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A MAGAZINE OF WISCONSIN BIRD STUDY



The Passenger Pigeon

Fall 1971

VOLUME 33, NUMBER 3

SAW-WHET OWL

Photo by
P. Connors and M. Labanauskas

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COVER PICTURE: Saw-whet Owl photographed by P. Connors and M. Labanauskas on February 27, 1969, in Dane County.



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Wisconsin Breeding Bird Survey: 1966-70

By Sam Robbins

In 1961 W.S.O. members began an ambitious new venture called the Summer Bird Count, in which they hoped to bring forth some type of valid measure of breeding bird populations, comparable in summer to what the Christmas Bird Count attempts to do in winter. The kind of project that was envisioned was one in which at least 200 different areas of the state would be covered each year. As the observers could cover the identical areas in an identical manner in succeeding years, year-to-year fluctuations could be tabulated, and significant trends detected.

This project began modestly in 1961 with 29 counts, and gained momentum through 1965 with up to 75 counts being taken per year. While the number of counts did not reach the desired goal, it was large enough to yield some very significant data: refinements in breeding ranges for some species, some documentation of noticeable fluctuations such as that of the Dickcissel. This has already been summarized in four articles in *The Passenger Pigeon*.

By 1965 Chandler Robbins and others in Maryland had developed a more ambitious and effective instrument to measure summer bird populations. Known as the Breeding Bird Survey, it started experimentally in Maryland and Delaware, spread to all states east of the Mississippi River in 1966, and now has come to encompass all North America. W.S.O. joined whole-heartedly in this project in 1966, and has now had five years of happy experience with it.

The Participation Record

Early in 1966 the writer was asked to coordinate Wisconsin's part in this project: help draw the transects, and recruit people to run them. The state was to be divided into degree-blocks (one degree latitude by one degree longitude; approximately 52 by 68 miles). Each of the twelve complete degree-blocks would have four transects; each of the fourteen partial degree-blocks would have one, two or three transects. In accordance with guidelines established for the Breeding Bird Survey, a random sampling method was used to pick the starting point and direction for each route. Figure 1 shows the location of each of the 70 transects established for Wisconsin.

Unlike the 1961-65 Summer Bird Count, which could yield comparative data only in an "intra-count" manner as the same observer repeated the same area in succeeding years and compared year-to-year results, the Breeding Bird Survey was set up to obtain valid "inter-count" as well as "intra-count" comparisons. The tallies for all North American counts in a given year can be compared with another if they all follow the same procedure. To effect the necessary standardization, Survey directions include: (1) beginning at the stated starting point exactly thirty minutes before sunrise; (2) recording every bird seen within a 0.25-mile radius and every bird heard during a three-minute interval; (3) driving 0.5 miles

and be ready to start the second look-and-listen interval two minutes after the end of the first period; (4) repeating the procedure for 50 stops, each separated from the preceding stop by 0.5 miles; (5) recording sky conditions, temperature and wind velocity at start and finish; and (6) tabulating total number of stops at which each species was identified, and total number of individuals of each species.

Much of the success of the Breeding Bird Survey depends upon the ability of the observers to recognize bird sounds. More than one observer may work a transect together, but while second persons may assist with the driving, timing and recording, the standardizing of procedures requires that the observing and listening records of only one person per transect be recorded.

Finding observers to man each of 70 transects each year, with routes spread far and wide around the state, has not been easy. We have not yet succeeded in manning all 70 assigned transects in one year, but we have come reasonably close. In 1966, 50 were completed. In 1967 this jumped to 62. In 1968, frustrated by rain that fell almost daily throughout June, state observers managed to run 52 counts. In 1969, again hampered by lots of rain, we managed 59 routes. The 1970 total was again up to 62. Over the five-year span, 81% of the routes have been completed. Each of the 70 transects has been run at least once. There are 33 routes that now have five years of data behind them, with a four-year history for 18 others.

This is quite a remarkable record, considering how scattered the assigned transects are throughout the state, while the main population centers are polarized in the southern and eastern sections of the state. It is a tribute to people like Louise Erickson, Carol Rudy, Charles Kemper and Paul Blanchard who have tackled as many as three or four transects per year. It is a tribute to people who have been willing to go far afield: Mary Donald from Milwaukee to cover areas in Forest and Oneida Counties, Libby Zimmerman from Madison to carry an area in Monroe and Juneau Counties, Jack Kaspar from Oshkosh and Dave Bratley from Delafield to census sectors for north in Bayfield County, Bill Foster and N. R. Barger and Bill Hilsenhoff in Madison to count in Vilas, Forest and Price Counties.

The average transect in Wisconsin yields a total of approximately 900 individuals of 60 species. The 90-species mark has been achieved twice: #12 in Polk County recorded 91 in 1968, while #15 in Sawyer and Washburn Counties tallied 90 in 1969. The 2000-individual total has been exceeded seven times, with the top score being 2591 on #46 in Winnebago County in 1970. As a general rule the highest species totals come from the northern areas where nesting woodland birds combine with birds of occasional open fields and meadows to offer varied habitat. The highest individual totals tend to come from the southern and eastern counties where fields predominate to attract large numbers of blackbirds and sparrows.

Table 1 shows the number of years each route has been traversed, and lists the average number of species and individuals for each area.

The North American Picture

The transects are run during the month of June, or in rare cases, during the first week of July. The data are first sent to project headquarters at the Migratory Bird Populations Center where, along with returns from nearly 1500 other North American transects, they are processed and totaled by computer. Tables are prepared showing the average number of individuals per transect for each species in each state.

Continental survey leaders Chandler Robbins and Willet Van Velzen have developed a plan for analyzing population data which involves the division of the continent into ecological strata. The results from those routes that fall within a given stratum can then be averaged, with year-to-year variation detected within that stratum that might not be so evident when dealing with the continent-at-large. The plan is too intricate to be described here in full, but is outlined in detail in Robbins and Van Velzen's "The Breeding Bird Survey, 1967 and 1968." Suffice it to say that 1968 has been chosen as a base year, and future population figures will be measured in terms of being greater than, equal to, or less than those of 1968. Published summaries of data since 1968 are not yet available, but when results from future years are known, it is hoped that it can be determined within a 95% probability range when an apparent rise or decline for a species represents mere chance or a real population change.

At the Migratory Bird Populations Center the data are also used to draw range maps that show more vividly than ever before the relative abundance of a given species within its normal range. Figure 2 is typical of the kind of range maps that can be drawn. This map of the Warbling Vireo range is of particular interest to the writer; for even though it is from one of the early years of the survey, and incomplete because the survey in 1966 covered only eastern North America, it shows Wisconsin to be one of only a few remaining areas east of the Mississippi where this species is still fairly common. This was a common bird in Massachusetts 30-40 years ago when the writer was a youth there. It is common there no longer. One wonders if the numbers will decrease similarly in Wisconsin if Dutch Elm Disease continues its relentless march across our state.

Some Wisconsin Results

The Migratory Bird Populations Center also furnishes each state coordinator with a complete machine print-out of the data for his state, and a free hand to make such use of it as he deems most advisable. The results for 1966-1970 now fill five of the writer's desk drawers.

It is hardly practical to publish annually the voluminous raw data from this project, as is done with the Christmas Bird Count. But perhaps at five-year intervals at least, a summary can be offered such as appears in Table 2. Of the 192 species listed, there are seven which should be discounted as summer residents in Wisconsin and assumed to be late spring migrants (Bay-breasted, Blackpoll and Wilson's Warblers), early fall migrants (Lesser Yellowlegs and Solitary Sandpiper) or non-breeding summer stragglers (Whistling Swan and Semipalmated Sandpiper). It will be noted that the Crow, Robin and Song Sparrow have appeared on every

one of the state's 285 routes. Another 15 species have been reported on 90-99% of the surveys.

When the results of the Summer Bird Count were analyzed for the years 1961-1965 (1966 Pass. Pigeon 47-62), three areas of information were explored: (1) the relative abundance of summer resident species, (2) the accuracy of the known summer range of each species, and (3) changes in population that were sufficiently pronounced to be detected. The results from the 1966-1970 Breeding Bird Survey deserve to be studied from the same three standpoints.

Relative Abundance. In Table 3 the top ten species, as determined for each of the past ten years, are shown. Both the Summer Bird Count and the Breeding Bird Survey point to the Robin, Starling, House Sparrow, Redwinged Blackbird and Common Grackle as the five most prevalent summer birds. The Redwinged Blackbird is far and away the most abundant summer bird. Not only are the total numbers far above those of other species, but also it is indicated through the Breeding Bird Survey tallies that it appears on a higher percentage of the individual stops on each transect than does any other species. The drop in the rating of the Common Grackle from number two in the Summer Bird Count to number four in the Breeding Bird Survey is probably due to a fundamental difference in the two projects. In the Summer Bird Count observers could choose their territories, and quite naturally might choose areas that were not overloaded with Starlings and House Sparrows. In the Breeding Bird Survey the observer had no choice of route, and presumably covered more of the urban and farm dwelling areas where Starlings and House Sparrows abound. The conspicuous difference in the Herring Gull points toward a probable bias in both counting projects. The Summer Bird Count had an unusually high number of counting areas along Lake Michigan, resulting in a disproportionate number of gulls that would not truly reflect the state as a whole. In the Breeding Bird Survey there is a bias that has the opposite effect; this survey must avoid dead-end roads—the kind that most often lead directly to the edge of bodies of water. Hence it tends to measure low on gulls and other water birds. The testimony of the Breeding Bird Survey is that the second group of five most numerous summer species includes the Crow, Song Sparrow, Western Meadowlark, Savannah Sparrow and Brown-headed Cowbird.

Data from the Breeding Bird Survey can be used to compare the relative abundance of species within a specific family, and to refine with greater precision the terms used in the literature to describe how common or uncommon a bird may be. Consider the flycatcher family. Considered either common or fairly common throughout Wisconsin in summer are six species: Eastern Kingbird, Crested Flycatcher, Eastern Phoebe, Traill's Flycatcher, Least Flycatcher and Eastern Wood Pewee. Table 4 shows the number of birds per transect during the past five years for each of these species. It seems clear that of the six species, the Crested and the Least are most numerous, followed fairly closely by the Kingbird and Wood Pewee, with a significant drop-off to the Phoebe and Traill's. When this is compared with the status as described in the 1960 revision

of the **Wisconsin Birds** checklist, and with the 1963 publication of Gromme's **Birds of Wisconsin**, it would appear that the Crested and Least are more deserving of the designation "common", while the Phoebe and Traill's might more aptly be termed "fairly common".

The Breeding Bird Survey makes possible a still closer look at the relative abundance of a given species in different regions of the state. Figure 3 takes two species of nearly equal state-wide abundance, the Crested and Least Flycatchers, and breaks down the total number of birds into degree-blocks. The figures within each degree-block represent the average number of birds per transect per year for the routes within the degree-block. Obviously the relative abundance is not the same throughout the state. For the Crested the abundance increases only gradually as we go north, with the greatest concentration in the northwest and northeast. For the Least, population levels appear to be low in the west, south and east, with a dramatic rise in the north and north-central regions.

Survey records now make it possible to analyze the summer ranges of dozens of other species in a similar detailed manner, not possible hitherto. Time and space limitations preclude full treatment in this article, but these records will find extensive use in the new volume on Wisconsin birdlife now in preparation.

Refinement of Range. The results of the 1961-1965 Summer Bird Count suggested that some revisions of the summer range (as compared with maps in Gromme's **Birds of Wisconsin**) might be in order for about 35 species. Because the Breeding Bird Survey tends to concentrate on roadsides in random-chosen areas, rather than areas deliberately chosen to favor rarities on the fringe of their range, this type of project cannot be expected to delineate with precision the edge of the range of a particular species.

Yet the Survey does offer some significant range information, particularly for members of the sparrow family. Shown in Figure 4 are Wisconsin range maps for six sparrows, with locations of Breeding Bird Survey observations marked in comparison with the range maps as outlined by Gromme. The most dramatic change concerns the LeConte's, formerly known only as a summer resident in three isolated northern pockets, but now recorded on nine of the state's 70 transects. Some of the same habitat for LeConte's has also produced records for the Henslow's at nine locations well to the north of the previously described range. A similar situation exists for the Field Sparrow. The northern range limit has heretofore been drawn through Polk, Chippewa, Marathon and Oconto Counties. Now Survey results have shown this bird to be present in Douglas, Washburn, Sawyer, Lincoln, Oneida and Forest Counties, suggesting that the summer range must come closer to covering the entire state in suitable habitat.

On the other hand the June Survey raises questions about the summer range of the Grasshopper and Clay-colored Sparrows. The summer range of each has been described as statewide, but it can be seen in Figure 4 that the Grasshopper has escaped notice on the northeastern routes,

while the Clay-colored has not been found on the southeastern transects. The mere fact that no transect happens to record a particular species does not prove that the species is not present. But it fits the pattern of the writer's research for his forthcoming book. Only three summer records for the Grasshopper in the northeastern counties are known; and summer observations for the Clay-colored in the southeastern counties appear to have ceased around 1950. It can also be seen in Figure 4 that the previously described summer range of the White-throated Sparrow has not included the entire state. Yet when one compares the listed range extremity with data from the Survey, it looks very much as if the line may need to be nudged northward.

The Breeding Bird Survey has also confirmed suspicions raised in the 1961-1965 Summer Bird Count that small numbers of the Rough-winged Swallow and the Yellow-throated Vireo can be found in the northernmost counties, extending slightly what had been presumed to be the northern range limit for these species. In suitable habitat both species can now be considered state-wide in summer.

Noticeable Fluctuations. The detection and measurement of population changes is one of the major goals of the Breeding Bird Survey. It is also one of the most difficult goals to reach. Recording the numerical changes that appear each year is simple enough, but knowing how much significance to attach to each fluctuation is complex.

Picture the difficulty. On a given transect the observer starts out on a route that has been chosen by random-sampling. He covers 24.5 miles, observing roughly a swath 0.5 miles wide; at most he is able to scan 12 square miles, and four such transects (48 square miles) would total little more than 1% of the area of a degree-block (3600 square miles). These figures are ideal and unrealistic. Actually a full half-mile swath is never observed, for at woodland stops one is able to see only a small part of the permitted $\frac{1}{4}$ -mile distance. So four transects really cover far less than 1% of the territory within a degree-block.

How representative of the degree-block is the given transect? The Hatfield transect (#37) is a case in point. It traverses a swath through such a sparsely populated area of scrub oak and jack pine that it can be run in its entirety without sighting a Starling, House Sparrow or Meadowlark. In 1969, following the completion of this transect, the writer drove three miles along a road just one mile west of the transect, and quickly recorded eight farmland species that were absent on the transect list. Both woodland and farmland are representative of this region, but transect #37 happens to emphasize one habitat at the expense of the other.

The observer is asked to run his transect on about the same date each year if possible. Sometimes this is not possible, but even when it is, early June counts will be compared with late June counts in other areas. Birds are in different stages of the breeding cycle as the count month progresses. This may be complicated further by previous weather factors which induced an unusually early or late breeding season, or variations in farmers' haying operations that may displace field-nesting birds.

The observer is asked to avoid strong wind, rain and fog when covering his route. In a few cases where observers have accepted responsibility for an area 100-200 miles from home, this is not always feasible; and when the Migratory Bird Populations Center tabulates results, it segregates a count taken under adverse weather conditions, and uses it for experimental purposes. But even when acceptable weather conditions are present, bird activity and song may be influenced by cloud cover, temperature, etc.

Given the large number of counts over the North American continent, and the use of a sophisticated data-processing system, the Migratory Bird Populations Center is learning how much variation in results can be expected from each of these variable factors. Much more complete and valid information about population changes will be forthcoming from the Center's periodic Survey summaries than we can hope to offer here.

Even so, there are a few instances of shifts that are suggested by the Wisconsin data alone. This can best be seen by examining the results from the 33 transects that have a full five-year history. Table 5 lists the 32 most common summer species, and gives the yearly 33-transect totals for each species. In order to see how much annual variation has occurred for each species, a mean yearly figure was obtained by averaging the five yearly totals, and the high-low range was obtained by subtracting the lowest annual total from the highest. Finally a simple percentage of variation was reached by dividing the range by the average total. The higher this index of variation, the larger the year-to-year variation is indicated.

