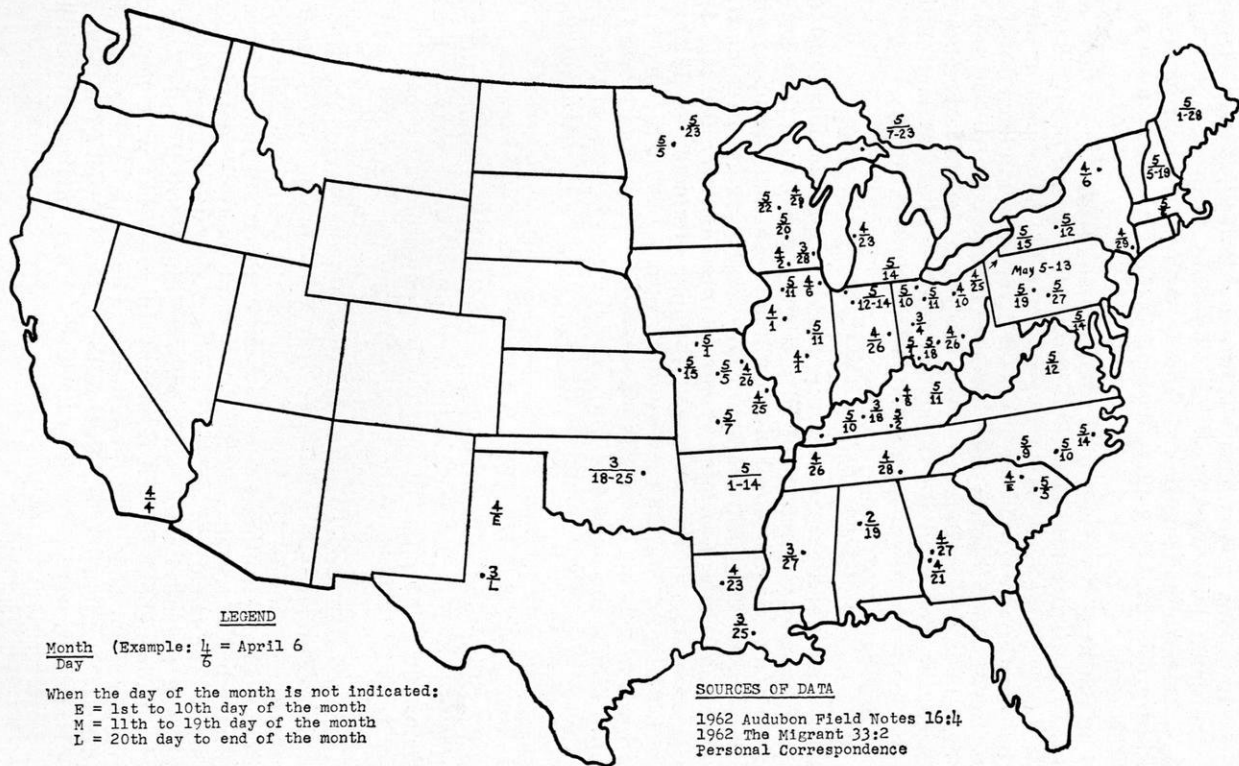


Figure 4. Last Sightings of Evening Grosbeaks, 1962.

attended by males more frequently than females. The females showed a preference for feeding on the ground. Observations provided counts of three females to one male from March 15-21 and two males to one female on April 25 and 26. Sex ratios at other times appeared to be about equal.

Mrs. Dimon of Columbus, Georgia, who fed about 150 grosbeaks, reported the sexes as being about equal. At nearby Waverly Hall, Mrs. J. W. Jones, who had a maximum of 40 birds, noted with one exception, a ratio of 1 male to 2 females. On April 18 she refers to "40 grosbeaks, 18 males." The flock was gone by April 27. Mr. W. H. Turcotte, who made careful observations of a flock of nine grosbeaks in Jackson, Mississippi, reported that six of them were males. Miss Ruth Armstrong at Ft. Smith, Arkansas, observed 33 birds in her area and 18 of them were males. Among the questionnaires that were returned to me, 44 indicated sex ratios, and of these 13 were about equal as to males and females, 13 had more males, and the remaining 18 had more females in the flock.

FOOD CONSUMPTION

Included in the answers to the questionnaires were reports of many interesting incidents. Almost all would comment on the "ravenous appetite" or the "gluttony" of the grosbeaks. One respondent likened them to "glorified starlings," but it was Mrs. Josephine Dimon of Columbus, Georgia, who neatly reduced these subjective comments to scientific precision. She wrote, "I cannot judge how much they eat, but I counted how long it took a male to crack a seed and it was 4 seconds, making about 15 a minute." After receiving her letter I made similar determinations and discovered that, if left undisturbed, a grosbeak will maintain this rate for several minutes without letup. Fifteen seeds from my own supply weighed approximately 1 gram (1.05) gram). The hulls weighed 0.4 gram and the edible part 0.6 gram. In a 16.6-gram sample the hulls weighed 6.6 grams and the cotyledons and embryo 10 grams. A small sample (2.8 grams) obtained from Mrs. Henry Koenig of Sauk City contained only 0.53 gram of seed per gram after the seed coats were removed.

Mr. and Mrs. Koenig have a crippled female Evening Grosbeak named Eve whose movements are limited to hopping. This bird is kept on a porch that is enclosed but unheated. At my suggestion they fed the bird a measured amount of seed and determined that she ate $1\frac{3}{4}$ ounces (49.62 grams) of sunflower seeds in three days or 16.54 grams per day. Since the seeds fed were composed of 53.6 percent edible material the captive bird was consuming 8.8 grams of food each day. The same amount of seed from my source in Stevens Point would contain 9.9 grams of edible portions. To consume this much food the bird would need to eat 246 seeds (Koenig's) or 236 seeds (Epple's), and at the rate of 15 seeds per minute approximately 15 to 16 minutes would be needed. A captive bird, of course, consumes less food than one in the wild state. Odom et al (6) postulate that a reasonable estimate of the flight range can be made on the assumption that the energy required for sustained flight is between two and four times maintenance metabolism. The Koenig's captive grosbeak does not quite fit Odom's definition for maintenance metabolism which is described as the normal or usual metabolic requirements of a caged bird at room temperature. Assuming a doubling of the energy needs for the normal flight activity of grosbeaks during the winter, it would appear that 30 to 40 grams of sunflower seed would be consumed

daily. At this rate it would take 15 to 20 birds to consume a pound of seed each day.

FLOCK SIZE

Wherever Evening Grosbeaks were present in large numbers the reports consistently referred to flock sizes of 20 and 30. Larger groups of grosbeaks were usually in multiples of these numbers. A letter from Dr. Kemper regarding this observation states, "My conception is that the grosbeaks are part of a tremendous super-flock, covering a good part of the countryside. The birds feed heavily early in the morning and continue feeding until about 2 p. m. when they retire, perhaps to a communal roost. In the morning they disperse at random to various feeding places in numbers of 10 to 30 and on rare occasions, in larger groups. Thus, a person might mistakenly think there were 10 to 30 Evening Grosbeaks in his yard, when actually there might be 5 to 10 times that many present." My observations are similar to Dr. Kemper's. Although large flocks of 100 to 125 birds have congregated in my yard, I have noticed that such flocks are composed of lesser groups consisting of 15 to 25 birds. When the larger flock is disturbed it scatters via these lesser groups, each bird of the larger flock identifying himself with a smaller group. If a hundred birds are flushed from the yard, there will be five trees distributed along a $\frac{1}{4}$ mile distance that will each have about 20 birds in them. They seem to go habitually to the same trees.

SEVERAL INTERESTING OBSERVATIONS

The long stay of a few of these birds in certain areas was accompanied by several observations worth noting. Mrs. Dorothy Buck of Hamlet, Indiana, who helped so much to secure data for this investigation, wrote me in one of her letters, "Jim Landing of Michigan City said last Sunday that one lady reported grosbeaks were still coming to her feeder (week of May 1st) and that the female was carrying nesting material." A similar observation was made by Mrs. George Parmenter of North Muskegon, Michigan, and in her letter she states, "Although it is the 23rd of April I have seen females collecting string (short pieces we have put out) and twigs." This behavior at such an early date probably precludes nest building, but it could possibly be a courtship display. An indication of nesting was reported by Harold Hanson of Walker, Minnesota. He writes, "This morning, 5-20-62, I banded two females with well developed brood patches so they are nesting nearby."

MIGRATION AND BIRD WEIGHTS

Frequent mention was made by respondents to the questionnaire in regard to diurnal activity of this species. As the winter season became spring, the birds would appear at the feeders earlier in the morning. Through most of the winter two o'clock in the afternoon was about the latest these birds would be at the feeders, and then they would disappear. Many respondents assumed that they returned to trees in the area to roost. No one reported such an observation, and a few indicated that unsuccessful attempts had been made to locate these roosts. In localities where the grosbeaks remained until late in April or even into May, respondents wrote that for a period of a week or two before the birds left they would feed as late as 5 p. m. This late feeding was noted in my

yard from about May 1 until May 15. After this date the number of grosbeaks suddenly dropped from approximately 40 to just two males who seldom returned in the afternoon. An explanation for this late feeding behavior is that the birds need extra food to build fat reserves for the return flight to the nesting site.

An analysis of 26 grosbeaks banded and weighed at my station between November 12, 1961, and March 31, 1962, and trapped again and weighed during the month of April reveals a weight loss instead of a gain in weight. Twenty-one of 26 birds lost weight ranging from 0.6 grams to 11.6 grams, with the median loss at 4.0 grams and the mean loss being 4.8 grams. Eleven male and 15 female birds made up this group of repeat captures, but the weight variations between the sexes were negligible. Of the five birds gaining weight the range was from 1.9 to 12.2 grams. Two males increased their weight 3.4 and 12.2 grams and three females weighed more by 1.9, 2.0 and 9.0 grams.

When birds banded in the same month are sorted out and their average weights at the time of banding and upon recapture are compared, the following results are obtained (weights are shown in grams):

Month	Number		Weights When Banded		Weights When Recaptured	
	M	F	Av. Wt.	Wt. Range	Av. Wt.	Wt. Range
November	2	0	59.6	55.8 to 63.4	57.0	52.9 and 61.1
December	2	4	61.9	56.2 to 69.5	58.2	50.6 to 65.1
January	2	4	67.3	65.5 to 71.1	63.7	56.6 to 74.5
February	3	3	64.6	59.5 to 73.8	63.4	56.8 to 75.6
March	2	4	62.9	57.3 to 68.3	60.8	58.5 to 65.0

Although the number of birds sampled for each month is relatively small, the results do indicate slight weight losses.

A NESTING AREA IN MINNESOTA

Several people have reported that Evening Grosbeaks prefer to nest in areas where the forests are infested with the spruce budworm. Such conditions apparently exist on the west end of the Gunflint Trail which is located north and west of Grand Marais, Minnesota. Mr. Justine Kerfoot, who operates a resort near Trails End, wrote me the following: "When the spruce budworm (an infestation found on the spruce trees for the past three years) started to develop, the Evening Grosbeaks came inland and fed on these wooly tidbits" (personal letter, 8-10-61). The presence of birds in this area has also been reported by James Woodford (10) who states, "They were reported as very common on a hundred-mile canoe trip in Quetico Park, Ontario." Over the years, observations of adult and juvenile grosbeaks in Wisconsin, upper Michigan and Minnesota have been published in ornithological journals, but so far as I have been able to determine no nest has actually been observed. As mentioned earlier, Mr. Harold Hanson of Walker, Minnesota, banded two females on May 20, 1962, with well developed brood patches, but nests of these birds could not be located.

Acknowledgments

The warp and woof of this article has been built on information received from many people whose names have not been mentioned. They may recognize their contribution as a dot on a map or a statistical num-

ber, or they may find no mention of their efforts. Whether a dot on a map, a statistic, or nothing at all, I assure each of my contacts that his contribution was significant. So many hearts, hands and minds have gone into the development of this paper that authorship should be jointly given to all contributors. This, however, would be unfair, because these fine people would then share in the responsibility for value judgments and statements that I have made and with which they may not agree. The best I can do is to thank them all and hope that my judgements and evaluations will meet their approval. I am also deeply indebted to Dr. George Becker, Wisconsin State College, Stevens Point, who helped in numerous ways throughout the study and who read and criticized the manuscript, and to Mrs. Melvin Asher, Rhinelander, Wisconsin, who checked the manuscript for errors and made many helpful suggestions. My sincere thanks are extended to both.