A first step in interpreting Table 5 should be to write off the Herring Gull and Bank Swallow as atypical. Virtually all the gulls are recorded on the Washington Island transect. Over 25% of the Bank Swallows each year are reported on the Esdaile route. Conclusions based so strongly on a single sample cannot be relied upon.

A second step involves the observation that for 14 of the remaining 31 species—nearly half—the index of variation is 25% or less. No one can yet say with assurance how high an index of variation must be to indicate actual significant population changes. It seems probable that a different index might be needed for each species. For instance, a flocking species like the Rock Dove would have a higher index than the Mourning Dove before its post-breeding flocking takes place. And a wide-ranging species like a Crow could logically have a higher index than the Catbird or Vesper Sparrow. It would seem to be a reasonable guess, however, that an index of variation of less than 25% would indicate a stable population level with only minor year-to-year changes.

A third step is the isolating of the Dickcissel. Its index is far larger than that of any other species, and places it in a unique class. It has long been known that this species is more subject to drastic population swings through much of its summer range—particularly along the fringe of the range. Here is vivid evidence that this species built up to a huge peak in 1967, and has been declining sharply ever since.

A fourth step requires looking with a suspicious but skeptical eye at the remaining species. At first glance it appears (1) that the Indigo Bunting and Field Sparrow are experiencing a modest but steady decrease; (2) that the Starling and Redwinged Blackbird are increasing, with the Starling making a very strong showing in 1969; and (3) that the Ovenbird had an unusually good year in 1967, followed by an unusually poor year in 1968. These suspicions may all be true. But until there is available a better form of statistical analysis, or further corroborative data, these observations cannot be finalized.

The temptation to calculate comparable indices of variation for many other less common species is great. But the writer has not yielded to this temptation, believing that when we are dealing with relatively small population samples, the adding and subtracting of a very few chance individuals could make too marked and unreliable any index of variation that might be developed. Included in Table 5 are only those species that showed a total of 2000 or more in Table 1.

Future Hopes

The Breeding Bird Survey is no short-term project. Such great care has been given to the development of the original procedure that it is hoped that our descendants will some day speak of the 70th annual Breeding Bird Survey even as we now speak respectfully of the 70th annual Christmas Bird Count. Goals toward which W.S.O. members can point include the following.

Attainment of Full Coverage. The 81% coverage of transects through the first five years is probably one of the best records of any North American state or province. But 100% coverage each year is possible, and this should be one of the immediate objectives. The index of variability used in Table 5 would have been more accurate had we been able to use five-year totals from 50, 60 or 70 routes instead of 33.

Development of Local Coverage. We can be grateful to the eager observers who have gone to the more remote areas of the state, and can hope that they can continue to make these pilgrimages indefinitely. But at the same time we must recognize the need to develop competent local observers when possible. An observer coming a long distance has less choice of available dates, and runs the risk of striking adverse weather conditions. One of the writer's roles in this Survey has been to run various transects for which no other coverage was available. This has taken him to widely dispersed areas in Douglas, Oneida, Pierce, Taylor, Juneau, Monroe, Columbia and Green Counties to give temporary coverage to routes other than his regular ones. The project is enhanced when observers can be found to handle these transects on a regular yearly basis.

Prompt Reporting. In a few instances there have been unfortunate delays in forwarding Survey tallies to the Migratory Bird Populations Center. This has resulted in the continental processing of data omitting some of Wisconsin's available data. Project headquarters are so limited in the times when the computer is available for their use that they simply cannot wait for late reports. The data from all late reports are included in this article, but have not been used in all continental summaries.

More Accurate Detection of Population Changes. The method used here for the measurement of population shifts is admittedly crude. We hope not only to learn from project headquarters how this can be done with greater precision, but also to compare Wisconsin results with those from neighboring states and provinces.

Increase the Number of Transects. Suggestions about possible future expansion from four to five or six transects per degree-block would need to come from project headquarters, and until Wisconsin observers can man 70 transects successfully, they can hardly plan to expand to 20 to 40 more. But if our state can produce a growing number of ornithologists competent in both sound and sight identification, we should be able to handle some expanded coverage in the future.

TABLE 1: BASIC TRANSECT INFORMATION

Route No.	Nearest Town	Starting Point	County	No. of Years	Average Total Species	Average Total Indiv.	Observer
1	Chaffey	46°19'N 92°14'N	Douglas	5	62	612	Bernard
2	Iron River	46°31'N 91°25'W	Bayfield	4	62	814	Lound Bratley
3	Minong	46°05'N 91°49'W	Washburn Douglas	3	71	641	Robbins
4	Drummond	46°18'N 91°04'W	Bayfield	3	57	493	Bernard
5	Bayfield	46°50'N 90°57'W	Bayfield	4	65	441	Kaspar
6	Shanagolden	46°09'N 90°45'W	Ashland	4	45	374	Vincent Tryggeseth
7	Montreal	46°11'N 90°23'W	Iron	1	57	501	Tryggeseth
8	Land O'Lakes	46°11'N 89°38'W	Vilas	3	65	513	Foster Snarski
9	Hudson	45°01'N 92°44'W	St. Croix	5	66	1144	Robbins Tweet
10	Dresser	45°23'N 92°42'W	Polk	5	75	1060	Robbins Tweet
11	Union	45°58'N 92°30'W	Burnett	5	43	375	Caldwell
12	Loraine	45°38'N 92°15'W	Polk	5	85	1076	Robbins Goddard
13	Cumberland	45°31'N 91°55'W	Barron Washburn	4	77	848	Snarski Knuth
14	Weyerhauser	45°20'N 91°29'W	Rusk Chippewa	5	58	868	Kemper Blanchard
15	Couderay	45°50'N 91°14'W	Sawyer Washburn	2	79	821	Robbins Knuth
16	Exeland	45°42'N 91°09'W	Sawyer Rusk	3	84	1176	Robbins
17	Gilman	45°09'N 90°47'W	Taylor	5	58	739	Kemper Blanchard
18	Holway	45°05'N 90°32'W	Taylor Marathon	4	59	732	Tryggeseth

TABLE 1 — (Continued)

Route No.	Nearest Town	Starting Point	County	No. of Years	Average Total Species	Average Total Indiv.	Observer
18	Phillips	45°38'N 90°12'W	Price	5	55	574	Hilsenhoff Vincent
20	Rib Lake	45°20'N 90°04'W	Taylor	4	68	682	Hilsenhoff
21	Merrill	45°13'N 89°48'W	Lincoln Langlade	5	66	902	Soulen Rudy
22	Irma	45°19'N 89°37'W	Lincoln	4	71	947	Rudy
23	McNaughton	45°46'N 89°30'W	Oneida	4	58	550	Dahlstrand Robbins
24	Eagle River	45°56'N 89°11'W	Vilas Oneida	5	66	509	Donald
25	Popple River	45°51'N 88°52'W	Forest Florence	5	55	335	Leshner Barger
26	Crandon	45°29'N 88°45'W	Forest	4	76	691	Donald
27	Hollister	45°20'N 88°39'W	Oconto Langlade	4	61	596	Rudy
28	Amberg	45°28'N 88°02'W	Marinette	5	35	286	Lindberg
29	Wausaukee	45°22'N 87°53'W	Marinette	5	44	326	Lindberg
30	Wash. Island	45°23'N 86°57'W	Door	5	82	1591	Erickson
31	Esdaile	44°38'N 92°27'W	Pierce Pepin	5	65	1222	Goddard
32	Cochrane	44°15'N 91°51'W	Buffalo	5	61	983	Donald Krumm
33	Gilmanton	44°22'N 91°43'W	Buffalo	5	57	1259	Krumm
34	Trempealeau	44°01'N 91°25'W	Trempealeau	3	60	913	Leshner
35	Cadott	44°54'N 91°07'W	Chippewa Eau Claire	4	67	738	Kemper Blanchard
36	Unity	44°48'N 90°23'W	Clark	3	62	1371	Kemper Blanchard
37	Hatfield	44°24'N 90°39'W	Jackson Monroe	3	59	646	Robbins
38	Mather	44°13'N 90°22'W	Jackson Juneau	4	69	750	Keach Robbins
39	Stratford	44°37'N 90°03'W	Marathon	5	39	654	Barnes
40	Wis. Rapids	44°25'N 89°51'W	Wood Marathon	3	61	1094	Stevenson
41	Stevens Point	44°37'N 89°29'W	Portage Marathon	4	55	452	Bierbrauer
42	Elderon	44°44'N 89°17'W	Marathon Portage	5	54	778	Baumgartner
43	Saxeville	44°23'N 89°02'W	Waushara	2	52	506	Newman
44	Manawa	44°25'N 88°57'W	Waupaca	5	59	533	Rill

TABLE 1 — (Continued)

Route No.	Nearest Town	Starting Point	County	No. of Years	Average Total Species	Average Total Indiv.	Observer
45	Oconto Falls	44°52'N 88°10'W	Oconto Menominee	3	66	860	Krysiak Tessen
46	Omro	44°03'N 88°41'W	Winnebago Waupaca	5	75	2228	Tessen
47	Clintonville	44°37'N 88°48'W	Waupaca Outagamie	4	55	807	Rill
48	Manitowoc	44°03'N 87°45'W	Manitowoc Kewaunee	3	62	1029	Brouchoud
49	Casco	44°35'N 87°39'W	Kewaunee Door	3	44	779	Lukes
50	Newburg Cor's	43°48'N 91°01'W	LaCrosse Vernon	5	60	1438	Rosso
51	Viroqua	43°33'N 90°53'W	Vernon Monroe	5	54	642	Morse
52	Rolling Gr'd	43°20'N 90°47'W	Crawford	5	53	606	Weber
53	New Lisbon	43°50'N 90°12'W	Juneau Monroe	3	63	817	Zimmerman
54	Kendall	43°44'N 90°19'W	Monroe, Ver- non, Richland	2	66	1225	Wood Robbins
55	North Freedom	43°26'N 89°53'W	Sauk	5	67	884	Zimmerman Lange
56	Pardeeville	43°33'N 89°11'W	Green Lake Columbia	4	52	1208	Gilmore
57	Princeton	43°57'N 89°06'W	Green Lake Marquette	5	64	838	Bauers
58	Fall River	43°28'N 89°02'W	Columbia	4	60	1247	Tomlinson Gilmore
59	Brownsville	43°30'N 88°55'W	Dodge	1	50	899	Brouchoud
60	Rolling Prairie	43°27'N 88°45'W	Dodge Fond du Lac	3	52	1758	Bielefeldt Fuller
61	Beaver Dam	43°38'N 88°30'W	Dodge	5	55	1429	Ashman
62	Eden	43°40'N 88°21'W	Fond du Lac Washington	5	47	913	Reichwaldt
63	Pt. Washington	43°21'N 87°53'W	Ozaukee Sheboygan	5	57	1875	Donald
64	No. Andover	42°49'N 90°58'W	Grant	1	61	2525	Ingram
65	Hazel Green	42°31'N 90°24'W	Lafayette	4	52	1407	Ingram Ellis
66	Wiota	42°43'N 89°58'W	Lafayette Green	5	52	1072	Barger
67	Mount Horeb	42°59'N 89°40'W	Dane	5	46	1304	Barger Vogelsang
68	Hebron	42°54'N 88°45'W	Jefferson Walworth	5	58	874	Zimmerman
69	Paris	42°38'N 88°02'W	Kenosha Walworth	5	57	1041	Erickson
70	Raymond	42°52'N 87°59'W	Racine Kenosha	5	52	1065	Erickson

TABLE 2: TOTAL INDIVIDUALS RECORDED 1966-1970

	1966	1967	1968	1969	1970	5-yr. Total	% of Counts
Common Loon	16	26	17	39	71	169	18
Pied-billed Grebe	6	9	11	20	14	60	6
Double-cr. Cormorant					1	1	*
Great Blue Heron	28	53	36	60	69	246	40
Green Heron	22	14	21	23	42	122	27
Common Egret	1	2	3	1	2	9	2
Black-cr. Night Heron	1	2	1	2	1	7	2
Least Bittern					1	1	*
American Bittern	8	20	7	34	34	103	15
Whistling Swan	1					1	*
Canada Goose	2	5		6	12	25	2
Mallard	425	182	247	184	124	1162	37
Black Duck	7		12	9	1	29	4
Pintail	4		2			6	1
Green-winged Teal	1				1	2	*
Blue-winged Teal	44	39	39	62	38	222	20
American Widgeon	1					1	*
Wood Duck	5	1	30	23	24	83	13
Redhead				2		2	*
Ring-necked Duck		2		6	2	10	1
Lesser Scaup	4	1	2		4	11	2
Ruddy Duck		2	1			3	*
Hooded Merganser	1	2	6	4	4	17	3
Common Merganser		1				1	*
Red-br. Merganser			23		1	24	*
Turkey Vulture	2		1	1		4	1
Sharp-shinned Hawk					2	2	*
Cooper's Hawk	2			3	1	6	2
Red-tailed Hawk	22	37	17	25	25	126	29
Red-shouldered Hawk	2	4	1	2	3	12	4
Broad-winged Hawk	4	7	6	8	10	35	9
Marsh Hawk	16	7	18	16	13	70	17
Osprey		1	3	2		6	2
Sparrow Hawk	22	30	25	34	30	141	28
Ruffed Grouse	7	32	6	20	25	90	13
Sharp-tailed Grouse				1	1	2	*
Bobwhite	34	47	44	33	26	184	19
Ring-necked Pheasant	256	215	175	163	244	1053	42
Gray Partridge		1	8			9	1
Turkey		1				1	*
Sandhill Crane	7	17	17	9		50	5
Virginia Rail		2		5	2	9	3
Sora	11	16	22	9	18	76	16
Common Gallinule	3	2	1	1	3	10	2
Coot		4	4	8	2	18	4
Killdeer	284	422	345	277	375	1703	81
Woodcock	1	8	4	5	1	19	3
Common Snipe	23	37	39	41	26	166	21
Upland Plover	62	70	54	41	71	298	28
Spotted Sandpiper	19	41	27	26	34	147	23
Solitary Sandpiper	2			1		3	*
Lesser Yellowlegs			1			1	*
Semipalmated Sandpiper					2	2	*
Wilson's Phalarope	3					3	*
Herring Gull	648	807	500	318	398	2671	5

*(under 1)

TABLE 2—(Continued)

	1966	1967	1968	1969	1970	5-yr. Total	% of Counts
Ring-billed Gull			41		36	77	*
Common Tern		7	22		113	142	2
Caspian Tern			4		1	5	*
Black Tern	80	105	105	84	52	426	24
Rock Dove	654	1118	693	774	869	4108	61
Mourning Dove	712	813	672	722	746	3665	82
Yellow-billed Cuckoo	13	28	27	32	31	131	26
Black-billed Cuckoo	71	84	59	92	124	430	54
Great Horned Owl		2	2	2	9	15	4
Barred Owl	3	3		9		15	4
Short-eared Owl			1			1	*
Whippoorwill	5	7	9	10	14	45	10
Common Nighthawk	11	7	9	15	12	54	9
Chimney Swift	213	305	199	131	165	1013	64
Ruby-thr. Hummingbird	1	9	16	7	25	58	16
Belted Kingfisher	21	34	20	22	34	131	30
Yellow-shafted Flicker	344	535	509	408	347	2143	97
Pileated Woodpecker	12	21	18	22	13	86	71
Red-bellied Woodpecker	28	36	28	18	36	146	18
Red-headed Woodpecker	123	220	147	150	117	757	59
Yellow-bellied Sapsucker	9	30	46	64	57	206	21
Hairy Woodpecker	33	28	28	36	42	167	35
Downy Woodpecker	49	37	62	79	89	316	48
Eastern Kingbird	240	234	220	187	189	1070	87
Western Kingbird		1				1	*
Crested Flycatcher	241	305	262	378	358	1544	89
Eastern Phoebe	96	118	80	152	149	595	67
Yellow-bellied Flycatcher	3		2	1	5	11	4
Traill's Flycatcher	80	118	106	100	162	566	57
Least Flycatcher	213	286	293	328	353	1473	64
Wood Pewee	217	272	207	261	310	1267	85
Olive-sided Flycatcher	1	3	6	1	3	14	4
Horned Lark	207	322	133	189	215	1066	56
Tree Swallow	269	369	397	455	383	1873	71
Bank Swallow	713	447	222	651	499	2532	54
Rough-winged Swallow	71	42	46	98	76	333	33
Barn Swallow	609	751	836	847	831	3874	93
Cliff Swallow	388	894	923	1409	997	4611	59
Purple Martin	421	398	400	407	496	2122	68
Gray Jay				3	2	5	1
Blue Jay	612	725	705	745	829	3616	98
Common Raven	26	67	42	78	58	271	22
Common Crow	1420	2326	1584	1960	2090	9380	100
Black-capped Chickadee	100	154	180	231	179	844	67
Tufted Titmouse	11	7	10	2		30	6
Red-breasted Nuthatch	6	8	11	16	16	57	12
Brown Creeper	1	7		1	2	11	4
House Wren	450	502	419	535	613	2519	94
Winter Wren	9	25	21	26	28	109	14
Bewick's Wren	1					1	*
Carolina Wren	1					1	*
Long-billed Marsh Wren	23	27	36	42	26	154	16
Short-billed Marsh Wren	148	149	184	225	229	935	58
Catbird	406	447	375	507	381	2116	92
Brown Thrasher	252	319	210	261	300	1342	90