Wisconsin State College
Stevens Point, Wisconsin

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By The Wayside . . .

A Good Look at a Cattle Egret. At 6:45 p. m. on May 5, a cloudy but not dark afternoon with the thermometer at 70°, we were on our front lawn beside Turtle Creek when a snow-white heron flew down the creek and perched in the box elder trees directly across from us. As the bird teetered there on the slim branches, we had a good look at its black legs and feet, its yellow beak, and the golden feathers on the back of its head. It stayed for about 15 minutes, giving us ample time to study it

with the binoculars, and when it finally flew off downstream, harassed by grackles, it banked so that we could see that the back was all white. No yellow was visible except on the head. It appeared larger than a Green Heron, smaller than a night heron. There was no doubt in our minds that we had seen a Cattle Egret.—David and Marion Stocking, Beloit.

Yellow-crowned Night Heron at Horicon Marsh. At 11:00 a. m. on the morning of May 15, 1962, while I was making some observations of Canada Goose broods on the state end of Horicon Marsh, a Yellow-crowned Night Heron was flushed from the shore of a small flowage. I was not aware of the bird's presence when it flushed at a distance of about 30 yards. The distinctive head coloration and gray body were so apparent, in contrast to the many Black-crowned Night Herons I had observed this day, that the bird was immediately identified.

Fortunately, after flushing, the heron flew only about 75 yards and landed near two pairs of Canada Geese and their broods. These adult geese showed no concern over the heron as it walked along the shore within about 20 feet of the goslings. Observations of the heron were made for about 15 minutes with 7x50 binoculars. The bird was then collected and donated to the Milwaukee Public Museum. While other sight records have been reported, this specimen was the first collected in Wisconsin.—Richard A. Hunt, Horicon.

A Ruff at Goose Pond. About 7:30 p. m. on May 21, I stopped at Goose Pond in Columbia County on my way back from a trip to the north and had a rather eventful few minutes (here the author describes sighting Eared and Red-necked Grebes—Seasonal Editor). As anticipated, several shorebirds were present, mostly Semipalmated Sandpipers and Dunlins, but also small numbers of other species, including three Short-billed Dowitchers. Among some Dunlins and near the Dowitchers I noticed an unusual bird, a species I was certain I had never seen before. My first impression was a large Lesser Yellowlegs, but the legs were straw-colored, the bill was too short, and the bird did not act like a yellowlegs. I was able to observe this bird at 15 feet with 7X binoculars. The bill was not much more than one inch long and was dark except at the base. The back was a brownish color and patterned similar to a Pectoral Sandpiper. The breast was only faintly barred. After several minutes of observation, I flushed this bird, and in the dim light I could see narrow white wing stripes in the secondaries, and much broader areas of white in the tail, which appeared to form a "V." In the poor light, however, I was not certain of the flight pattern, except that it was one which I never before had seen.

When I arrived back in Madison, I consulted my Peterson field guide and then talked with Bill Foster. We came to a tentative conclusion that the bird I had seen was a female Ruff or "Reeve." At 6 a. m. the next morning, we drove to Goose Pond. The bird could not be found where I had seen it the previous evening but was soon flushed in some corn stubble near one edge of the pond. A large white spot on each side of the tail and a wing stripe in the secondaries were clearly visible each time the bird flew, confirming our suspicions that the bird was a Ruff. After several minutes of chasing the Ruff through corn stubble, we were able to observe it at rest from 100 feet through a 30X scope. The features

were the same as those observed the previous evening, except for a puzzling red patch, flanked by black, on the belly. When the Ruff flew to within 20 feet of us, this mystery was solved. The red patch was a wound which the bird cleaned with its bill, and the black area was dried blood. This wound was not present the previous evening.

This Ruff was seen again during the first week in June and still had an open wound. At this last observation, the barring in the breast was darker but still very widely dispersed.—William Hilsenhoff, Madison.

Editor's note: Keith Brown, Madison, also reported observing a Ruff at Goose Pond, this one on May 26. Observation was made with a 20X scope at about 100 feet.

An American Avocet at Goose Pond. At about 8 a. m. on May 10, 1962, we saw an Avocet at Goose Pond near Arlington. This large shore-bird, with its pinkish rusty neck and black and white pattern, caught our attention when viewed through 7x50 binoculars. Hurriedly turning the 20X Balscope on it, we brought the full beauty of the bird into focus, with its long upturned bill and bold wing pattern.—Lucy Gauerke, Monterey, and Hortense Langer, Delafield.

Great Black-backed Gull in Ozaukee County. On March 31, 1962, an ornithology class from the University of Wisconsin-Milwaukee had the good fortune to locate a Great Black-backed Gull in a flooded field three miles east of Thiensville, Ozaukee County, and about one mile from Lake Michigan.

The senior author first sighted the adult-plumaged bird among a large group of Herring Gulls and Ring-billed Gulls more than 175 yards from the road. A 30X scope was focused on the bird and it was found that all three of the above mentioned species were in full view at one time. This permitted easy direct comparison of the Great Black-backed Gull with the two common species. The bird's large size, obvious black back and large bill were the important field characters recorded at the time.

Visibility and observing conditions were good, and there is no doubt in our minds as to the identification of the bird.—C. M. Weise and R. A. Stefanski, Milwaukee.

Adult Laughing Gull Seen in Racine County. May 24 was a bit windy and cloudy with the temperature at 60°, but the sun came out later. At Wind Point there were five Sanderlings, 66 Ruddy Turnstones, a few Herring and Bonaparte's Gulls and one different gull. It was a little bigger than the Bonaparte's. The bird did not have any white in the forepart of his wing. As a matter of fact, its wings were dark gray to the tip—there was no white except along the back edge. The gull stretched a number of times so I had a good view of its wings. Its bill and feet were dark.

Afterwards my husband and I came back—sunshine this time at 6:30 p.m.—bright sun on the beach. The gull was on the same point and flew with the other gulls. The wing pattern was the same—all dark gray to the darker tip.—Louise Erickson, Racine.

Boreal Owl Found at Wausau. On March 4, 1962, a woman in nearby Rothschild called Mrs. Kenneth Kann, a bird club member, to report that she had found a dead owl on her porch which was quite different from any she had ever seen before. Mrs. Kann picked up the specimen the next day and brought it home. On examination it appeared to be

a Boreal Owl, but she hesitated to call it that without verification from another birder.

My husband and I took the bird and checked out each identification mark according to Peterson's field guide and **Birds of America**. It checked out on each point—the horn-colored bill, the black frame around the face and the spotting of white on the forehead—all marks which distinguish it from the Saw-whet Owl.

On the strength of our findings, I reported it to Sam Robbins. He suggested that possibly the Zoology Department of the University of Wisconsin might be interested in having the specimen. Our problem of getting it to Madison was answered when Fran Hamerstrom stopped in the following Saturday, verified our identification, and took the owl with her, promising to see that the skin was delivered to John Emlen of the Zoology Dept.—Emily R. Bierbrauer, Wausau.

Worm-eating Warbler Stays a Week in Racine. I observed this bird at about 20 feet with 8x40 binoculars. I would be positive of my identification were it not that the bird was a deeper olive on the underparts than the one in my field guide. The crown pattern was identical to the illustration. The size also compared favorably. For eight days I observed the bird within 200 feet of my first sighting. The area was a moist, shady hillside with an eastern exposure, covered with dead wood and thick shrubbery.—Bill Weber, Racine.

Brewster's Warbler in Kettle Moraine. One singing bird was seen May 27 and 30 in the Kettle Moraine. It was observed on an exposed perch in good light. The characteristics noted were: broad yellow wing bars, yellow cap, and clear white underparts. Both parent species were seen singing in the vicinity on the same dates. The song was two-noted, like the Blue-wing's, but had no buzzy note—just two drawn out "s-e-e" notes.—John Bielefeldt, Waukesha.



JIMMY, COME HOME!

By MRS. MELVIN ASHER

As I went downstairs yesterday, I noticed Jimmy's jingle bell rope hanging beside the door. "Might as well take it down now," I thought and I began untying it, all the while thinking of the many times our little Crow had jangled it when he wanted to come through that door for a visit upstairs. What a cute pet he'd been, and yet what a nuisance, too! Mel, my husband, and I often wonder where he went that bright October day last fall when for the first time he didn't come flying to our call—the call that he never again answered.

Our neighbor had found Jimmy early in May along with four other little crows in a nest that the mother hadn't visited for some time. He gave us Jimmy, a most gruesome looking bag of feathers and bones, who opened his mouth wide whenever he felt us touch the little box of straw in which he was nestled. Into this miniature cavern we dropped hamburger balls and shot milk from an eyedropper many times a day.

For this we were rewarded with strange gobblings and gurglings followed by periods of quiet contentment. Small as he was then, he tried to keep his nest clean by sticking his tail over the edge of the box whenever he felt the bathroom urge. At times he was successful!

When Jimmy finally hopped out of his box and began to investigate his immediate territory, we built him a perch near the back door. Soon he would fly up to it, and from this vantage point he would sit by the hour watching the chipmunks and other birds, calling to us whenever he felt hungry. He made no attempt to hunt for food, for he knew that one loud caw would bring one of us running with peanuts, crackers, hamburger or pickles. He loved a pickle; it would send him into an ecstasy of wing spreading and smearing the pickle over the inside of his feathers—a performance we never could understand.

Fifteen Baths a Day

When our lawn needed watering and we attached the hose and began spraying it, Jimmy was fascinated. He ran in and out of the spray until he became soaked, and then he'd fly to the roof and spread out flat in the hot sun. When we weren't there to turn on the hose when he felt the urge for a bath, he would run to the faucet, peck at it, and caw in distress. To quiet him, we bought a commercial baking tin, filled it with water, and kept it in the middle of the yard. Here Jim would play for hours, sometimes taking as many as fifteen baths a day—flapping and splashing furiously each time. If we happened to be outside sitting in the lawn chairs, he'd light on the back of one of our chairs after each bath and shake himself vigorously giving us baths, too. As a reward for this free shower, he would offer his head for us to scratch and go sound asleep during the process. If we stopped and he awoke and found us not on the job, he'd give us a sharp peck to start the action again.

As I worked outside that summer, Jimmy followed me around. If I planted seeds, he dug them up; if I picked off the old blossoms in my flower bed, he picked the prettiest and freshest; if I hung clothes, he pulled out the clothespins letting the clothes drop to the ground. Each drop was accompanied by a high pitched, "Oh, boy!" the first words that he learned. Spanking him on the tail did not deter him from any of these tricks; he only flew to the roof and waited for another chance.

We never left Jimmy outside at night for fear a skunk or hawk would get him. He had a large cage in the basement with a perch near the ceiling, and at dusk he would walk into the basement and fly into it. We never locked him in the cage; he was free to explore if he wished. One of his favorite pastimes down there was to perch on an ironing board which was near a bag of clothespins hanging on the clothes chute. He'd reach into the bag, select a pin, and drop it to the cement floor calling out, "Oh, boy!" at each drop until the bag was empty. Another favorite trick was getting into the basement sink and playing with the soap, brushes, and bottles on a ledge nearby.

As summer drew on, Jimmy began flying to the neighbor's house. At first they welcomed him and would feed him whenever he tapped at their windows and doors. However, when he began picking their choicest blooms and pecking at their reddest tomatoes, he was no longer welcome. It was then that we built him a large, outside cage which he hated. The

only way we could get him into it was to catch him from his basement cage and carry him, struggling and biting, to this outside prison. There he would sulk all day until we'd release him for a while when we had time to watch him. Yet, at night we could always get him to walk into the basement, although sometimes we had to coax him if he wasn't ready for bed.

We kept Jimmy in the basement most of his first winter, for it was too cold for us to keep the door open while he took his time about coming and going. During this time he learned to talk, and to visit upstairs without flying around. He also learned what a paper on the floor was for! Each morning I'd go down and pull up his shade (he had to have a shade or he'd caw when the sun came up) and draw his bath. The baking tin was now indoors. I'd say, "You want to take a bath?" and before long he was saying it plainly and endlessly. Another favorite saying of his was, "You wanta go outside for awhile?" which I must have said each time I opened the door.

Several times a day Jimmy hopped up the stairs and pulled at the jingle bell rope that I had placed beside the door and I'd let him in. He learned to fly to the back of a child's chair, and from there he would watch me do kitchen work. As long as I stayed in the kitchen, he behaved beautifully, putting a cuff button into a plastic pill box and dumping it out again, or preening himself. But as soon as I went into the bedroom he'd make a bee (or crow) line for the rubber mat in front of the sink, and tear a strip from it and hurry back to his perch. He loved those red strips, and as a result he ruined the mat. Scolding did no good. He was also hard on braided hooked rugs.

As a special treat we allowed Jimmy to come into the living room to watch TV. His favorite program was "Big John," but if John sang too loudly he'd run over and peck at him.

Was He Lured Away by Crows?

Jimmy hated to go downstairs after his visits, and we usually had to force him down. Then he would sit on the top step and jingle his bell hopefully for awhile.

When summer came again, Jim was a big boy. Whenever we released him from his outside cage he flew farther and farther away. Still, he always returned when we called. As the hunting season approached, I painted the top of his head red so hunters would know he was tame. He survived the season, and he also survived a fight with a hawk which we viewed from a distance. But one bright October day when I went out to give Jim a pickle, he didn't come when I called. We don't know what happened to him—perhaps the wild crows lured him away as they had often tried to do. We miss him and hope he'll return.

RFD 4

Rhineland, Wisconsin

NEWS . . .

In the spring of 1963 a citation was awarded to Miss Margaret Morse, Viroqua, by the Bureau of Sport Fisheries and Wildlife, in recognition of 40 years of con-

secutive contributions of field notes for federal files. These notes were first submitted to the Bureau of Biological Survey, then to the Fish and Wildlife Service, and now to the Bureau of Sports Fisheries and Wildlife.



PHOTO BY U. S. DEPT. OF THE INTERIOR,
FISH AND WILDLIFE SERVICE, FROM A
DRAWING BY J. L. RIDGEWAY

FOOD HABITS OF THE LONG-EARED OWL

By THOMAS H. NICHOLLS

The Long-eared Owl (*Asio otus wilsonianus*) enjoys a wide distribution over nearly all the United States and the timbered regions of Canada, including the tree belts along the streams on the western plains and even the deserts. It can hardly be classed as a bird of the deep forests, for it may be found wherever it can find tree growth sufficiently dense to give it shelter for its nest and concealment during the day. The bird prefers dense groves of coniferous trees.

The Long-eared Owl is more strictly nocturnal in its habits than some other owls; it spends the day well hidden in the densest cover it can find and seldom moves about unless disturbed. For this reason it is seldom seen and may be common where its presence is not suspected. Its protective coloration and its effective hiding pose make it difficult to recognize and easy to overlook.

Other observers have found that this species congregates at times to form small colonies. This seems to occur more frequently in the regions where timber is scarce and may explain its apparent sociability.

Food Habits

Digestion is relatively complete in both vegetation- and animal-eating birds and there is a minimum of nondigestive wastes. The Long-eared

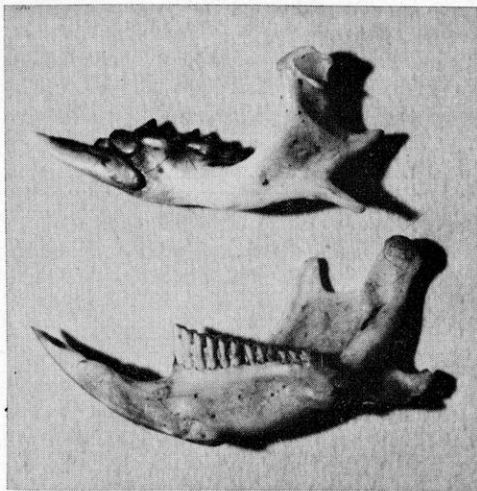
Owl forms pellets of the bones, fur, and feathers of its prey in the proventriculus, and periodically ejects them through the mouth rather than having them complete their passage through the digestive tract. The owl's habit of forming pellets, however, apparently hinders continuous feeding, for once a substantial meal is consumed it may not eat again until relieved of the pellet-forming materials. This requires six to twelve hours or more. This is of little disadvantage, however, for the Long eared Owl hunts almost exclusively at night. Thus, the owl may use the daylight hours for digesting and ejecting the waste materials, thereby being ready for another night of hunting.

The Long-eared Owl is unquestionably worthy of protection as one of our most beneficial birds of prey. A large proportion of its food, about 80 to 90 percent on a seasonal average, consists of injurious rodents. Dr. Paul L. Errington's (1932) pellet records for Wisconsin show that during fall, winter and early spring, mammals, mainly mice, make up 99 to 100 percent of its food. During late spring and summer this percentage drops to 87 to 92 percent, birds making up from 7 to 12 percent of the owl's diet. His summary states, "Total vertebrate kills from pellets and stomachs (quantitative data) amount to 3,273; juvenile cottontail, 1; Norway rat, 3; meadow mouse, 2,732; deer mouse, 497; shrew, 14; small birds (mostly finches), 26."

Dr. Errington's summer records indicate that birds are taken in quantity only during the season when the owls have a brood of young to feed and when mice are not sufficiently abundant to fill their requirements.

The Long-eared Owl, although roosting and nesting in dense thickets, does its foraging in the open. Small birds are not as available there, at least at night, as they are in the trees and bushes through which certain other species of owls, known to hunt birds, are often found.

The Long-eared Owl pellets checked for this report were picked up in a mixed white pine, red pine, and jack pine stand on the Grady tract of the University of Wisconsin Arboretum, Madison, Wisconsin. Two Long-eared Owls were using the stand of trees for cover during the day. The stand of trees was 125 feet long and 25 feet wide, making a total area of 3,125 square feet. Deciduous trees were to the north and prairie to the south of the stand of pine trees. These two plant communities provided excellent hunting areas where deer mice and meadow voles could be readily caught by the owls. The deer mice and the meadow



MANDIBLES OF SHORT-TAILED SHREW (TOP)
AND MEADOW VOLE, ENLARGED ABOUT
THREE TIMES

PHOTO BY THE AUTHOR

voles, along with the short-tailed shrews, made up the main diet of these owls.

The Long-eared Owls were always located in the red pine trees, and when disturbed during the day they would fly from one part of the pine

Table 1
Composition of Winter Food of Two Long-eared Owls
as Determined by Pellet Analysis

Pellet	Meadow Vole Mandibles (no.)	Skulls (no.)	Short-tailed Shrew Mandibles (no.)	Skulls (no.)	Deer Mouse Mandibles (no.)	Skulls (no.)
1	4	2				
2	4	2				
3	4	2				
4	2	1				
5	3	1				
<hr/>						
6	4	2				
7	2	1				
8	4	2			1	
9	2	1				
10	5	2				
<hr/>						
11			4	2		
12			4	2		
13	5	3				
14					3	2
15					2	1
<hr/>						
16			1		3	1
17	4	2			2	1
18	6	3				
19	2	1			2	1
20	4	1				
<hr/>						
21	2	1			1	
22			4	2		
23	1	1				
24	2	2				
25	4	1				
<hr/>						
26	4	2				
27	5	2			1	1
28	4	2				
29	4	2				
30	4	1				
<hr/>						
31	4	2				
32	4	2				
33			4	2		
34	2	1			1	1
35	1	1			1	1
<hr/>						
Totals	96	46	17	8	17	9

stand to another, but never into the deciduous woods. One could flush the owls many times, yet they did not leave the pine stand. A small white pine stand ran parallel with the mixed pine stand, but the owls were never observed to be in that stand. Pellets were not found in the white pine stand either. This was probably due to the lack of good cover in the white pines. No other species of owls were observed in either of the pine plantations during the period of this study.

The Long-eared Owls were observed between January 11 and March 1, 1958. On March 1, the owls could not be found, and subsequent investigations of the pine stand for the next ten days revealed that the two owls had left the area. During the 50 days between January 11 and March 1, 175 individual pellets were found. All of them were under red pine trees. The owls had three or four favorite trees in which they roosted. Of the 175 pellets collected, 35 were taken apart and examined, the purpose of which was to determine the kind of animals that were eaten by the two owls (see Table 1).

The Long-eared Owl produces pellets that can be analyzed accurately in quantitative terms. This is possible because there is little or no bone digestion of the few, small sized species on which it preys. Individual animals can be determined in the pellets. This cannot be done with all raptors, however. Only pellets in good condition were analyzed for this study.

Results

The skulls of 46 meadow voles (*Microtus pennsylvanicus*), nine deer mice (*Peromyscus* sp.), and eight short-tailed shrews (*Blarina brevicauda*) were found in examining 35 pellets chosen randomly from the 175 pellets collected. The Long-eared Owl's food diet, therefore, was made up of 73.0% meadow voles, 14.3% deer mice, and 12.7% short-tailed shrews. 1.8 animals were found per pellet.

Conclusion

Almost 100 percent of the winter food of the two Long-eared Owls which were studied for a period of 50 days in the Grady tract of the University of Wisconsin Arboretum in the winter of 1958 consisted of three kinds of rodents. This knowledge is important in providing additional evidence of the value of Long-eared Owls in their beneficial role of helping to control rodents. This bird should be protected by law as should many of our other raptor species which are highly beneficial.

3829 Council Crest
Madison 11, Wisconsin

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MORE NEWS . . .

Have you ever thought of what WSO does for you? Take the Supply Department, for example. Under the capable leadership of Mr. and Mrs. Harold Kruse and with the help of their assistants, the Supply Department maintains a large selection of books, pamphlets, stationery, feeders, bird houses, records and other items pertaining to nature study. You, as a WSO member, receive a 10% discount on purchases you make from the department. An attractive catalog listing hundreds of items is available for the asking.

Badger bird banders were busy during

1962 according to the annual banding report of the Inland Bird Banding Association. This is a voluntary report of IBBA members and is published each year in the association's bi-monthly **IBBA News**.

Twenty-two banders in the state reported banding 27,099 birds of 176 species during the year. The highest total was from Cedar Grove where University of Wisconsin banders captured, marked, and released 7,668 birds. Harold Wilson, Ephraim, was next with 3,758 birds.

The five most numerous species banded in the state were: Herring Gull, 3,650; Evening Grosbeak, 1,955; Swainson's Thrush, 1,568; Slate-colored Junco, 1,258. and White-throated Sparrow, 1,227.



FIELD NOTES

By THOMAS SOULEN

Spring Season

March-May, 1962

Observers characterized the Spring, 1962, season in quite different ways, depending on where they live and whether they happened to be looking for birds May 12-14. One can draw no conclusions about the nature of the migration which would hold for all sections of the state. The fact that struck most people was the extreme rapidity of the May movement of birds through the state. Until late April few migrants had appeared, and by May 20 or shortly thereafter, not many birds were to be seen. (It is possible that the high winds and quite dense foliage for the rest of May contributed to the lack of reports). Comments appearing in the August, 1962, issue of **Audubon Field Notes** indicate that other, neighboring areas similarly witnessed a very condensed migration.

The majority of people who commented on the migration felt that beginning in April, migrants appeared somewhat later than usual. In cases where fairly normal arrival dates were noted for the first individuals seen, specific mention was often made of the fact that the major influx of a species was delayed for a week or more. Many observers also felt that numbers of individuals of many species were down, especially warblers; this was true mainly of people in the western and extreme eastern counties. A possible reason for their appraisal of the season as poor lies in the fact that they invariably mentioned also the lack of decided waves of migrants.

Waves did occur during the season, but they apparently were not widespread; at least they did not command the attention of many ornithologists. What waves were noticed, therefore, quite likely were not the result of well-defined weather patterns which affected a large area, but rather were due simply to local weather conditions. The only exception, presumably, was the period May 12-14. Even though many observers failed to note at that time any unusual concentrations of birds, others encountered incredible numbers. The only significant kills reported by Charles Kemper at the Eau Claire TV tower occurred on these dates. Daryl Tessen writes of the Appleton area: "On May 12th there was almost an unbelievable number of birds present. Warblers and thrushes were not only in the trees but in places were almost carpeting the ground as well. . . . The thrushes in places numbered as many as 30-40 with every species present except the Hermit." Several people in Madison noted similar concentrations of birds the morning of May 13, after a noticeable nocturnal migration the night before which built up to deafening proportions by dawn. That this influx included a large variety of birds is shown by Keith Brown's finding of 30 species of warblers on that one morning, all in Madison. The next day, in the Superior area, Eugene Butler noted a "great migration of sparrows and Palm Warblers." For those who did not witness these great numbers of birds, however, the migration seemed generally poor.