*(under 1)

TABLE 2—(Continued)

	1966	1967	1968	1969	1970	5-yr. Total	% of Counts
Robin	1682	2244	1837	2426	2565	10754	100
Wood Thrush	172	140	105	186	135	738	56
Hermit Thrush	42	65	72	70	70	319	20
Swainson's Thrush			2	1		3	1
Veery	281	435	315	429	379	1839	58
Eastern Bluebird	156	151	112	108	150	677	66
Blue-gray Gnatcatcher	2				2	4	1
Golden-crowned Kinglet	2	10	2	7	6	27	5
Ruby-crowned Kinglet		1	3	5	2	11	2
Cedar Waxwing	349	252	359	387	384	1731	69
Loggerhead Shrike		2	1	4	3	10	3
Starling	2119	3512	3353	4713	4159	17856	94
Bell's Vireo	2	1				3	1
Yellow-throated Vireo	45	43	32	37	41	198	35
Solitary Vireo	1	6	4	4	14	29	6
Red-eyed Vireo	442	716	629	820	942	3549	87
Warbling Vireo	276	242	198	225	291	1232	81
Black-and-white Warbler	20	68	52	87	117	344	32
Worm-eating Warbler				1		1	*
Golden-winged Warbler	51	61	44	49	102	307	29
Blue-winged Warbler	8	5	6	2	12	33	7
Nashville Warbler	48	188	98	227	264	825	33
Parula Warbler	12	13	11	13	10	59	10
Yellow Warbler	300	332	223	280	291	1426	81
Magnolia Warbler	1		8	7	14	30	5
Myrtle Warbler	4	25	15	30	21	95	11
Black-throated Green Warbler	34	88	70	84	78	354	19
Cerulean Warbler		1	1		1	3	1
Blackburnian Warbler	16	29	26	19	50	140	16
Chestnut-sided Warbler	122	238	116	282	342	1100	35
Bay-breasted Warbler		1		1		2	*
Blackpoll Warbler	3			1		2	*
Pine Warbler	6	8	5	29	21	69	12
Palm Warbler			1	2		3	*
Ovenbird	433	747	427	720	699	3026	67
Northern Waterthrush	3	4	4	4	3	18	5
Louisiana Waterthrush		1				1	*
Connecticut Warbler		1	5	2	10	18	3
Mourning Warbler	56	108	65	120	138	487	34
Common Yellowthroat	817	876	697	932	1041	4363	98
Yellow-breasted Chat				1	1	2	*
Willson's Warbler				1		1	*
Canada Warbler	7	8	14	22	26	77	11
Redstart	93	114	96	157	140	600	47
House Sparrow	4574	6790	4059	4222	5720	25365	84
Bobolink	916	990	704	805	1296	4711	86
Eastern Meadowlark	860	1016	676	807	793	4152	85
Western Meadowlark	1562	1910	1436	1339	1609	7856	83
Yellow-headed Blackbird	18	19	15	21	26	99	7
Redwinged Blackbird	6117	7788	6808	7579	8780	37090	99
Orchard Oriole	3	1	1			5	2
Baltimore Oriole	343	342	276	342	468	1771	90
Brewer's Blackbird	119	135	148	236	251	889	37
Common Grackle	1900	2396	2263	1995	2593	11147	90
Brown-headed Cowbird	1088	1222	1062	1084	1169	5625	96

*(under 1)

TABLE 2—(Continued)

	1966	1967	1968	1969	1970	5-yr. Total	% of Counts
Scarlet Tanager	92	124	73	106	134	529	54
Cardinal	204	240	187	199	230	1060	45
Rose-breasted Grosbeak	335	465	384	543	582	2309	89
Indigo Bunting	484	615	464	600	536	2699	92
Dickcissel	577	992	417	202	172	2360	56
Evening Grosbeak			4	9	9	22	3
Purple Finch	33	48	82	82	61	306	30
Pine Siskin	1		5	20	14	40	5
American Goldfinch	604	765	807	652	725	3533	94
Red Crossbill		9		14	8	31	2
White-winged Crossbill				2		2	*
Rufous-sided Towhee	171	240	167	211	200	989	63
Savannah Sparrow	1346	1531	1508	1438	1678	7501	81
Grasshopper Sparrow	162	231	178	143	123	837	51
LeConte's Sparrow			8	7	13	28	4
Henslow's Sparrow	29	17	12	11	17	86	16
Vesper Sparrow	628	688	587	614	625	3136	78
Lark Sparrow				2	2	4	1
Slate-colored Junco		11		1	9	21	3
Chipping Sparrow	348	527	431	523	601	2430	92
Clay-colored Sparrow	113	132	115	134	145	639	42
Field Sparrow	442	511	332	391	366	2042	66
White-throated Sparrow	70	124	207	150	157	708	31
Lincoln's Sparrow		1				1	*
Swamp Sparrow	69	75	83	125	99	451	37
Song Sparrow	1408	1753	1425	1789	1845	8220	100
Number of Transects	50	62	52	59	62	285	

*(under 1)

TABLE 3: TEN MOST COMMON SUMMER SPECIES (1961-1970)

Summer Bird Count						Breeding Bird Survey				
61	62	63	64	65		66	67	68	69	70
1	1	1	1	1	Redwinged Blackbird	1	1	1	1	1
3	3	6	4	4	House Sparrow	2	2	2	3	2
4	4	4	3	3	Starling	3	3	3	2	3
2	2	2	2	2	Common Grackle	4	4	4	5	4
5	5	5	5	5	Robin	5	6	5	4	5
10	10	10			Common Crow	7	5	7	6	6
7	8	7	8	8	Song Sparrow	8	7	9	7	7
					Western Meadowlark	6	8	8	8	9
					Savannah Sparrow	10	9	6	9	8
6	7	9		7	Brown-headed Cowbird	9	10	10	10	
					Bobolink					10
8	6	3	7	6	Herring Gull					
9	9			10	Mourning Dove					
		8	6		Bank Swallow					

TABLE 4: COMPARATIVE ABUNDANCE OF FLYCATCHERS (1966-1970)

	Year	Routes Seen	Birds Seen	Birds per Total Routes	Status
Eastern Kingbird	1966	48	240	4.8	Common (Gromme)
	1967	58	234	3.8	
	1968	45	220	4.2	Common (Checklist)
	1969	47	187	3.2	
	1970	50	189	3.0	
	Composite:			3.8	
Crested Flycatcher	1966	43	241	4.8	Common (Gromme)
	1967	50	305	4.9	
	1968	47	262	5.0	Fairly Common
	1969	54	378	6.4	(Checklist)
	1970	60	358	5.8	
	Composite:			5.4	
Eastern Phoebe	1966	34	96	1.9	Common (Gromme)
	1967	42	119	1.9	
	1968	31	80	1.5	Common (Checklist)
	1969	42	152	2.6	
	1970	41	149	2.4	
	Composite:			2.1	
Traill's Flycatcher	1966	27	80	1.6	Fairly Common
	1967	33	118	1.9	(Gromme)
	1968	29	106	2.0	Fairly Common
	1969	33	100	1.7	(Checklist)
	1970	40	162	2.6	
	Composite:			2.0	
Least Flycatcher	1966	27	213	4.2	Fairly Common
	1967	41	286	4.5	(Gromme)
	1968	36	293	5.6	Fairly Common
	1969	37	328	5.6	(Checklist)
	1970	42	353	5.7	
	Composite:			5.1	
Eastern Wood Pewee	1966	43	218	4.3	Common (Gromme)
	1967	55	272	4.4	
	1968	41	207	4.0	Common (Checklist)
	1969	49	261	4.4	
	1970	54	310	5.0	
	Composite:			4.4	

FIGURE 1: LOCATIONS OF BREEDING BIRD SURVEY TRANSECTS

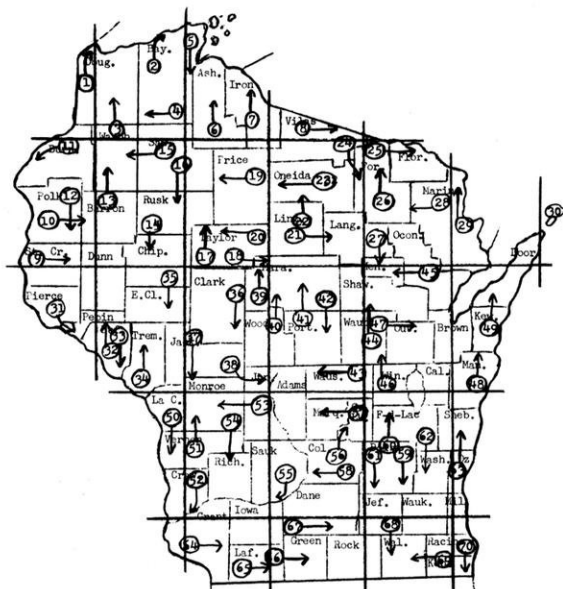
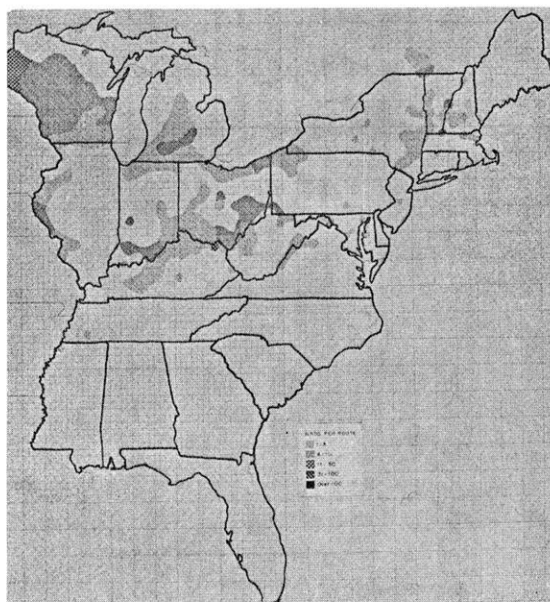
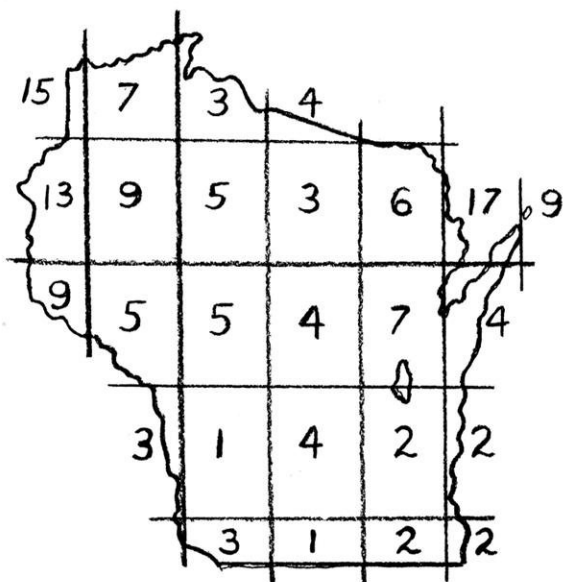


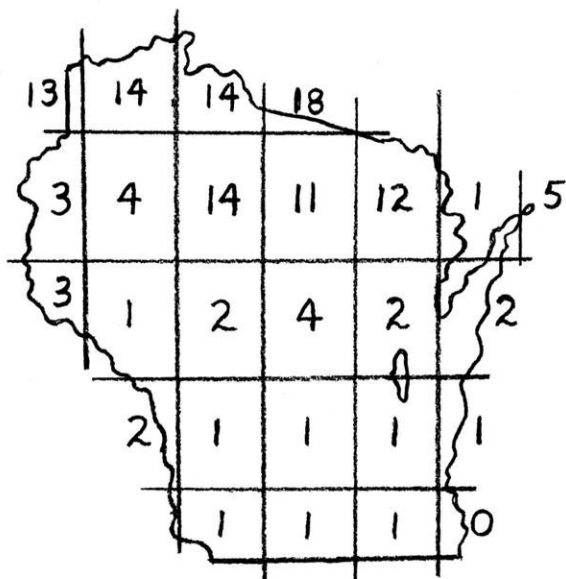
FIGURE 2: 1966 DISTRIBUTION OF WARBLING VIREO IN EASTERN NORTH AMERICA (courtesy Migratory Bird Populations Center)



**FIGURE 3: AVERAGE NUMBER OF BIRDS PER TRANSECT PER YEAR
WITHIN EACH DEGREE BLOCK, 1966-1970**

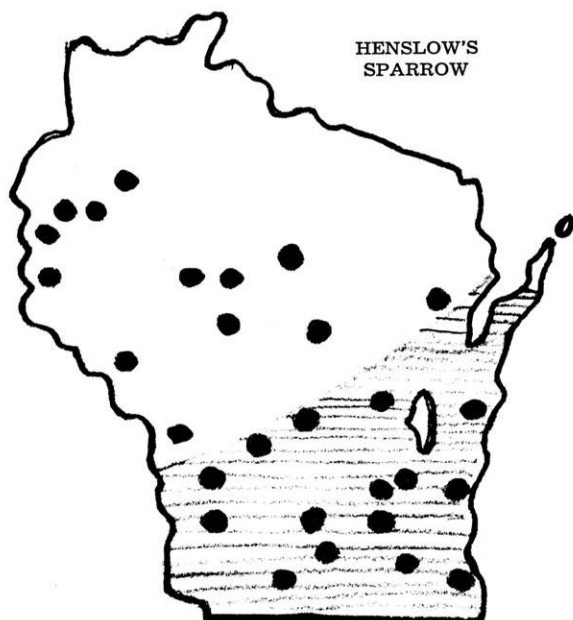
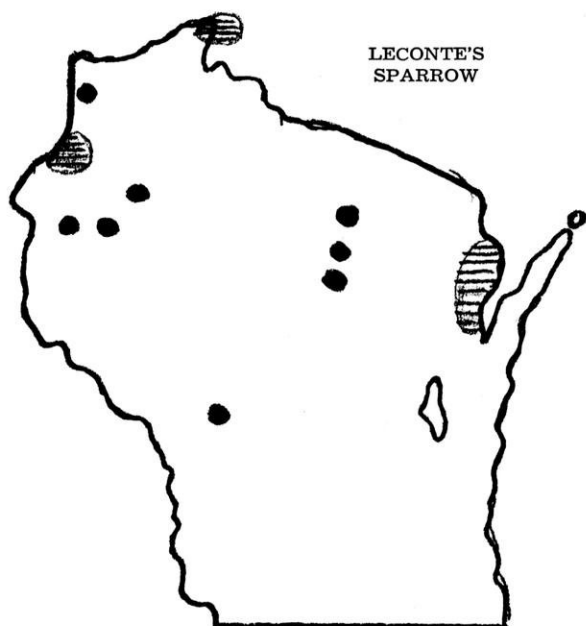