Little Change in Robins and Bluebirds

There seemed to be little overall change in the status of the Robin or the Eastern Bluebird in this or neighboring states. Some of the rarer species that occurred in greater numbers than usual in Wisconsin were also more widespread in other sections of the midwest. Several regions reported decidedly higher than normal numbers of White-eyed Vireos, Worm-eating Warblers, and Yellow-breasted Chats. Both the Cattle Egret and the Glossy Ibis caused comment west and south of us, and there were Ruffs seen in Ohio and Missouri. The mammoth invasions of two winter species persisted throughout the midwest until quite late—Bohemian Waxwings remaining into April even as far south as Missouri, and Evening Grosbeaks well into May in many areas.

Common Loon: First reported in Columbia County March 25 (the R. B. Dryers). Reached Brown County just two days later (Edwin D. Cleary). Most southern counties reported arrivals April 10-11, and northern counties by April 19-24, by which time birds had left the southern part of the state.

Red-throated Loon: Only one record: April 25 in Pierce County (Sam Robbins).

Red-necked Grebe: Three in Fond du Lac County April 7 (Harold Bauers); single birds (many observers) in Madison March 5-25 and at Goose Pond, Columbia County, May 21-31.

Horned Grebe: Appeared April 8 in Dane (Tom Ashman, William Hilsenhoff) and Waukesha (John Bielefeldt) counties. Peaks reported April 14-25, by which time the species had reached several northern counties. Still present in Dane County May 12 (Keith Brown).

Eared Grebe: An early bird was seen well in Racine County April 13 (Robert and Louise Erickson). One bird also at Goose Pond May 21-28 (Hilsenhoff), seen by several observers.

Pied-billed Grebe: A bird in Dane County March 16 (Brown) preceded by quite a bit the usual first push the last week of March. Although not seen generally in northern counties until mid-April, there was an early report from Lincoln County March 31 (Donald J. Hendrick).

Double-crested Cormorant: First seen April 18 in Pierce County (Robbin). One still present in Dane County May 18 (Brown, Tom Soulen).

Great Blue Heron: Earliest one was in Racine County March 18 (Ericksons). Reported from all parts of the state by the end of the month.

Green Heron: Seen quite early in Racine County April 16 (Ed Prins, Bill Weber). A number of reports April 26-30.

Cattle Egret: This species really made inroads this season. Seen at Horicon Marsh from May 5 until well into June (many observers). As many as seven were reported. Also recorded in Columbia County May 3 (Bernice Andrews, Frances Glenn) and Rock County May 5 (David and Marion Stocking).

Common Egret: Early birds in Rock County April 10 (Melva Maxson) and Horicon Marsh April 13 (Richard A. Hunt). A fair number of other April reports from five additional counties. Charles Kemper recorded it for the first time in spring in Chippewa County.

Snowy Egret: The only reports were from Horicon Marsh, by Hunt (no date given) and the Dryers (May 22).

Black-crowned Night Heron: Early birds seen April 8 in Brown County (Cleary, Elmer W. Strehlow), April 14 in Waukesha County (Mrs. Earl Sauer), and April 15 in Milwaukee County (Strehlow). General arrival the last week in April.

Yellow-crowned Night Heron: Observed in four counties: Milwaukee and Ozaukee May 5 (Mary Donald), Dodge May 15 (Hunt), and Racine May 19 (Prins, Weber). The Dodge County bird was collected (see "By the Wayside"); the Racine County pair was nesting.

Least Bittern: Birds heard April 24 in Dane County and April 25 in Portage County (Brown). Reported April 30 in Brown County (Cleary). Only three other records.

American Bittern: Two very early dates in Waukesha County: March 27 (Sauer) and April 7 (Bielefeldt). Reached Marinette County in the north by April 24 (Harold Lindberg).

Glossy Ibis: Sighted in three locations: eight birds in Manitowoc County April 29 (Merle Pickett et al.); one bird in Jefferson County April 30 (many observers); five birds at Horicon Marsh May 8-15 (many observers).

Whistling Swan: Arrived March 11 in Waukesha (Bielefeldt) and Winnebago (Daryl Tessen) counties. Peaks in southern counties April 1-7. First appeared in the north in Marinette County April 7 (Lindberg) and in Burnett County April 8 (Norman R. Stone). Remained in Winnebago County until April 23 (Tessen), and until the end of the period in Marinette County (Lindberg). One seen on the Beloit May Count was thought to be an injured bird.

Canada Goose: A few appeared in Outagamie County March 3 (Tessen), but no more until March 11 in Waukesha County (Bielefeldt). A great many localities reported their first geese March 17-18. Birds in Burnett County March 27 (Stone) and Marinette County April 7 (Lindberg) were earlier than those reported elsewhere in the north. Peak dates mentioned varied widely, from March 18 to April 24.

Snow Goose: Fewer reports than last year, all in the southern counties, from March 24 in Milwaukee County (Donald) to May 4 in Columbia County (Hilsenhoff).

Blue Goose: Same as above, except for an individual which remained until near the end of May at Goose Pond (many observers).

Mallard: First reported from central and northern counties March 22-28.

Black Duck: Had reached some northern areas by the last week in March.

Gadwall: Wintered in Dane County. First migrants seen March 18 in Winnebago County (Tessen); did not reach other localities until March 29-31, and the few northern counties reported it considerably later. Still present at the end of the period in Dane (Hilsenhoff) and Columbia (Brown) counties.

Pintail: Wintered in Dane County. Migrants appeared there March 25 (Ashman) and in Juneau County March 26 (Carl Pospichal). Had reached most southern areas by the end of the month, and northern counties by about April 10. Late May reports from St. Croix (Robbins), Brown (Cleary), Kenosha (Ericksons), Columbia (Ericksons, Brown), and Dane (Hilsenhoff) counties.

Green-winged Teal: Earliest migrants noted March 26 in Dane County (Brown), with records from three other counties by the end of the month. Reached Burnett County by April 9 (Stone). Still present at the end of the period in Columbia (Hilsenhoff, Brown), Burnett (Stone), and Outagamie (Tessen) counties.

Blue-winged Teal: Dane County March 25 (Ashman, Brown); Waukesha County March 30 (Sauer); Milwaukee (Donald) and Jefferson (Emil Stock) counties March 31. No reports from far northern counties until April 19 (Burnett, Stone) and April 22 (Marinette, Lindberg).

American Widgeon: Arrived March 18 in Racine County (Ericksons) and March 25 in Dane (Ashman) and Jefferson (Elizabeth Degner) counties. Had reached St. Croix County by March 28 (Robbins), but not until about April 10 was it seen generally in the north. Still present in Columbia County at the end of the period (Hilsenhoff, Brown).

Shoveler: Early reports from Rock County March 18 (Stockings) and Waukesha County March 24 (Ed Peartree). Many arrivals March 30-31. Appeared generally in the north April 20-25. Still to be seen at the end of May in five southern counties.

Wood Duck: An early migrant noted in Waukesha March 17 (Peartree). Other arrivals scattered, beginning the last week in March.

Redhead: Rather diffuse arrival pattern, the first report being from Dane County March 5 (Hilsenhoff). Some birds still in Columbia County at the end of the period (Hilsenhoff, Brown).

Ring-necked Duck: A vanguard appeared March 16-18 in Dane (Brown), Jefferson (Degner), and Milwaukee (Ericksons) counties, with the next main movement coming March 30-31. Reached a number of northern counties April 8-11. Noted as late as May 31 in Waukesha (Bielefeldt), Columbia (Hilsenhoff, Brown), Burnett (Stone), and St. Croix (Robbins) counties.

Canvasback: Racine County March 8 (Prins, Weber); Waukesha County March 17 (Bielefeldt); three other counties March 18. Most departures by late April, but still in Columbia County May 10 (Robbins) and Waukesha County May 13 (Oconomowoc May Count).

Greater Scaup: Reported from nine counties: Waukesha, Racine, Milwaukee, Jefferson, Outagamie, Marinette, St. Croix, Fond du Lac, and Dane.

Lesser Scaup: Present at the beginning of March in Milwaukee, Kenosha and Dane counties. Earliest migrant seen March 11 in Winnebago County (Tessen), with quite a number of areas reporting arrivals in the last week of March. Reached Burnett County by April 9 (Stone).

Common Goldeneye: Again this year Katherine Fuller found early birds in Sawyer County on March 4. Present in early May in Racine County (Ericksons) and on May 18 in Dane County (Brown, Soulen). One still in Appleton in early June (Tessen).

Bufflehead: Birds were in Milwaukee, Racine and Brown counties at the beginning of the period. Although most areas did not record arrivals before the end of March, Lindberg noted birds as far north as Marinette County March 18. One bird at Crystal Lake, Dane County, May 18 (Brown, Soulen).

Oldsquaw: The usual Lake Michigan birds had departed generally by mid-April, although Bauers saw 15 at Point Beach State Forest in Manitowoc County May 25. An interesting report away from the eastern part of the state is that of Bernard Klugow, who found one male dead south of Iron River in Bayfield County on March 11, and a live male later the same day.

Harlequin Duck: A single female was observed sitting and flying at Wind Point and was also photographed on May 19, over a month and a half later than this species has ever been recorded in Wisconsin (Prins, Weber).

White-winged Scoter: Reported by Ericksons and Strehlow from Milwaukee County March 4. Three birds observed by Bauers in Manitowoc County (Point Beach) May 25 are a week later than they have previously been seen in May.

Surf Scoter: The Ericksons provide the state's first spring record of this species. They saw two males in Racine County May 11, swimming at a distance of 200 feet with scaups and numerous Bonaparte's Gulls. They saw "the orange-ish bill with circle of orange" clearly. A puzzling observation was that the "two head patches (in the back and on top) were not white but light colored."

Ruddy Duck: Seen first at Goose Pond by Sauer March 11. After a few other reports one to two weeks later, there appeared to be an influx March 25-26. Remained until the end of May in Waukesha (Bielefeldt), Dane (Hilsenhoff), St. Croix (Robbins) and Columbia (Dryers, Brown) counties.

Hooded Merganser: Rock County March 18 (Stockings); Jefferson (Degner) and Wood (Gary D. and Donn C. Stout) counties March 25. Thereafter a number of reports before the end of March. A vanguard reached the north April 3 (Sawyer County, Fuller), but general arrival there was not until April 10-11, when the species reached five additional northern counties. May reports from five counties in the south and from several northern areas where they might breed.

Common Merganser: Still present in May in five northern counties, but seen last in Columbia County May 24 (Brown).

Red-breasted Merganser: There appeared to be a definite influx into northern counties April 11-14. Scattered May reports. Only western counties reporting were St. Croix and Dunn (Robbins) and Burnett (Stone).

Turkey Vulture: Arrived March 27 in Dane County (Ashman) and March 28 in Milwaukee (Donald), Waukesha (Mrs. Paul Hoffman), and Columbia (Dryers) counties. Recorded more than usual in the eastern part of the state, with eleven counties reporting. Seen after May 20 in Racine (Prins, Weber), Waushara (N. R. Barger), and Jefferson (Degner) counties.

Goshawk: One migrant seen near Prescott in Pierce County April 18 (Robbins).

Sharp-shinned Hawk: After Degner's Jefferson County report March 1, no migrants were noted until the last week in March, at which time birds were observed as far north as Burnett County (Stone).

Cooper's Hawk: General migratory movement of this species seemed earlier than that of the Sharp-shinned.

Red-tailed Hawk: There were enough arrival dates March 25-28 to imply movement of these birds then, particularly since most first reports from northern counties came during this period.

Red-shouldered Hawk: Perceptible migration March 24-28, reaching as far north as Marinette County in the east (Lindberg), and St. Croix County in the west (Robbins).

Broad-winged Hawk: Of the 21 arrival dates noted, four fell in the period April 18-23, with four more by April 28. The migrants seen earliest were in these north-western counties April 18-19: St. Croix (Robbins), Douglas (Klugow, Ted Koski), and Burnett (Stone).

Rough-legged Hawk: A rather large number of reports (8) the first half of May.

Bald Eagle: Most reports were from northern counties. An unusual southern observation was made of two birds high over Devil's Lake May 20 (Ericksons).

Marsh Hawk: The earliest report was from Marinette County in the north March 13 (Lindberg), with the main movement occurring the last week in March.

Osprey: Seen in Dane County April 17 (Brown) and three other counties April 18. Norman Pripps reports nesting in Iron County May 12.

Peregrine Falcon: Observed in eight counties April 5 to May 13.

Pigeon Hawk: Only four reports, three in the last half of April, the other being a very early bird March 24 in Waukesha County (Peartree).

Sparrow Hawk: There seemed to be a decided movement into northern counties March 28-29.