CRESTED FLYCATCHER



LEAST FLYCATCHER

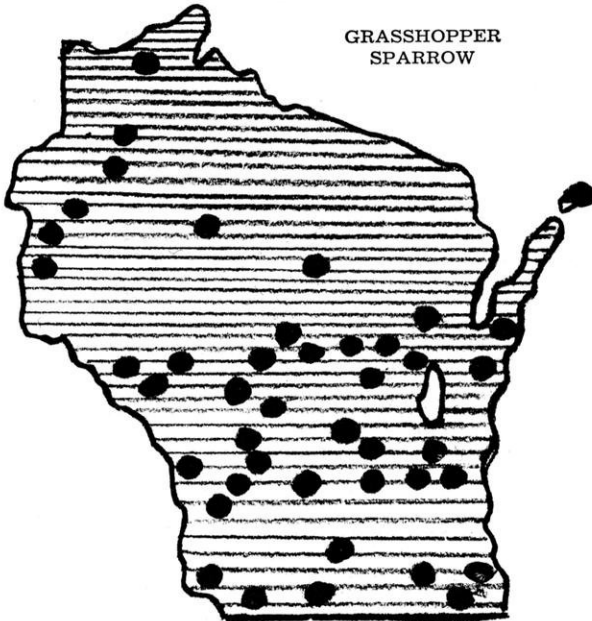
FIGURE 4: BREEDING BIRD SURVEY LOCATIONS FOR SIX SPARROWS



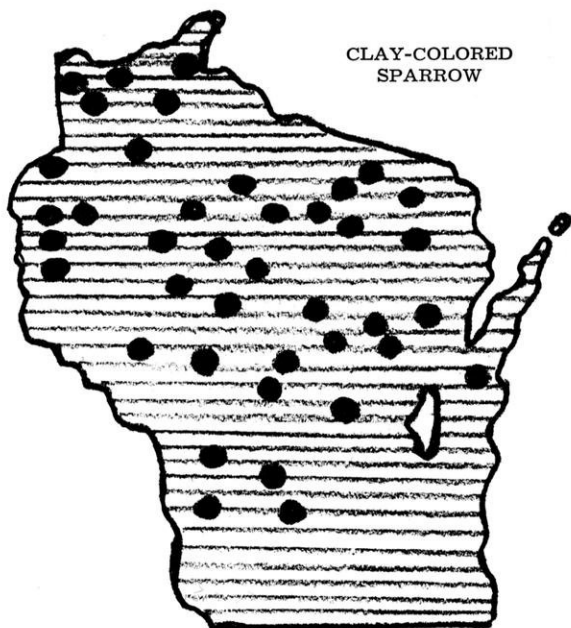
FIELD
SPARROW



GRASSHOPPER
SPARROW



CLAY-COLORED
SPARROW



WHITE-THROATED
SPARROW

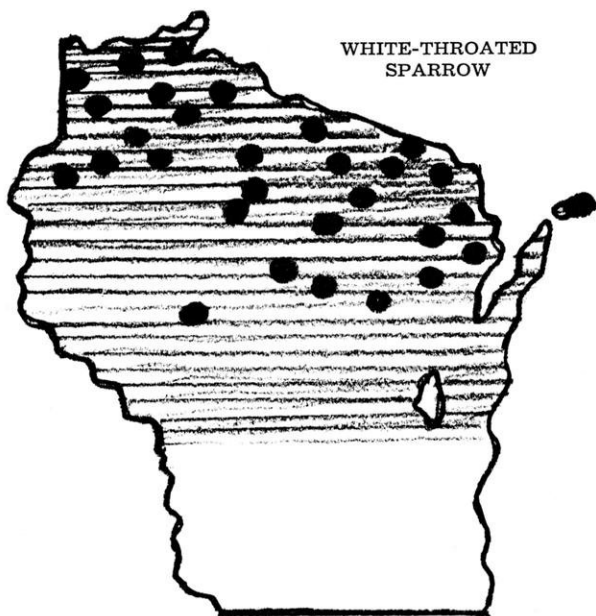


TABLE 5: POPULATION FLUCTUATIONS OF MORE COMMON SUMMER SPECIES AS RECORDED ON 33 TRANSECTS WITH FIVE-YEAR HISTORY

Species	1966 Total	1967 Total	1968 Total	1969 Total	1970 Total	Annual Mean	Hi-Lo Range	% of Variation
Herring Gull	646	798	499	317	395	531	481	91
Rock Dove	449	734	524	498	536	548	285	52
Mourning Dove	523	489	518	484	458	494	65	13
Yellow-shafted Flicker	213	254	320	243	206	247	114	46
Bank Swallow	397	246	169	560	431	361	391	108
Barn Swallow	402	391	377	518	530	444	153	34
Cliff Swallow	292	367	377	489	283	362	206	57
Purple Martin	308	282	315	308	344	311	62	20
Blue Jay	418	374	452	384	373	400	79	20
Common Crow	966	1404	931	1072	1101	1095	473	43
House Wren	310	267	267	323	389	311	122	39
Catbird	252	273	282	275	207	258	75	29
Robin	1145	1267	1187	1510	1448	1311	365	28
Starling	1389	1714	2291	3375	2355	2425	1986	82
Red-eyed Vireo	292	275	278	258	303	281	45	16
Ovenbird	238	290	162	233	236	232	128	55
Common Yellowthroat	482	440	417	437	501	455	84	18
House Sparrow	3281	4638	3406	3300	3896	3704	1357	37
Bobolink	690	562	474	569	801	619	327	53
Eastern Meadowlark	459	505	427	489	500	476	78	16
Western Meadowlark	1143	1208	1155	983	1082	1114	225	20
Redwinged Blackbird	4343	4296	5283	5167	5500	4918	1204	24
Common Grackle	1320	1414	1998	1473	1803	1602	678	42
Brown-headed Cowbird	658	632	738	715	683	685	105	15
Rose-breasted Grosbeak	244	244	228	273	293	256	65	25
Indigo Bunting	356	336	278	264	230	293	126	43
Dickcissel	353	529	353	155	117	301	412	137
American Goldfinch	386	330	494	359	394	393	164	42
Savannah Sparrow	910	829	976	832	942	898	147	16
Vesper Sparrow	527	520	490	459	472	494	68	14
Chipping Sparrow	223	219	195	231	245	223	50	22
Field Sparrow	309	301	258	255	229	270	80	30
Song Sparrow	916	947	833	935	912	909	114	13

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Cadott, Wisconsin



FIELD NOTES

By DARYL TESSEN

The Autumn Season

August 16 - November 30, 1970

The autumn season this year was characterized by unusually warm days; during August and September it was hot, with abnormally warm weather persisting well into October. Slightly cooler weather appeared state-wide during late October, but November was not exceptionally cold until the latter third of the month. Precipitation was light during the first half of the period but much of October and all of November was very wet. Late November was unusually windy with the state-wide freeze occurring during the third and fourth weeks of the month.

Typifying the non-extreme weather of the fall was the migration pattern. Migrants passed through the state in a leisurely fashion, with large flights of birds being unusually scarce this year. Small waves passed through the state on Sep. 7-9, and 13-14. Then between Sep. 22-26 the only major wave occurred as witnessed by the comments of several reporters, including Ken Lange, "Sep. 22 was a spectacular day with hundreds of Blue Jays, thousands of small passerines and several hundred Broad-winged Hawks passing through. Hundreds of Broad-wings continued to pass through on Sep. 23 and 26." A small wave occurred on Oct. 3-4, with one of moderate size on Oct. 10-13. The last flight, of smaller proportion, occurred on Oct. 16-18.

Species Summary

Hérons: Again this fall there were few observations of the Great Blue and Black-crowned Night, although over 100 of the latter were seen in El Dorado Marsh in late September. Likewise there were few reports of the Common Egret with the only concentrations reported at the nesting ground at Horicon Marsh and La Crosse county. However this was one of the best falls ever for the Cattle Egret.

Waterfowl: Again this fall there were good concentrations of Whistling Swan throughout the state with the usual large numbers along Green Bay and the Mississippi River plus the Wisconsin River north of Stevens Point. Excellent numbers of Canadas, Snows and Blues passed through the state during the fall with the major movement of Canada into the state occurring on Sep. 26-30 with Snow and Blue on Oct. 16-18.

At Horicon Marsh the Canada peaked at 162,000 on Oct. 19 with thousands of Snow and Blue present in mid-October.

Ducks were generally less numerous than the previous fall, as indicated by the comments of many reporters. Areas having high concentrations of various species were decidedly fewer in number than last year.

Hawks: An extremely poor flight of most species occurred this fall. At Cedar Grove, September and October were exceptionally poor with only the November flight preventing one of the lowest banding totals in some years; 433 hawks and owls were banded during the fall for their fourth best record. Apparently what hawk migration there was, primarily occurred in the western half of the state this fall, as indicated by the excellent Broad-winged flight occurring in Sauk county on Sep. 22, 23 and 26. Also on Sep. 26 the Duluth, Minnesota area experienced one of their best flights ever, with 16,000 hawks passing over during the day. Poor flights this fall included the Goshawk, Sharp-shinned, Cooper's, Red-tailed, Red-shouldered, Pigeon and the Peregrine Falcon. However the most outstanding observation of the fall occurred within this group — two separate sightings of Mississippi Kites. See "By the Wayside."

Shorebirds: The plover migration varied this fall. Large concentrations of Killdeer were in several areas. An exceptional concentration of 700 Golden Plover occurred in Racine county in late September, decreasing gradually during the entire month of October. However for the remaining plover species, records were few. Most of the remaining shorebird flight was unusually poor. The only good concentrations were noted at Horicon Marsh, Good Pond (Columbia county) and Kaukauna (Outagamie county) in late August and early September. But both yellowlegs species, the dowitcher and the Stilt Sandpiper displayed good migrations this fall.

Gulls: Some of the outstanding observations of the period came from this group. They included sightings of the Glaucous, Iceland, Great Black-backed, Laughing, Franklin's and Little Gulls and the Black-legged Kittiwake !!! The usual large concentrations of Herring and Ring-billed occurred during the fall, especially along Lake Michigan. While again there was no major movement of Franklin's into the state, Bonaparte's numbers increased above those of last year, especially in the southeastern part of the state during November.

Terns: Generally similar to the past few years, this fall had few observations of all species. The only exception to the pattern was the unusually high concentration of Caspians that occurred along the Fox River in Outagamie county during mid to late August.

Chickadees-Nuthatches: The Black-capped was not present in large numbers this fall. No Boreal Chickadees were reported this fall; the first time this has occurred in many years. In contrast to the past two years there was no movement of Red-breasted Nuthatches into the state.

Thrushes: The migration this fall was quite similar to that of last year, a slightly above average movement for all species, but nothing outstanding. The exception was the Bluebird.

Warblers: A real disappointment this fall. Remarkable unanimity among observers on the lack of sightings for most of the warbler species. Even the Myrtle numbers were down.

Finches: Easily the major disappointment for this fall, this being classified as a "finchless" year. The "brightest" of an extremely bleak picture was the Evening Grosbeak where a small movement in the state occurred during November. There were only scattered sightings of Purple Finches with many areas reporting them absent by November. From here the picture becomes even more bleak with only three reports of the Pine Siskin and only one Redpoll being noted for the entire fall. In addition there were no observations for the Pine Grosbeak, Red Crossbill and White-winged Crossbill. The only positive aspect to the finch group is that of the American Goldfinch. Large numbers were being observed statewide in late November, which is in contrast to the last several falls.

Sparrows: Another good variety observed this fall, although slightly below that of last year. The flight was generally an average one with good numbers of White-crowned and White-throats reported. The Harris' migration remained below average.

Interesting Species

While the migration seemed to be an unspectacular one, with the movements of many species being below average, there was nevertheless an excellent number and variety of species observed during the fall. 280 species were recorded during the period, which represents one of the highest totals for any autumn period. In addition some truly outstanding species were recorded in the state. Most outstanding is the first and second state record of the Mississippi Kite; the second state record of the Royal Tern and the Chuck-wills-widow; the appearance of the Black-legged Kittiwake in Ozaukee county and a Laughing Gull in Milwaukee; the ninth record of the Little Gull and the tenth record of the Brant; the observation of three rare gull species, the Glaucous, Iceland and Great Black-backed; two sightings of the rare Buff-breasted Sandpiper; the appearance of western visitors including the Western Grebe, Swainson's Hawk, Golden Eagle, Avocet, Black-billed Magpie and Varied Thrush; and the appearance of southern visitors including the Little Blue Heron, Cattle Egret, Hooded Warbler and Summer Tanager. Also noteworthy are the following species: Red-necked Grebe, Eared Grebe, Yellow-crowned Night Heron, Mute Swan, Surf Scoter, Common Scoter, King Rail, Yellow Rail, Western Sandpiper, Hudsonian Godwit, Ringed Turtle Dove, Carolina Wren, Mockingbird, Yellow-breasted Chat, Orchard Oriole, and Lark Sparrow.

The Season Summary

Common Loon: Reported from Chippewa, Milwaukee, Ozaukee, Price, and Sauk counties with the last fall observations from Dane (Ashman) and LaCrosse (Leshner) counties on Nov. 13.

Red-throated Loon: Three reports: two on the Wisconsin River north of Stevens Point on Oct. 15 (Eastwood); one on Oct. 31 in Ozaukee county (Gustafson); two on Nov. 1 in Milwaukee county (Donald).

Red-necked Grebe: A breeding colony was discovered on Rush Lake (Winnebago county) during the summer, with individuals still present at the beginning of the fall period (March). One bird was observed northwest of Shiocton (Outagamie county) on Aug. 16 (Bradford).

Horned Grebe: All observations occurred during October and November with the first from Sauk county (Oct. 1, Lange) and the last from Milwaukee county (two birds on Nov. 27, Gustafson). The only numbers reported were of 16 birds on Nov. 7 in Dane county (Ashman).

Eared Grebe: A total of four birds were observed during the fall season: one on Oct. 31 (Donald, Priebe) and another on Nov. 24 (Donald) in Milwaukee county; two during the Nov. 28 weekend in Walworth county (Dicker).

Western Grebe: One observed in Milwaukee county on Nov. 1 by Donald; another observed during the Nov. 28 weekend in Walworth county by Dicker.

Pied-billed Grebe: Ten November departure dates, the latest from Sauk county, on the 23rd (Lange).

Double-crested Cormorant: The only reports this fall came from LaCrosse county where individuals were observed between Oct. 3 and Nov. 8, with fifty counted on Oct. 13 (Leshner, Rosso).

Great Blue Heron: Only four October dates, with fifteen counted on the 25th in LaCrosse county (Leshner) and one November date, the 8th, from LaCrosse county (Rosso).

Green Heron: Three weeks later than all other observations this fall, and the only October date, was that of a bird noted on the 18th in Rock county (Brakefield).

Little Blue Heron: The first fall report in over seven years occurred when two individuals were observed on Aug. 18 in Waukesha county by Sundell.

Cattle Egret: Easily the best fall in some seven years for this species with the following reports: three observed along the west shore of Lake Puckaway feeding with some cows in a sedge meadow on Sep. 30 by March; one on Oct. 10, Waukesha county (Bielefeldt); reported from Price county by Gregg with three noted on Nov. 5 (Regner); one found dead on Nov. 27 in Iron county by Schmude and Steckert. This represents a state departure record.

Common Egret: Only the following reports; 150 counted on the northeastern half of Horicon Marsh on Aug. 20 (Tessen); seven on Sep. 20 in Vernon county (Weber); 125 counted in LaCrosse county on Oct. 25 (Leshner).

Black-crowned Night Heron: Few observations this fall with 35 counted on the Fox River at Kaukauna (Outagamie county, Tessen) on Sep. 6; 100+ counted at El Dorado Marsh (Fond du Lac county, Shepard) on Sep. 26 and last on Sep. 27 in Brown county (Cleary, Columban).

Yellow-crowned Night Heron: A good fall for this species as indicated by the following reports: Aug. 18, Waukesha county (Sundell); Aug. 23-30 with three immatures observed, LaCrosse county (Leshner); Sep. 1-5, seven, including five young which were raised in the yard of Pugh (Racine county); last on Oct. 11, LaCrosse county (Rosso).

Least Bittern: Three reports of this elusive species: Aug. 18, Ozaukee county (Blintz); Aug. 22, Ozaukee county (Blintz); Sep. 6, Milwaukee county (Gustafson).

American Bittern: No October departure dates with the last observations occurring on Sep. 26, Winnebago county (Tessen); Sep. 27, Milwaukee county (Gustafson, Sheridan); and Sep. 28, Price County (Vincent).

Mute Swan: One bird was observed in Waukesha county on Aug. 18 by Sundell.

Whistling Swan: Fourteen reporting counties with observations commencing on Oct. 17 in Brown county (Cleary, Columban). Numbers included 140 in LaCrosse county, Nov. 14 (Leshner); 100 in the Green Lake area on Nov. 15 (March); 150 on Nov. 15 in Brown county (Cleary, Columban); 500 in Winnebago county on Nov. 15 (Natzke); and 1,500 on the Wisconsin River north of Stevens Point on Nov. 15 (Eastwood). Individuals were still present in LaCrosse county (Rosso) at the end of the period with 600 counted in Buffalo county on Dec. 12 (Leshner).

Canada Goose: Present at the beginning of the period in LaCrosse (Rosso) and Brown (Cleary, Columban) counties. It was next observed on Sep. 1 in Ozaukee county (Blintz). At Horicon Marsh the first migrants arrived on Sep. 9 (Marsh). Statewide the major movement occurred Sep. 26-30 with reports coming from counties throughout the state. 6,100 were present in Brown county on Oct. 17, 162,000 at Horicon on Oct. 19 and 20,000 in LaCrosse county on Nov. 25. Canadas were present into December in Brown, Columbia, Dodge (Horicon Marsh), LaCrosse and Ozaukee counties.

Brant: A juvenile bird was shot in November by Dr. Sievert.

Snow and Blue Geese: Both species were observed in fifteen counties during the fall period with both being first noted in the state at Horicon Marsh on Sep. 13 (March). The major movement into the state occurred between Oct. 16-18 with many sightings being reported. Numbers of Snows included "thousands" on Oct. 16 at Horicon Marsh (March); 120 on Oct. 17, Brown county (Cleary, Columban); 150 on Oct. 18, Outagamie county (Tessen); and a "few hundred" on Nov. 3, Iron and Ashland counties (Evrard). Numbers of Blue included "thousands" on Oct. 16 at Horicon Marsh (March); 200 on Oct. 17, Brown county (Cleary, Columban); 100 on Oct. 18, Fond du Lac county (Tessen); 350 on Oct. 21, Marinette county (Lindberg); and a "few hundred" on Nov. 3, Iron and Ashland counties (Evrard). Both species were last reported from Milwaukee county on Nov. 30 (Juneau, Lemke).

Mallard: "Thousands" were present on Oct. 1 in Dodge, Fond du Lac, Green Lake and Winnebago counties (March).

Gadwall: Hundreds were reported in late October in the Horicon-Green Lake areas by March. The last report came from LaCrosse county, Nov. 15 (Rosso).

Pintail: Hundreds were present in early October in the Horicon-Green Lake areas (March). Present in December in LaCrosse county (Rosso).

Green-winged Teal: Thousands were in the Horicon-Green Lake areas on Oct. 3 (March). Last reported in Milwaukee county on Nov. 27 (Gustafson).

Blue-winged Teal: Thousands were present in mid-September in the Horicon-Green Lake areas (March). A female was present in Winnebago county well into December (Tessen).

American Widgeon: The only numbers reported were 45 on Aug. 16 in Green Bay (Tessen) and 200 on Sep. 11 in LaCrosse county (Leshner). Birds were present well into December in Milwaukee county (Juneau); two in LaCrosse county (Leshner) and four in Washington county (Schmidt).

Shoveler: Hundreds at Horicon Marsh on Oct. 1 (March). Last observed on Nov. 25 in LaCrosse county (Rosso).

Wood Duck: Hundreds at Horicon Marsh on Oct. 1 (March). At least two birds were present into December in Winnebago county (Tessen).

Redhead: Present at the beginning of the period at Horicon Marsh with thousands present on Oct. 16 in the Horicon, Green Lake, Winnebago areas (March). Next observed on Sep. 26 (Outagamie county, Tessen) and Sep. 28 (Columbia county, Werner). Seven were present at the end of November in Winnebago county (Tessen), with individuals also present in LaCrosse county (Rosso).

Ring-necked Duck: Only eight reports this fall with it present at the beginning of the period at Horicon Marsh with hundreds in the Horicon-Green Lake areas (March) during mid-fall. 105 were counted on Sep. 29 in Price county (Evrard). Present in LaCrosse county at the end of November (Rosso).

Canvasback: Present at the beginning of the period in Price county (Vincent). A female was observed at Green Bay on Aug. 16 (Tessen). Next reported from Ozaukee county on Aug. 30 (Blintz). The major movement into the state occurred in early October. Hundreds were present in the Horicon, Green Lake, Fond du Lac, Winnebago areas. Individuals were present into December in LaCrosse (Rosso), Sauk (Lange) and Winnebago (Tessen) counties.

Greater Scaup: First reported in the state on Oct. 12 with 65 counted in Ozaukee county by Tessen. This was followed with reports from Oct. 14 (LaCrosse county, Rosso), Oct. 16 (Milwaukee county, Donald) and Oct. 19 (Columbia county, Connors). 10,000 were present in Milwaukee by Oct. 30 (Donald). It was still present in LaCrosse county in December (Rosso) as well as along Lake Michigan.

Lesser Scaup: Present at the beginning of the period in Columbia county (Werner). Next reported from Sauk (Sep. 22, Lange) and Outagamie (Sep. 26, Tessen) counties. The major movement into the state occurred in early October. Present at the end of the period in Brown (Cleary, Columban), Dane (Ashman), LaCrosse (Rosso), two in Outagamie (Tessen), Sauk (Lange), and four in Winnebago (Tessen) counties.

Common Goldeneye: The following fall arrival dates: Oct. 11 (March); Oct. 24, Chippewa county (Robbins); Oct. 26, Milwaukee county (Juneau); and Oct. 28, LaCrosse county (Rosso).

Bufflehead: First on Oct. 3, Sauk county (Lange); Oct. 12, Brown county (Cleary, Columban); Oct. 15, Columbia county (Werner). The main migration into the state occurred between Oct. 24-28. End of the period inland reports included Dane (Ashman) and Outagamie (Tessen) counties.

Oldsquaw: Nov. 1 arrival dates from Ozaukee (Blintz) and Milwaukee (Donald) counties. A migration of several thousand along Lake Michigan in Ozaukee and Milwaukee counties was observed on Nov. 7 (Tessen). Inland reports this fall included Rusk county, Nov. 7 (Robbins) and LaCrosse county, Nov. 29 (Rosso).

White-winged Scoter: An excellent migration for this scoter species this fall as evidenced by the following reports: several on Fox Lake from late October into early November (March); single sightings in Milwaukee on Nov. 3 (Donald) and Nov. 21 (Gustafson); in Ozaukee county (Loon Bluff), two on Nov. 6 with 16 present in the morning of Nov. 7 (Gustafson) increasing to 55 by the afternoon (Tessen); 3 in Racine county on Nov. 7 (Tessen); 3 on Nov. 8 in LaCrosse county (Rosso, Leshner); a female on Nov. 14 at Neenah (Winnebago county, Tessen).

Surf Scoter: One male observed at Loon Bluff (Ozaukee county) on Nov. 22 by Tessen.

Common Scoter: A good migration for this scoter species with the following sightings: two individuals were observed on Nov. 6-7 at Loon Bluff by Gustafson and Tessen. Five immatures were noted along Lake Michigan in Ozaukee county on Nov. 21 by Gustafson. Three were shot on Big Green Lake on Nov. 24-25 with one live individual also noted on Nov. 25 (March).

Ruddy Duck: At the beginning of the period reports from Columbia (Werner), Brown and Outagamie (Tessen) counties. Observed on Aug. 20 at Horicon Marsh (Tessen). Individuals were present in December in LaCrosse (Rosso) and Milwaukee (Juneau) counties.

Hooded Merganser: The peak movement for this species in the state occurred on Oct. 1 according to March. End of the period reports from Dane, Door, LaCrosse and Milwaukee counties.

Common Merganser: An arrival date of Oct. 24 when twelve were counted in Milwaukee (Tessen).

Red-breasted Merganser: First noted on Nov. 4 in LaCrosse county (Rosso).

Turkey Vulture: Another good fall for this species with eleven reporting counties. Present at the beginning of the period in LaCrosse county with the last bird seen on Oct. 7 (Rosso). Two on Aug. 23, in Douglas county (Robbins); eight on Aug. 23, one on Sep. 20 in Vernon county (Leshner, Weber); two in late August in Dodge county (Sigrist); 3 on Sep. 11 in Sauk county (Ashman); two on Sep. 20 in Taylor county (Fadness); between Sep. 21 and Oct. 24 a total of four were seen at Cedar Grove (Berger); one on Sep. 26, two on Oct. 2 in Dane county (Barger); single birds on Sep. 27 in Ozaukee (Blintz) and Waukesha (Sheridan) counties; last on Nov. 5 in Milwaukee county (Gustafson) and 2 on Nov. 27 in Racine county (Toslyn).

Mississippi Kite: The first state record for this southern species occurred this fall with a single bird observed at Cedar Grove on Sep. 10 by Berger and between 20-25 noted on Tomahawk Lake in Oneida county on Sep. 11 by the Engbergs. See "By the Wayside."

Goshawk: The following reports: Sep. 20, Taylor county (Fadness); Cedar Grove, first on Sep. 25 with a total of nine during the period (Berger), the last on Nov. 5 (Gustafson); Oct. 24, Milwaukee county (Donald); 2 on Oct. 26, one on Nov. 20 in Dane county (Emlen).

Sharp-shinned Hawk: Observations this fall occurred between Sep. 5, Sauk county (Lange) and Nov. 27, Oconto county (Richter). Other reporting counties included Barron, Brown, Dane, Douglas, LaCrosse, Outagamie, Rock, Sawyer and Sheboygan. The flight was considered to be a **very poor** one with the only numbers reported being 20 on Sep. 25 in Dane county (Emlen) and at Cedar Grove, 187 on Sep. 26 with a total of only 907 for the season at the station (Berger).

Cooper's Hawk: Likewise another **very poor** flight for the species was noted this fall. Individuals were observed at the beginning of the period in Outagamie (Tessen) and Sauk (Lange) counties. Other observations came from only Brown, Dane, Dodge, Sheboygan and Vernon counties. Only a **total** of 12 birds were seen during the entire fall at Cedar Grove (Berger). Birds were present into December in Dane county (Ashman).

Red-tailed Hawk: A poor flight for this species reported by Berger with peak dates occurring on Nov. 4, of 48 birds and Nov. 23, of 51 birds.

Red-shouldered Hawk: Likewise a **very poor** flight was noted at Cedar Grove this fall with a total of ten being noted during the season (Berger).

Broad-winged Hawk: An interesting flight occurred this fall. Along Lake Michigan there was little movement, as witnessed by a peak of 75 on Oct. 3, with a **total** of 188 for the **entire** fall at Cedar Grove (Berger). However through the central and more western parts of the state a good flight occurred with the majority of birds passing through the state between Sep. 21-26 as evidenced by the following: 9 on Sep. 21, Barron county (Goff); 30 in Shawano county (Hoffmann); 13 on Sep. 23 in Dane county (Emlen); 9 on Sep. 24, LaCrosse county (Leshner); 40 on Sep. 26, Fond du Lac county (Shepard); and in Sauk county, "several hundred" on each of the following days, Sep. 22, 23 and 26 (Lange). The observation period extended between Sep. 13-Nov. 6. The latter sighting was made in Milwaukee county (Juneau) and represents a record state departure.

Swainson's Hawk: One banded at Cedar Grove on Sep. 22 by Berger. One was observed on Nov. 1 and two on Nov. 13 in Vernon county by Weber.

Rough-legged Hawk: Over a month ahead of all other observations this fall were the sightings of birds in Vernon county on Sep. 18 (Weber) and Brown county on Sep. 23 (Cleary, Columban).

Golden Eagle: Two sightings this fall: one on Nov. 1 and two on Nov. 23 at Cedar Grove (Berger).

Bald Eagle: Only five reporting counties, which represents the lowest number in over seven autumns, including: LaCrosse, Price, Sauk, Sheboygan and Vilas. The only numbers reported were eleven on Oct. 25 in Price county (Evrard) and 56 on Nov. 25 in LaCrosse county (Rosso).

Marsh Hawk: A peak of 52 on Oct. 3 at Cedar Grove (Berger). Present at the end of the period in Outagamie (Tessen) and Rock (Mahlum) counties with late November sightings in Brown, Langlade and Taylor counties.

Osprey: One of the better flights occurred this fall with seventeen reporting counties. At Cedar Grove the observation period extended between Sep. 8-Oct. 10 with ten counted on Sep. 11 and a total of 48 for the season (Berger). All other observations varied between single to a half dozen birds. Last reported on Oct. 23 in Dane county (Emlen).

Peregrine Falcon: Again this fall there were few sightings. Observations extended between Sep. 10-Oct. 31 with a total of 19 counted during the fall at Cedar Grove (Berger). Other reports included Sep. 20, Sauk county (Lange); in Ozaukee county, Sep. 12 (Blintz), 2 on Sep. 27, 1 on Oct. 31 (Gustafson).

Pigeon Hawk: As with most other hawk species this one also experienced a poor flight through the state. Observations occurred between Sep. 11-Nov. 5 with the only number reported being 16 on Oct. 2 at Cedar Grove (Berger). Other reporting counties included Douglas, Marinette, Milwaukee and Sauk. Of special interest is the banding of a **Richardson's Hawk**, a western subspecies of the Pigeon Hawk, at Cedar Grove on Oct. 2 by Erdman.

Sparrow Hawk: Peak flights at Cedar Grove on Sep. 26 and Sep. 27 of thirty-eight and twenty-eight birds, respectively (Berger).

Spruce Grouse: One observed along a road in Price county on Oct. 14 by Evrard. One reported accidentally shot by a hunter in Forest county on Oct. 17 (Richter).

Bobwhite: Fall observations only from Rock (Mahlum) and Vernon (Weber) counties.

Turkey: Six observed on Oct. 24 at Necedah by Leshner, Rosso, et al.

Sandhill Crane: Fewer reports and numbers noted this fall. Observed in Green Lake, Langlade, Oconto, Waushara, and Winnebago counties with these numbers indicated; 10 into September in Shawano county (Hafemann); 28 on Aug. 30 in Jefferson county (Compton); 50 on Sep. 20 in Racine county (Pugh); and last, 20 on Oct. 24 at Necedah (Leshner).

King Rail: The only fall report was of a single bird sighted in Milwaukee county on Sep. 20 by Priebke.

Virginia Rail: Only these reports this fall: five on Aug. 16, Winnebago county (Tessen); Aug. 20, Ozaukee county (Blintz); Oct. 3-4, Milwaukee county (Basten, Gustafson).

Sora: Four October departure dates, the latest being the 18th in Milwaukee (Juneau) and Walworth (Beloit Club) counties.

Yellow Rail: One heard calling in the late afternoon on Aug. 16 in Green Bay by Tessen.

Common Gallinule: A new state departure record is that of a bird observed on Nov. 8 in Milwaukee county by Juneau.

American Coot: Numbers reported this fall included 100,000+ in mid-October in the marshes of central and east-central Wisconsin (Horicon, Green Lake, El Dorado, etc.) by March; 2,000 on Nov. 5 in Green County (Rohde); and 350 in Milwaukee on Nov. 11 (Juneau). Present into December in Door, Milwaukee and Ozaukee counties.

Semipalmated Plover: Few reporting counties with no good numbers observed this fall. Last observed in the state on Oct. 9 in Milwaukee (Gustafson).

Piping Plover: Aug. 30, Goose Pond (Columbia county), Connors; Sep. 3, Milwaukee (Donald); Oct. 11-12, Goose Pond, Werner.