Sharp-tailed Grouse: Only two reports: 21 birds in Burnett County April 20 (Stone); two birds in Langlade County April 22 (Soulsens).

Bobwhite: Recorded throughout the period only in Wood, Portage, and Vernon counties, with observations from only seven additional counties. Harold Kruse reports it as fairly common in Sauk County.

Gray Partridge: All reports were from southeastern counties.

Sandhill Crane: Reports from only six counties: Waukesha April 2 (Bielefeldt); Juneau April 6 (Pospichal); Green Lake April 8 (Bauers); Burnett April 11 (Stone); Dodge May 5 (Degner); and Adams May 9 (Donald).

King Rail: Only one bird seen, at Horicon Marsh May 5 (Degner).

Virginia Rail: A very early observation in Dane County April 15 (Brown); all other reports were in May, from five other counties.

Sora: Racine County April 17 (Prins, Weber); St. Croix County April 24 (Robbins); a number of other arrivals April 27-30.

Common Gallinule: Seen in April only in Winnebago County, on the 21st (Tessen). There were only ten additional reports.

American Coot: First migrants appeared March 11-15, with a major influx the last week in March.

Semipalmated Plover: Ashman's May 6 Dane County report was a few days ahead of a more general arrival noted May 9-11. Seen in far northern Douglas County May 23 (Eugene Butler).

Piping Plover: Lake Superior provides another record of this species with two birds on May 15 (Douglas County, Butler).

Killdeer: After a March 11 arrival in Dane County (Brown, Hilsenhoff), this species appeared to reach the state in several well defined intervals: March 17-18 and 23-26. The latter influx spread throughout the northern counties.

Golden Plover: St. Croix County April 27-28 (Robbins); Racine County April 29 (Prins, Weber); all other reports were from Dane and Columbia counties April 22-May 27.

Black-bellied Plover: There were three remarkably early reports from Dane and Columbia counties April 26-30 (Ashman, Peartree, Brown), perhaps the same bird. One of these records was supported by details. Noted by Lindberg as far north as Marinette County May 6. As is usual for this species, general arrival was not until the middle of May, and birds remained until the end of the month in several areas.

Ruddy Turnstone: A Brown County May 1 record (Cleary) is two weeks earlier than birds appeared elsewhere in the state. Peak dates reported were May 20-24 in southern counties. Eighteen birds in Douglas County May 17 were the first ever seen there by Butler and were also earlier than most of the other reports; seen also in Kenosha County the same day (Ericksons).

American Woodcock: Arrival dates of this species followed no pattern, stretching from March 27 (Waukesha County, Hoffman) and March 30 (Fond du Lac County, Tessen) into May. Fuller reports that district forest ranger Sam Ruegger found a nest containing four young one day old on May 4 near Winter in Sawyer County.

Common Snipe: Earliest birds spread over the state rapidly, being seen March 25 in Waukesha County (Sauer), the next day in Burnett County (Stone), and in many other areas within the following week.

Upland Plover: Seen April 22 in Rock (Andrews, Glenn) and Sauk (Kruse) counties, with others noted in a number of counties before the end of the month.

Spotted Sandpiper: Fourteen April reports, the first a very early April 17 in Brown County (Ed Paulson fide Cleary).

Solitary Sandpiper: Kruse's April 23 Sauk County observation was several days earlier than a very decided influx April 27-30. Seen last in Dane County May 26 (Brown).

Willet: All reports fell within a one week period April 28-May 4. Seen at two locations in Racine County (Ericksons) and also in Columbia County (Hilsenhoff, Peartree).

Greater Yellowlegs: Although the majority of the arrival dates fell within the week April 22-29, there were reports from four counties during the first half of the month, the earliest being April 1 in Jefferson County (Degner), with another three days later in St. Croix County (Robbins). Most birds departed by about May 20, although Dryers report it present in Columbia County May 31.

Lesser Yellowlegs: The appearance of this species was not nearly so well defined as that of the preceding one. Noted April 18 in Juneau (Pospichal), Pierce (Robbins), and Racine (Prins, Weber) counties, with most other arrivals coming the last ten days of April. Lingered later than Greater, being seen in seven counties after May 20.

Pectoral Sandpiper: Virtually all arrivals April 20-29. Still to be found in four counties the last week in May.

White-rumped Sandpiper: Seen from May 15 on in Dane and Columbia counties (several observers). There were also these reports: Wausau May Count May 13; Chippewa County May 20 (Kemper); St. Croix County May 21-25 (Robbins); Jefferson County May 27 (Degner).

Baird's Sandpiper: Noted in Waukesha County May 13 (Peartree); Dane County May 15 (Brown), May 18 (Ashman), and May 28 (Hilsenhoff); Kenosha County May 21-22 (Ericksons); St. Croix County May 25 (Robbins); and Columbia (Dryers) and Outagamie (Tessen) counties May 27.

Least Sandpiper: Reported from 15 counties, May 3 (Rock County; Andrews, Glenn) to May 30 (Dane County, Brown).

Dunlin: The earliest and latest observations were from far northern Marinette County May 6-31 (Lindberg). All peak dates noted were May 18-21.

Dowitcher: Birds unidentified as to species were seen April 27 in Columbia County (Dryers) and on scattered dates in six additional counties. Two very long-billed birds (which uttered no notes) were seen April 30 in Dane County (Brown). The only identification of the Long-billed species by call notes was by Robbins May 4 in St. Croix County. Short-billed identification (also by notes) were as follows: Columbia County May 12, 21 and 30 (Brown, Hilsenhoff); Dane County May 15 and 24 (Brown); St. Croix County May 17 (Robbins).

Semipalmated Sandpiper: A few birds were seen May 5-8, but most arrivals were during the last half of May, with large numbers still present in some areas into June.

Western Sandpiper: One in breeding plumage in St. Croix County May 25 (Robbins).

Marbled Godwit: St. Croix County April 28 (Robbins); Dane County April 30 (Brown) and May 1 (Ashman); Columbia County May 20 (Sauer).

Hudsonian Godwit: St. Croix County May 11-14 (Robbins); Columbia County May 13 (Dryers) to May 26 (Brown, Hilsenhoff); Kenosha County May 18-22 (Ericksons); Dane County May 20 (Brown).

Ruff: Wisconsin's second visitor of this species was seen by a number of observers who tramped the corn stubble bordering Goose Pond in Columbia County from May 21 into the first week in June. Seen first and last by Hilsenhoff. See "By the Wayside."

Sanderling: Seen early in Dane County May 3 (Brown) and Manitowoc County May 8 (John Kraupa). All other reports were from the Lake Michigan counties May 20 and after except for Columbia County May 30 (Brown).

American Avocet: A single bird at Goose Pond, Columbia County, May 10 was seen by Ashman, Robbins, Lucy Gauerke, and Hortense Langer.

Wilson's Phalarope: A fair number of reports during the last five days of April, the earliest being in Columbia County (Dryers). Had apparently reached most sections of the state by the end of the first week of May. Tessen noted more than usual in the Appleton area, with a pair still present June 6.

Northern Phalarope: Seen in Dane County May 10-13 (Ashman, Brown, Kruse).

Great Black-backed Gull: An ornithology class from the University of Wisconsin-Milwaukee encountered one of these in a flooded field in Ozaukee County on March 31 (see "By the Wayside").

Herring Gull: A very decided movement into central and northern counties during the last week in March.

Ring-billed Gull: Again this year, the only report from the northern tier of counties was provided by Alfred S. Bradford (Vilas County, May 22).

Laughing Gull: One of the state's few records of this species—and only the second in spring—is that of the Ericksons in Racine County May 24. Their description of the adult bird's plumage is in "By the Wayside."

Bonaparte's Gull: The first birds reported were inland, oddly enough, in Dane County March 25 (Brown). Noted in several other areas April 5-8. As was the case last year, no observations in northern counties until May.

Forster's Tern: Soulen's April 27 report from Madison was followed within the next four days by observations from Racine, Dunn, and Brown counties. Seen later in Adams and Milwaukee counties.

Common Tern: Seen very early in Winnebago County April 21 (Tessen). No definite pattern among subsequent arrivals.

Caspian Tern: There were only five reports: Marinette County April 17 (Lindberg); Brown County April 27 (Cleary); Dane County May 10 (Soulen); Milwaukee County May 13 (Donald); St. Croix County May 14 (Robbins).

Black Tern: Appeared first in Racine County April 29 (Prins, Weber) and Dane County April 30 (Brown). Reached northern counties about mid-May.

Mourning Dove: Although wintering birds in many areas make it difficult to discern when the first migrants appear, there were many arrival dates reported which cluster in the period March 24-28; since some of these come from counties (including northern ones) from which there was no indication of winter residents, there was likely a definite movement then.

Yellow-billed Cuckoo: Noted in Madison May 13 (Brown), with a fair number of observations elsewhere within the next week. The northernmost counties reporting this species were St. Croix May 18 (Robbins) and Langlade May 20 (Antigo May Count). Two areas reported peaks May 20.

Black-billed Cuckoo: A remarkable date in Vernon County April 30 (Earl and Viratine Weber). Seen next on May 13, in six counties. Noted as more common than last year in Juneau County (Pospichal).

Barn Owl: Present throughout the period in Waukesha County (Peartree), where they were seen displaying May 17.

Screech Owl: There were again reports from very few counties, only eight, all in the southeastern part of the state. Three young were noted in Jefferson County May 31 (Degner).

Snowy Owl: Seen in Outagamie County March 11 (Tessen), Milwaukee County March 12 (Strehlow), and Brown County March 20 (Cleary).

Barred Owl: Reports this year represent most sections of the state.

Long-eared Owl: Noted in Waukesha (Bielefeldt, Peartree), Milwaukee (Ashman, Ericksons, Donald), Jefferson (Degner), St. Croix (Robbins), and Brown (Mrs. Paul Romig fide Cleary) counties.

Short-eared Owl: Only three reports: St. Croix County until April 17 (Robbins); Waukesha County April 21 (Peartree); Marinette County April 24 (Lindberg).

Boreal Owl: A dead bird of this species was found and identified by several members of the Wausau Bird Club March 4. Details in "By the Wayside."

Saw-whet Owl: Not reported in the winter Field Notes was a bird apparently in good health which was captured February 20 in Lincoln County by one of the seventh grade students of Donald J. Hendrick. Mrs. Spencer Doty found one dead in her yard in Wausau April 15.

Whip-poor-will: There were an amazing number of April reports, the first being April 21 in Chippewa County (Kemper). Had reached Marinette County by April 24 (Lindberg), and a total of eight counties by the end of the month.

Common Nighthawk: After Ashman's very early April 29 observation in Dane County, there were scattered other arrivals before a very marked influx May 12-14 which reached at least some of the far northern counties. None were seen by Kraupa during the season in Manitowoc County.

Chimney Swift: Stone's April 20 arrivals in Burnett County in the north were a week earlier than the first sizable push into the state.

Ruby-throated Hummingbird: Seen first May 4 in Rock County (Stockings). A few more noted before May 12-13, when it reached many areas, including several counties in the north. Sixteen were reported on the Antigo May Count May 20.

Belted Kingfisher: Moved northward April 17-23, when it was noted in Lincoln (Hendrick), Burnett (Stone), Sawyer (Fuller), and Marathon (Doty) counties.

Yellow-shafted Flicker: The first definite date of movement seemed to be March 28, when birds appeared in six counties (although birds had been seen March 22 in Winnebago County by Hilsenhoff and in Brown County by Cleary). That April 22-23 was another time of perceptible movement is indicated by appearance of the species in Sawyer (Fuller), Iron (Norman Pripps), and Burnett (Stone) counties, and by the fact that several observers in the southern part of the state noted that peak numbers were present then.

Pileated Woodpecker: Records from these counties where the species is not reported regularly: Dodge May 5 (Dryers) and Rock (Beloit May Count).

Red-headed Woodpecker: There appeared to be migratory movement April 27-28, with a peak reported in Dane County then (Brown). Other peak dates were mostly May 12-13.

Yellow-bellied Sapsucker: Seen March 29 in Milwaukee (Donald) and Waukesha (Hoffmann) counties. Peaks varied from April 15 to 27, and birds lingered in a fair number of areas until mid-May.

Eastern Kingbird: A few appeared with the major push of birds which occurred April 29-30 (Outagamie County, Bradford; Adams County, Peartree; Polk County, Mr. and Mrs. John McKenney). They were noted gradually in other areas until a major influx May 12-14 which spread over the entire state. Margarette E. Morse observed birds starting to build a nest in Vernon County May 23.