Killdeer: Over one hundred were observed on Aug. 16, Outagamie county (Tessen), Sep. 5, Columbia county (Ashman) and Sep. 27, Winnebago county (Tessen). There were only three early November departure dates from Kenosha, Milwaukee and Sauk counties. However birds were present into December in LaCrosse (Rosso) and Manitowoc (Casper) counties.

Golden Plover: Ten reporting counties with it present in mid-August in Columbia, Dodge, Ozaukee, Waukesha and Winnebago. Most sightings were of a few individuals with an occasional report of 20 or 40 birds. However in Racine county, just north of the junction of highways 41 and 20, an **exceptionally large** number were observed for over a month. On Sep. 25 there were 700 present, with 550 counted on Oct. 12, 400 on Oct. 24 and 50 on Oct. 31 (Tessen).

Black-bellied Plover: Likewise ten reporting counties with August sightings on the 18th, Waukesha county (Sundell); the 20th, Horicon Marsh (Tessen); the 23rd, Columbia county (Robbins). Numbers were low again this year with 25 being noted in both Outagamie and Winnebago counties on Sep. 26, and in Racine county, 75 on Sep. 25 with 55 still present on Oct. 24 (Tessen). Last reported in Milwaukee when four were seen on Nov. 22 (Tessen).

Ruddy Turnstone: These reports: Aug. 24 (Gustafson), Sep. 4 (Leshner), Racine county; 2 on Sep. 13 (Juneau), 5 on Sep. 24 (Gustafson), Milwaukee county; Sep. 19, Kenosha county (Hamers); and a late date of Oct. 24, Wind Point (Racine county), Tessen and Erickson.

Woodcock: A Nov. 13 departure date in LaCrosse county (Leshner).

Common Snipe: The only November departure date came from LaCrosse county, on the 18th (Rosso).

Upland Plover: The only report was of ten birds present in late August in St. Croix county (Granica).

Spotted Sandpiper: Almost six weeks later than all other departures, and only one week short of tying the state departure record, is an individual observed on Nov. 4 in Sauk county (Lange).

Solitary Sandpiper: A normal departure for the species this fall with it last observed in Sauk county on Sep. 26 (Lange).

Greater Yellowlegs: Numbers noted included 150 on Aug. 20 at Horicon Marsh and 100 on Sep. 5 at Kaukauna (Outagamie county), Tessen. A normal departure with the last sighting, of 11 birds, on Oct. 31 at Cedar Grove (Gustafson).

Lesser Yellowlegs: 200 were counted on Aug. 20 at Horicon Marsh (Tessen); 200 on Aug. 30 at Goose Pond (Columbia county Connors); and 100 on Oct. 17, Price county (Vincent). Likewise a normal departure this fall with the last individual noted in Racine county on Oct. 24 (Tessen).

Knot: In Columbia county, Aug. 26 (Gustafson); Aug. 30 (Connors); Sep. 3 (Ashman, Leshner). In Milwaukee, a single individual on Aug. 31 increasing to six on Sep. 23 (Gustafson, Donald). In Kenosha county, one on Sep. 25 (Tessen).

Pectoral Sandpiper: Numbers included 100+ on Aug. 17 in Outagamie county and 100 on Aug. 20 at Horicon Marsh (Tessen); 75 on Sep. 25 in Kenosha county (Tessen); 52 on Oct. 18 in Columbia county (Ashman); last on Nov. 1 in LaCrosse county (Rosso).

White-rumped Sandpiper: One on Aug. 24 in Brown county (Cleary, Columban); two on Sep. 5 at Kaukauna (Outagamie county, Tessen).

Baird's Sandpiper: In Outagamie county one was present on Aug. 16, three between Sep. 5-19 and four on Sep. 26 (Tessen). In Columbia county three were noted on Aug. 22 and eight on Sep. 9 (Gustafson). Five birds were observed on Sep. 25 in Racine county and one on Sep. 26 in Winnebago county (Tessen). One bird was present between Oct. 9-13 in Milwaukee (Gustafson).

Least Sandpiper: Three weeks later than all other dates was that of Oct. 14 in LaCrosse county (Rosso).

Dunlin: This species was late in arriving this fall with the first birds not being seen until Sep. 25 in Brown county (Cleary, Columban). Last reported in Milwaukee when four individuals were present Nov. 26-29 (Juneau, Gustafson).

Dowitcher: August observations from Ozaukee county, Aug. 16-18 (Blintz, Sundell); Waukesha county, Aug. 18 (Sundell); 20 on Aug. 20 at Horicon Marsh (Tessen); 15 on Aug. 23, Columbia county (Robbins). During September it was also observed in Columbia county, on Sep. 3 and 70 on Sep. 5 (Ashman); Sep. 19, Outagamie county (Tessen). Birds identified as Short-billed were noted in Brown county, Aug. 24 (Cleary, Columban); Outagamie county, four during Sep. 5-7 (Tessen); Columbia county, 24 on Oct. 11 (Werner). Long-bills were reported on Sep. 7, Outagamie county (Tessen); 24 on Oct. 11, Columbia county (Werner); 3 on Oct. 25, Columbia county (Gustafson); 60 on Oct. 12 (Leshner) with individuals remaining until Oct. 28 (Rosso) in LaCrosse county.

Stilt Sandpiper: Another excellent migration for the species this fall as indicated by the following observations: from Columbia county, one on Aug. 17, 40 on Aug. 23, 20 on Aug. 30, 25 during Sep. 5-7, and one on Sep. 20 (Ashman, Gustafson, Leshner, Robbins); Aug. 20, Dane county (Robbins); 120 on Aug. 20 at Horicon Marsh (Tessen); Sep. 2, Chippewa county (Robbins); in Outagamie county, numbers ranged from two to eight between Aug. 16-Sep. 26 with one individual present on Oct. 17 (Tessen).

Semipalmated Sandpiper: Three weeks later than all other dates was that of Oct. 14 in LaCrosse county (Rosso).

Western Sandpiper: Single birds were observed on Aug. 18 in Ozaukee county (Sundell), Aug. 24 and Sep. 5 in Columbia county (Gustafson) and Sep. 6 in Outagamie county (Tessen).

Buff-breasted Sandpiper: Sightings of this rare shorebird were made on Sep. 5 at Goose Pond (Peartree) and Sep. 7 at Horicon Marsh (Bratley, Mathiak).

Hudsonian Godwit: Two birds were present at Goose Pond on Oct. 13-14 (Werner).

Sanderling: Observations occurred between Aug. 19 (2 in Vernon county, Leshner) and Oct. 29 (Milwaukee county, Gustafson). Other reporting counties included Columbia, LaCrosse, Manitowoc, Marinette, Ozaukee and Racine.

Avocet: One of these western birds was observed on Sep. 24 in Milwaukee county by Gustafson.

Wilson's Phalarope: These reports: 2 on Aug. 19 in Outagamie county (Tessen); 20 on Aug. 20 at Horicon Marsh (Tessen); 2 on Aug. 23 and 4 on Aug. 24 in Columbia county (Robbins, Gustafson); 5 on Aug. 23 in Vernon county (Leshner).

Northern Phalarope: These reports: 5 on Aug. 20 at Horicon Marsh (Tessen); one on Aug. 22, two on Aug. 24 and two on Sep. 28-29 in Columbia county (Gustafson, Werner); one at Wind Point, Racine county between Oct. 12-24 (Tessen, Erickson).

Glaucous Gull: For the second straight fall this species was sighted in the state. Single birds were observed in Brown county on Aug. 18 (Cleary, Columban) and in Milwaukee on Nov. 14 (Donald, Balsom).

Iceland Gull: Also observed for the second straight fall with sightings in Milwaukee on Nov. 13 (Gustafson) and Nov. 15 (Donald). See "By the Wayside."

Great Black-backed Gull: Likewise a second straight fall observation with one individual present on the Fox River out of DePere (Brown county) on Sep. 24 (Cleary). See "By the Wayside."

Herring Gull: Besides the large concentrations along Lake Michigan in Ozaukee, Milwaukee and Racine counties, some 10,000 birds were observed on the Fox River in Brown county on Sep. 24 (Cleary).

Laughing Gull: A bird in winter plumage was observed in Milwaukee by Sundell on Aug. 18.

Franklin's Gull: Again no major movement for the species into the state, making this the fourth consecutive year it has failed to occur. Four were observed on Aug. 18 in Milwaukee (Sundell), one on Sep. 3 (Donald), and nine on Sep. 7 (Gustafson). One bird was seen on Sep. 16 in Brown county (Cleary, Columban). Two birds were noted in Douglas county on Sep. 26 (Robbins). Different birds were seen in Outagamie county on Aug. 16 and Sep. 26 (Tessen).

Bonaparte's Gull: These reports: Sep. 23-24, Brown county (Cleary); Sep. 24-26, Columbia county (Werner); 15 on Sep. 26, Outagamie county (Tessen); between Sep. 26-Nov. 14, Winnebago county (Tessen); 150 on Oct. 24, Racine county (Tessen); 4 on Oct. 25, LaCrosse county (Leshner); Nov. 1, Ozaukee county (Blintz); 700 on Nov. 7 with 400 still present on Nov. 22 in Milwaukee (Tessen); 760 on Nov. 22 with individuals still present on Dec. 10 in Racine county (Erickson).

Little Gull: The ninth state record occurred when a bird was observed on Nov. 14 in Milwaukee by Gustafson and Donald. (See "By the Wayside.")

Black-legged Kittiwake: A bird was carefully studied at Loon Bluff, Ozaukee county on Nov. 6 by Gustafson, Donald and Hanbury. See "By the Wayside."

Forster's Tern: Maintaining the pattern of the past several years there were few reports. 50 were present on Aug. 16 in Outagamie county with the last observation being 25 birds in Outagamie and 30 in Winnebago counties on Sep. 26 (Tessen).

Common Tern: Likewise few fall reports with the last observation, two weeks after all others, coming from Brown county on Oct. 12 (Cleary, Columban).

Royal Tern: An individual answering the description of this species was carefully studied along Lake Superior off from Bayfield county by Bratley and Mahhiak on Sep. 27. See "By the Wayside."

Caspian Tern: Only five reports this year with observations in Racine county, Sep. 4 (Leshner); LaCrosse county, 30 on Sep. 11 (Leshner); Milwaukee county, Sep. 16 (Gustafson); Douglas county, 2 on Sep. 26 (Robbins). However a remarkable build-up, that commenced during early August in Outagamie county along the Fox River between Little Chute and Kaukauna, continued into the fall period; 135 were present on Aug. 16, 150 on Aug. 19, decreasing to 50 on Sep. 5, with 15 present between Sep. 19-26 (Tessen). Last observed on Sep. 30 in Racine county (Erickson).

Black Tern: 130 along the Fox River in Outagamie county on Aug. 16 (Tessen). A somewhat early departure occurred this fall with the last observation on Sep. 10 in Brown county (Cleary, Columban). There were few reports for this tern species again this fall.

Ringed Turtle Dove: Two adults and one young coming to the feeder of Sheridan between Sep. 11-22. Thereafter two adults came to the feeder until Nov. 24 (Milwaukee county).

Yellow-billed Cuckoo: Eight observations during the fall with a very late date of Oct. 30, Rock county (Mahlum) and a record state departure date of Nov. 19, Milwaukee county (Donald).

Black-billed Cuckoo: Likewise eight observations during the period with four October dates: the 10th, and 15th, Dane county (Ashman, Emlen); the 13th, Rock county (Brakefield); and the 16th, Vernon county (Weber).

Screech Owl: Observed during the period in Brown, Chippewa, Dodge, Green, Milwaukee, Rock, Shawano, Vernon and Waukesha counties.

Snowy Owl: Four reports this fall: Oct. 21, Marinette county (Lindberg); Oct. 25, Brown county (Lindley); during November in Adams county (Kramer) and at Port Washington (Blintz).

Long-eared Owl: Two reports: Oct. 11, Rock county (Mahlum) and Nov. 5, Cedar Grove (Gustafson).

Short-eared Owl: Four reports: two present from early September until Oct. 29, Taylor county (Fadness); Oct. 29, Dunn county (Robbins); one in November, St. Croix county (Granica); Nov. 26, Ozaukee county (Gustafson).

Saw-whet Owl: A very poor flight this fall with only the following reports: one banded on Oct. 18, Sauk county (Peartree); Oct. 25 and 29, Nov. 4 and 6, Brown county (Jacobs, Cleary, Columban); Nov. 5-7, Cedar Grove (Gustafson).

Chuck-wills-widow: Only the second record for this species occurred when a bird was heard calling on successive nights in mid-August in Marquette county by Flaherty.

Whip-poor-will: Three reports: mid-August, Vernon county (Weber); Sep. 21, Wau-shara county (Greenman); Oct. 10, Ozaukee county (Blintz). The latter date is late.

Nighthawk: Several large migrations were observed this fall. The included a "very large" one on Aug. 28 in Oconto and Marinette counties (Richter); "hundreds" on Aug. 29 in Sauk county (Lange); and 4,900 on Sep. 20 in Kenosha county (Hamers). October dates included: the 3rd, Cedar Grove (Gustafson); the 5th, Barron (Goff) and Ozaukee (Blintz) counties; and the 10th, LaCrosse county (Rosso).

Chimney Swift: 600 were counted on Sep. 7 in Brown county by Cleary and Columban. There were seven October departure dates, the latest being on the 9th, Dane county (Ashman).

Ruby-throated Hummingbird: October dates included: Oct. 4, Milwaukee (Sheridan, Gustafson) and Rock (Brakefield) counties; Oct. 7, Sauk county (Kemper); and a very late Oct. 16, Brown county (Wierzbicki).

Belted Kingfisher: Present at the end of the period in Green county (Rohde).

Yellow-shafted Flicker: Reported as present at the beginning of the winter period in Dane, Milwaukee, Outagamie, Sauk and Vernon counties.

Red-headed Woodpecker: Present into December in Barron (Goff), Brown (Cleary, Columban), LaCrosse (Rosso), Sauk (Lange), and Winnebago (Tessen) counties. This is less than half the reporting counties as compared to last fall when it wintered in unusually large numbers.

Yellow-bellied Sapsucker: All departure dates were for mid-October except for individuals present until Oct. 29 in Vernon county (Weber), Nov. 1 in Racine county (Erickson) and Nov. 3 in Price county (Hardy).

Eastern Kingbird: Three weeks later than all other dates this fall, and less than one week away from tying the state departure record was that of one individual sighted in Ozaukee county by Jarboe on Oct. 11.

Great Crested Flycatcher: Three weeks later than all other dates is that of Oct. 13 by Blintz in Ozaukee county. This is a late date.

Eastern Phoebe: There were twelve departure dates between Oct. 5-18 with one bird still present on Oct. 24 in Milwaukee county (Juneau).

Yellow-bellied Flycatcher: Observed this fall on Aug. 30, Manitowoc county (Albrecht), Sep. 12, Kenosha county (Hamers), Sep. 14, Brown county (Cleary, Columban) and a very late Oct. 1, Ozaukee county (Jarboe). The latter date is five days away from tying the state departure record.

Acadian Flycatcher: Unusual is a bird observed in Brown county on Aug. 30 (Cleary, Columban).

Traill's Flycatcher: Two reports: Aug. 20 (Robbins) and Sep. 16-27 (Emlen) in Dane county.

Least Flycatcher: Two exceptionally late dates this fall, just several days away from tying the state departure records are Oct. 13, Brown county (Wierzbicki) and Oct. 14, Marinette county (Lindberg).

Eastern Wood Pewee: Last on Oct. 6, Milwaukee county (Gustafson), Oct. 11, LaCrosse county (Rosso) and Oct. 12, Racine county (Tessen).

Olive-sided Flycatcher: These reports: Aug. 29, Ozaukee county (Blintz); Sep. 2 Chippewa county (Robbins); Sep. 19, Outagamie county (Tessen).

Tree Swallow: Large migrations were observed during the period. These included 3,000+ on Sep. 6 at Green Bay (Tessen) where numbers increased to 10,000 by Sep. 13 (Cleary, Columban); "hundreds" on Sep. 24 in Winnebago county (Greenman); 300 on Oct. 3 at Cedar Grove (Gustafson); and on Oct. 25, 3,000 flying into Horicon Marsh. Last noted in the state on Oct. 26, at Horicon by Mathiak.

Bank Swallow: Sep. 27, LaCrosse county (Rosso).

Rough-winged Swallow: Likewise, Sep. 27, LaCrosse county (Rosso).

Barn Swallow: Oct. 4, Ozaukee county (Blintz).

Cliff Swallow: A late date of Oct. 3, LaCrosse county (Rosso).

Purple Martin: Sep. 27, Kenosha county (Hamers).

Gray Jay: Another poor fall with only the following reports: Vilas county (Bradford); during the entire period, Price county (Hardy, Vincent); becoming numerous on Oct. 11 and very numerous on Oct. 17 in Forest county (Richter).

Blue Jay: The following migrations were observed this fall: Sep. 7-14, Waushara county (Greenman); "hundreds" between Sep. 21-27, Sauk county (Lange); 125 on Oct. 1, Brown county (Cleary, Columban); 1,100 between 11:00 am. and 4:00 pm. on Oct. 1 at Dykesville (Hasterlik); 920 counted during a forty minute span on Oct. 11 on Washington Island (Erickson).

Black-billed Magpie: A mid-August observation in Ozaukee county by Jarboe. This is the third consecutive fall it has been observed in the state.

Common Raven: Observed during the period in Forest, Marinette, Price and Vilas counties. Unusual were the following sightings at Cedar Grove: Sep. 18, Oct. 3 and Nov. 23 (Barger).

Boreal Chickadee: For the first time in over seven years none were reported this fall.

Red-breasted Nuthatch: A complete reversal of the past two autumns with only ten reporting counties. It was present all period in Price county (Vincent). In Shawano county it was present from August through October (Hafemann). Additional reports came from Brown, Columbia, Dane, Douglas, Marinette, Milwaukee and Taylor counties. Reported as present at the end of the period only in Columbia and Dane counties.

Brown Creeper: Present at the beginning of the period in Price county (Vincent) followed by observations in Milwaukee county on Sep. 9 (Donald) and Brown county on Sep. 14 (Wierzbicki).

House Wren: Four October departure dates, the latest being on the 25th in Sauk county (Koenig). This is only three days away from tying the state departure record.

Winter Wren: Eleven reporting counties this fall. Five were seen on Oct. 11 in LaCrosse county (Rosso) and nine, also on Oct. 11, in Dane county (Emlen). Present at the end of the period in Sauk county (Lange).

Carolina Wren: One bird was observed on Oct. 19 in Grant Park (Milwaukee county) by Juneau.

Long-billed Marsh Wren: Oct. 21, Dane county (Ashman).

Short-billed Marsh Wren: Oct. 4, Chippewa county (Robbins).

Mockingbird: Two reports of this southern species this fall: one present in the yard of Weber beginning on Oct. 1 (Vernon county); one observed on Nov. 8 by Woodmansee at Loon Bluff (Ozaukee county).

Catbird: Nov. 4, Outagamie county (Tessen) and Nov. 7, Washington county (Schmidt).

Brown Thrasher: November observations came from Dane, Dodge, Milwaukee and Rock counties, with two birds still coming to a feeder in Racine county into December (von Jarchow).

Robin: 500 were noted on Aug. 31 in Brown county (Cleary, Columban). Reported as present into December in Dane, Dodge, Marinette, Milwaukee, Price and Shawano counties.

Varied Thrush: Observed for only the second time in the past five falls with an individual present during the early part of the fall at the feeder of Larson in Waukesha county.

Wood Thrush: Oct. 16, Brown county (Cleary, Columban) and Oct. 21, Outagamie county (Tessen).

Hermit Thrush: Nov. 24, Milwaukee county (Donald).

Swainson's Thrush: One banded by Peartree on Aug. 23; Aug. 23, Brown county (Wierzbicki); Aug. 27, Outagamie county (Tessen) were the first fall reports this year. 119 were counted on Sep. 14 in Dane county by Emlen. Last were birds observed on Oct. 18, LaCrosse county (Leshner), Oct. 19, Dane county (Ashman) and Oct. 20, Milwaukee county (Schneck).

Gray-checked Thrush: Present at the end of August in Shawano county (Hafemann); next on Sep. 1 in Brown county (Wierzbicki). Last noted on Oct. 24 in Ozaukee county (Blintz).

Veery: Two on Oct. 19 in Milwaukee county (Sheridan).

Eastern Bluebird: In Brown county, Baldry banded 200 during the year with the last one observed on Nov. 7. There were few observations with even fewer numbers noted this fall. Of special interest is an individual still present on Dec. 5 in Vernon county (Weber).

Blue-gray Gnatcatcher: One report: Sep. 11, Sauk county (Ashman).

Golden-crowned Kinglet: The major movement into the state occurred between Sep. 25-30 with numerous arrival dates during this time. It was very abundant during mid-October in several southern and eastern counties. Reported as present into December in Dane (Ashman) and LaCrosse (Rosso) counties.

Ruby-crowned Kinglet: First on Aug. 23 in Langlade county (Schimmels); next on Sep. 4 in Sauk county (Lange). This was followed by several Sep. 13-15 arrival dates with the remainder noted during late September. There were six November dates, the latest being on the 27th in Milwaukee county (Gustafson).

Water Pipit: A shorter than normal movement through the state as indicated by the following reports: Sep. 30, Chippewa county (Robbins); Oct. 4, Clark county (Robbins); 20 on Oct. 17, Outagamie county (Tessen); three to eleven between Oct. 18-20, Columbia county (Ashman, Werner).

Northern Shrike: A better than average fall for the species with eight reporting counties: Oct. 14, Price (Hardy); Nov. 8, Ozaukee (Jarboe); Nov. 15, Brown (Cleary, Columban); Nov. 25, Marinette (Wierzbicki); Nov. 27, Oconto and Marinette (Richter); Nov. 28, Winnebago (Natzke, Tessen), Outagamie (Tessen) and Racine (Erickson).

Loggerhead Shrike: During late August and early September in Ozaukee county (Blintz); a very late Oct. 20 in Barron county (Goff); and a new state departure record, by one day, of Oct. 29, LaCrosse county (Frister).

Yellow-throated Vireo: Three departure dates on Sep. 26-27 with the last individual reported from LaCrosse county on Oct. 4 (Rosso).

Solitary Vireo: A late August observation from Dodge county (Sigrist). Last reported from Dane (Emlen) and Rock (Brakefield) counties on Oct. 13.

Red-eyed Vireo: There were no less than eight departures noted between Oct. 4-17 this fall. However, extremely late, only two days away from tying the state departure record, was a single bird observed in Outagamie county on Nov. 3 (Tessen).

Philadelphia Vireo: The migration in the state extended between Aug. 23 (Brown county, Wierzbiicki) and Oct. 4 (Milwaukee county, Sheridan).

Warbling Vireo: All departures noted during the middle of September except for a late sighting on Oct. 18 in LaCrosse county (Rosso).

Black-&-White Warbler: No less than eight departures noted between Sep. 23-27 with the last individual recorded in Portage county on Oct. 9 (Biebford).

Golden-winged Warbler: Seven reporting counties with the departure this fall being on Sep. 20, Barron county (Goff).

Blue-winged Warbler: The only sighting was of two birds in Sauk county on Sep. 5 (Gustafson).

Tennessee Warbler: Present at the beginning of the period in Barron county (Goff) with August sightings in Brown county, the 22nd (Wierzbiicki); Outagamie county, the 29th (Tessen); and Sauk county, the 29th (Lange). Last on Oct. 24 in Sauk county (Lange).

Orange-crowned Warbler: Only three September reports: the 15th, Rock county (Brakefield), the 16th, LaCrosse county (Rosso), and forty-three on the 30th, Dane county (Emlen). Last on Oct. 17 in Clark county (Robbins). Again this fall there was an unusually poor migration for the species.

Nashville Warbler: Oct. 20, Outagamie county (Tessen).

Parula Warbler: These reports: Sep. 12, Chippewa county (Robbins); Sep. 12, Ozaukee county (Gustafson); Sep. 18, Sauk county (Lange); Sep. 27, Milwaukee county (Gustafson); several between Sep. 15-30, Dane county (Emlen, Ashman).

Yellow Warbler: September sightings in seven different counties including ten on Sep. 5 in Brown (Cleary, Columban). Last on Oct. 6 in Milwaukee county (Schneck).

Magnolia Warbler: Nineteen in Dane county on Sep. 15 (Ashman). Reported in nine additional counties during September and into October with the last individual noted on Oct. 12 in Brown county (Wierzbiicki).

Cape May Warbler: The observation period extended from Aug. 19 (Price county, Hardy) to Oct. 5 (Outagamie, Tessen, and Ozaukee, Blintz, counties).

Black-throated Blue Warbler: A better than average migration this fall as indicated by the following reports: Sep. 12, thirteen between Sep. 13-29 in Dane county (Emlen); Sep. 13-25, Brown county (Wierzbiicki); Sep. 14-15, and 21, Ozaukee county (Jarboe, Blintz, Gustafson); Sep. 21, Winnebago county (Natzke); Sep. 22, Sauk county (Lange); and Oct. 5, Milwaukee county (Gustafson).

Myrtle Warbler: Numbers reported included 90+ on Oct. 7 in Dane county (Ashman) and 90 on Oct. 12 in Brown county (Cleary, Columban). Last on Nov. 28 in Milwaukee county ((Gustafson).

Black-throated Green Warbler: There were mid-October departure dates from Brown, Dane, Green, Milwaukee, Ozaukee and Rock counties. Last observed on Oct. 29 in Manitowoc county (Albrecht).

Cerulean Warbler: The only report came from LaCrosse county on Sep. 12 (Rosso).

Blackburnian Warbler: Oct. 11, Ozaukee county (Liebherr).

Chestnut-sided Warbler: Sep. 30, LaCrosse county (Rosso).

Bay-breasted Warbler: Observations occurred between Aug. 30, Outagamie county (Tessen) and Oct. 4, Milwaukee (Sheridan) and Rock (Brakefield, Mahlum) counties.

Blackpoll Warbler: First on Aug. 21, Walworth county (Robbins) and Aug. 22, Brown county (Wierzbicki) and last on Oct. 7, Sauk (Lange) and LaCrosse (Rosso) counties.

Pine Warbler: Last on Oct. 12, Milwaukee county (Tessen).

Palm Warbler: The observation period extended between Sep. 1, Manitowoc county (Kraupa) and Oct. 27, Ozaukee county (Liebherr).

Ovenbird: Oct. 7, Milwaukee county (Sheridan) was the departure date this fall.

Northern Waterthrush: Late dates this fall include Oct. 24, Racine county (Tessen) and Oct. 25, Ozaukee county (Blintz).

Louisiana Waterthrush: Two reports: Aug. 27, LaCrosse county (Leshner); Oct. 14, Sauk county (Lange). The latter is six days short of tying the state departure record.

Connecticut Warbler: Ten reports this fall, which is more than usual. Reporting counties included Brown, LaCrosse, Milwaukee, Ozaukee, Price, Rock, Sauk and Shawano. Observations extended between Aug. 26 and Oct. 2.

Mourning Warbler: Only four reports this fall: Aug. 21, Jefferson county (Robbins); Sep. 27, Outagamie county (Tessen); Oct. 4, LaCrosse county (Rosso); Oct. 6, Brown county (Wierzbicki).

Yellowthroat: Oct. 31, LaCrosse county (Rosso).

Yellow-breasted Chat: Sighted for the first time in the past four autumns with a bird observed on Sep. 18 at Pikes Lake (Washington county) by Schmidt.

Hooded Warbler: The first fall report in over seven years, and a record state departure date as well, is the sighting of a bird on Sep. 20 in Milwaukee county by Sheridan and Lemke.

Wilson's Warbler: A shorter than normal observation period this fall with it first noted on Sep. 5 in Chippewa (Robbins) and Ozaukee (Blintz) counties. Last seen on Oct. 4 in LaCrosse county (Rosso).

Canada Warbler: Sep. 14, Dane county (Ashman).

American Redstart: Last observed on Oct. 13, Dane county (Emlen).

Bobolink: Seven observations during the early part of the period with 100 noted on Aug. 16 in Brown county (Tessen). Last noted on Sep. 21 when 24 were seen in Rock county (Brakefield).

Meadowlark (sp.): Reported as present at the end of the period in Dane, Green and Rock counties.

Yellow-headed Blackbird: 15 on Aug. 16, Brown county (Tessen); 25 in August, St. Croix county (Granica); 3 on Aug. 23, Sep. 3, Columbia county (Ashman, Leshner, Robbins); 30 on Aug. 30, Oct. 1, Brown county (Cleary, Columban) were all the reports this fall.

Redwinged Blackbird: One thousand were observed on Sep. 13 in Brown county (Cleary, Columban). Present into December in Dane (Ashman), Green (Rohde), LaCrosse (Rosso) and Price (Hardy) counties.

Orchard Oriole: Representing only the third sighting during the autumn period since 1964 was the observation of a male in LaCrosse county on Aug. 16 by Leshner.

Baltimore Oriole: All departure dates fell between Sep. 4-25. However a bird appeared at the Yeoman feeder in Jefferson county between Nov. 28-Dec. 4 where it ate suet.

Rusty Blackbird: The observation of 100 birds in Winnebago county on Sep. 5 (Tessen) represents a new state arrival record, exceeding the prior record by ten days. There were scattered observations during the period with two birds noted on Nov. 28 in Milwaukee county (Gustafson).

Brewer's Blackbird: The only November observations came from Manitowoc county, on the 2nd (Albrecht).

Common Grackle: Present at the end of the period in LaCrosse (Rosso), Outagamie (Tessen), Price (Vincent) and Vernon (Weber) counties.

Brown-headed Cowbird: Present at the end of the period in LaCrosse county (Rosso).

Scarlet Tanager: Eleven birds were noted on Sep. 25 in Dane county by Emlen. The only two October observations both came from Milwaukee county, the 4th (Gustafson) and the 12th (Tessen).

Summer Tanager: The fifth fall record occurred this fall when one individual was observed in Milwaukee county on Oct. 4 (Sheridan).

Rose-breasted Grosbeak: Oct. 15, Brown county (Cleary, Columban).

Indigo Bunting: Oct. 10, LaCrosse county (Rosso).

Dickcissel: Two reports: present in mid-August in Green county (Rohde); 12 on Aug. 16, Rock county (Brakefield).

Evening Grosbeak: In contrast to the past two years there were observations in only thirteen counties by sixteen observers, indicating no major movement into the state this winter. All of the observations occurred during November except the following: from Aug. 31 into December, Price county (Hardy, Vincent) and Oct. 17, Stevens Point (Heig). During November it was then reported in Barron, Brown, Chippewa, Door, Langlade, Marinette, Outagamie, Sauk, Shawano, Sheboygan and Waushara counties. The only report of numbers came from Shawano where flocks of 30-50 were present at the end of the period (Hafemann, Ready).

Purple Finch: While there were reports from 21 counties by 30 observers the movement was considerably poorer than the only fair movement of last fall. Many reports were of lone or only a few birds, representing single sightings. In addition many areas reported birds absent by mid-November, all indicating very little movement throughout the state, probably for most if not all of the winter period. It was present during the entire period in Barron county (Goff) and present at the beginning of the period until early November in Price county (Hardy, Vincent). The only other early report was of an Aug. 24 sighting in Brown county (Wierzbicki). September sightings occurred in Chippewa, Dane, Green, Outagamie, and Ozaukee counties. Only reported present into December in Barron, Brown, Columbia, LaCrosse and Shawano counties.

Pine Grosbeak: For the first time in over seven autumns there were no birds observed this year.

Common Redpoll: Only one report: Oct. 27, Brown county (Cleary, Columban).

Pine Siskin: In direct contrast to last year, only five reports: present at the beginning of the period in Price county where the majority had departed by Sep. 28 (Vincent); Sep. 13-Nov. 8, Brown county (Cleary, Columban); 6 on Oct. 6-18, Langlade county (Schimmels); 2 on Oct. 11, 18 on Nov. 29 on Washington Island (Erickson); Nov. 16, Cedar Grove (Gustafson).