Western Kingbird: One bird seen May 18 and 25 in St. Croix County (Robbins).

Great Crested Flycatcher: A great many arrival dates reported from the entire state May 12-14, at which time also peaks were noted in several areas. Prins and Weber provide a very early observation April 27 in Racine County; other birds apparently began filtering in about a week later.

Eastern Phoebe: Observed in Dane (Ashman) and Waukesha (Hoffmann) counties March 27 and in Buffalo (Hilsenhoff) and Chippewa (Kemper) counties the next day. A number of arrivals March 31 reached as far north as Marinette County (Lindberg). A distinct movement into the north occurred generally April 17-19. Mrs. Joseph Mahlum saw birds carrying nesting material in Rock County April 10. Peaks April 14 in Vernon County (Weber) and April 18 in Milwaukee County (Bauers).

Yellow-bellied Flycatcher: Noted first May 13 in Rock County (Maxson) and on the Wausau May Count. Subsequent arrivals from eight additional counties followed no pattern. Present late in the period, as is usual.

Acadian Flycatcher: Although this species is by no means rare in the southwestern part of the state and is seen regularly but rarely in many southern counties during migration, very few observers ever supply supporting details with their reports. There are some who feel that under very good lighting conditions it is possible to distinguish the empidonax flycatchers by color alone; other competent authorities disagree. The

following may be found on page 152 of Peterson's **A Field Guide to the Birds**: "Ludlow Griscom writes: 'Collecting has proved that it is impossible to be certain in separating the Acadian, Alder, and Least Flycatchers by color characters even in the spring.'" Since these three species do not confine their migratory travels to typical breeding habitat, and since they do not always sing while being watched by ornithologists, observers should provide documentation for their records of this species. No details were sent with these few records received: banded May 6-26 in Rock County (Stockings); Milwaukee County May 20 (Donald); Columbia County May 31, thought to be nesting (Dryers).

Traill's Flycatcher: This species is much more common than the preceding one; nevertheless, there are reports from early May nearly every year which precede by one to three weeks all other observations, yet with these reports there is rarely if ever any substantiating evidence (which probably should include a description of the song in "other-than-field guide" language or at least mention that the song was heard). First noted this season May 13 in Waukesha (Peartree) and Dane (Brown) counties. Reached Chippewa County by May 17 (Kemper) and most other areas by May 19.

Least Flycatcher: This earliest and most vocal of the empidonax flycatchers usually does not provide observers with the identification problems presented by the preceding species. It was seen first May 2 in Dane County (Brown), and in the next few days it was reported from a fair number of additional areas, as far north at Chippewa County (Kemper). There were more observations in northern counties by the 10th, but many arrivals came in with the May 12-14 movement.

Eastern Wood Pewee: May 5 and 6 birds in Grant (Dryers) and Outagamie (Tessen) counties were not followed by others until May 12-14, except for Lincoln County May 10 (Hendrick). One killed at the Eau Claire TV tower May 30 (Kemper).

Olive-sided Flycatcher: A May 5 bird in Jefferson County (Degner) is very early. A fair number appeared May 13-15. Present late in May in four counties, and into June in Chippewa (Kemper) and St. Croix (Robbins) counties.

Horned Lark: Peaks in Columbia (Dryers) and Dane (Brown) counties noted March 7 and 11, but in six other areas March 17-24.

Tree Swallow: Jefferson County March 26 (Degner), and among other places, as far north as Washburn County two days later (Hilsenhoff). Most arrivals were not seen until well into April.

Bank Swallow: The first observation was in Chippewa County April 22 (Kemper), with others the next three days in Dodge, St. Croix, and Pierce counties. A marked influx April 28-May 1 carried birds as far as Marinette County (Lindberg) in the east. Peaks noted May 8-9.

Rough-winged Swallow: A few early birds April 21 in Dane (Hilsenhoff) and Rock (Stockings) counties, and elsewhere in the next day or two, establishing a record date in Chippewa County (Kemper). A number more were seen the last three days of April.

Barn Swallow: Three phenomenally early birds in Racine County April 2 (Ericksons) establishing a new record arrival date. Other very early observations April 10 in Rock County (Mahlum) and April 11 in Lincoln County (Hendrick). Subsequent arrivals were spread out, bunching somewhat April 18-24 and 28-30. There was no detectable pattern in the peak dates reported (April 24-May 20).

Cliff Swallow: Chippewa County again provides an earliest swallow arrival, April 22, also a record date for the county (Kemper). Seen April 23 in Rock (Maxson) and Dodge (Dryers) counties. Other arrivals strung out, with none in the far north until the May 13-15 push.

Purple Martin: One male in Horicon Marsh April 2 (Hunt), with reports a week later in four other areas, including Marinette County (Lindberg). Peaks noted April 21-25 in three counties.

Gray Jay: Seen in Ashland (Hilsenhoff), Iron (Pripps), and Sawyer (Fuller) counties.

Blue Jay: Peaks, probably associated with migratory movement, were noted in Dane County April 26, May 3 and 13 (Brown, Soulen), and in Milwaukee County May 13 (Bauers).

Common Raven: Seen in Burnett, Iron, Langlade, Lincoln, Price, Sawyer, and Vilas counties.

Boreal Chickadee: February 11-13 in Sawyer County (Fuller).

Tufted Titmouse: Noted as "again rare in Madison" by Hilsenhoff. No noticeable range extension, although one area not often supplying records of it is Brown County (March 17, Cleary).

Red-breasted Nuthatch: A sizable number of observations, from eighteen counties

in most sections of the state. Seen into May in many areas, departing in most cases by the middle of the month.

Brown Creeper: Nearly all departures occurred the last ten days of April. Still in Brown County May 20 (Cleary).

House Wren: Birds in Waukesha County April 13 (Sauer) and Brown County April 18 (Cleary) were ahead of the main influx, which was first noted April 22. Although a few northern counties were without records until after May 10, most sections of the state reported wrens by the end of April. Kemper comments that numbers seemed down in Chippewa County.

Winter Wren: Not much pattern to the arrival dates, except that western counties in general reported this species earlier than eastern ones. First seen in Dane County March 31 (Hilsenhoff). Relatively few reports in all, from only nine counties.

Bewick's Wren: The Stockings' banding of birds April 17-22 establishes a rather interesting Rock County report; very few have been seen there. Seen also in Rock County April 22 by Andrews and Glenn. Kemper's report of one June 6 is a first for Chippewa County. Found in its usual haunts in Adams County (May Count).

Long-billed Marsh Wren: Ashman's April 22 observation in Dane County establishes by two days a record arrival date. Next reports were a week later. Not seen in northern counties until after mid-May.

Short-billed Marsh Wren: First seen May 3 in Dane (Brown) and St. Croix (Robbins) counties, with no reports from other areas until May 12-14.

Mockingbird: Seen in the Appleton area during the period (Tessen, Bradford). According to Bradford, at least two were in the vicinity.

Catbird: An April 3 Racine County bird (Prins, Weber) was quite possibly a wintering one. Appeared April 29 in three southeastern counties, with gradual spreading to other parts of the state in the next week. Not seen in many sections, however, until May 11-15. Birds were killed at the Eau Claire TV tower in this period, with ten on the 13th (Kemper).

Brown Thrasher: Some early stragglers found their way to Milwaukee (Donald), Walworth (Mrs. Fred Belland), Brown (Cleary), and Lincoln (Hendrick) counties April 6-8, but the first sizable movement into the state occurred April 22, with nearly all counties reporting it by the end of the month.

Robin: A few migrants were seen March 10-11 and somewhat more March 17-20 (large migration March 18 in Kenosha County—Tessen); by the end of the following week most counties had noted returning robins. Mentioned as more common than in years immediately past by Maxson (Rock County) and Pospichal (Juneau County). Two peak periods noted March 25-31 and April 27-30, with one other right in the middle, April 15.

Wood Thrush: Quite early in Dane County April 29-30 (Brown, Ashman). Appeared generally throughout the state May 11-13.

Hermit Thrush: Milwaukee (Donald) and Outagamie (Tessen) counties March 28. Filtered into more areas about a week later, reaching Lincoln County April 10 (Hendrick). General arrival did not occur until April 21 and after. Very few May reports.

Swainson's Thrush: Although observers rarely submit details with April reports, it seems likely that a few birds slip into the state before May each year. One found dead in Lincoln County April 22 (Hendrick) constitutes proof of such movement, and further evidence would seem to come from more April records than usual: April 26, Waukesha County (Hoffmann); April 27, Walworth (Mrs. W. W. Morgan) and Racine (Prins, Weber) counties; April 29, Rock (Stockings) and Milwaukee (Bauers) counties. Peaks May 12-17, with a few departures noted before May 22.

Gray-checked Thrush: Rock County May 1 (Stockings, Maxson); three more counties May 2.

Veery: A few appeared the first week in May, but nearly all arrivals were May 11-13.

Eastern Bluebird: Seen March 23 in Rock County (Andrews, Glenn) and the next day in four additional counties. By early April had reached a few northern counties, but quite a number of areas statewide did not record arrivals until after April 20. The only comments of scarcity came from Vernon (Morse) and Brown (Cleary) counties, while observers from these other counties noted either normal or increasing numbers: Sauk (Kruse), Outagamie (Tessen), Chippewa (Kemper), Dane (Brown), and Lincoln (Hendrick).

Blue-gray Gnatcatcher: First noted in Rock County April 21 (Stockings) and in Waukesha County April 22 (Peartree). Reached three more counties the last three days of April, but all subsequent dates were May 6 and after. The northernmost counties in which gnatcatchers were seen were Pierce and St. Croix (Robbins).

Golden-crowned Kinglet: This season's records form a more definite pattern than is the case some years. Indicated as present at the beginning of the period only in Waukesha County (Bielefeldt), with only one other date before the end of March, in Dane County March 4 (Brown). Nearly half of the arrival dates reported were in the period March 28-31, and peaks in three counties also were noted March 29 to April 1. Departures began by mid-April and were nearly complete by the beginning of May, only Brown County providing a later date (May 13, Cleary). Large numbers in Milwaukee County April 29 (Bauers, Strehlow).

Ruby-crowned Kinglet: Appeared March 31 in Dane (Hilsenhoff) and Walworth (Morgan) counties, with subsequent reports rather stretched out. Reached northern counties April 14-20. Peaks were said to occur in various areas during at least four periods between April 21 and May 13. Last seen in Dane County May 18 (Brown). Again this year, only one was seen in Sawyer County (April 28, Fuller).

Water Pipit: There were observations in six counties: Dane, April 22 to May 3 (Ashman, Brown); Columbia, April 26 (Dryers); St. Croix, May 5 (Robbins); Outagamie, May 12 (Tessen); Kenosha, May 13 (Ericksons); and Brown, May 25 (Mrs. Clara Hussong fide Cleary). Mrs. Hussong's bird, seen at close range, is two days later than the previous latest departure from Wisconsin.

Bohemian Waxwing: The period began with quite a spectacular finish to the flight of the preceding winter, many areas reporting around the beginning of March either peak numbers or their only observations of the winter. Most birds departed early in the month, but a few stragglers remained into early April in Racine County (Ericksons, Prins, Weber).

Cedar Waxwing: Present at the beginning of the period in Rock, Milwaukee, Dane, Vernon, Walworth, and Outagamie counties, almost as many counties as reported Bohemians at that time. Arrival dates in March and April were scattered, including some from a few northern counties (Sawyer March 29, Fuller; Marinette April 8, Lindberg). Other areas did not note birds until mid-May. Except for a peak noted April 24 in Rock County (Stockings), all peaks reported were in May and were spread through the entire month.

Northern Shrike: Seen only in Milwaukee, Dane, Jefferson, and Waukesha counties, with departures from three of these being March 17-18.

Loggerhead Shrike: Early observations in Rock County March 24 (Stockings) and Dane County March 25 (Ashman), with another in Barron County March 28 (Hilsenhoff). Noted first in three additional counties April 11. Observed May 20 in Langlade County, where it is not often seen (Antigo May Count).

White-eyed Vireo: Madison observers witnessed a real invasion of this species, there being estimates of four to eight different birds present from April 30 (Ashman) to May 20 (Brown). Lake Michigan reports were the only other ones, on the Milwaukee May Count May 13 and at Cedar Grove May 19-20, when several were banded.

Bell's Vireo: Had returned to its nesting sites in the University Arboretum in Madison May 13 (Brown). Both Hilsenhoff and Brown felt there may have been as many as three pairs established there. No other reports.