Red and White-winged Crossbills: No observations of either species this fall.

Rufous-sided Towhee: Nov. 3, Outagamie (Tessen) and Ozaukee (Liebherr) counties; Nov. 4, Sauk county (Lange).

Savannah Sparrow: Most departures occurred between Oct. 17-25 with the last on Oct. 29, Green county (Rohde).

Grasshopper Sparrow: One report: Aug. 23, Vernon county (Weber).

Henslow's Sparrow: One report: Aug. 21, Walworth county (Robbins).

Vesper Sparrow: Almost a month later than all other reports this fall was Nov. 21, Vernon county (Weber).

Lark Sparrow: One report: 3 on Aug. 20, Sauk county (Gustafson).

Slate-colored Junco: First observed in late August in St. Croix county by Granica. This was followed by sixteen arrival dates between Sep. 13-30. In Price county, the species was very numerous this fall with 1,000 present on Oct. 10 (Vincent).

Oregon Junco: These observations: Oct. 3, occasionally seen thereafter, Outagamie county (Tessen); Oct. 6, Price county (Vincent); Oct. 9, Milwaukee county (Sheridan); Oct. 17, Racine county (Erickson); 2 on Oct. 18, Barron county (Goff); Nov. 1, Rock (Brakefield) and Columbia (Werner) counties; Nov. 27, Milwaukee county (Gustafson).

Tree Sparrow: September arrival dates of the 21st, Brown county (Cleary, Columban), and the 28th, Rock county (Brakefield). There were only four October arrival dates with the majority of first sightings occurring during November this fall.

Chipping Sparrow: All October departures except of two noted in Vernon county on Nov. 3 (Weber). However most unique is a bird that was banded on Nov. 22 by Lindberg and still present on Dec. 7 in Marinette county.

Clay-colored Sparrow: These reports: Sep. 11, Brown county (Goff); Sep. 14, Price county (Hardy); 2 on Sep. 28, Dane county (Emlen); Oct. 1, LaCrosse county (Rosso); Oct. 3, Chippewa county (Robbins).

Field Sparrow: Last on Nov. 1, LaCrosse county (Rosso) and Nov. 4, Milwaukee (Donald) and Dane (Ashman) counties.

Harris' Sparrow: A sub-par migration occurred again this fall with reports from only 10 counties by 13 observers, including: intermittently between Sep. 9-Oct. 14, Price county (Vincent, Hardy); Sep. 24-Nov. 1, LaCrosse county (Rosso, Leshner); Sep. 28-Oct. 13, Barron county (Goff); Sep. 30, Chippewa county (Robbins); Oct. 6-11, Vernon county (Weber); Oct. 11-16, Milwaukee county (Donald, Gustafson); Oct. 12, Outagamie county (Defferding); Oct. 13, Dane county (Emlen); Oct. 15, Taylor county (Fadneww); Nov. 1-3, Columbia county (Werner). Almost all sightings were of single birds. The Sep. 9 arrival date by Vincent represents a new state arrival date, by six days.

White-crowned Sparrow: An above average migration this fall but slightly below the level of last year. It was noted in 18 counties by 21 observers with the first observation occurring on Sep. 14, Price county (Vincent). Reports extended until Nov. 3 when it was last noted in Outagamie (Tessen), Ozaukee (Liebherr) and Price (Hardy) counties. Numbers noted included ten in Dodge and Milwaukee counties during late September and October; seven on Sep. 22 in Price county; 15 on Oct. 11 in LaCrosse county; and 25 on Oct. 21 in Rock county.

White-throated Sparrow: Last reported during mid-November in Milwaukee, Outagamie and Rock counties.

Fox Sparrow: Observations occurred between Sep. 16, Price county (Vincent) and early December, Sauk county (Lange).

Lincoln's Sparrow: Eleven were observed on Oct. 11 in LaCrosse county (Leshner). Last reported in the state on Nov. 1 in LaCrosse county (Rosso).

Swamp Sparrow: Nov. 7, Milwaukee county (Donald) was the last report this fall.

Song Sparrow: December sightings were reported from Brown, Columbia, Dane, LaCrosse and Rock counties.

Lapland Longspur: The prevailing situation of the past several years persisted this fall — few reports. Observations included: 2 on Oct. 2, LaCrosse county (Leshner); Oct. 24, Necedah (Rosso) and Racine county (Tessen); 200 on Nov. 11, Langlade county (Schimmels); Nov. 20, Brown county (Cleary, Columban); Nov. 23, Outagamie county (Defferding).

Snow Bunting: Not quite as good a movement into the state this fall as the past several years but still an above average one. It was first reported on Oct. 19 at Necedah by Rosso. The only other October observations came from Price and Sauk counties. Numbers noted included 50 on Nov. 14 at Horicon (Liebherr), 80 on Nov. 29 on Washington Island (Erickson), 100+ on Oct. 24, Price county (Vincent) and Nov. 8, Brown county (Cleary, Columban) and 200 on Nov. 14, Langlade county (Schimmels).



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Letters To The Editor . . .

January 7, 1971

Passenger Pigeon
Chippewa Falls, Wisconsin

Dear Mr. Kemper.

We are interested in the incidence of wintering Brown Thrashers reported in the Winter issue.

A thrasher is at our feeder right now despite the fact that the temperature this morning was 24 below zero. This bird eats cracked corn, suet, bacon fat, sunflower seed and honeysuckle berries.

We first noticed the thrasher in early November and have seen it almost every day since.

Last year we had a half dozen Tufted Titmice here. This winter, 1971, not a single individual so far.

Sincerely,

Mrs. Winston A. Elkins
Box 222
Trempeleau, Wis. 54611

ED. NOTE—Brown Thrashers do winter in Wisconsin but rarely. A few reports seem to reach the field editor every year.

By the Wayside...

Varied Thrush at Erskine Feeder in Jacksonport, Wis. — We first noticed our Varied Thrush that has been with us all winter on a Sunday morning in December. He loves to eat on the ground, usually sunflower seeds. He comes two to four times a day and sits on a branch waiting but will sit and eat at feeder by the house, always on the ground. He is a loner as he loves to have the area to himself, although he will tolerate the Cardinals when they come at noon or evening. — Gertrude Erskine, Jacksonport, Wis.

* * * * *

A Mississippi Kite at Cedar Grove — Several minutes before 6:00 p.m. CDT on 10 September 1970, I observed an adult Mississippi Kite (*Ictinia missippiensis*) while trapping raptors at the Cedar Grove Ornithological Station. The bird first appeared low over the trees to the northeast. A quick check with the binoculars suggested an adult Peregrine Falcon; however, when it failed to respond to my lures I glassed it again. I still believed it to be an adult Peregrine although the configuration was not sufficiently chunky. I also noticed that the entire head, neck, back and even the proximal portions of the wings were light gray — the color of an adult male harrier. I lured some more during which time the bird circled somewhat higher. Subsequent glassings from the underside during the next three to five minutes revealed the wings to be a very dark gray distal to the wrist joint. The tail was equally dark and appeared to be too long for a Peregrine. Then too, it widened toward the tip rather than narrowing as would be the case with a Peregrine. Within a minute I strongly suspected that it was a Kite — primarily because of its configuration, the color pattern (unlike anything I had ever seen), and the fact that it appeared to be very buoyant or light on the wing. I have had previous experience with only one species of Kite — the Whitetailed. Before referring to the field guide, however, I was quite convinced that it must be a Mississippi Kite. An immediate check confirmed that I was correct, and that it was an adult bird.

Viewing conditions were excellent. The sun was behind me as I watched the bird to the north and northeast. The sky was clear and I used 9X binoculars. In spite of the rarity of this species in Wisconsin, I am convinced that this is a valid record. — Daniel D. Berger.

* * * * *

Mississippi Kite at Tomahawk Lake — On September 11, 1970 my husband and I were cruising leisurely in our boat on Tomahawk Lake in Oneida county. It was a warm, clear, calm afternoon. Suddenly over the treetops, and then right over our heads about twenty feet up, came a flock of gray, falcon-like birds with white heads and definite hooked bills. They were approximately one foot or more long and flying very fast, and in close formation with approximately 20-25 in the group. They had pointed wings, long narrow, slightly notched, squared-off tails and

blunt-square heads. We could see yellow feet and yellow in the beaks. In short, they looked just like the pictures of the Mississippi Kite in Peterson's **Field Guide**. There were no immatures in the group, as we saw no stripes or streaks in the tails or breasts. They were definitely not gulls or terns, with their hawk heads and were flying too fast and too close together. They were behaving just as described in the text of **Birds of North America** for Mississippi Kites.

The remnants of two gulf coast hurricanes had caused strong winds and rains from the south about a week before we saw these birds and they could have been driven farther north than usual. There was also a tornadic squall in southwestern Wisconsin two or three days before. — Mr. and Mrs. Paul Engberg, Minocqua, Wis.

Seasonal Editor's Note: This observation, as well as that of the Cedar Grove sighting, due to lack of a specimen or photograph, dictate this species be considered on the hypothetical list.

* * * * *

Second State Sighting of Royal Tern — We stepped from our cars at 3:00 p. m. on September 27, 1970 and walked to the breakwater marking the entrance to the harbor at Port Wing (Bayfield County). Immediately two terns were sighted flying in from the east along the edge of the Lake Superior shoreline. The leading tern was glassed with 7X binoculars. Its large bill, bright red and unmarked, identified it as a Caspian, *Hydroprogne caspia* (Pallas). While observing this bird, a loud shorebird-like call could be heard farther to the east, but it was thought to be a Black-bellied Plover, *Squatarola squatarola* (Linnaeus). Rather than look for the shorebird, our glasses were shifted to the second tern following some distance behind the first. Immediately the bird struck us as somewhat different. It had the stocky build and short forked tail, but the large unmarked bill was orange, not red. The black cap appeared full, but yet different from that of the first tern. We could only speculate that the cap may have been smaller or may have had more white scattered through it. As it passed low and directly overhead, we observed that the shorebird-like call was being uttered by this tern, and it called almost continually until disappearing from sight into the west. We described the voice as a loud high pitched call similar to the Black-bellied Plover but more drawn out (kear-ree). This contrasted sharply with the typical harsh Caspian call of the first tern.

Uncertain as to whether it was a Royal, *Thalasseus maximum* (Boddaert), or a young Caspian, we made a literature search. All Caspian calls, whether young or adult, were described as harsh. The Royal Tern on the other hand has one call described by Bent as "a very musical, rolling call, a soft liquid whistle, 'tourrrreee', suggestive of the melodious rolling whistle of the Upland Plover." This is very similar to our original description. Thus the voice and field marks identify this bird as a Royal Tern. — David Bratley and Harold Mathiak.

Seasonal Editor's Note: As this is only the second sighting for this species, (the first occurring on Sep. 5, 1965 on the Fox River at Kimberly, Outagamie county), with neither being documented by either a specimen or a photograph, this species remains on the hypothetical list.

Black-legged Kittiwake at Loon Bluff — On November 6, 1970, while watching two Common Scoters, *Oidemia nigra* (Linnaeus), at Loon Bluff, Ozaukee county, I noticed out of the corner of my eye a gull flying along the edge of the lake. I finally raised my binoculars to study it and noted to my surprise an unusual black pattern on its wings. By that time it was too far away to further study and I resigned myself to an unidentified gull. Several minutes later what I thought was another bird just like it flew past directly in front of me. I figured if there were two, it could not be a rare bird yet its black wingtips and stripe similar to the pattern on the smaller Bonaparte's immature gull, *Larus philadelphia* (Ord), stymied me. As I watched this slightly-smaller-than-Ring-billed-Gull-sized bird (direct comparison available), I saw it turn and begin a long oval back to its starting point, causing me to realize that I was watching one bird. After five passes I saw, in addition to the above marks, the slightly notched, black tipped tail and the dusky marks on the back of the head and neck. Upon checking in the bird book I found that I was watching a Black-legged Kittiwake, *Rissa tridactyla* (Linnaeus). Dennis Gustafson, Milwaukee, Wisconsin.

ED. NOTE: This is a good description of a first year Kittiwake, a bird personally remembered from Iceland.

* * * * *

Iceland Gull and Little Gulls Observed in Milwaukee — The Iceland Gull, *Larus glaucoides* (Meyer), was a first year bird observed on November 13, 1970 in the Milwaukee Harbor. It was seen at about fifteen yards away in a dump so close it was difficult to use my 20X scope on it. It first called attention to itself when momentarily flying up to show very light wing tips, almost white. On the ground its small, all black bill, Herring Gull, *Larus argentatus* (Portoppidan), size, and light brown body with those very light wings even when folded were clinching identification marks for me.

On November 14 while looking carefully over a flock of Bonaparte's Gulls, *Larus philadelphia* (Ord), in Milwaukee's lakefront, I noticed a gull which had no white or black on its wings. After putting my 20X scope on it, I noticed its small size, all gray wings, some indistinct dark head markings and most unusual of all, its dark, almost blackish, underwings, making it a Little Gull, *Larus minutus* (Pallas). — Dennis Gustafson, Milwaukee, Wisconsin.

* * * * *

Great Black-backed Gull in DePere — On September 24, 1970, an individual of this species, *Larus marinus* (Linnaeus), was observed in the Well's area (DePere, Brown county) bordering on the Fox River. This gull really stood out from the rest as I estimated about 10,000 Herring Gulls were present in the area — also several Bonaparte's and Ring-billed, *Larus delawarensis* (Ord). Identifying marks included: very large size, larger than a Herring; dark color of back and wings very pronounced; underside white; head and tail bordered in white. All identification marks were checked with 7X binoculars.—Ed Cleary, Green Bay, Wisconsin.

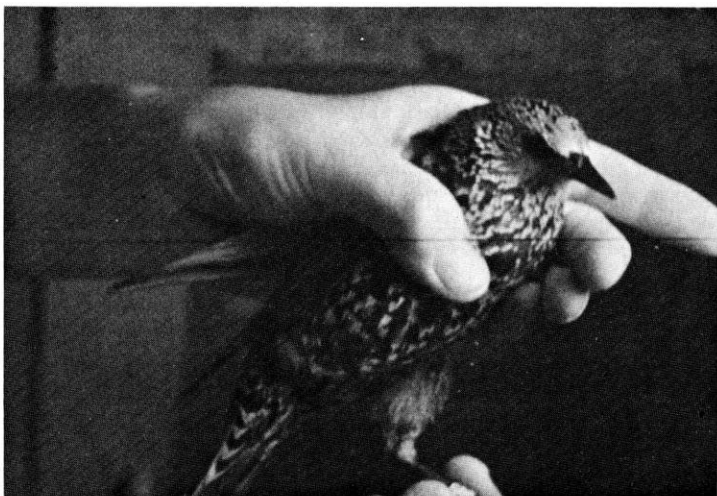
STARLINGS AND CHIMNEYS

By HAROLD A. MATHIAK

Starlings, *Sturnus vulgaris* (Linnaeus), may perch on chimneys at any time of the year, but they are most frequently seen warming themselves on chimneys in extremely cold weather. The 1970-71 winter had frequent below-zero days and as many as a dozen starlings could be seen on certain chimneys in Horicon, particularly those of three story houses. On January 1, 1971, I received my first report of a banded starling being found in a basement. When five more banded starlings were reported being found in houses in February, I sent a news release to five area newspapers requesting data on banded starlings found in houses.

The notices brought reports of two more banded starlings, one having been killed and the other released alive without recording the band number. I did not find out what type of furnace was involved in the latter case. Five of the banded birds were found in houses heated by gas. The pipe from a gas furnace to the chimney has a gap through which birds can enter the basement, at least during the periods when the gas is not burning. One banded starling entered a house heated by oil. It got into the kitchen by partially pushing out the cover over an old chimney pipe hole.

Two of the banded starlings had been banded by me in the 1969-70 winter and had not been retrapped prior to going down chimneys. Two of the banded birds were recovered in Mayville and six were from Horicon. Nearly a thousand starlings had been banded by me in Horicon during the last six weeks of 1970. Just a couple of unbanded birds found in houses were reported to me.



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