Yellow-throated Vireo: One early bird May 1 in Vernon County (Webers). After a few more reports nearly a week later, arrivals apparently deluged most sections of the state May 11-13. A few areas, however, particularly in the north and east, did not record the species until May 19.

Solitary Vireo: Seen in St. Croix County April 28 (Robbins), in Dane County May 3 (Brown), and in several other counties May 5-7. Kemper noted more than usual in Chippewa County. Most departures May 16-18, although still in Sauk County May 20 (Kruse).

Red-eyed Vireo: Over 60% of the arrival dates reported were May 12-14, and three peaks were during these days also. The only birds appearing before this were in Sauk County May 5 (Kruse) and in Grant County May 6 (Dryers). Although nearly all northern areas reported arrivals by the 13th, Kemper says that the bulk of the birds did not come until later in Chippewa County. Peaks in Vernon County May 18 (Webers) and in Milwaukee County May 23 (Bauers).

Philadelphia Vireo: Two early birds April 29 in Columbia County (Dryers) and May 6 in Dane County (Ashman). May 12-14 in Racine (Prins, Weber), Outagamie (Tessen), Kenosha (Ericksons), Chippewa (Kemper), and Jefferson (Degner) counties, and also on the Milwaukee May Count. May 18-20 in Brown (Cleary) and St. Croix (Robbins) counties. Milwaukee County May 23-24 (Donald, Bauers).

Warbling Vireo: Dane (Ashman) and Vernon (Webers) counties April 30, with other arrivals stringing along until widespread appearances all over the state May 12-15.

Black-and-white Warbler: That these birds enter the state even more ahead of the main warbler movements than many of us realize is shown by these observations from northern counties: Lincoln April 21, a pair (Hendricks), and Iron April 27 (Pripps). April 28-30 saw arrivals in nine more counties, mostly in the south. Peaks mentioned fell into three periods: April 30-May 5, May, May 12-14, May 18-25. Many still present in Dane County May 20 (Brown); banded in Rock County May 28 (Stockings).

Prothonotary Warbler: The only observations away from usual breeding territory were along Lake Michigan, in Racine County May 6 (Prins, Weber) and Milwaukee County May 18 (Donald).

Worm-eating Warbler: Quite a number were observed during the season, most of them described in some detail by those reporting. An April 23 record from Waukesha County (Peartree, Dick Sharp) is three days earlier than the species has ever been seen in the state; no details accompanied this report, unfortunately. One bird spent an incredible nine days in Racine May 2-10 (Weber)! Noted also in Waukesha County May 7 (Sauer), St. Croix County May 18 (Robbins), and Dane County May 13 and 18 (Brown) and 19 (Soulen), a day later than the previous record departure date.

Golden-winged Warbler: Seen first in Dane County May 2 (Brown), then May 5-6 in several other areas. May 12-13 brought birds to all but the northernmost counties; these dates also were the only ones mentioned as peaks. Observed May 19 in Sawyer (Fuller) and Lincoln (Hendrick) counties. Fuller and Robbins mention seeing only one during the season, while peak numbers in some of the southern counties apparently were unusually large.

Blue-winged Warbler: Dane County May 2 (Brown); Racine County May 4 (Prins, Weber); three more counties May 6. By May 13-14 had moved up the western side of the state as far as St. Croix (Robbins) and Chippewa counties (Kemper; first county record since 1955).

Brewster's Warbler: This hybrid appeared in two places during the season. The birds were described well by Brown (University Arboretum in Madison May 13) and Bielefeldt (Kettle Moraine area of Waukesha County May 27 and 30).

Tennessee Warbler: An early batch April 30 in Vernon (Webers), Eau Claire (Robbins), Rock (Maxson), and Dane (Brown) counties. Relatively few reports from other areas until the big May 12-13 push. All peaks were May 12-14. Still in Dane County May 26 (Hilsenhoff).

Orange-crowned Warbler: Dane County April 22 (Ashman), four other counties April 26-30. Only report after May 13 was in St. Croix County May 15 (Robbins).

Nashville Warbler: April 25 in Jefferson County (Degner); April 29 in Dane (Ashman) and Waukesha (Bielefeldt) counties. Many arrivals May 2-6. Did not reach many northern counties until May 13. Three peaks were noted May 4-5, another two May 12-13. Seen last in Dane County May 20 (Brown).

Parula Warbler: One seen in excellent light at a distance of five feet in Outagamie County on April 24 (Bradford). Next migrants appeared May 2-5. Only one was seen in St. Croix County, May 15 (Robbins).

Yellow Warbler: Arrived April 28-30 in five southern counties. Although Stone reports it from Burnett County May 4, general occurrence in the north was not noted until May 14-15. Fuller saw only one in Sawyer County, May 26. Peak dates followed no pattern, stretching from May 2 to 22.

Magnolia Warbler: Observed May 1 in Dane (Brown), Jefferson (Degner), and Brown (Cleary) counties, then not again until May 4-6. Virtually none in northern counties until May 13. Still present in a number of areas, including southern ones, the last week in May. Peaks mentioned in several sections May 13, in Milwaukee May 17 (Bauers). Seen only May 16 in Sawyer County (Fuller).

Cape May Warbler: Brown County May 1 (Cleary), only four additional counties May 5-9. All sections noted arrivals May 11-14, the period when peaks seemed to occur. While Bauers saw birds in Milwaukee County on only one date all spring (May 13), Bradford mentions the largest flight of this species he has ever observed; at one time he counted 15-20 birds at once in a cherry tree in his yard. Had departed from most areas by May 20, although Fuller reports birds present May 29.

Black-throated Blue Warbler: One found dead in Walworth County May 5 (Rev. Donald Hobbs). Seen May 13 in Milwaukee (Donald, Strehlow), Kenosha (Ericksons), and Dane (Brown) counties, and May 14 in Waukesha County (Mr. and Mrs. James McCombe). Last seen May 20 in Dane County (Ashman Brown).

Myrtle Warbler: An April 1 observation in Racine County (Prins Weber) was quite a bit earlier than the next reports which came sparsely April 10-14, and in numbers April 20 and after. Peak dates spread from April 27 in Dane County (Brown) to May 13 in Milwaukee (Bauers) and Rock (Mahlum) counties. Lindberg saw only two in Marinette County all season, while Bradford reports the "largest flight ever" in Outagamie County. Had departed from all areas except its breeding range by May 20.

Black-throated Green Warbler: Seen three places April 27-30; St. Croix (Robbins), Milwaukee (Strehlow), and Brown (Cleary) counties. Next arrivals May 2-6, then none until May 12-14, when it overspread all parts of the state. All peaks in non-breeding areas were confined to a few days, May 4-6. There were the usual late May reports in southern counties, May 27 in Waukesha (Bielefeldt) and Dane (Hilsenhoff) counties, and May 29 in Racine County (Ericksons).

Cerulean Warbler: Noted May 12-14 in Milwaukee (Donald), Dane (Brown), Waukesha (Peartree), St. Croix (Robbins; only record), and Rock (Maxem) counties, and later in Sauk (many observers), Barron (Robbins), and Columbia (Dryers) counties.

Blackburnian Warbler: Racine County May 4 (Prins, Weber); Dane and Grant counties the next two days. Most arrivals May 12-14, statewide.

Chestnut-sided Warbler: Kemper's April 28 is a record arrival for Chippewa County; seen the next day in Madison (Brown). Relatively few noted subsequently until the widespread influx May 13. Peaks May 13-14.

Bay-breasted Warbler: Brown County May 10 (Cleary); many areas May 12-13. Last seen May 25, in St. Croix County (Robbins).

Blackpoll Warbler: Quite early in Rock County May 2 (Mahlum) and in Sauk County May 5 (Mrs. Henry Koenig). Many more seen May 11-14, but some areas saw none until nearly May 20. Peaks May 13, 16, 18-19. Mahlum notes this species as being more common than any other warbler.

Pine Warbler: Seen first in Rock County April 22 (Stockings) and in Sawyer County April 27 (Fuller), and in May in Milwaukee, Brown, Bayfield, Barron, Adams, and Langlade counties.

Prairie Warbler: Birds were seen May 20 in Brown County (Paulson fide Cleary) and at Honey Creek in Sauk County (many WSO observers).

Palm Warbler: Waukesha County April 22 (Bielefeldt), nine other counties April 25-29. Far northern reports did not come until nearly mid-May. Some peaks noted as early as April 30, others mentioned were May 4-5, 11, 13-16. "Largest flight ever" in Outagamie County (Bradford). Still in Dane County May 18 (Brown).

Ovenbird: Rock County April 25 (Andrews, Glenn); Dane (Ashman, Brown, Soulen) and Sauk (Kruse) counties April 30. By May 13 had reached all parts of the state. All peaks May 11-14.

Northern Waterthrush: April reports from six counties, the first in Racine County April 25 (Prins, Weber). Brown found it still in Dane County May 20.

Louisiana Waterthrush: Four April observations, beginning April 21 in Racine County (Prins, Weber). All reports were from western and southwestern counties except Milwaukee (Donald, Strehlow), Outagamie (Bradford), and Racine.

Kentucky Warbler: Dane County May 2-20 (Brown, Ashman); Honey Creek, Sauk County, May 19-20 (many observers); Rock County May 23, banded (Stockings).

Connecticut Warbler: Appeared May 13 in Brown (Cleary), Columbia (Dryers), Marathon (Wausau May Count), and Dane (Ashman) counties, and seen the last ten days of the month also in Waukesha (Bielefeldt, Mrs. Norma Schmidt) and Rock (Stockings, banded) counties. Present into June in Dane (Hilsenhoff) and Outagamie (Tessen) counties. Only reports.

Mourning Warbler: A very early one was banded May 6 in Rock County (Stockings); no others were noted until May 13, when there were observations in Dane, St. Croix, and Brown counties. Within the next ten days birds reached the other seven counties from which the species was reported. Still to be seen May 31 in Dane (Hilsenhoff) and Outagamie (Tessen) counties.

Yellowthroat: Racine County April 28 (Ericksons), with a few more arrivals before a May 4-6 influx. The rest of the counties noted returning birds by May 12-14. Most peaks May 10-14, with a few others as late as May 22.

Yellow-breasted Chat: Noted first at the University Arboretum in Madison May 15 (Ashman), with as many as five or six reported there a few days later, at least two of which remained into June (many observers). One heard singing in St. Croix County May 18 (Robbins). Recorded at Tower Hill State Park, Iowa County, May 20 (Brown). Two were observed at Whitnall Park, Milwaukee County, from May 27 well into June (Mrs. Norman White, Strehlow).

Hooded Warbler: One male was observed singing at very close range in Racine County May 19 (Prins, Weber). Two birds spent a good share of May 20 in the University Arboretum in Madison (Ashman, Brown).

Wilson's Warbler: Early arrivals May 5 in Racine (Prins, Weber) and Eau Claire (Robbins) counties, with most others May 12-13. Peaks May 17 in Milwaukee County (Bauers) and May 18 in Dane County (Brown). Many birds were still present during the last few days of May.

Canada Warbler: First seen May 10 in Brown County (Cleary). While there was a mild influx May 12-15, about half the reports are from May 20 and after. Robbins and Fuller reports only one observation each in their respective northwestern counties. Peaks same as for Wilson's.

American Redstart: Recorded by Brown in Dane County May 1 and next three days later in Sawyer County (Fuller). A fair number of arrivals May 5-6, but not seen in about half the reporting areas until May 12-14. Peaks were also May 12-14 except for Milwaukee County (May 16, Bauers).

Bobolink: Waukesha County April 27 (Sauer, Bielefeldt); other records beginning April 30. A May 2 arrival in Chippewa County was the earliest in ten years (Kemper). Not seen in most northern areas until May 13 or later.

Eastern Meadowlark: Birds appeared in all but the northern counties over a rather long period, March 16-26.

Western Meadowlark: Had reached virtually all the areas from which it was reported by March 30, including Burnett County (Stone). Not seen northeast of a line from Grantsburg to Green Bay.

Yellow-headed Blackbird: First noted in St. Croix County April 16 (Robbins). Seen subsequently in twelve additional counties, including Marathon (Wausau May Count) and Marinette (Lindberg). The Dryers report two new colonies in Columbia County, while Kemper states that a colony inhabited for four years had no birds this season.

Red-winged Blackbird: The period of most widespread arrival was March 18-26, birds gradually moving northward during this time. There were scattered dates earlier than this, first in Brown County March 6 (Cleary). Many dates of peak numbers: March 18, 23-24, 27, 30, April 6, and May 16.

Orchard Oriole: Seen only in Milwaukee County May 2 (Donald), St. Croix County May 17 (Robbins), Dane County May 20 (Brown) and on the Beloit May Count.

Baltimore Oriole: An amazing record April 18 in Juneau County (Pospichal) was unfortunately undocumented. Noted in Dane County April 29 (Hilsenhoff, Ashman) and in Sauk County April 30 (Kruse). Many birds appeared between then and May 11-15, by which time all areas had reported arrivals. Peaks May 6, 12-13, and 16.

Rusty Blackbird: All reports were between March 18 (Sauk County, Kruse; Rock County, Mahlum) and April 25 (St. Croix County, Robbins). Most arrivals March 28-31.

Brewer's Blackbird: A small flock in Dane County April 1 (Tessen). Spread northward during April, reaching Sawyer County April 26 (Fuller). Cleary reports it as nesting in more areas this season in Brown County.

Common Grackle: Milwaukee County March 12 (Strehlow). Many arrivals March 17-24. Seen in some northern counties by the end of March, not in others until about April 20. Most peaks mentioned were March 24-29.

Brown-headed Cowbird: Noted first in Brown County March 11 (Cleary). Other arrivals bunched March 18-19, 22-25, with birds reaching northern counties generally by a month later.

Scarlet Tanager: One in Dane County April 30 (Brown) is a day earlier than this species has been seen in the spring. One in Racine County May 1 (Ericksons). Several

arrivals May 5-6, but mass movement into the state was not until May 12-14. A few northern areas were without birds until the last week of May. Most peaks May 12-13.

Cardinal: Three quite northern reports were Lincoln County May 17 (Hendrick), Sawyer County May 20-27 (Fuller) and Baron County May 26 (Robbins).

Rose-breasted Grosbeak: Reported very early in Rock County April 26 (Maxson) and several other areas April 29-30. No real pattern to subsequent arrivals, with dates bunched May 4-6 and 12-14, birds being seen in most parts of the state during both these periods. Only one seen all season in Outagamie County (Bradford). Many in Madison April 30 (Brown), other peaks noted May 12-17. Sixteen birds killed at the Eau Claire TV tower May 12 (Kemper).

Blue Grosbeak: Emily Bierbrauer reports that during the May Count period the Roy Mattens observed one feeding in their yard in Wausau. It "was slightly smaller" than a nearby Rose-breasted Grosbeak, "had the large beak, and tan wing-bars." They observed the bird for about five minutes before it flew away.

Indigo Bunting: Seen first in Racine County May 4 (Prins, Weber) and in other areas the next few days. A massive influx May 12-14 reached essentially all parts of the state. Peaks May 12-13, 16-17, and 24-26.

Dickcissel: Very early birds were seen in Rock County May 1 (Mahlum) and May 5 (Andrews, Glenn). Next reported May 13 in several other areas. Noted as far north as Chippewa County (Kemper) and Pierce and St. Croix counties (Robbins).

Evening Grosbeak: The winter's fabulous invasion of the state provided a mass of spring reports from 24 counties. The Koenigs in Sauk County banded a total of 1,302 from January through May, with a peak there on March 5 (62 banded); one bird, previously injured, lingered until May 30. Kemper banded 655 birds January 1 to May 10 in Chippewa County, trapping birds which had been banded earlier in New York, Connecticut, Minnesota, and Wisconsin, indicating a fair amount of east-west movement of this species. Few peaks were reported, those being in April. Birds began to leave some areas at the end of April, many more the first week in May, most others by May 13. Still in Marinette County May 15 (Lindberg), Dane County May 18 (Ashman), Langlade County (Antigo May Count) and Brown County (Paulson fide Cleary) May 20, and Polk County May 28 (McKenneys).

Purple Finch: Wisconsin's relative lack of this species during the winter was followed by a respectable number of spring reports from 23 counties. The records received indicate that observers in those sections of the state which had few or no wintering birds noted arrivals and in some cases peaks March 23-29. The next major movement occurred April 27-30; at this time birds left many southern areas and had only recently appeared in far northern counties. Latest report in southern Wisconsin was May 20 in Dane County (Brown). The Koenigs banded 381 from January to May, and "could have banded many more" but "were concentrating on the Evening Grosbeaks."

Pine Grosbeak: Seen in only five counties: Brown (Cleary), Manitowoc (Kraupa), St. Croix (Robbins), Winnebago (Tessen), and Wood (Stouts). All departures were by March 18 except in Brown County, where it remained until April 10.

Common Redpoll: Reported from 11 counties. Departures began about March 23 and were complete from most sections by a week later. Last noted April 22 in Outagamie (Tessen) and Langlade (Soulen) counties.

Pine Siskin: There were observations from only four counties: Dane, March 17 (Hilsenhoff) to May 13 (Brown); Brown, April 30 to May 20 (Cleary); Outagamie, May 6-12 (Tessen), and Milwaukee, April 29 (Strehlow).

American Goldfinch: Migratory movement apparently occurred March 20-26 on a small scale, with other arrivals (in areas where no birds wintered) from the latter part of April in the south to mid-May in the north. Mentioned as scarce by the Stockings in Rock County and Degner in Jefferson County.

Red Crossbill: Seen only in Madison (April 1, Tessen) and St. Croix County (April 24, Robbins).

White-winged Crossbill: The only report was from Columbia County March 2 (Brown).

Rufous-sided Towhee: Early arrivals March 26-29 in Rock (Andrews, Glenn, Mahlum), Walworth (Belland), Dane (Ashman), and Waukesha (Hoffmann) counties. There

were scattered reports the first three weeks of April, but generally birds did not appear until April 22-29.

Savannah Sparrow: Racine (Prins, Weber), Waukesha (Bielefeldt), and St. Croix (Robbins) counties April 8-11, with a few more observed a week later. General arrival April 22-29, except later by one to two weeks in the north.

Grasshopper Sparrow: First noted April 20 in Rock County (Mahlum). Four other arrivals April 27-30.

Le Conte's Sparrow: A May 21 record (Kemper) is a first for Chippewa County. Two birds were heard by Robbins May 26, one in northern St. Croix County and one in southern Polk County.

Henslow's Sparrow: Noted April 27 in St. Croix County (Robbins) and the next day in Waukesha (Bielefeldt) and Waushara (Peartree) counties. May reports from eight more counties. None could be found in a usual breeding spot in Chippewa County, perhaps because it was too wet (Kemper).

Sharp-tailed Sparrow: On May 18 Robbins observed a bird northeast of Roberts in St. Croix County at a distance of 25 feet, noting its "very short, sharp tail, brightly marked face, distinctive call note."

Vesper Sparrow: Early birds March 27 in Waukesha County (Bielefeldt), March 28 in Sauk County (Kruse), and March 30 in Dane County (Hilsenhoff). Not much pattern to later arrivals. Peaks ranged from April 25 to May 9.

Lark Sparrow: Very few records: Adams and Beloit May Counts, Dane County May 3 (Brown), Pierce County May 14 (Robbins), and in Chippewa County (Kemper).

Slate-colored Junco: The return to northern counties stretched from March 26 (Sawyer, Fuller) to April 8 (Iron, Pripps). Peaks in southern counties ranged from March 27 to April 26, most being toward the beginning of those four weeks. Fuller reports the Sawyer County peak May 4-12. Birds had left most areas by the end of April. Noted in Marinette County May 11 (Lindberg) and Sawyer County May 19.

Oregon Junco: A cluster of reports March 23-29. Last seen April 16 in Outagamie County (Tessen). Other observations were from Milwaukee, Dane, Polk, St. Croix, Pierce, and Columbia counties.

Tree Sparrow: The return of birds of this species to the north was much like that of the junco. Departures mostly from mid-April to the end of the month. All May reports (from six counties in all) were undocumented.

Chipping Sparrow: An April 11 observation in Rock County (Stockings) is a week earlier than the next group of arrivals (three more counties). A well marked influx April 22-25 reached essentially all parts of the state. Most peaks April 24-27.

Clay-colored Sparrow: Central and western counties provide the only April dates: St. Croix County April 27 (Robbins), Adams (Peartree) and Wood (Stouts) counties April 29. May observations in Dane, Portage, Chippewa, Milwaukee, Racine, Marathon (16 on the Wausau May Count), Sawyer, Barron and Rusk counties.

Field Sparrow: Rock County March 19 (Stockings), Racine (Prins, Weber) and Dane (Hilsenhoff) counties March 31. A fair number of arrivals in southern and central counties from then until mid-April, but most sections report it first April 22-28. Peaks April 27 in Dane (Brown) and Milwaukee (Bauers) counties.

Harris' Sparrow: St. Croix County, nine between May 4 and 13 (Robbins); Chippewa County May 7 (Kemper); Milwaukee County (Donald) and Oconomowoc May Count May 13; Waukesha (Sauer) and Douglas (Butler) counties May 14.

White-crowned Sparrow: Quite a number of late April reports, from seven counties, the first being in Sauk County April 22 (Kruse); it is possible that some of these birds had wintered. The influx in early May reached the northern counties by the end of the first week of the month. Peaks were May 4, 9, 12-16, by which time most birds had departed. Still in Rock and Sawyer counties May 21.

White-throated Sparrow: Birds in Madison March 27 (Brown) and in Milwaukee April 6 (Strehlow) may have wintered. Reports April 13 from Dane (Hilsenhoff) and Polk (McKenneys) counties might have been first migrants. Nearly all arrival dates fell in the period April 21-28, statewide. Peaks April 27-30 and May 10-12. Birds had left most areas in the south by shortly after mid-May, but a single bird stayed in Madison until well into June (N. R. Barger, Brown).

Fox Sparrow: Many arrivals March 25 to April 3, the earliest in Walworth County (Belland). Some northern areas noted none until mid-April. Had departed from nearly all sections of the state by the end of April.

Lincoln's Sparrow: Reported from nine counties in all, first on April 27 in St. Croix (Robbins) and Milwaukee (Bauers) counties.

Swamp Sparrow: A March 17 bird in Dane County (Hilsenhoff) was likely a wintering one. Noted March 31 in Vernon County (Webers) and April 1 in Milwaukee County (Strehlow). General arrival was the last ten days of April.

Song Sparrow: Birds seen March 7 and 11 in Rock (Mahlum) and Dane (Brown) counties probably wintered. The first migrants moved in about a week later, with the heaviest influx about March 27-29. It took until mid-April for birds to reach most of the northern counties, however.

Lapland Longspur: Noted in 12 counties. Still present in early May in many areas, with a report May 30 from Columbia County (Dryers).

Snow Bunting: Birds left most of the 12 counties reporting this species during March. Still in Polk (McKenneys) and Brown (Cleary) counties April 10. There were unprecedentedly late stragglers noted in three areas: Sawyer County May 2 (Fuller), Iron County May 5 (Pripps), and Marinette County May 8 (Lindberg). Only once before has this species been observed so late.



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MORE NEWS...

Helen Northup is busy making up the index for volumes 19 through 23 of **The Passenger Pigeon**. You'll be getting a copy in the not-too-distant future.

Branta canadensis maxima is a name that you may be hearing more about in the future, according to recent newspaper reports. That's the scientific name of the Giant Canada Goose, believed to be extinct for the past 40 years.

This goose, ranging up to 20 pounds in weight compared to 12 pounds for the Canada Goose, was first discovered near Rochester, Minnesota, in a flock of geese that wintered there.

According to reports, researchers didn't believe their scales when they weighed

birds they had caught for banding and other studies. In fact, they purchased five pounds of sugar and ten pounds of flour at a local market to prove the accuracy of their scales.

Not only were the birds heavier, but they were lighter in color, had exceptionally broad bills, large feet and long wings.

Shortly after the overgrown subspecies of the Canada Goose was reported from Rochester, it was found in Wisconsin. An AP dispatch noted that the Conservation Department rediscovered "maxima" in the vicinity of Turtle Creek in Rock County. This flock consisted of about 4,000 geese, most of them of the large variety.

In addition, about 50 geese wintering near Mecan Springs in Waushara County were suspected to be the same subspecies. They will be investigated next winter.



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Roy J. Lukes, 2106 Center Avenue, Madison 4

Editorial Staff

Editor: Nils P. Dahlstrand,* 814 Birch Street, Rhinelander

Circulation Manager: Mrs. Raymond J. Roark, 101 Roby Road, Madison 5

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Seasonal Editors:

(spring) Thomas Soulen, 603 Eagle Heights Apts., Madison 5

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